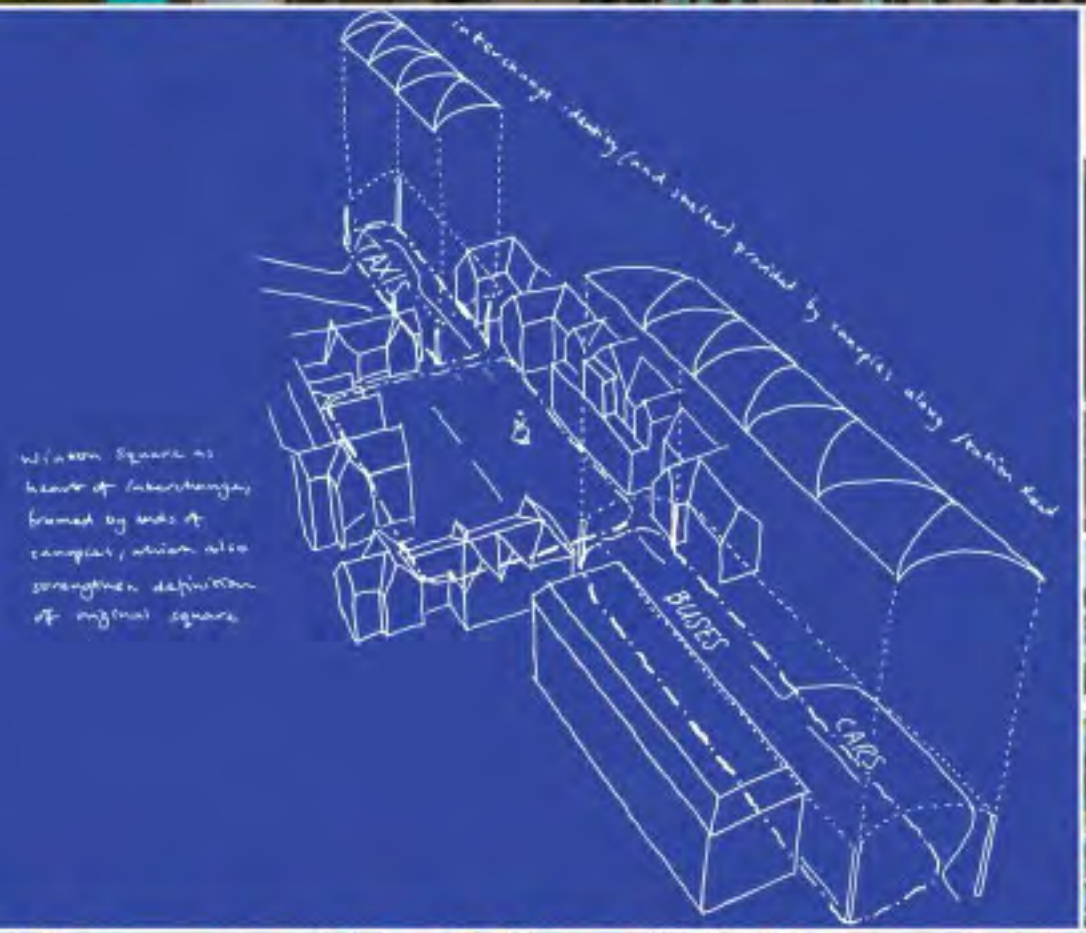
Stoke-on-Trent City Council

TRANSFORMING CITIES FUND TRANCHE 2

Strategic Outline Business Case



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FOREWORD

Stoke-on-Trent is undergoing the most significant transformation in its economic fortunes in over 30 years. We are amongst the fastest growing local economies to come out of recession; Stoke-on-Trent has continued to out-perform large areas of the UK in terms of GVA growth, job creation and innovation. Our ambition is to remain on this track!

However, significant infrastructure challenges still remain which we need to address to continue this positive progress and ensure the city achieves its true potential. Physical regeneration has been an important element of this process, and there has been a growth in confidence and aspirations to enhance external perceptions of the City. Independent reports, including the latest UK Powerhouse figures, forecast that Stoke-on-Trent will continue to be among the best for employment growth by the final quarter of 2020 – with a predicted ranking of fourth nationally. This is an excellent testament to the work we have started to deliver and the changing perceptions of our city. Infrastructure will be a common denominator in this assurance. This continued investment is both critical and vital!

We are seeking Transforming Cities Funding to fundamentally change our intra-city connectivity. The City is well placed geographically, a position endorsed by Midlands Connect as a key location for regional connectivity both north and south along the M6 and West Coast Mainline corridor, and east west along the A50/ Crewe – Stoke-on-Trent – Derby rail corridor. This key connectivity will be further enhanced by the arrival of HS2, but a step change is required in our intra-city connectivity to keep pace with our aspirations.

Despite key employment and education development being centred in a small number of locations we are a dispersed city where support is now needed to aid connectivity and boost economic growth. A number of travel challenges remain, both for City residents and inward commuters:

- The bus network is ‘split’ at the City Centre, creating interchange penalties for cross city travel in terms of user time, cost and inconvenience;
- The rail/bus interchange at Stoke-on-Trent Railway Station is poor;
- Given the City’s polycentric geography, legibility can be difficult;
- Bus journey times can be long, with some journeys taking twice as long as by car due to congestion; and
- Gaps in the walking and cycling network exist, particularly around the Railway Station.

The proposals contained in our programme will improve links between the City Centre (the hub of the bus network), the Railway Station and key employment sites such as Ceramic Valley Enterprise Zone.

These proposals will remove the glass ceilings that the current transport barriers create. They will transform how people move around between key arrival and destination points in the city.

Yes, we are ambitious and yes, we are determined too. Our residents and businesses deserve the best, therefore by 2023 Stoke-on-Trent will:

- Be a City where a commuter can arrive at Stoke-on-Trent Railway Station and transfer seamlessly to a fast, high quality bus service to a range of major employment locations, including to our burgeoning City Centre in five minutes;
- Have two cross City routes providing a true ‘metro-style’ public transport service;
- Have a Station which is a destination in its own right, aided through the gateway redevelopment of the Swift House site;
- Be a City where bus patronage is rising, so that residents can travel across the City by bus without the need for interchange, linking residential areas with employment sites and access to education and training; and
- Have high quality walking and cycling routes: along a newly designed College Road or through the upgraded Hanley Park to the City Centre, or via the refreshed National Cycle Network to Ceramic Valley Enterprise Zone and Trentham Lakes.

Councillor Abi Brown
Leader – Stoke-on-Trent City Council

INTRODUCTION

1.1 Purpose of the document

This document forms the Strategic Outline Business for the Stoke-on-Trent Transforming Cities Fund Tranche 2 submission. The document has been prepared in line with the principles of HMT Green Book and Department for Transport (DfT Major Scheme Business Case guidance) and includes the five cases of Strategic, Economic, Financial, Commercial and Management.

This is a programme level Strategic Outline Case submission regarding a **£69.4 million** programme of measures, with funding brought together from the DfT and local contributions.

1.2 Background

Stoke-on-Trent is the major economic hub[1] in Staffordshire forming the focus for economic growth in the Manchester – Birmingham corridor.

As part of the Government's Industrial Strategy and the National Productivity Investment Fund, the Transforming Cities Fund (the Fund) aims to improve productivity and spread prosperity through investment in public and sustainable transport in some of the largest English city regions. This was first announced on 20 November 2017 by the Prime Minister.

The DfT core policy objectives for the Fund is to:

- Invest in new local transport infrastructure to boost productivity;
- Improve public and sustainable transport connectivity; and
- Improve access to employment sites, Enterprise Zones, development sites, or an urban centre that offers particular growth/employment opportunities.

In September 2018, Government shortlisted the City of Stoke-on-Trent as one of 10 non-mayoral city regions to bid for a share of £840m to upgrade public transport links. In the Autumn 2018 Budget, Government announced that the Fund will be extended by a year to 2022-23 as well as providing an extra £440m to those shortlisted city regions, increased to 12, providing £1.28bn in total - the funding for which will be allocated by the Department for Transport (DfT) via two tranches. The £60 million profiled for 2018-19 is focused on early-delivery small schemes and will be allocated via Tranche 1. The Spring Statement

[1] Midlands Connect Strategy: Powering the Midlands Engine

confirmed the award of £5.6m for works associated with Stoke-on-Trent Station from Tranche 1.

As a modern, forward thinking authority, the City Council recognises the vital role that targeted sustainable transport improvements in the city will play in contributing towards elevating Stoke-on-Trent's status as a regional employment powerhouse and delivering the necessary socio-economic, wellbeing and environmental benefits to make Stoke-on-Trent a great working city. This will unlock economic growth potential and increase productivity, improve everyone's access to their daily needs and to better housing and improving the city's built and natural environment; making Stoke-on-Trent more prosperous overall.

Through this fund, the City Council's ambition is for a properly connected sustainable transport network linking:

- Stoke-on-Trent Station with more than 3.1 million passengers passing through per year. The area immediately around the station is a key area of employment and economic growth, and the City Council has aspirations for the delivery of a Station Masterplan which brings forward a number of development sites totalling approximately 12 million sq. ft. within the vicinity of the station, bringing £130 million GVA growth per annum;
- The University Quarter and its 28,000 students and workforce. Staffordshire University continues to grow, and is investing in a new £40m "Catalyst Building" to drive economic growth and apprenticeships;
- The City Centre, with its growing retail and leisure offer incorporating the council-led Smithfield development delivery 1.2 million sq.ft. of office, leisure, retail and hotel space A mile from the Rail Station and Strategic Road Network, a high quality public transport link is required to enable the City Centre to develop into the 'regional capital'[2] and the next Core City; and
- Wider city growth opportunities such as the Etruria Valley area (which currently has poor public transport links but good SRN access) which form part of the rapidly growing Ceramic Valley Enterprise Zone – with 1 million sq.ft. in the pipeline. This coupled with 1 million sq.ft. of pent up demand, plus over 300 office enquiries and forecast growth by 2020 means the City will be the 4th fastest growing economy in the UK given year-on-year improvements.

The City Council's prioritised plans for this Fund have secured strong political support and can be summarised in priority order as comprising:

- A major development of Stoke-on-Trent Rail Station into a next generation multi-modal and multi-functional Mobility Hub (known as the Station Hub) at the centre of the rail corridor including Longton and Longport Stations that serve the city;

[2] As referred to by the Constellation Partnership

- High quality mass transit links to the City Centre; and
- Onward improved cross-city mass transit links and sustainable travel link including to Etruria Valley (part of Ceramic Valley Enterprise Zone area) and wider connectivity to employment areas including Longton, Burslem and Tunstall, the Royal Stoke University Hospital and Trentham Lakes.

Stoke-on-Trent Rail Station is at the heart of the City Council's Transforming Cities Fund proposals. Its position on the West Coast Mainline offers the city significant advantages with rapid intercity connectivity to London, Birmingham and Manchester, making it one of the key business gateways serving the city region. With the balance in road and rail investment shifting in rail's favour, with HS2 at the forefront of rail investment nationally, it is of strategic importance that investment in Station facilities continues. Stoke-on-Trent is in the advantageous position of being within the Midlands Connect geography, alongside sitting within the sphere of influence of Transport for the North. Both these transport bodies have ambitious plans to improve connectivity across their regions as well as improving cross-border connectivity, making Stoke-on-Trent a focal point. Improved connectivity to other city regions and transport hubs including Nottingham, Liverpool, Derby and Crewe will all be beneficial. The Station plays a crucial gateway role in the identity of the City of Stoke-on-Trent for local residents (as a source of civic pride), businesses, and visitors (providing their first and last impressions). It has a purpose that extends beyond its transport functions, as a destination in its own right, and a focus for providing facilities for surrounding communities – with a wider Staffordshire economy of 658,800 working population.

Funding from the programme would support sustainable growth detailed in the Local Plan, which sets out how the city will develop circa 200 hectares of land, supporting 17,000 jobs and 27,800 new homes by 2033. The Fund will support delivery of three major regeneration areas within a five-year period all ahead of HS2, namely, the Smithfield development, City Centre Regeneration Area and wider Station Masterplan. It would also strengthen mass transit and sustainable transport infrastructure in time for HS2 services that are scheduled to run from the city by 2026, subject to infrastructure delivery and Royal Assent.

1.3 Structure of the Document

As a programme level Strategic Outline Case submission, the structure and contents of the document are as follows:

- Chapter 3: Strategic Case – outlining the challenges and opportunities for transport in Stoke-on-Trent;
- Chapter 4: Strategic Case – option generation, defining the preferred option and a phased approach to delivery;
- Chapter 5: Economic Case – demonstrating the economic benefits of the packages;
- Chapter 6: Financial Case – providing an overview of the cost allocations for the programme;
- Chapter 7: Commercial Case – outlines the proposed procurement opportunities for delivery of the programme; and

- Chapter 8: Management Case – sets out the proposed programme governance arrangements, risk management, and monitoring and evaluation approach.

2 STRATEGIC CASE: THE LOCAL CONTEXT

2.1 Introduction

This chapter outlines the strategic case for the Stoke-on-Trent Transforming Cities Fund Tranche 2 programme. It will provide a summary of how the programme will contribute towards the wider national, regional and more local policy objectives. Moreover, the case for much needed investment in sustainable transport is made. As part of this case, the key challenges and opportunities for sustainable transport investment are set out. The Strategic Case is presented, as follows:

- Section 3.2 –Study Area Locality;
- Section 3.3 – Stoke-on-Trent in the Context of the West Midlands Region;
- Section 3.4 – Stoke-on-Trent: It's Place within a Growing Economy
- Section 3.5 – Policy Context;
- Section 3.6 – Alignment with Wider Programmes and Strategies;
- Section 3.7 – Transport Challenges Facing Stoke-on-Trent; and
- Section 3.8 – An Opportunity for Stoke-on-Trent.

This strategic context has been critical to shaping the development of the City's Tranche 2 Fund programme, which is reported in Chapter 4.

2.2 Study Area Locality

The City of Stoke-on-Trent is situated midway between Manchester and Birmingham, and is 90 minutes from London by train with 5% passenger growth per annum expected. The City comprises a polycentric urban area.

Stoke-on-Trent is accessed from the motorway network via junctions 15 and 16 of the M6, between which the A500 runs, providing a link through the conurbation (see **Figure 2-1**). The A50 then provides an east-west link between the M6 and M1 motorways.

The City has excellent rail links. Stoke-on-Trent Railway Station is on the West Coast Mainline with a footfall of over three million passenger journeys per annum from a combination of local and long-distance journeys. Stoke-on-Trent Railway Station is planned to be a HS2 station hub served by up to 2 trains per hour which are scheduled to run from the city by 2026, and which will be accompanied by an associated growth in demand for travel by rail.

The vision is to create an iconic built environment around the existing Grade 2* listed station building and multi-modal & multi-functional mobility hub providing seamless transfers between rail and other modes, including bus services, supported by traveller facilities and a range of integrated land uses.

The City Centre is a mile from the Station and strategic road network (SRN). A high quality, regular, rapid and sustainable transport link is required to enable the City Centre to develop

into the ‘regional capital’ and the next Core City.

Figure 2-1 – Study Area Locality

2.3 STOKE-ON-TRENT IN THE CONTEXT OF THE WEST MIDLAND REGION

Stoke-on-Trent is the 13th largest city in the UK with an immediate population of 255,400[3], with a wider Staffordshire economy of 658,800 working population. The City’s economy was originally founded in the 17th Century on industrial pottery manufacturing with other traditional heavy industries including coal mining and steel. As the world capital of ceramics, it lies at the heart of a region with outstanding expertise in advanced engineering and energy transmission.

[3] 2017 ONS

Stoke-on-Trent is surrounded by the county of Staffordshire, a diverse county situated at the crossroads of England, with the greatest population of all of the shire counties in the West Midlands Region, with a population of around 870,900. This gives the Stoke-on-Trent & Staffordshire Local Enterprise Partnership (SSLEP) area a total population of 1,126,300, which makes it a powerful economic entity. The county shares borders with eleven other strategic authorities[4], with a sphere of influence which extends into the East Midlands and North West regions – the Midlands Engine and Northern Powerhouse.

Gross Value Added (GVA) as an absolute measure provides an indication of the total overall economic output and scale of an area, and in 2017 the total GVA of the SSLEP area was around £22.3 billion[5] (24% attributable to Stoke-On-Trent) - the 2nd largest total output of the strategic authorities in the West Midlands Region after Birmingham.

As of 2017, there were around 520,000 employee jobs[6] in the SSLEP area (24% attributable to Stoke-on-Trent) - the 2nd highest absolute number of employee jobs in the West Midlands Region after Birmingham, demonstrating the areas importance in terms of economic scale within its wider context.

2.4 Stoke-on-Trent: It's Place within a Growing Economy

2.4.1. Fourth Fastest Growing Economy in the UK by 2020[7]

The Stoke-on-Trent and Staffordshire economy has experienced strong growth over the past seven years (+18%), complemented by strong employment growth, with the SSLEP area having a slightly higher rate of growth than the UK as a whole (+17%). The economic geography of the UK is changing, with the growth of high-value knowledge intensive employment sectors. The core advanced manufacturing sectors have performed well and enabled the SSLEP area to maintain its unique specialisms in Energy, Auto-Aero, Medical

[4] Staffordshire shares borders with - Birmingham, Cheshire East, Derbyshire, Dudley, Leicestershire, Shropshire, Telford and Wrekin, Walsall, Warwickshire, Wolverhampton and Worcestershire
[5] Estimates of workplace based GVA allocate incomes to the region in which the economic activity takes place at current basic prices
[6] https://www.stokestaffslep.org.uk/app/uploads/2018/11/SSLEP-Annual-Report-2018-website.pdf
[7] Independent UK Powerhouse Report

Technologies, Agri-Tech and the Applied Materials sector, one of the most specialised in the UK.

The Ceramic Valley Enterprise Zone (Ceramic Valley EZ) is one of the most successful in the UK, at the very heart of Stoke-on-Trent and Staffordshire's continuing economic growth. It comprises six key sites totalling 140 hectares along the strategic A500 corridor in the heart of the City of Stoke-on-Trent. A key objective is to accelerate investment in a range of employment sectors including Energy and Power Generation; Advanced Manufacturing and Engineering; Applied Materials; Business and Professional Services, and Warehousing and Distribution. With five of the six sites under active development, businesses are continuing to take advantage of Stoke-on-Trent's strong strategic location and the city's economic growth. A number of developments are complete and occupied with others under construction or in the planning phase which account for a pipeline of more than 1,600 jobs, contributing significantly towards the achievement of an ambitious target of 6,700 new jobs.

SSLEP Growth since 2011

12% employment growth

18% GVA growth

50,400 jobs created

40% increase in new business creation

19% business growth

146% new homes growth

22% increase in population educated to NVQ4+ level

Employment

14% of employees work in the public sector in the LEP area, one of the lowest proportions in the West Midlands. Public sector employment has declined by almost a quarter since 2011. 86% work in the private sector (which includes universities and social enterprises).

Business and Professional Services have a crucial role in supporting the growth of the SSLEP area priority sectors. The growth ambitions for the urban centres, particularly Stoke-on-Trent (including by creating a new central business district with a strong professional services offer), will draw in a growing base of professionals looking to support indigenous businesses if the City can capitalise on its connectivity assets.

The City Council is committed to the renewal of Stoke-on-Trent to become a Core City forming the focus for economic growth in the Manchester – Birmingham corridor. At the centre of the UK motorway network, with four international airports and one sea port all within an hour's drive, and centrally positioned on the national rail network, Stoke-on-Trent is ideally placed for business and provides excellent value in terms of commercial property and labour markets.

There has been substantial development activity across the City, with over £120m of investment in the last five years including:

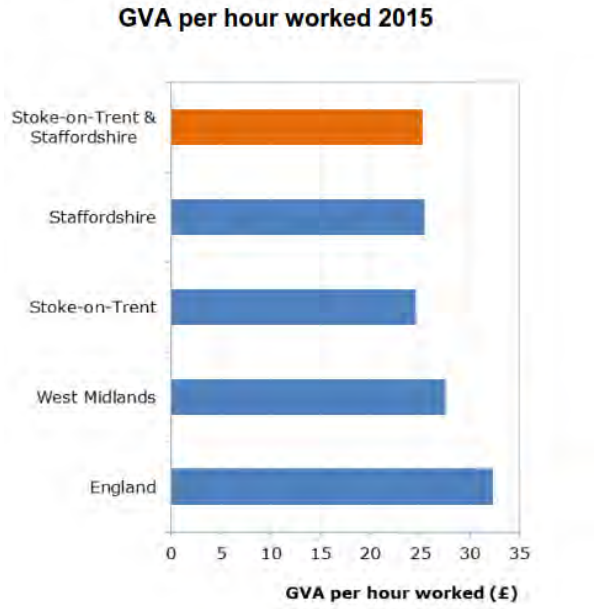
- in the City Centre:
  - £55m Smithfield office development (£20m Hilton Hotel under construction) and £14m bus station;
  - £15m of partner funding to deliver improvements close to the Rail Station; and
  - £10m City Centre Access Programme funded by the SSLEP.
- £40m Etruria Valley Link Road will open up the Ceramic Valley EZ;

- Housing growth is being driven by Fortior Homes' £35m scheme at Smithfield alongside delivering the Housing Zone; and
- Adjacent to the Rail Station, Staffordshire University is building a £40m Innovation and Apprentice Hub.

2.4.2. *Re-Balancing the Economy*

The local economy has changed significantly since 2011, when it was still feeling the effects of the economic downturn and unemployment was high. Since then the SSLEP area has been very successful in generating a large number of jobs, increasing earnings and reducing unemployment to the point where there has been close to full employment for some time.

However, while productivity has increased in terms of overall levels of Gross Value Added (GVA), relative levels of GVA continue to lag behind other parts of the country. GVA per head of population is often used as a measure of relative productivity, and stood at around 71% of the UK average in the SSLEP area in 2015. GVA per hour worked is considered to be a more comprehensive indicator of labour productivity and the preferred measure at sub-national level[8]. Stoke-on-Trent and Staffordshire had a GVA per hour worked of £25.30 in 2015, around 80% of the UK average.



Source: Regional GVA 2015, ONS

Improving this is a key aim of the SSLEP and City Council, given that economic prosperity is fundamental to the local economy and to the quality of life of its residents. A vibrant and diverse economy, offering high-value, high-wage job opportunities and future prospects provides a more dynamic business environment and puts more money in the pockets of its residents, so that they and their families can live the lives they want.

The Transforming Cities Fund will improve connectivity, create new access to jobs and help to close the GVA gap.

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[8] Gross value added for local enterprise partnerships in England: 1997 to 2015, February 2017, ONS, https://www.ons.gov.uk/economy/grossvalueaddedgva/articles/gvaforlocalenterprisepartnerships/1997to2015

2.4.3. *Socio Economic Context*

Despite an improving labour market picture, the City still has significant pockets of deprivation – which is much higher than the national average with 80% of the city being an area with some deprivation and 18% of households living in fuel poverty. The city is the 14th most deprived local authority area in England, and some 30% of residents live in areas classified in the 10% most deprived in England, with a 6.6% above national average for claimed benefits. Incomes in the city lag behind, with workplace earnings 13% below the national figure and 6% behind the West Midlands regional figure.

Figure 2-2 - Indices of Multiple Deprivation

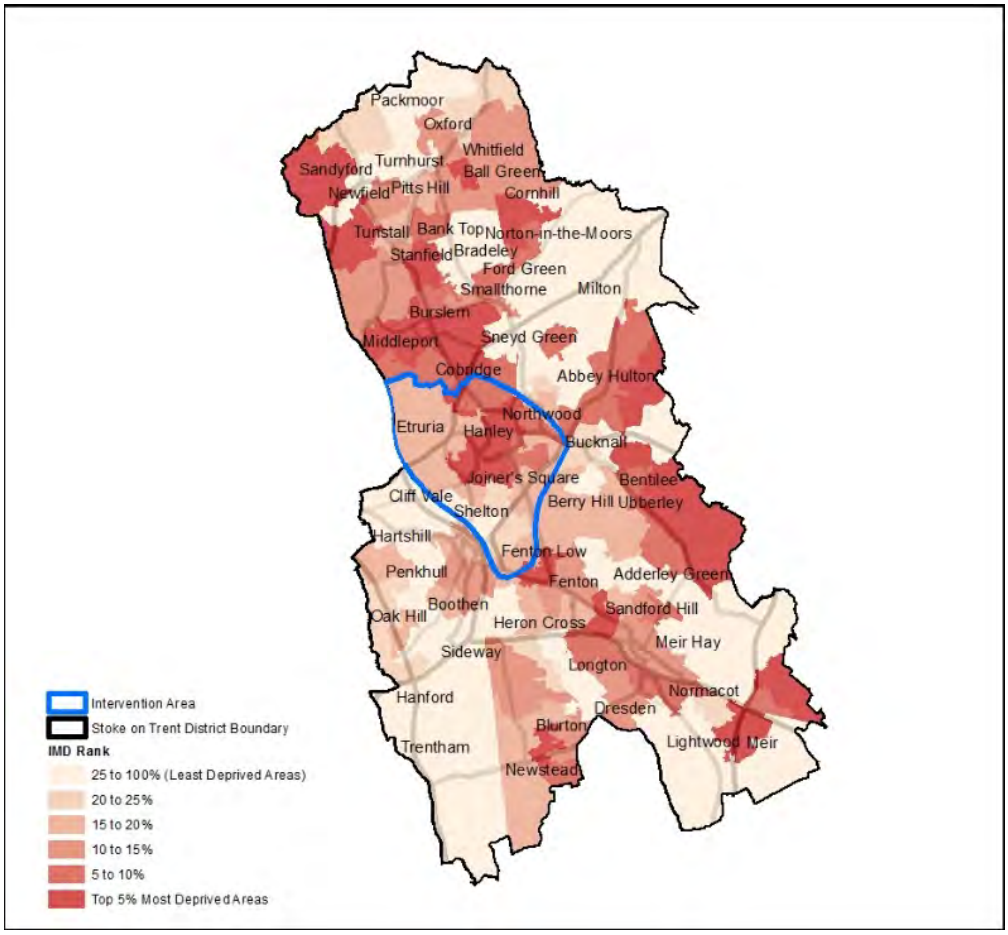


Figure 2-2 shows the pockets of deprivation within Stoke-on-Trent District. It identifies that areas which suffer the most deprivation are scattered across the city with the north west, south east and central areas seeing the highest levels of deprivation.

As well as a combined Indices of Multiple Deprivation score, several separate indicators are included below to illustrate the varying levels of deprivation by Lower Super Output Area. These are income, living environment, health and crime. The results of these individual indicators are presented in **Figure 2-3** to **Figure 2-6**. The most disadvantaged areas portrayed by the indicators are around the north and east of the City as well as the areas around the City Centre at the heart of the Intervention Area.

Figure 2-3 - Income Deprivation

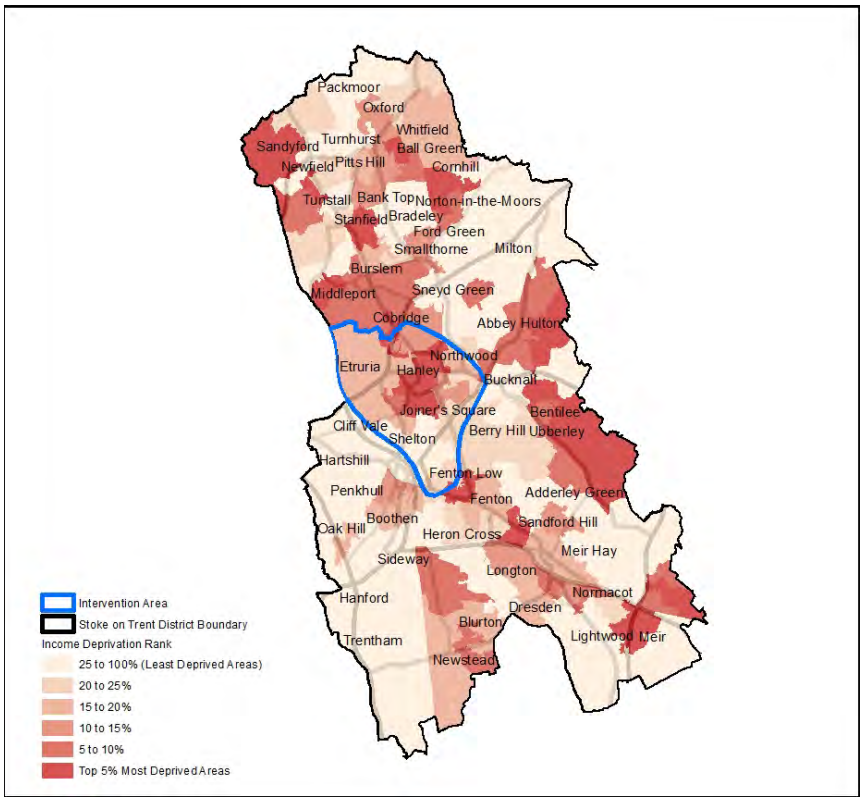


Figure 2-4 - Living Environment Deprivation

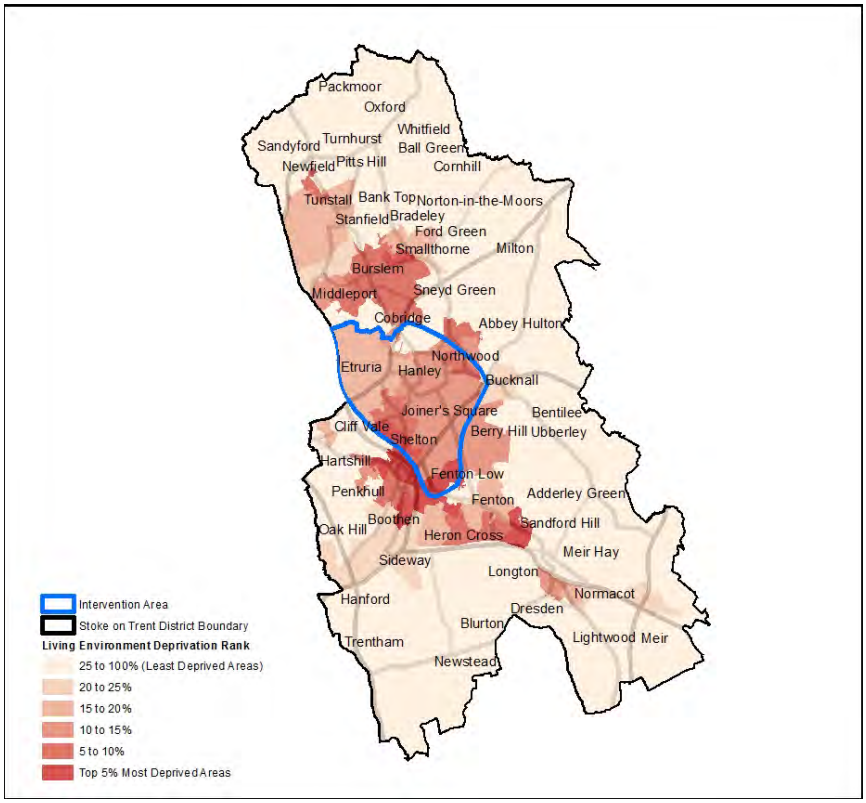


Figure 2-5 - Health Deprivation and Disability

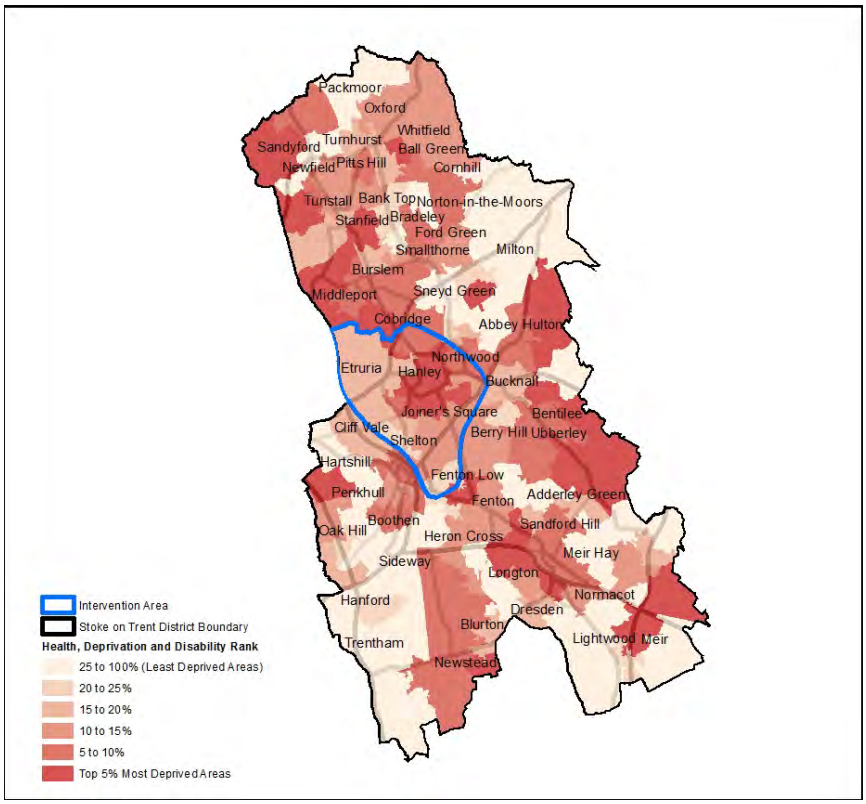
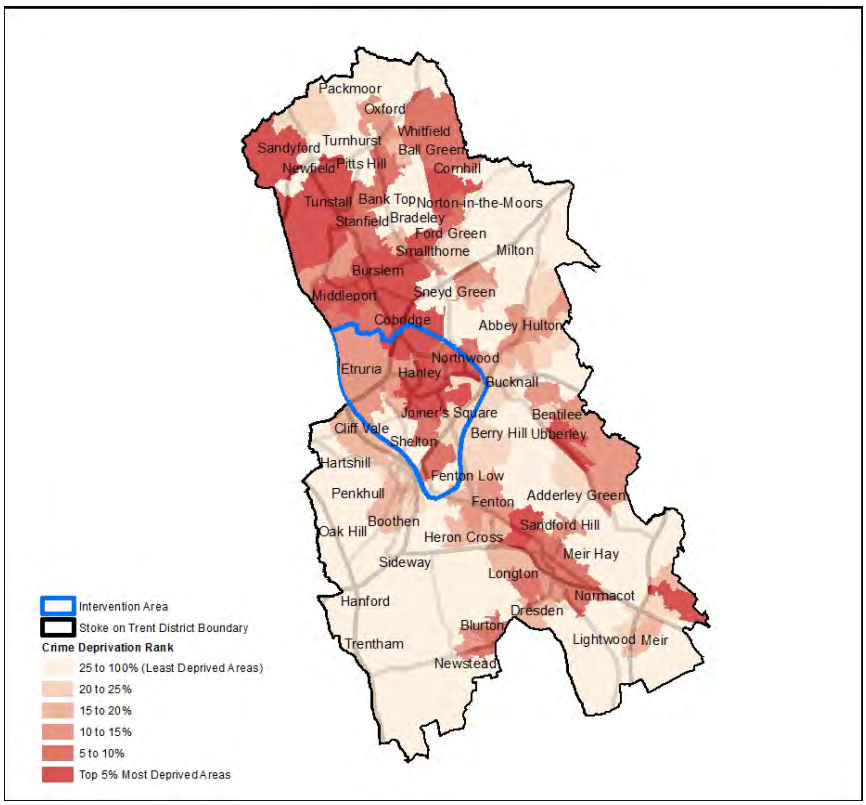


Figure 2-6 - Crime Deprivation



Levels of car ownership in the city are low with 30.9% of households not having access to a car (rank 286/348 local authorities). However, despite this, journey to work data illustrates that the use of a private car makes up a relatively high proportion of trips with 78% of people travelling to work by car, as shown in **Table 2-1**. This compares against 77% and 68% across the West Midlands and England and Wales respectively. In comparison, the very low 1% rail usage is evidence that due to a number of factors, such as frequency and capacity of local services, proximity of stations to housing and employment, and access to those stations, rail does not receive its fair share of commuting traffic.

Table 2-1 – Method of Travel to Work (2011 Census)

Method of Travel to Work	Stoke-on-Trent	West Midlands	England and Wales
Light Rail	0%	0%	4%
Train	1%	3%	6%
Bus	8%	8%	8%
Driving a car or van	69%	70%	62%
Passenger in a car or van	9%	7%	6%
Bicycle	2%	2%	3%
On foot	11%	11%	12%
Total	100%	100%	100%

Improved connectivity to the areas where there are higher levels of deprivation is one mechanism to improve access to employment and training opportunities, to make all the communities across Stoke-on-Trent attractive places to live and work.

Improving skill levels of residents will support the challenges the City faces with regard to productivity.

Table 2-2 – Qualification Levels, 2018

Qualification	Stoke-on-Trent	Stoke-on-Trent (%)	West Midlands (%)	Great Britain (%)
NVQ4 and above	35,600	22.5	33.1	39.3
NVQ3 and above	64,300	40.6	51.9	57.8
NVQ2 and above	101,800	64.3	70.4	74.9
NVQ1 and above	122,900	77.7	81.4	85.4
Other Qualifications	14,100	8.9	8.3	6.8
No Qualifications	21,200	13.4	10.3	7.8

*Source: ONS Annual Population Survey

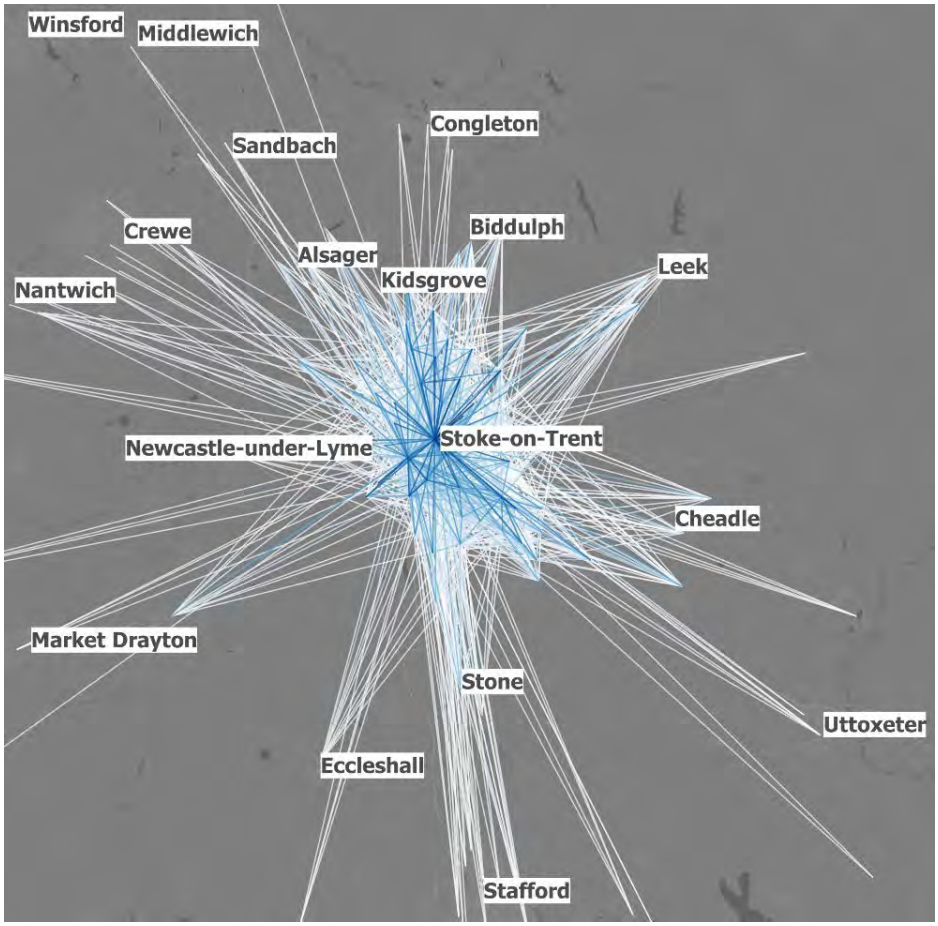
The proportion of the working age population in Stoke-on-Trent who have no formal qualifications is high at 13.4%, compared to the national average at 7.8% and West Midlands average of 10.3%. The City also has comparatively few people educated to

degree level - only 22.5% of residents of Stoke-on-Trent have NVQ4+ qualifications, compared to 39% nationally and one third of West Midlands residents. The Local Transport Plan points to research that indicates in areas associated with deprivation and low income people find it more difficult to engage in educational activities. Transport impacts on participation if direct journey times to educational establishments are longer than 30 minutes.

2.4.4. Travel Demand and Interaction

Commuting patterns in the SSLEP area are relatively self-contained, with 77% of residents living and working in the area. The economic success of Stoke-on-Trent and Staffordshire over recent years is shown by changes in commuting flows between the last two Censuses. Whilst the SSLEP area remains an overall net exporter of labour, this is reducing as more jobs are created within Stoke-on-Trent and Staffordshire leading to more commuting into the area. Between 2001 and 2011 the overall number of people commuting into Stoke-on-Trent and Staffordshire to work increased by over 16,000, compared to an increase in outflows of just 9,500. The attractiveness of the area as a place to live and work is also shown by the fact that self-containment increased by more than 27,500 over the period.

Figure 2-7 – Travel to Work Movements to Stoke-on-Trent District (10+trips)



According to the 2011 census, circa 100,000 people work within the Stoke-on-Trent City boundary with 60% living and commuting internally and the remaining 40% travelling from outside the district boundary. The 2011 journey to work flows for all modes show that there a high number of people travelling into Stoke-on-Trent for work from Newcastle-under-Lyme, Biddulph, Leek, Stone and Stafford (see **Figure 2-7**), despite Newcastle-under-Lyme Biddulph, and Leek not being rail connected. North Staffordshire in general is quite poorly rail connected.

In order to maximise the potential of HS2 the need for enhanced regional and local connectivity to and from the Station is of paramount importance.

2.5 POLICY CONTEXT

The UK Government, as well as regional and local authorities, have identified the need for investing in strategic infrastructure to improve the country's productivity and increase economic growth and overall wellbeing in a way that is socially and environmentally responsible. In addition, the need for rebalancing the economy and shifting away from targeting purely 'net national' impacts has become increasingly important. This need to create an economy that works for everyone and every region has been highlighted in several national, regional and local policies. Infrastructure projects and changes delivered to stimulate the economic development of the study area of influence need to consider these policies to ensure consistency with the wider national framework and other infrastructure initiatives.

2.5.1. National Policy

The Government is committed to creating an economy that works for everyone, to increasing productivity, and providing better access to good jobs.

At a national level, the Government's Industrial and Transport Investment strategies outline the need to actively support the UK's long-term productivity and economic development through strategic infrastructure projects and investments. The Industrial Strategy sets the overall objective of creating an economy that boosts productivity and earning power throughout the entire UK. It identifies five main foundations of productivity:

- Ideas – 'the world's most innovative economy'
- People – 'good jobs and greater earning power for all'
- Infrastructure – 'a major upgrade to the UK's infrastructure'
- Business Environment – 'the best places to start and grow a business'
- Places – 'prosperous communities across the UK'

Improved infrastructure plays a key role in the Industrial Strategy, as the need for better connectivity to link up people and markets to attract investment has been highlighted. To stimulate more inclusive economic growth through transport investments, the strategy also takes greater account of regional imbalances to ensure that growth can be achieved across all regions in the UK. DfT's Transport Investment Strategy[9] is closely aligned with the Industrial Strategy. The key objectives of the Transport Investment Strategy are shown in **Table 2-3**.

Table 2-3 – Transport Investment Strategy Objectives

Objective	Challenge
Create a more reliable, less congested, and better-connected transport network that works for the users who rely on it	Current transport networks have become increasingly out-of-date and experience increasing demand, causing delays and less reliability. In many places the transport network does not provide the connections people and businesses need.
Build a stronger, more balanced economy by enhancing productivity and responding to local growth priorities	UK productivity lags behind other developed countries and prosperity and benefits have not been shared evenly between different regions, leaving some communities being left behind.
Enhance the global competitiveness by making Britain a more attractive place to trade and invest	The long-term success in a globalised world will depend on the UK's ability to attract job creating investment, enhance the country's industrial strengths and enhance global trade.
Support the creation of new housing	Transport infrastructure is considered as one of the keys to unlocking development and delivering places people want to live.

As part of the Government's Industrial Strategy and the National Productivity Investment Fund, the Transforming Cities Fund aims to drive up productivity through improved connections between urban centres and suburbs. To do this, investment in infrastructure is necessary to improve public and sustainable transport connectivity in some of England's largest cities.

Many city centres have seen significant redevelopment and regeneration in recent years, however this has not always spread to outlying areas, held back through poor transport links. The Transforming Cities Fund seeks to rectify this, delivering significant investment in packages of projects to improve key intra-urban corridors, improving access to jobs.

At the same time, UK national productivity continues to lag behind other countries, with significant differences in GVA per hour worked between cities. Few cities outside of London have a higher productivity than the national average, and Stoke-on-Trent is no exception. As part of the Industrial Strategy, the Government is committed to doing more to improve

9 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/624990/transport-investment-strategy-web.pdf (DfT, Transport Investment Strategy, 2017)

productivity across the country, and with this Fund will seek to do this through improved public transport connectivity.

Improvements to National Rail stations and connectivity into multi-modal and multi-functional mobility hubs are encouraged through the Fund and it supports the Future of Mobility Grand Challenge to improve people's lives and the country's productivity and put the UK at the forefront of the industries of the future. In part, it is doing this through the funding of Future Mobility Zones, however, it is also essential that all projects funded through the TCF, and more widely, give due consideration to future mobility issues.

The Government's **Future of Mobility: Urban Strategy (March 2019)** is a core policy document for guiding the delivery of improvements to transport, connectivity and mobility. The report outlines the government's approach to maximising the benefits from transport innovation in cities and towns. It sets out the principles that will guide government's response to emerging transport technologies and business models. The document also presents the 6 high-level 'key changes' that are fuelling the evolution of transport, which are:

- **Cleaner Transport:** There is an increasing trend that transport is becoming cleaner. This is in part due to decreasing battery prices, improvements in energy density and the developments of alternative fuels. The UK has plans to be at the forefront of the design and manufacturing of zero emission vehicles, aiming for all new cars and vans to be zero emission by 2040.
- **New Modes:** Technology is enabling new ways of transporting people and goods; drones, new forms of micro-mobility and light electric freight vehicles are just a few of the ways in which technological advancements are impacting transport.
- **Data & Connectivity:** The increasing availability of data and improved connectivity is enabling travellers to have access to more information related to their journeys as well as enabling vehicles to communicate with each other and provide information to network providers. Additionally, advances in machine learning could provide a number of opportunities in the transport sector, such as self-driving vehicles, improved reliability of transport services, and identifying congested areas etc.
- **New Business Models:** New digitally enabled business models are emerging with regards to transport provision. For example, ride-hailing and mobility as a service are both digitally enabled models that have impacted the transport sector.
- **Automation:** Improved sensor technology and computing power/software is enabling increasing levels of automation in transport across a number of modes. UK companies are at the forefront of this field with several projects expected to deploy self-driving vehicles on public roads and spaces by 2021.
- **Changing Attitudes:** Road travel demand across England and Wales is expected to increase over the coming decades, however this is mainly driven by population growth. When looking at travel per person, people are actually travelling less. This is due to a decline in commuting driven by flexible working and working from home, as well as

decreases in leisure trips such as trips for shopping (these have decreased by 30% over the last decade).

Additionally, the report outlines the following nine principles that will underpin the Governments approach in facilitating innovation in urban mobility for freight, passengers and services:

1. New modes of transport and new mobility services must be safe and secure by design.
2. The benefits of innovation in mobility must be available to all parts of the UK and all segments of society.
3. Walking, cycling and active travel must remain the best options for short urban journeys.
4. Mass transit must remain fundamental to an efficient transport system.
5. New mobility services must lead the transition to zero emissions.
6. Mobility innovation must help to reduce congestion through more efficient use of limited road space, for example through sharing rides, increasing occupancy or consolidating freight.
7. The marketplace for mobility must be open to stimulate innovation and give the best deal to consumers.
8. New mobility services must be designed to operate as part of an integrated transport system combining public, private and multiple modes for transport users.
9. Data from new mobility services must be shared where appropriate to improve choice and the operation of the transport system.

Finally, the report concludes by highlighting the need to effectively manage the technological changes associated with the transport sector in order to boost productivity and investment, increase export opportunities, and create high quality jobs. If these changes are not managed, undesired effects such as increasing congestion or reducing sustainable travel could occur. The report, therefore, states that: "**the Government is committed to managing this transition to maximise the benefits and mitigate the risks of changes in mobility"**.

2.5.2. Regional Policy

Midlands Engine

The Midlands Engine initiative looks to make the West and East Midlands an engine for growth for the UK economy. It sets out the actions being taken to address productivity barriers enabling businesses to create more jobs, export more goods and services, and grow their productivity. It is backed by business, 11 Local Enterprise Partnerships and local authorities including Stoke-on-Trent City Council.

The strategy recognises that the success of the Midlands does not just depend on the Midlands itself, but investment and collaboration with Government to kick-start and accelerate growth. The prize is huge; if the areas £207 billion economy were as productive as the UK average it would be a £261 billion economy.

The 2030 Vision for Growth sets out five priorities for investment that will enable the Midlands to contribute to the UK's Industrial Strategy and drive post-Brexit growth.

Of the five priority areas where collaboration can accelerate growth most rapidly two resonate with the DfT's Transforming Cities Programme:

1. Connect the Midlands

- Maximise new technologies to deliver a radical transformation of Midlands connectivity
- Deliver the Midlands Connect Transport Strategy and accelerate HS2
- Secure full funding for a rail, road and smart connectivity investment package
- Become the UK's transport innovation testbed
- Maximise the potential of our two international airports, including through bold new ideas to boost capacity

The TCF bid supports the ambition for the Midlands Engine to be regionally, nationally and globally connected so that the Midlands transports people to work, goods to market and allows the exchange of ideas that power the knowledge economy.

To facilitate this connectivity, Midlands Connect was formed in 2014 to research and develop a strategy for improving transport connectivity across the Midlands to boost economic growth. The strategy (described further below) is now moving forward across rail, road and smart connectivity, working closely with the DfT, to modernise and upgrade transport networks.

2. Invest in Strategic Infrastructure

- Invest in the most sustainable and advanced technology to deliver the infrastructure required to meet future business and resident needs
- Invest in our long-term energy security
- Create a 5G digital testbed
- Increase our logistics and freight capabilities
- Use HS2 as a catalyst for growth, helping deliver the East Midlands HS2 Growth Strategy, the Curzon Masterplan and UK Central Hub

The TCF bid supports the Midlands Engine priority to invest in strategic transport infrastructure that will boost the economy by up to £5 billion per year by 2040, creating a total of 300,000 new jobs. Our bid aligns with the new approach to connectivity that will reduce congestion and improve journey times across the Midlands through a joined-up approach to infrastructure improvement and investment.

Other Linkages

In addition to the five work packages, the Midlands Engine has two local priorities, skills and devolution, which will be delivered by Midlands Engine partners.

Skills shortages are a significant barrier to growth. 31% of people of working age in the Midlands Engine area are educated to degree level or higher, which is significantly lower than the national average. The Midlands Engine also has an above-average percentage of its working-age population without any formal qualifications; 10% compared to a national rate of 8%. Partners are working hard to address these issues, implementing innovative initiatives targeting local skills gaps to meet business needs.

Stoke's TCF bid will improve access to education facilities clusters around Stoke Railway Station.

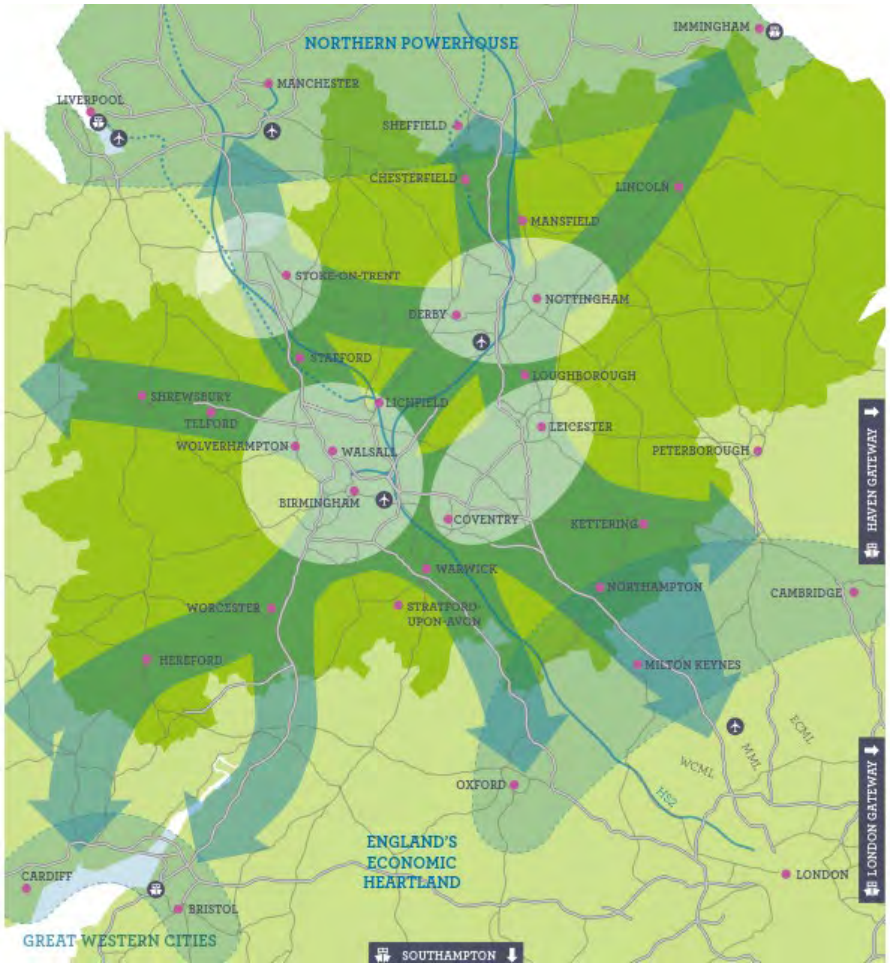
Midlands Connect Strategy: Powering the Midlands Engine

Midlands Connect is the transport arm of the Midlands Engine. It's 25-year transport strategy for the region has the potential to add £5 billion a year to the UK economy, contributing to the Midlands Engine vision of creating 300,000 additional jobs by 2030 and growing the economy by £54 billion.

Midlands Connect was established in October 2015 with one objective - to determine what transport infrastructure was needed to boost the region's economy. Midlands Connect's economic impact study identified four economic hubs (including North Staffordshire / Stoke-on-Trent) and six intensive growth corridors, including the Nottingham / Derby – Stoke-on-Trent – Crewe corridor.

Each of its priority projects focuses on developing better connectivity within these hubs, between the hubs and from the hubs towards neighbouring markets and international gateways, to support economic growth. This simple idea is the foundation on which more detailed development work is now building.

Figure 2-8 – Midlands Connect: Strategic Economic Hubs and Intensive Growth Corridors



Each of its priority projects focuses on developing better connectivity within these hubs, between the hubs and from the hubs towards neighbouring markets and international gateways, to support economic growth. This simple idea is the foundation on which more detailed development work is now building.

In September 2019, Midlands Connect published their 'Midlands Engine Rail Programme' that identified £3.5bn investment across 7 rail infrastructure investment projects in the Midlands. Included within that programme is investment into the Derby – Stoke-on-Trent – Crewe line, specifically selected due to the impact that improved services in this corridor could have on social mobility, housing and economic growth. Currently, only 3% of travellers in this corridor choose rail at present, so there is evidently suppressed demand for rail travel along this corridor.

An ongoing feasibility study is investigating options for both doubling the frequency of services (currently 1tph) and also an improved journey time (currently 79minutes). Analysis suggests this could increase demand by up to 72%, stimulating growth, reducing congestion, and providing an improved link into HS2 at both Stoke-on-Trent and Crewe stations. Although one of the options for improved journey times is the operation of a semi-fast service that may not stop at Longton and Longport, there is existing political support to double the frequency at these suburban stations in Stoke-on-Trent in line with the ambitions of this TCF bid. Discussions are ongoing with East Midlands Railway, who, in parallel are also investigating both the doubling of capacity through improved rolling stock, and the doubling of frequency to 2tph. New rolling stock is expected to be introduced from 2021, and from December 2021, no single carriage trains will remain in operation on this route.

Stoke-on-Trent & Staffordshire Strategic Economic Plan – 2017-2018

The SSLEP has a bold and ambitious vision to transform the local economy which it calls "50:50:10" which is the stated aim to grow the economy by 50% and generate 50,000 new jobs in the next 10 years with a vision for the SSLEP area of:

> "*…. the transformation of Stoke-on-Trent into a truly competitive and inspiring Core City (and) enabling the growth of a thriving economy….* ***where everyone has the opportunity to access a better job****."*

To achieve its ambition, the SEP is built around five interlocking objectives, which tie in with the foundations of the Industrial Strategy, namely:

- **1. Stoke-on-Trent as a Core City and 2. A Connected County**: To be the one of the strongest performing economies in the UK. As a truly Connected County, and through the continued transformation of Stoke-on-Trent into a competitive and inspiring Core City, our ambitious plans will harness the rapid economic growth of the Midlands Engine and in particular the continued growth of nearby conurbations including Manchester and Birmingham.

- **3. Competitive Urban Centres:** To support our ambitious plans for growth, we will create the right mix of places that are attractive as a destination to live, work and visit, underpinned by the right infrastructure.
- **4. Sector Growth:** Our traditional industries will be transformed through innovation whilst we will ensure that growth in new higher-value sectors flourishes.
- **5. Skilled Workforce:** Our future economy will be underpinned by an outstanding skills system that focuses on the skills pathway of individuals as they go through life, enabling individuals to make informed choices about the best route for their learning, career development, re-skilling and upskilling.

The SEP's vision for the Stoke-on-Trent as a Core City:

> *"Stoke-on-Trent will rapidly grow into a Core City, harnessing its city centre economy, a spirit of enterprise & innovation, unique indigenous energy and cultural offer to become a net contributor to UK plc. It will form the centrepiece of a powerful UK growth corridor along the M6 and strategic rail routes linking Birmingham and Manchester. We will bring forward a sustainable package of employment, housing and educational sites along a city centre spine which will enhance the scale and quality of our competitive offer to businesses, entrepreneurs, learners and residents."*

To achieve this vision the SEP sets out several action areas for Stoke-on-Trent to become a distinctive and competitive City Centre at the heart of a new Core City, namely:

- Enhancing the City Centre's shopping, cultural and leisure offer
- Supporting and enhancing commercial activity in the City Centre
- Ensuring the City Centre is appealing and attractive
- **Improving connectivity to and within the City Centre**
- Encouraging more residential living within, and at the edge of the City Centre
- Attract more investment and visitors by improving the image and brand of the City Centre

The Transforming Cities Fund will help deliver these action areas by significantly enhancing the first impressions of the city through a world-class station hub and providing improved transport connectivity which improves peoples' access to jobs and opportunities, bringing a major economic boost to the City and driving economic growth and value for the City Region.

2.5.3. Local Policy

Stoke-on-Trent and Newcastle-under-Lyme Joint Local Plan

The adopted Development Plan covering Stoke-on-Trent is the Newcastle-under-Lyme and Stoke-on-Trent Joint Core Spatial Strategy (2009 – 2026) (CSS). This is a strategic development plan document and has a particular focus on targeted regeneration of the inner urban core of the city which would include the Stoke Railway Station Area. Criterion 14 of Policy ASP 1 of the CSS is relevant to the Stoke Railway Station area and states:

'……The connection between the City Centre to the University Quarter, Stoke railway station and Stoke Town Centre by means of the University Boulevard will be enhanced'

Stoke-on-Trent Railway Station is therefore seen as a key gateway into Stok-on-Trent and the City Centre. The important enhancement of the Station itself and connections from the Station to surrounding town centres and the City Centre is being carried forward into the review of the CSS and into new updated planning polices which will cover the period to 2037.

Newcastle-under-Lyme Borough Council and Stoke-on-Trent City Council are preparing a new Joint Local Plan. This is a statutory development plan which will eventually supersede the Core Spatial Strategy and will set out the Councils' Vision, Strategy and Policies for development across the two authority areas up to 2037.

The new Joint Local Plan is at the Draft Plan Stage having been the subject of Strategic Options and Preferred Options consultations in 2017 and 2018. These consultations involved the consideration of the draft Vision, Aims and Objectives including the following objectives which are relevant to the Stoke-on-Trent Railway Station area:

- to support and boost existing and new opportunities for business growth, encouraging new investment and entrepreneurship fostering innovation in the science and technology sectors and digital connectivity (Objective E1);
- to reduce the need to travel, improve accessibility and increase the opportunities for sustainable and innovative modes of active travel (Objective T2);
- to encourage the re-use of historic assets (Objective HER3); and
- to promote safe and resilient buildings and efficient management of land and resources.

It is also proposed that the Joint Local Plan will contain a specific policy on development around Stoke-on-Trent Railway Station which was set out at the Preferred Options stage, and the details of which are currently being prepared for consultation as part of the Draft Joint Local Plan in Spring 2020.

It is the intention that the policy will include a specified area upon which complementary uses to the railway station use will be supported – providing the strategic framework for an integrated multi-modal and multi-functional mobili hub and giving appropriate planning criteria in line with the vision, aims and objectives of the Joint Local Plan and taking future mobility and sustainable transport efficiency into consideration.

The Joint Local Plan also recognises that Stoke-on-Trent Railway Station is a Grade II* listed building and its efficient uses is of paramount importance to its longevity. The Joint Local Plan will therefore set out the level of appropriate uses in order to help ensure the buildings upper floors in particular can be brought back into use.

Local Industrial Strategy

The SSLEP has established a Steering Group and appointed consultants Metro Dynamics to produce the Stoke-on-Trent and Staffordshire Local Industrial Strategy (LIS). The LIS emerging vision is for:

> *''A highly connected, inclusive economy, using digital, transport and energy networks to drive growth through innovation, scale up businesses, inward investment and raising enterprise and ambition.''*

Early SWOT analysis (Strengths, Weaknesses, Opportunities & Threats) framed against the five main foundations of productivity for the Stoke-on-Trent economy has identified:

Ideas: An innovative economy

Strengths	**Opportunities**
• Two Universities aligned to the City • A small base of larger companies undertaking innovation and research and development, including companies such as Bet365, Lucideon • Building and developing strengths in relation to activity around Energy	• Build upon University and city business specialisms (growth sectors) • Ceramic Park & Lucideon • Cluster around Energy/Low Carbon • Industry diversification of existing products and materials and the ability to then spin-off cutting edge businesses • Partner SME's with universities and likeminded businesses • Use of future Prosperity Funds
Weaknesses	**Threats**
• Low baseline of R&D within SME's • Better understanding of R&D funding through Innovate UK and how businesses can benefit	• High productivity activity concentrating and clustering in to major UK cities • Future of university structure • Lack of Prosperity Funds to support innovative businesses within the City

People: Good jobs and greater earning power for all

Strengths	**Opportunities**
• Workforce availability • Loyal static workforce • Large workforce working in engineering and manufacturing sector	• Raise skills levels • Ability to attract new residents • A skills system better aligned with current and future needs of the local economy • A more inclusive and prosperous workforce
Weaknesses	**Threats**
• A low skilled work base • High number on incapacity benefits • Intergenerational worklessness • Low wages and GVA	• Quality of Secondary Education • Retention of Graduates • An FE system that does not deliver to local skills requirements • Higher wages being paid in commutable cities, leading to a transient workforce

Infrastructure: Major infrastructure upgrades

Strengths	**Opportunities**
• West Coast mainline & access to SE England • M6, Smart Motorway & multiple Airports and Port access Links between A500, A50 and M1 • Established logistics presence due to location and major road networks	• **Impact of Transforming Cities Fund** • Positive impact of HS2 • Cities own broadband Network • Energy programmes and initiatives – resilience • Local Plan providing additional employment sites.
Weaknesses	**Threats**
• Volume of traffic within the centre of the City and weak road capability • Lack of future employment land	• Lack of investment in local and national transport systems • HS2 not being delivered beyond Birmingham • Impact on growth in business rates due to lack of new or regenerated employment sites

Business Environment: The best place to start and grow a business

Strengths	**Opportunities**
• Sector Strengths in Manufacturing, Ceramics and Advanced Materials, Energy, Business & Professional, Logistics • An established business support network • Reasonable property values	• A more advanced business engagement strategy, linking the City council to the needs of local businesses • More schemes such as Grants for Growth • Developing higher level skills for business • Use of future Prosperity Funds to support business growth and start-ups • Economic fortification to protect the local economy from downturns • A willingness to build on sector strengths
Weaknesses	**Threats**
• Low levels of GVA • Lack of suitable employment stock and land to support business growth within the City	• Growing and supporting businesses that do not lead to increased levels of GVA • BREXIT Impact? • Lack of Prosperity Funds to support businesses in the City • Economic fortification to protect the area from downturns in the economy

Places: Prosperous communities

Strengths	**Opportunities**
• Central location between Midlands Engine and Northern Powerhouse • A City with Strong ambition and strong leadership • Quality of life /cost of living • Diverse Visitor Economy	• Ability to grow the City (Core City) and communicate its core identity • To develop a strong and internationally recognised and diverse City • Develop a more socially inclusive and prosperous city through:

• A strong international identity via ceramics • Cultural identity	o **Transforming Cities Fund** o Improved Housing offer o Improved Educational attainment o Recently announced Tourism Sector Deal
Weaknesses • Low levels of productivity, impacting on prosperity (low levels of pay, lack of higher skilled jobs, innovation with SME's, availability of land for employment and housing)	**Threats** • Devolved Local Government being a priority • Lack of funding opportunities

Summary

At this early stage of the LIS the City Council is working to ensure the following Stoke-on-Trent findings are embedded:

- Ensuring that the City's key existing sectors and those able to offer significant growth are represented within the LIS;
- advocate stronger links between its universities and companies, facilitation of more research & development activity both within specialist sectors and more broadly across the economy;
- address the low skill levels characterised within the City, pushing for programmes which address higher skills both academic and vocational;
- continuing the push for ever improving secondary education results;
- **maximising the potential benefits of the Transforming Cities Fund and lobbying for HS2 Phase 2;**
- ensuring the City has the tools to support its key established businesses and pushing more companies into export activity; and
- **Build upon the identity of "Stoke-on-Trent" with its international track record as a place that can design and create, produce and export.**

Local Transport Plan

The City Council's Local Transport Plan (LTP) will prioritise investment into improving the capacity, reliability and connectivity of the city's transport network, improving journey times for all users, undertaken in a way which protects the environment and protects human health, whilst promoting sustainable economic growth as highlighted by the three overarching goals within the LTP:

- **Economy:** supporting the local economy through increasing productivity for existing businesses and encouraging new investment by making the area more attractive – better connectivity and easier to move around.
- **Environment:** improving the local environment through reducing the impact of traffic (air and noise) and moving towards more sustainable transport technology and modes, coupled with improving the appearance of local areas.
- **Health:** caring for local health through improving access to transport, transport safety and encouraging active travel such as walking and cycling.

2.6 ALIGNMENT WITH WIDER SCHEMES & STRATEGIES

The schemes to be delivered through this Strategic Outline Case are developed in the context of existing national and local transport schemes that are already being developed or delivered.

2.6.1. Transforming Cities Tranche 1 (Secured Funding / Do Minimum Scenario)

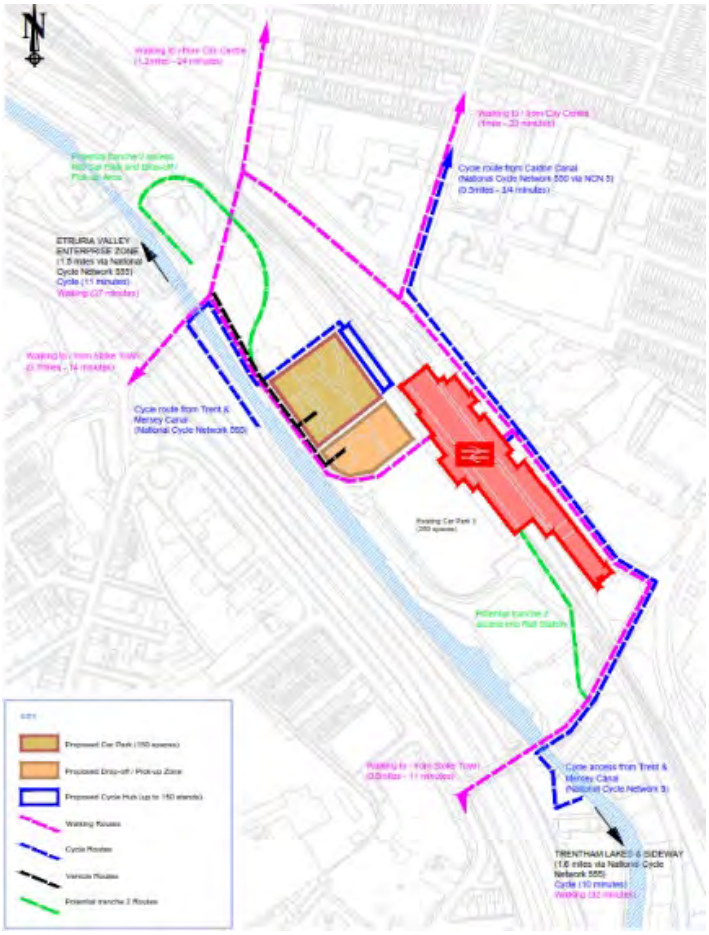
Three Tranche 1 scheme bids were submitted as part of an integrated plan to improve sustainable transport provision across the city to target congestion, improve accessibility, and facilitate economic growth. Two bids were successful which are fully integrated and complementary to each other and collectively are essential to achieving the wider sustainable transport vision for the city. This includes the 'a legible city' and 'Stoke-on-Trent Rail Station Gateway scheme' bids.

Critical to improving air quality and reducing congestion is to create "a legible city" which promotes more short trips by walking and cycling, rather than the use of private and/or polluting vehicles. Within this scheme are five linked components to promote more short trips by walking and cycling:

- Winton Square – improving the public realm at the entrance to Stoke-on-Trent Railway Station, generating an enhanced sense of arrival before moving to the next phase of the visitor journey. Works will include replacement paving, decluttering and installation of hostile vehicle mitigation bollards.
- Boughey Road – improving the linkages between the two Staffordshire University campuses. Works will include a new area of paved public space and enhanced crossing facilities.
- Canal Tow Path Upgrades – enhancing the surface of the tow paths and installing lighting to promote the use of the extensive canal network as a viable option for safe cycling and walking routes.
- Wayfinding – promoting walking and cycling routes between the railway station and key centres of employment through the installation of the legible London approach to finger-posts and monolithic signs.
- Hanley Park – using the park as a safe cycling and walking route between the railway station and the city centre by enhancing footpaths and steps through the Victorian park.

The 'Stoke-on-Trent Rail Station Gateway scheme' is the first phase of the proposed Station Hub to be developed as part of the main Transforming Cities Fund bid. Improvements are to be located at the rear of the station next to the Manchester bound platforms (access off Vernon Road / Stoke Road junction) and includes:

- Relocation of existing Car Park 1 (150 parking spaces) on Station Road to the rear of the Station with 15 electric vehicle charging points
- New short stay setting down and pick up facilities, including taxi rank
- Taxi EV charging points
- Additional 150 space cycle parking hub, with cycle rental scheme
- Station power upgrade to support new facilities at station (now being delivered under Tranche 2).



The approved Tranche 1 scheme will:

- Kick start the creation of a transformational central multi-modal transport hub at the Station, which will be a focus of the main Tranche 2 bid; and
- Improve links between the Rail Station and City Centre and key employment areas.

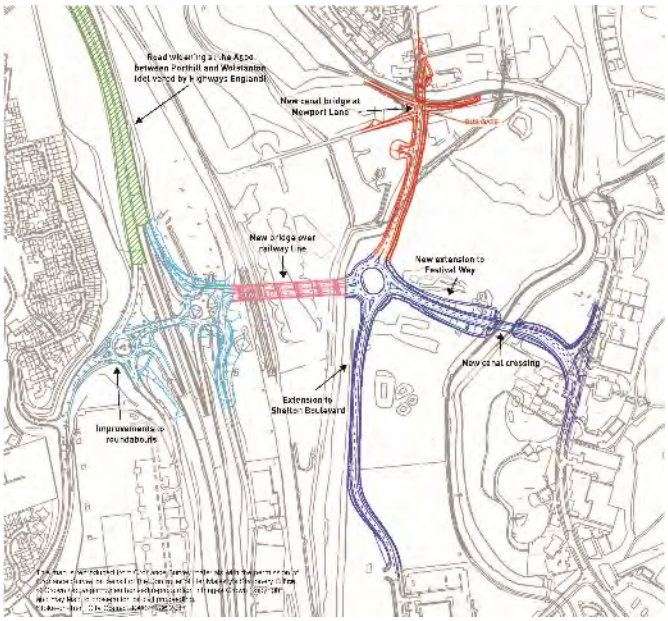
2.6.2. *Etruria Valley Link Road (Do Minimum Scenario)*

This committed scheme involves building a new link between the A500 and Stoke-on-Trent City Centre and is being funded by central Government through the DfT, the Regional Growth Fund, SSLEP and the City Council, costing in the region of £40 million. The scheme will enhance the local economy by:

- Unlocking a 39 ha Core Strategy site providing 13 ha of employment land, a mixed use local centre and 200 houses;
- Reducing congestion on the local highway network;
- Reducing the impact the development site has on local residential areas;
- Accelerating growth by bringing forward the development programme; and
- Reducing severance for transport users

The Etruria Valley Link Road will include:

- Improving the two roundabouts at the Wolstanton junction;
- A new viaduct crossing over the West Coast mainline;
- A central roundabout linking Shelton Boulevard, Newport Lane and Festival Way;
- Replacing the canal bridge at Newport Lane;
- A new canal bridge crossing to Festival Way; and
- An extension to Shelton Boulevard.



The scheme will also include three junction improvements:

- The creation of a mini roundabout at the junction of Grange Lane and Church Lane;
- Road widening at Newport Lane between the junction of Maddock Street and Furlong Lane; and
- Enlarging the Marina Way roundabout at Festival Park.

Planning permission for the scheme has recently been granted by Stoke-on-Trent City Council and Newcastle Borough Council, with the road crossing both areas. The scheme has been referred to the DfT for a final funding decision on the link road.

2.6.3. A500 Etruria Widening (Do Minimum Scenario)

The A500 is a key route for local and regional connectivity, connecting the M6, Nantwich, Crewe and other Cheshire towns with the city of Stoke-on-Trent, carrying thousands of vehicles a day through the city for business and leisure. It also links to the A50 which provides a link to the East Midlands as well as being a local connector. Over time, the number of vehicles on the A500 has increased, leading to congestion and delays. Highways England's scheme will tie into the Stoke-on-Trent Etruria Valley Link Road scheme.

Highways England's scheme involves widening the A500 from two to three lanes between Porthill (A5271) and Wolstanton (A527) to increase capacity. In addition, there will be:

- speed limit will be reduced from 70mph to 50 mph;
- existing public footpath closed that runs alongside the A500; and
- an alternative footpath/cycle way provided at a safer distance from the carriageway, as well as safe pedestrian access to cross the road at Porthill junction.

The scheme is estimated to take 18 months to complete, starting February 2019 and finishing in autumn 2020. It will cost in the region of £16.5 – 17.5 million.

2.6.4. Rail Franchise Commitments

Both the West Coast and East Midlands franchises have recently been awarded – West Coast Partnership to First Trenitalia, and East Midlands to Abellio Group. As part of both awards, the new Train Operating Companies have made franchise commitments to deliver improvements to services and stations along their routes. These can be summarised as follows:

West Coast Partnership (First Trenitalia):

- New ticket vending machines (TVMs)
- Improved waiting rooms and more seating
- New First Class lounge
- Free WiFi across the station

In addition, although not publicised yet, requirements of the franchise also included working with Local Authority partners to regenerate under-utilised station buildings and engage more closely with communities, including accommodating community uses into stations. Once the franchise has commenced on 8th December 2019, we will be engaging further with First Trenitalia to align their plans for Stoke on Trent Station with the ambitions set out in this TCF bid.

East Midlands Railway (Abellio):

Abellio took over the operation of the East Midlands franchise, now branded as 'East Midlands Railway' in August 2019. Their commitments include:

- Increased capacity on services from December 2021, through doubling of train lengths from 1-car to 2-car
- Refurbishment and modernisation of rolling stock including WiFi, passenger displays, increased luggage space and charging points (sockets and USB)

At both Longton and Longport stations, the following passenger enhancements have been committed, and are likely to be delivered as quick win schemes:

- Installation of LED Lights
- Installation of help points
- Station WiFi
- Installation of new / improved signage
- Passenger announcement systems (Longport only)

- Smart TVM Kiosks
- Repainting
- Installation of new / replacement platform validators

2.6.5. *Other Rail Schemes*

Additional rail schemes which highlight the potential growth of Stoke-on-Trent Railway Station and its importance as a Gateway have been identified through Midlands Connect[10] and West Midland Rail Executive[11] policy documents and include:

- A new Crewe – Stoke-on-Trent – Birmingham service very recently commenced; and
- Development of a Business Case for enhanced capacity on Derby – Stoke-on-Trent – Crewe rail services (as described at 3.5.2 above).

2.6.6. *City East Link Road (Potential Future Scheme)*

The City East Link Road (CELR) is a Midlands Connect prioritised large local major transport scheme focussed on providing a new route to connect the inner urban core of Stoke-on-Trent and the south and east of the city onwards towards the Strategic Road Network (SRN). The project will provide a 'missing link' in the network (the CELR) which will connect the city centre with the MRN and beyond through existing links to the SRN.

CELR will deliver wide-ranging benefits across the existing network, including significant journey time and safety benefits and supporting the potential delivery of major commercial development opportunities. The CELR project is a longstanding aspiration of the City Council as the scheme promoter and is widely supported through policy at a local, regional and sub-regional level.

The City Council has already invested significant funds in the development of the proposals for the CELR which has secured an initial £24.6m funding package towards the project. £16m of local funding will be used towards the delivery of the CELR project whilst a complementary funding package of £8.6m of Local Growth Funding has been secured through the SSLEP towards the delivery of two strategic junction/corridor improvements associated with the CELR.

In addition to core improvements relating to journey time savings and safety benefits; the CELR will:

- alleviate traffic congestion along key bus corridors including A50 Victoria Road and A52/A5008 Bucknall Road, helping to improve journey time reliability;

[10] Powering Midlands Engine (March 2017)
[11] A 30-year Rail Investment Strategy 2018-2047 (December 2018)

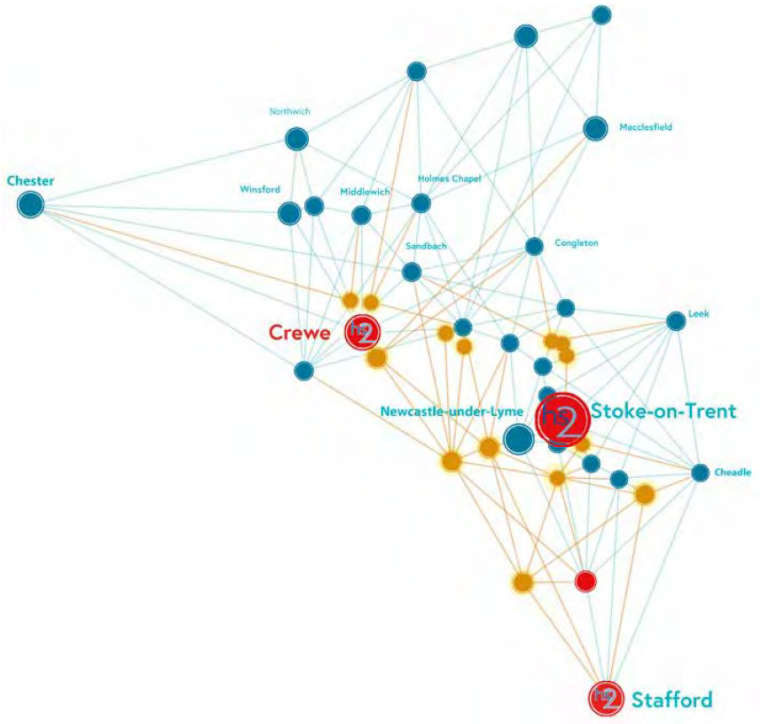
- incorporate dedicated footway / cycleways which will tie into the National Cycle Network including routes 5 and 550; and
- provide drivers with a more direct link to the A50, via the Heron Cross Roundabout allowing more direct access to the strategic road network.

The CELR will also support the SRN by:

- help alleviate major congestion at the A50/A500 intersection which is a key focus for Midlands Connect;
- providing an alternative route from the SRN (A50) into the city centre and key destinations in the south and east of the city, the CELR will help to support the SRN.

2.6.7. *HS2 Growth Strategy*

HS2 will deliver a step change in travel times, transforming access to labour, jobs, and housing markets, boosting skills, and increasing rail capacity for local services and freight.



Centred on three HS2 transport hubs at Crewe, Stoke-on-Trent and Stafford, investment in enhanced supporting infrastructure will unlock development, driving growth throughout all of region, and across neighbouring economies. Land values will increase and the area's attractiveness as a living and working location will grow. The regional partners' ambition is to deliver 100,000 new homes and 120,000 new jobs by 2040.

It is within this context that the Constellation Partnership describes Stoke-on-Trent as:

> *"the capital of The Constellation – it's vibrant, unique, resurgent city heart. The commercial, retail and leisure hub, developing rapidly and with huge potential for further growth - supporting existing town centres and building on the ongoing transformation of the city centre. Home of Staffordshire University and Ceramic Valley Enterprise Zone and heart of the UK ceramics industry, and at the forefront of innovative housing development, the city is one of three key industry, growth, and transport hubs that will drive growth throughout the Constellation."*

Stoke-on-Trent Railway Station is planned to be a HS2 station hub served by up to 2 trains per hour. The West Midlands Rail Executive '30-year Rail Investment Strategy 2018-2047'

(December 2018) states that rail services and connectivity will be developed in corridors which see the greatest economic and population growth up to 2032, maximising the benefits to be taken from capacity released from HS2, which includes Stoke-on-Trent.

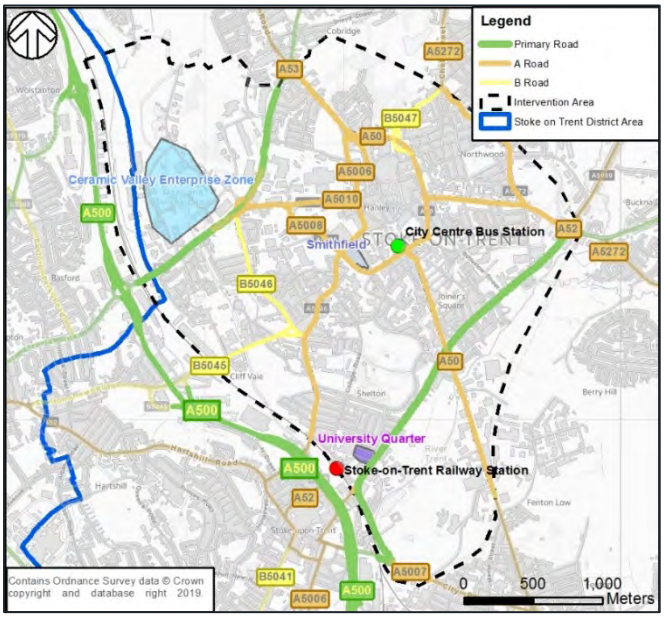
Regional partners point to HS2 as a catalyst for improvement with an overall vision for Stoke-on-Trent as a transformed urban centre where new housing and social infrastructure will be located. It highlights that investment in housing and employment areas should be coherent with a need to develop area Masterplans.

2.7 TRANSPORT CHALLENGES FACING STOKE-ON-TRENT

One of the key challenges to Stoke-on-Trent's economy is congestion and poor connectivity, leading to a cost to the local economy of £80 million per annum, equating to 23 hours lost productivity per person[12]. This is a major barrier to the City's aspirations for growth and job creation.

2.7.1. Highway Congestion

Stoke-on-Trent has unique transport challenges. It has developed from multiple urban centres which has created a polycentric city with dispersed travel demands and a physically constrained road network. The City's location makes it a key connector between the East and West Midlands and the Northwest. The M6, A50, A500 and A34 all converge on the city region. However, these strategic routes – many used for local trips - suffer from peak congestion and the local network is vulnerable to the effects of displaced traffic from the Strategic Road Network (SRN) leading to frequent and unpredictable congestion which is predicted to get worse over the coming years.



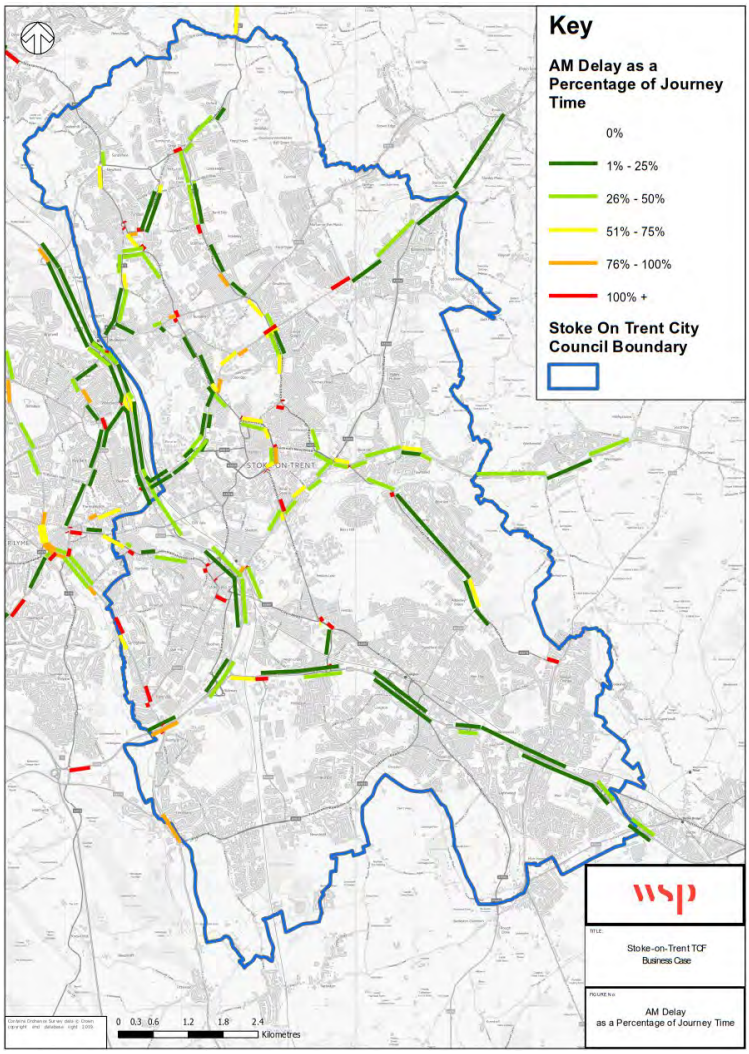
The highway network (see inset) is constrained in terms of land use and has limited scope for traditional highway improvements due to the nature of historic streets. Tackling congestion solely through new roads and capacity enhancements is not viable, in terms of physical space required, cost and delivery timescales, or fit with local and national transport policy. This has resulted in a need to consider other

[12] INRIX 2016 Traffic Scorecard

types of transportation improvements to alleviate these impacts and achieve economic growth. The high levels of congestion are the result of converging local and strategic traffic movements, impacting on the quality of life for local residents, causing environment problems and acting as a constraint on the economy. This reduces the attractiveness of the city for visitors and investors. There are a number of longstanding transport and travel problems including several constraints on the network resulting in issues around journey time reliability and local air quality.

Trafficmaster data gathered from vehicle mounted GPS data provides vehicles speeds across the network. Subsequently, delay can be calculated by comparing free-flow journey times to the slowest journey times. **Figure 3-9** shows delay as a percentage of the link's free-flow time for the morning peak period and showing a number of pinch point hotspots.

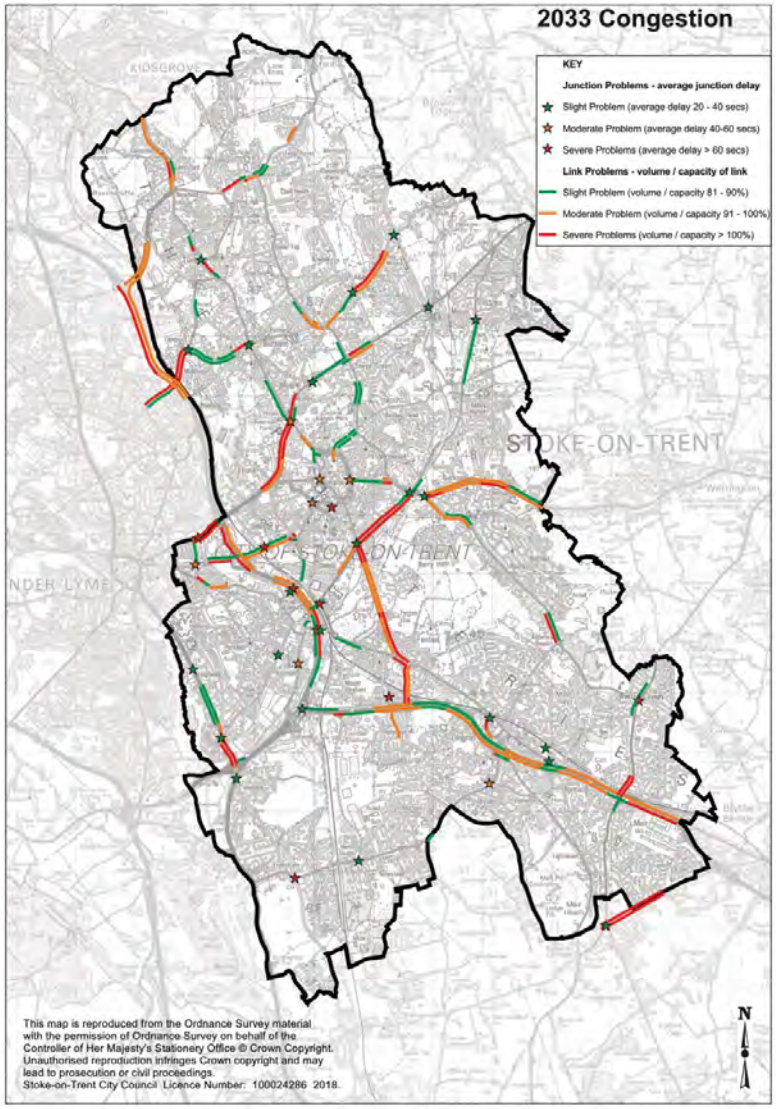
Figure 2-9 – Existing Morning Peak Delay as a Percentage of Journey Time



Congestion also has a major impact on bus journey times and punctuality. There is limited local rail service provision particularly between key locations, and this lack of attractive public transport alternatives has led to an increase in car usage for those who can afford, which further exacerbates congestion and air quality problems.

Future growth will exacerbate these problems as predicted by the North Staffordshire Multi-Modal Model for 2033 and shown overleaf in **Figure 2-10**.

Figure 2-10 – Predicted Future Congestion Issues (2033)

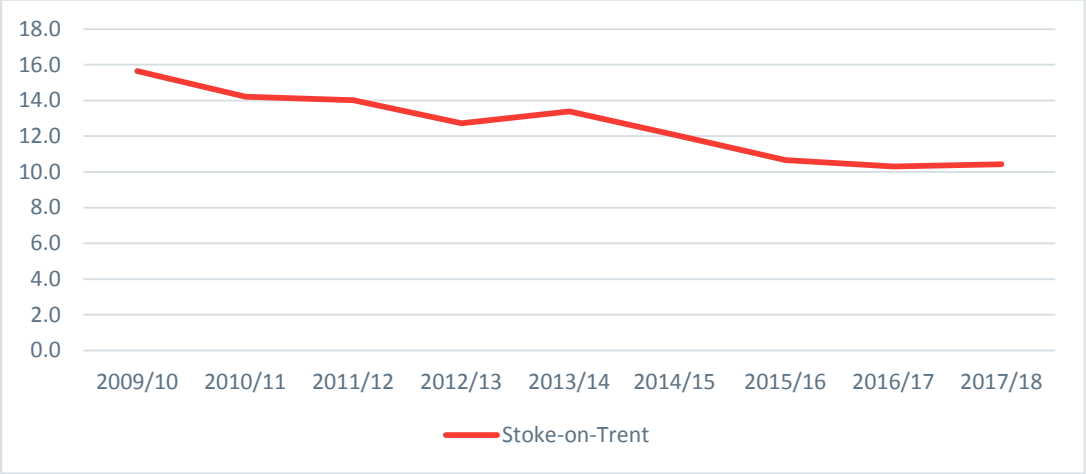


Tackling congestion solely through new roads and capacity enhancements is not a viable nor sustainable strategy.

2.7.2. Declining Bus Patronage and Quality of Bus Service Offer

Bus is a fundamental and significant component in the delivery of a modern, integrated transport network and accounts for a mode share of 8% of journeys for work within Stoke-on-Trent (2011 census). Accordingly, buses are a crucial component of the city's transport system. However, there has been a national trend showing a decline in bus journeys and Stoke-on-Trent is no exception. The annual number of local bus journeys reduced from 15.6 million in 2009-10 to 10.4 million in 2017-18 (see **Figure 2-11**).

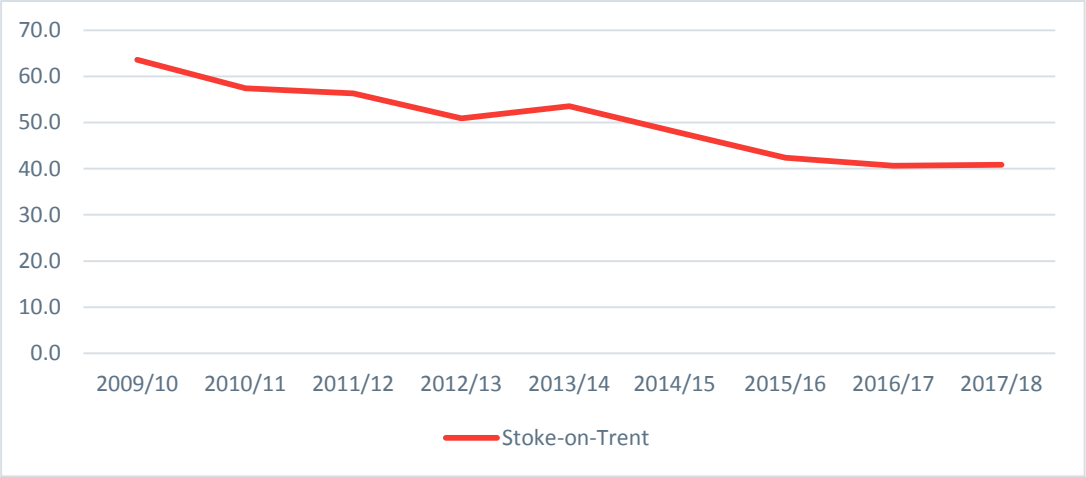
Figure 2-11 - Stoke-on-Trent Bus Passenger Journeys (millions)



Source: DfT Table BUS0109a Passenger journeys on local bus services, 2009/10-2017/18

Passenger journeys per head follow a similar trend, decreasing from 63.6 passenger journeys per annum in 2009-10 to 40.8 passenger journeys per annum in 2017-18 (shown in **Figure 2-12**).

Figure 2-12 - Stoke-on-Trent Bus Passenger Journeys per head



Source: DfT Table BUS0110a Passenger journeys on local bus services per head, 2009/10-2017/18

Stoke-on-Trent is served by a comprehensive bus network that provides frequent services to a number of surrounding areas. However, it currently suffers from unreliable journey times due to traffic congestion on the network, as previously described. The main bus station is the City Centre Bus Station located circa 1.6km north of the Rail Station and 2km south east of the Ceramic Valley Enterprise Zone.

There are five bus services that link the Railway Station and City Centre Bus Station, providing a daytime frequency of up to 15 buses per hour on a weekday. These include services 9, 14, 21, 23 and 25, as shown in **Table 2-4**. Other than the service 9 they all terminate at the City Centre Bus Station, providing few direct links between the Rail Station and areas beyond the City Centre.

Table 2-4 – Weekday Bus Services (per hour) between the Railway Station and City Centre

Service Number and Description		Weekday	
		Daytime	Evening
9	Biddulph – City Centre – Stoke – Newcastle – Clayton	2	1 - 2
14	City Centre – Barlaston – Stone – Eccleshall – Stafford	1	< 1
21	City Centre – Stoke – Trent Vale – Trentham	3	2
23	City Centre – Stoke – Fenton – Blurton – Newstead	3	1 - 3
25	City Centre – Stoke – Royal Stoke University Hospital – Newcastle – Keele	4 - 6	2 - 4

Source: First Bus and D&G, correct as of November 2019

It is noted that while there is good connectivity between the Rail Station and the City Centre, there are no through services to key employment opportunities beyond the City Centre apart from the half hourly corridor 9 service.

Analysis of accessibility modelling confirms town centres can be reached by a greater proportion of the resident population than more peripheral business parks. However, journeys by bus can take almost twice as long as the equivalent trip by car, reducing the ability of this mode to be a practical option for regular travel to employment and training, even more so when linked to a rail journey. The journey times by car, bus and rail between a number of key destinations is illustrated in **Figure 2-13**. It shows that travel time by bus between a number of destinations is significantly longer than travel time by car.

Figure 2-13 - Travel Time by Car, Bus and Rail

Burslem								
9 16	City Centre							
8 30	7 7	Etruria Valley						
3 5	11 30	10 37	Longport					
18 42	14 25	14 32	15 55 10	Longton				
15 45	15 22	12 30	14 34	16 35	Royal Stoke Hospital			
13 30	7 7	10 34	10 47 5	13 35 5	11 15	Stoke-on-Trent Railway Station		
13 47	13 23	11 60	12 38	7 32	12 33	8 10	Trentham Lakes /	
6 7	14 22	12 45	6 13	18 50	16 50	12 50	16 60	Tunstall

Car
Bus
Rail

Requires interchange

With limited dedicated physical infrastructure to give priority to bus services, and in order to achieve punctuality accounting for variable congestion, bus operators have had to sacrifice fast journey times, allowing extra time in timetables (via a layover period at the City Centre Bus Station) to enable on-time departure from timing points. However, local monitoring of bus punctuality has recorded a decline to less than 70% of buses on time at timing points, not helped by instability and continued rationalising of commercial bus services in response to the market conditions (joint local plan issues consultation – transport technical paper).

The need for better bus services and information is reflected in the National Highways and Transport (NHT) passenger satisfaction survey results for Stoke-on-Trent which showed poor customer satisfaction levels and bus punctuality (as shown in **Figure 2-14**), which clearly shows:

- A significant decline in the percentage of buses starting their route on time (from 05/06 to 14/15); and
- Lower percentage of buses on time at intermediate points compared to their starting point indicating congestion on the route resulting in bus journey time reliability issues.

Figure 2-14 - Bus punctuality in Stoke-on-Trent

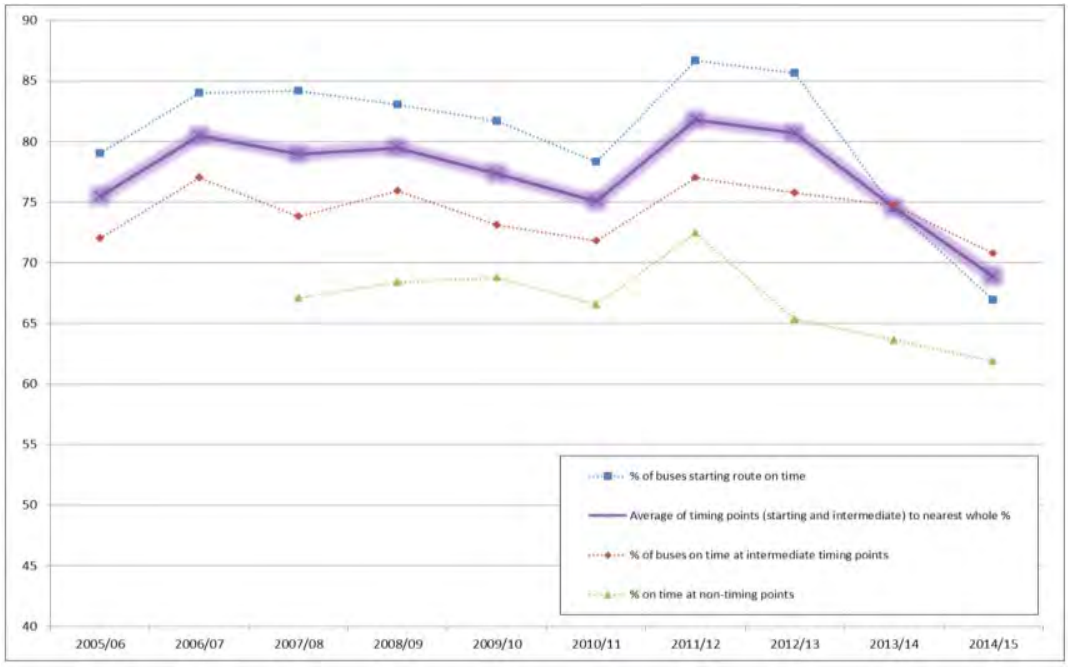


Figure 3.15 Redacted as commercially sensitive

- Buses provide an important role in providing people with access to educational, leisure and employment opportunities, particularly lower income groups. In line with national trends, bus travel in Stoke-on-Trent has decreased in recent years with bus journeys to work accounting for just 8% of overall mode share.
- Congestion has a major impact on bus journey times and punctuality leading to unreliable journey times resulting in poor overall customer satisfaction. It may be expected that bus journey times and punctuality will continue to deteriorate with increased demand to travel if not addressed.
- As a result, bus operators do not have the confidence to operate cross-city services, limiting access to employment opportunities by sustainable modes for all.

2.7.3. Developing Stoke-on-Trent Rail Station into a Next Generation Mobility Hub

Stoke-on-Trent Rail Station is at the heart of our Transforming Cities Fund proposals. Its position on the West Coast Mainline offers the city significant advantages and as one of the key business gateways serving the city region, it is of strategic importance that investment in station facilities continues.

The station is located within an area designated as the University Quarter. It is in the immediate vicinity of Staffordshire University, the Stoke-on-Trent College and the new Sixth Form College. It is only 2km from the City Centre, 500 metres from the main City Council civic offices, 5km from Newcastle-under-Lyme town centre and 200 metres from the heart of Staffordshire University campus. However, the railway running north – south in parallel with both the Trent & Mersey Canal and the A500 creates significant severance between the polycentric centres within the city. Vehicular, pedestrian and cycle movement between the two sides of the city are constrained to a limited number of corridors, of which Glebe Street to the south, and Stoke Road to the north of the station are pivotal. This is illustrated in **Figure 2-16**

Figure 2-15 - Stoke-on-Trent Rail Station

Figure 2-16 – Severance Feature and Walking Routes

This situation is exacerbated even further as the existing station layout is predominantly unidirectional, facing eastwards towards the University Quarter and the City Centre, and effectively turning its back on the western side of the city. Although half the station car parking is currently to the west (rear) of the station and a station entrance is present, the route is so vehicular-dominated that pedestrians and cyclists do not choose to access the station from the rear, instead electing to travel by another mode, or use the longer walk to the front of the station.

Rail Passenger Growth

The growth in passenger numbers on the rail network in recent years has been substantial. Stoke-on-Trent Rail Station attracted over 3.1 million entries and exits in 2017/18 and was used as a rail-to-rail interchange hub in a further 215,000 trips – most of these being interchanges between faster services between London, Manchester and Birmingham and

stopping services on the Manchester – Stoke-on-Trent and Derby – Stoke-on-Trent – Crewe line. **Figure 2-17** shows that over a 10-year period, from 2008/09 to 2017/18, the number of entries/exits has almost doubled.

Figure 2-17 - Total Entries/Exits Stoke-on-Trent Station

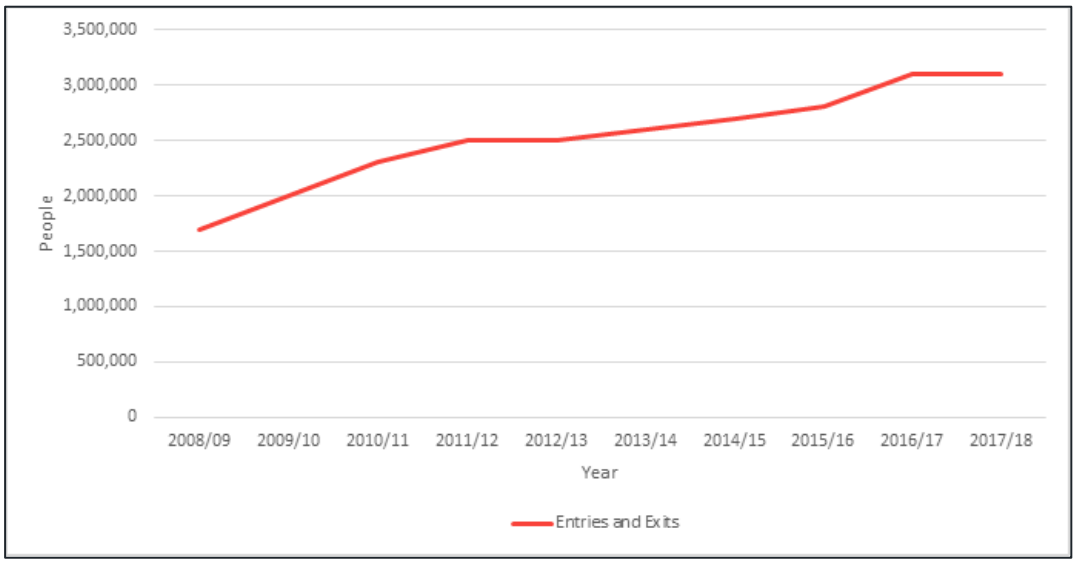


Figure 2-18 show the results of a pedestrian survey undertaken within the station over a 12-hour period (07:00-19:00) on the 16th November 2017.

Figure 2-18 - Number of Pedestrians Entering and Exiting the Station (16/11/17)

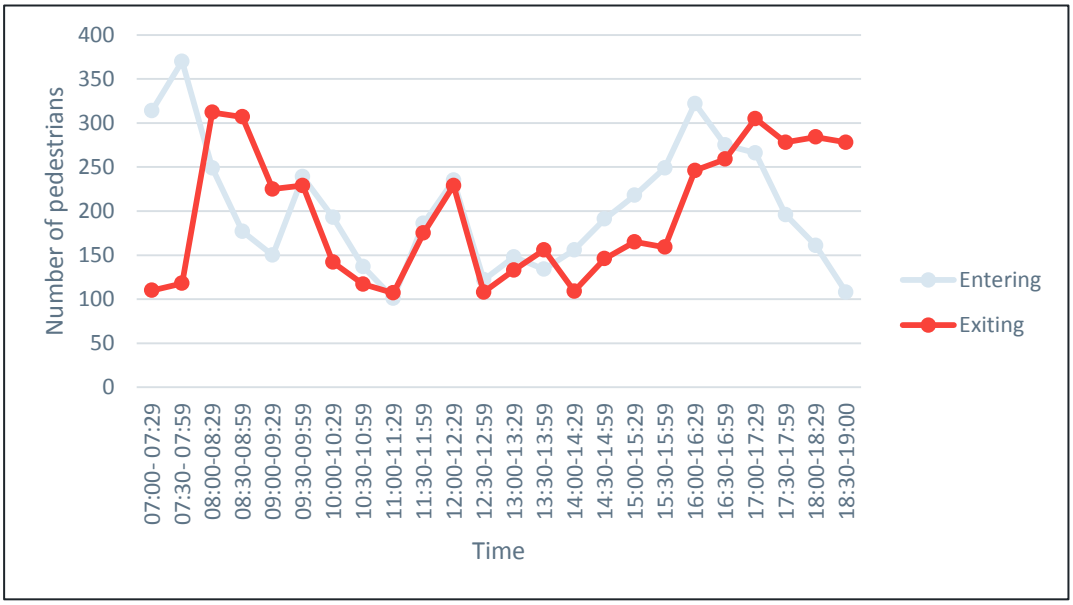


Figure 2-18 show that over a 12-hour period there were:

- Over 9,500 people entering and exiting the station;
- Entries and exits show a similar pattern over the 12-hour period which shows evidence of both out commuting and in commuting;

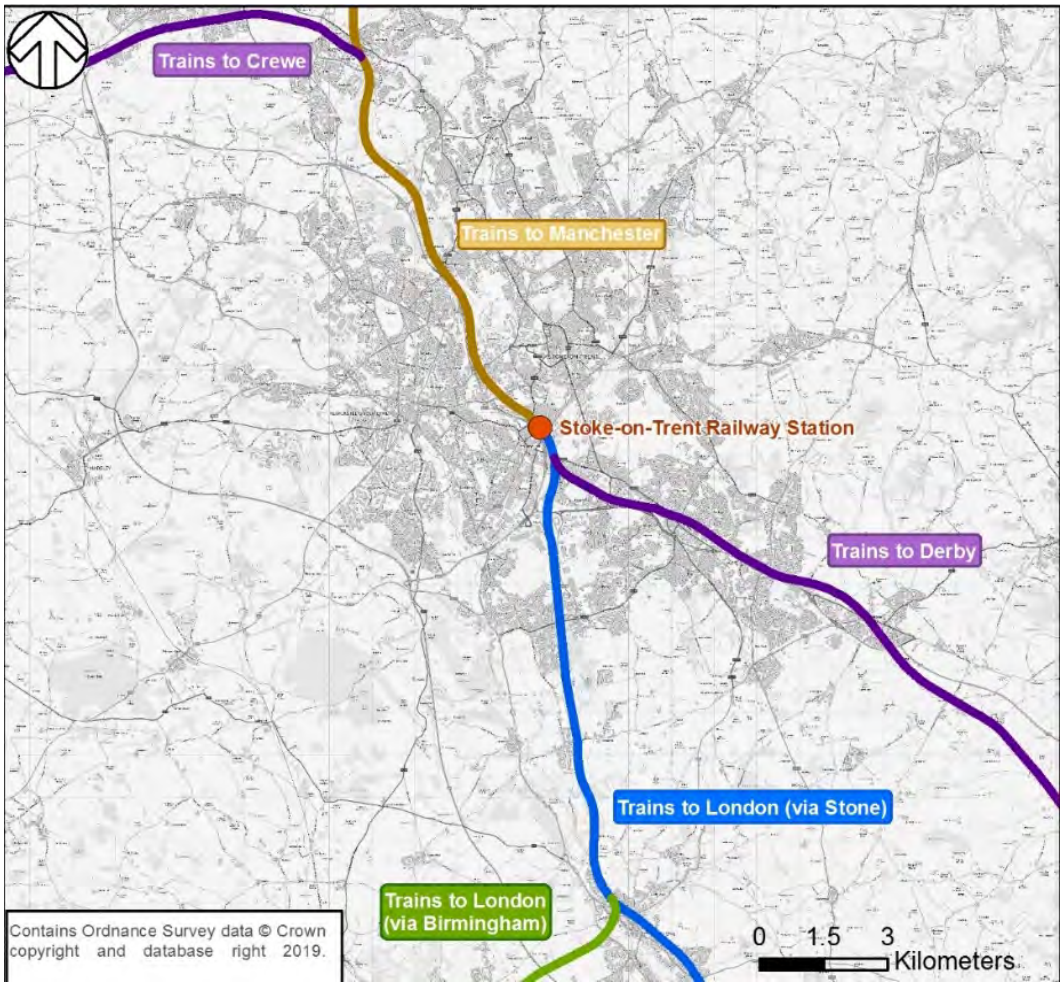
- Peak pedestrian counts within Stoke-on-Trent Station were between 07:30 to 09:00 and 16:00 to 18:00; and
- There is also a lunch time increase for both entries and exits which may linked to the presence of the Universities.

Existing service patterns for Stoke-on-Trent Station provide connections (see **Figure 2-19**) to local, regional and national markets:

- 2 trains per hour (tph) between Manchester and London (West Coast);
- 1 tph between Manchester and Stoke (Northern stopping service);
- 2 tph between Manchester and Birmingham and beyond (Cross Country);
- 1 tph between Crewe and Birmingham extended to London (London North Western Railway); and
- 1 tph between Crewe and Derby (East Midlands Railway).

The station has three operational platforms (2 through platforms and 1 north-facing bay used by the Manchester – Stoke stopping service), and although this provides sufficient capacity at present, it may be a constraint for aspirational future services and growth.

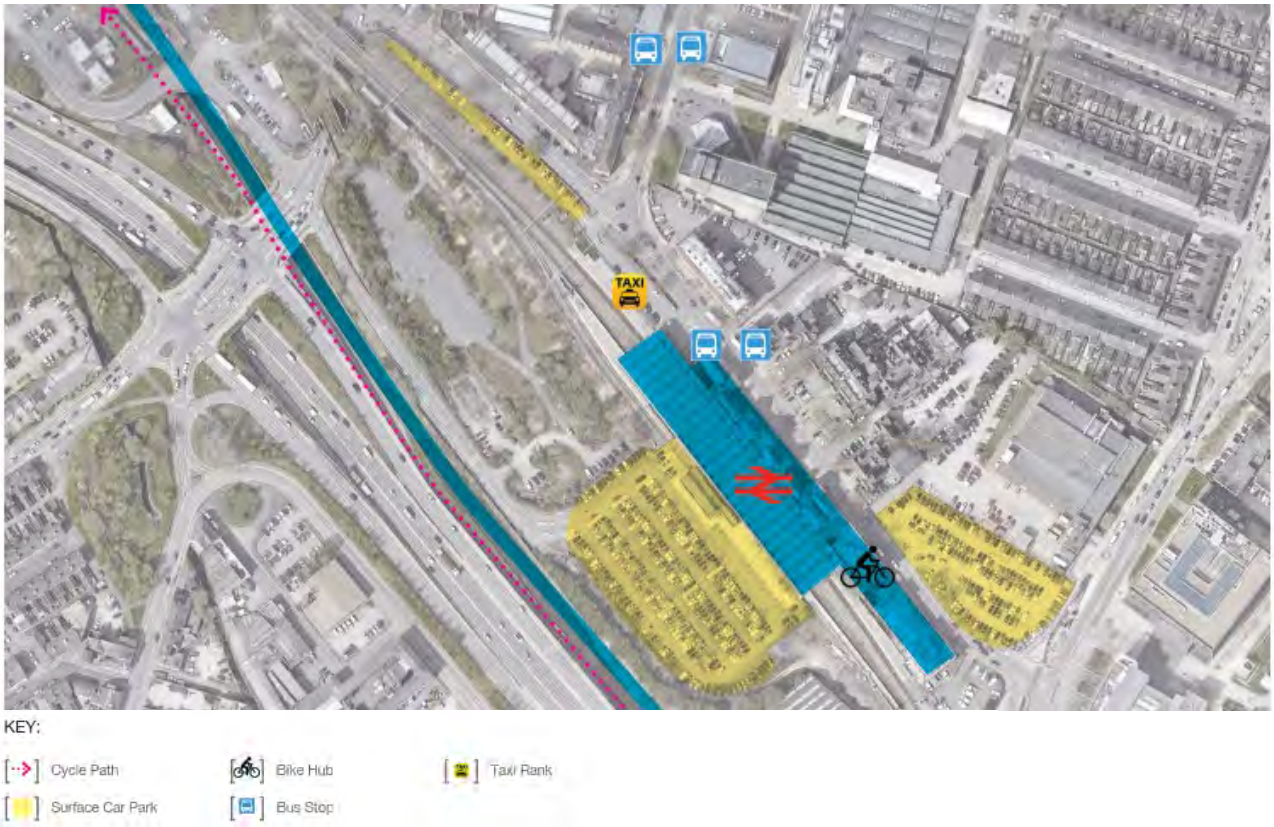
Figure 2-19 – Stoke-on-Trent Station Connections



Current Interchange Provision

For a modern station to operate, particularly as a mobility hub, it must have suitable access across a range of complementary first mile/last mile options comprising both traditional, new and shared modes: such as walking, cycling, public and multi-occupancy transport, taxis and car (park-and-ride, drop-off/ pick-up, kiss-and-ride).

Figure 2-20 – Current Interchange Provision at Stoke-On-Trent Railway Station



Current first mile/last mile provision for these modes is described below.

By Walking and Cycling

Critical to improving air quality and reducing congestion is to create “a legible city” which promotes more short trips (typically between 2-5km) by walking and cycling, rather than the use of private and/or polluting vehicles.

The Station is within walking distance of the City Centre and three higher education providers which include Staffordshire University, Stoke-on-Trent College and the City of Stoke-on-Trent Sixth Form College. The City Council is actively investing in public realm improvements in the area and is developing a wayfinding strategy for the city. **Figure 2-21** shows the 20-minute walking isochrone for the station that includes the educational establishments, Civic Centre, Spode Museum and Hanley Park. The City Centre sits just beyond the 20-minute isochrone (1,600m), but within 2km. **Table 2-5** presents the number of private dwellings within 20 mins walking and cycling distance of the station.

Figure 2-21 – Stoke-on-Trent Railway Station Walking Isochrone

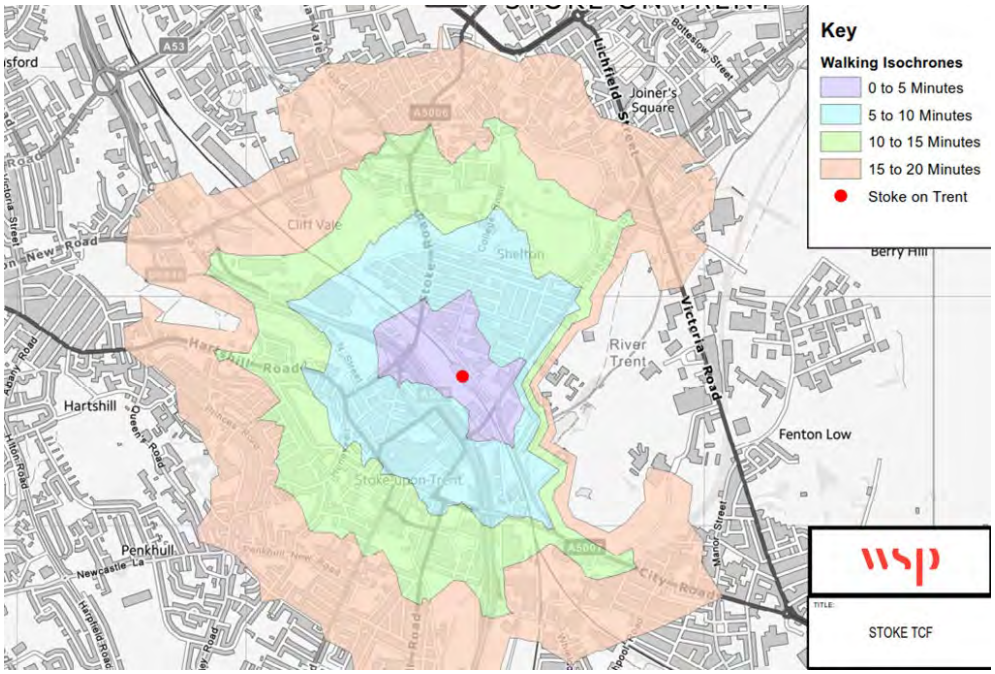


Table 2-5 – Private Dwellings with 20 minutes[13] walk / cycle distance (Stoke-on-Trent Station)

	Walking	Cycling
Within 5mins	326	4,333
5-10mins	1,242	13,836
10-15mins	1,706	19,858
15-20mins	3,978	38,549

The Station currently has a cycle hub with Brompton bikes for hire and some cycle parking on Platform 1. The cycle parking by Platform 2 is poorly located outside of the station building. Existing non-motorised user (NMU) routes close to the Station include a canal towpath which is a popular walking and cycling route and is part of the National Cycle Routes 555 and 5. However, the direct links between the canal towpath and the station are poor, as users are required to interact with vehicular traffic between exiting the towpath (to the north or south) and arriving at one of the two station entrances. CCTV cordon surveys undertaken in October 2019 showed minimal flows between the towpath and the station. Until further surveys are undertaken, it is unknown which factor(s) this could be attributed to.

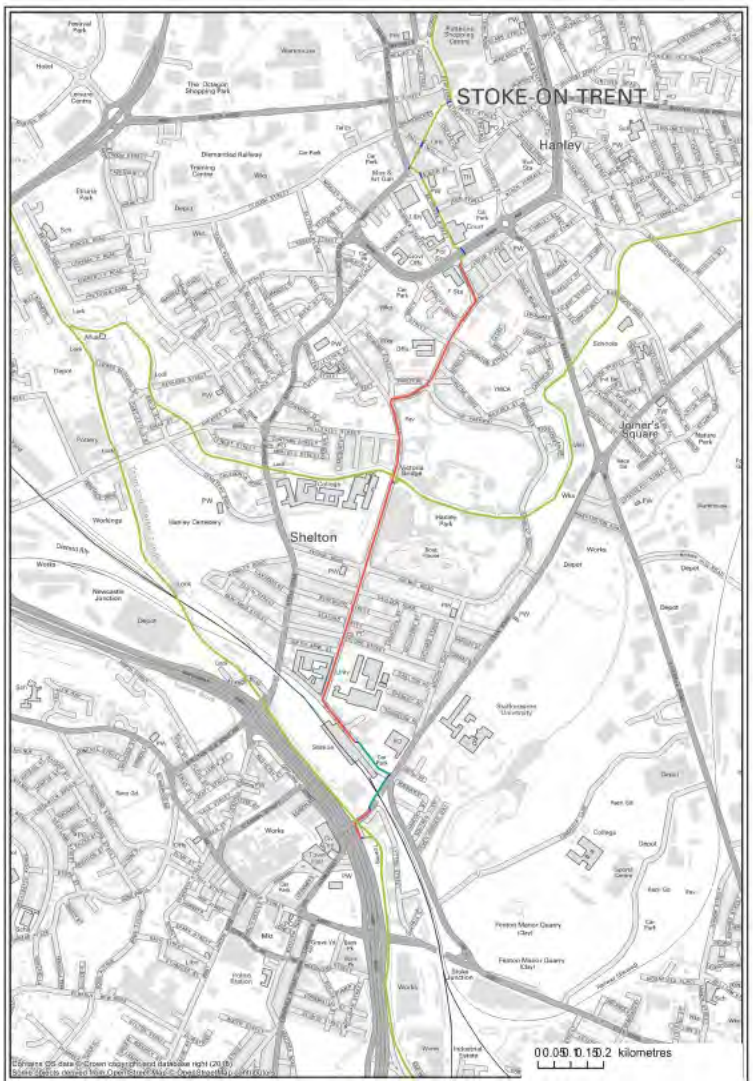
As part of TCF Tranche 1, pedestrian / cycle facilities will see:

[13] Based on 4.8 kh/hr walk speed and 16 km/hr cycle speed.

- Improvements at Boughey Road to improving the linkages between the two Staffordshire University campuses including a new area of paved public space and enhanced crossing facilities; and
- Canal Tow Path Upgrades – enhancing the surface of the tow paths and installing lighting to promote the use of the extensive canal network as a viable option for safe cycling and walking routes.
- Wayfinding – promoting walking and cycling routes between the railway station and key centres of employment through the installation of the legible London approach to finger-posts and monolithic signs.
- Hanley Park – using the park as a safe cycling and walking route between the railway station and the city centre by enhancing footpaths and steps through the Victorian park.

The national cycle network in its wider context through the study area is presented in **Figure 2-22** below.

Figure 2-22 – Wider National Cycle Network



It can be seen the Rail Station has excellent potential to create more linked walking and cycling trips.

Wider walking routes connecting to the City Centre north-east of the Station travel through predominately residential areas where pedestrian footpaths are narrow, and at points, poorly surfaced. An improved pedestrian environment between the City Centre and the Station is required to encourage rail station users to walk to/from the Station. At present there are severance issues at a number of places which the TCF programme is seeking to mitigate or remove.

It is recognised that cycling has the potential to replace short car journeys, this is especially important when journeys are beyond reasonable walking distance but can easily be cycled. Despite this, only 2% of trips to work are made by bike in Stoke-on-Trent, which is below the level of the West Midlands and England & Wales.

By Bus

As previously highlighted, the Station is well served by bus services that operate between the Station and City Centre although it is only the half hourly corridor 9 service which provides an onward cross-city service. Most services operate daily including on evenings and weekends. Whilst bus stops adjacent to the Rail Station provide a connection opportunity, the customer offer is poor:

- Poor quality bus shelters detract from the high architecture quality of the Winton Square Conservation Area;
- Lack of information and poor wayfinding between the Station entrance and bus stops;
- Bus shelters have insufficient capacity to provide for the number of bus users;
- Restricted footway space creating conflict between waiting bus passengers and other pedestrians;
- Poor environment due to proximity of short-stay parking bays and informal pick-up and drop-off by taxis and private vehicles; and
- Significant delays to bus users due to traffic flows on Station Road.

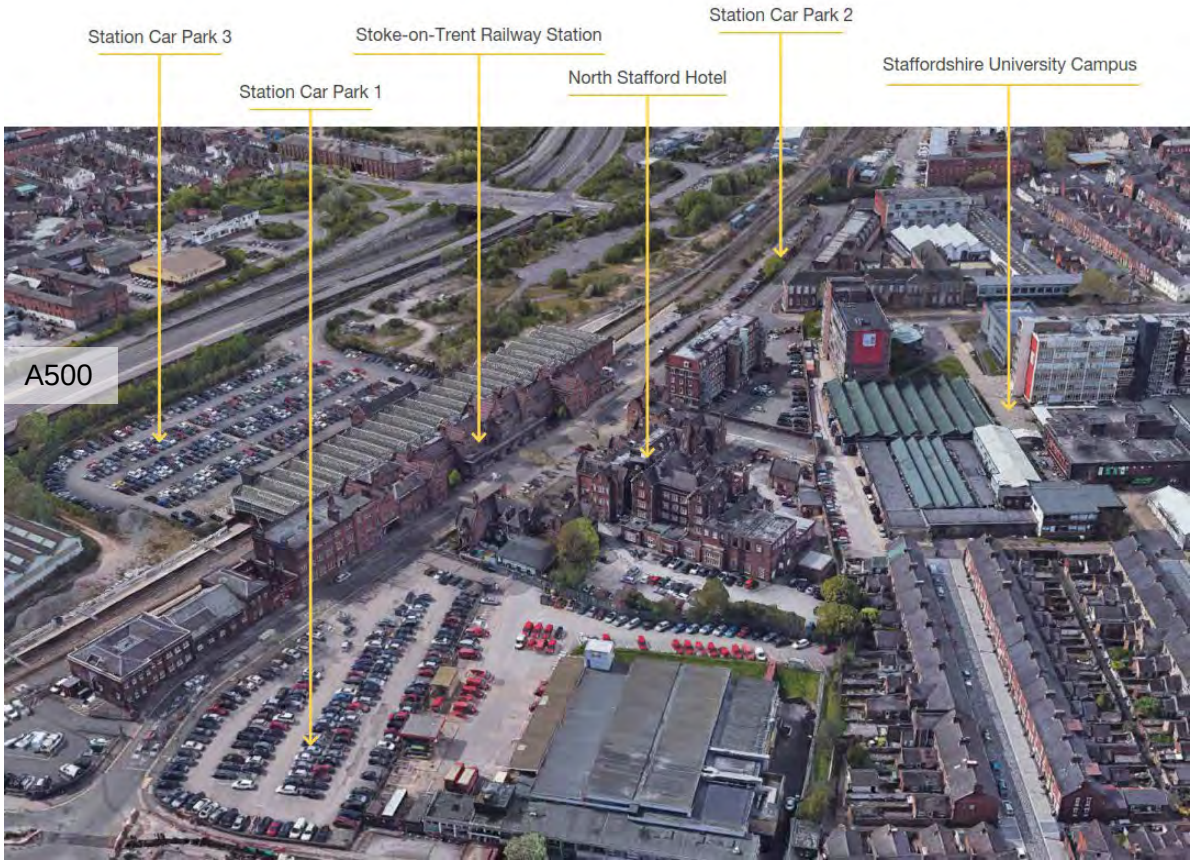
By Car and Taxis

The station is strategically located next to the A500 which potentially creates excellent highway links especially to the strategic highway network (A500 and M6). However, access to Station Road is constrained by low headroom bridges on Stoke Road and Glebe Street as well as junction capacity constraints, as described previously.

The only taxi rank is located to the front of the Railway Station on Station Road. The Station car parking provision is split between three surface car parks (see **Figure 2-23**):

- Car Park 1: 157 spaces (with 6 accessible spaces) and located to front of the station;
- Car Park 2: 24 spaces and located to the front of the Station; and
- Car Park 3: 308 spaces (with 15 accessible spaces) available and is located to the rear of the station.

Figure 2-23 - Location of Car Parks



Vehicle access routes in the vicinity of the Station are shown in **Figure 2-24** overleaf.

An opportunity exists to rationalise land use of the existing car parking to: provide enhanced public realm; reduce pedestrian and vehicle conflicts on Station Road; whilst at the same time create the potential for a new pick-up/drop off area and limited commercial redevelopment opportunities. As part of TCF Tranche 1, Station Car Park 1 will be relocated to currently vacant land to the rear of the station with 15 electric vehicle charging points, alongside new short stay setting down and pick up facilities, including taxi rank; and public realm enhancements at Winton Square.

As indicated in **Figure 2-23** above and from site visits, there is evidence that occupancy levels at the Station car parks are close to capacity, for significant parts of the day. Customers wishing to access a relocated Station Car Park 1 will use Stoke Road / Vernon Road junction alongside existing Station Car Park 3 customers. Traffic modelling analysis has indicated that any further material increase in the number of car parking spaces to the rear of the station beyond the delivery of the Tranche 1 scheme, will require a major modification to the Stoke Road / Vernon Road signalised junction.

Figure 2-24 – Vehicle Access Routes

2.7.4. Wider Rail Connectivity within the City

Beyond the mainline railway station of Stoke-on-Trent, there are two further stations within the city – Longton to the southeast, and Longport to the north, as shown in **Figure 2-25**.

Longton

Longton is one of the six polycentric centres of Stoke-on-Trent, and is an active town centre in its own right. Immediately adjacent to the station is a retail park hosting: a Tesco Extra superstore; Argos; Next; Matalan; Wilko and B&M; as well as a selection of fast food restaurants. Longton Town Hall and Library, recently refurbished, are both located in close proximity to the station. In addition, there is a large residential catchment for the station, shown in **Figure 2-26** and **Table 2-6**. This supports a strong commuting flow into Stoke-on-Trent from Longton, in particular from the student population, as shown on **Figure 2-27**.

Figure 2-25 - Longton and Longport Stations

Figure 2-26 - Longton Station Walking Isochrone

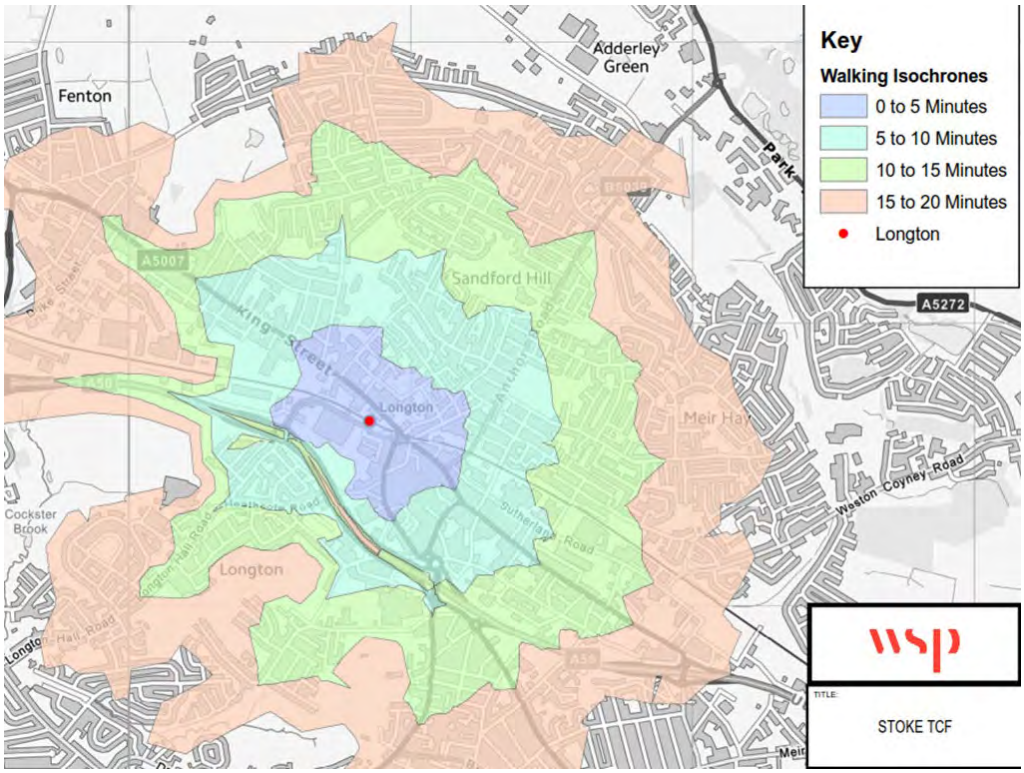
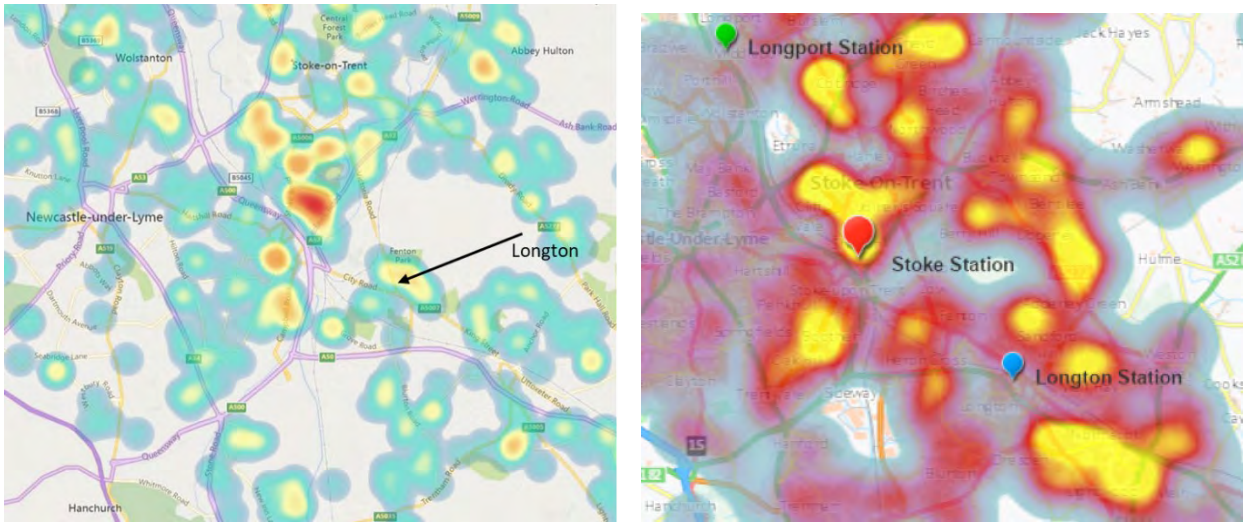


Table 2-6 – Private Dwellings with 20 minutes walk / cycle distance (Longton Station)

	Walking	Cycling
Within 5mins	169	5,550
5-10mins	1,429	13,225
10-15mins	2,702	16,029
15-20mins	4,667	19,305

Figure 2-27 - Student Commuting Heatmaps – University (left) and Sixth Form College (right)



Longton is served by 1tph, on the East Midlands Railway route between Derby, Stoke-on-Trent and Crewe, with a journey time of only 6 minutes into Stoke on Trent Station. There is also a direct bus service (6) from Longton to the City Centre, and although some distance away from the National Cycle Network, provision is made for cyclists accessing the station.

Longport Station

Unlike Longton Station, Longport Station is situated in a heavily industrialised area, close to the A500 trunk road and the Trent & Mersey Canal. It is the nearest railway station to Etruria Valley / Ceramic Valley Enterprise Zone which is located approximately 1km to the southeast. The station catchment can be seen on **Figure 2-28** and **Table 2-7** overleaf.

Longport is served by 1tph, on the East Midlands Railway route between Derby, Stoke-on-Trent and Crewe, with a journey time of only 4 minutes into Stoke on Trent Station. There are direct bus services (98 and 99) passing Longport Station en route between Newcastle-under-Lyme and Burslem / Tunstall respectively. At Burslem it is possible to interchange onto service 3 to the city centre. The station is very close to the National Cycle Network (Route 555) along the Trent & Mersey Canal, which then permits access to the wider cycling network across the city.

Figure 2-28 - Longport Station Walking & Cycling Isochrone

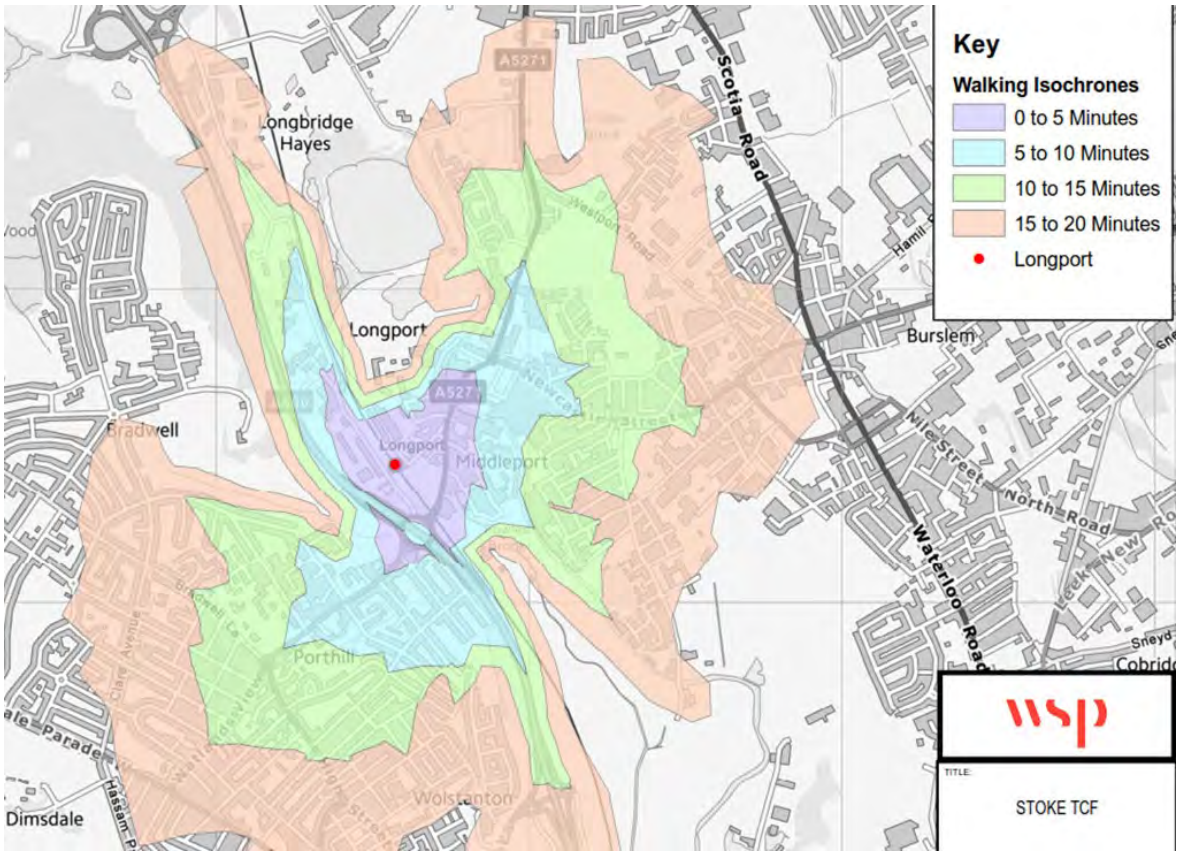


Table 2-7 – Private Dwellings with 20 minutes walk / cycle distance (Longport Station)

	Walking	Cycling
Within 5mins	152	3,390
5-10mins	609	11,113
10-15mins	1,616	20,265
15-20mins	2,931	27,808

Station Usage Patterns

Both Longton and Longport stations have seen steady growth in patronage over the last 5 years, circa 5% per annum, as shown in **Figure 2-29** . Longton is the better used of the two stations, but this is not surprising given its catchment. Based on surveys taken in 2017, both stations show similar patterns of usage over the day, with outbound peak flows in the morning, and inbound peak flows in the evening. Demand drops off during the off-peak, although both stations also see a small lunchtime peak which aligns with a similar pattern at Stoke-on-Trent station. Daily passenger flows for both stations can be seen in **Figure 2-30**.

Figure 2-29 - Annual Station Usage growth, Longton and Longport Stations

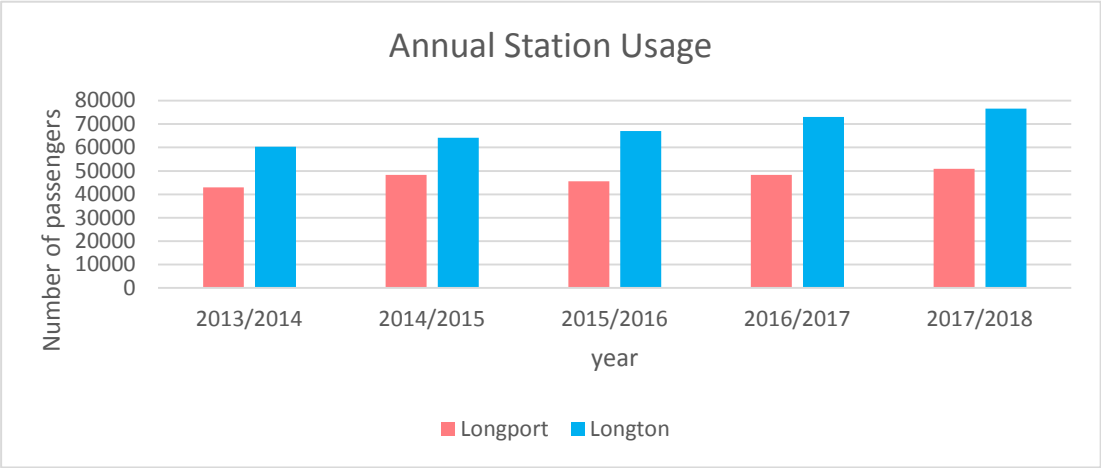
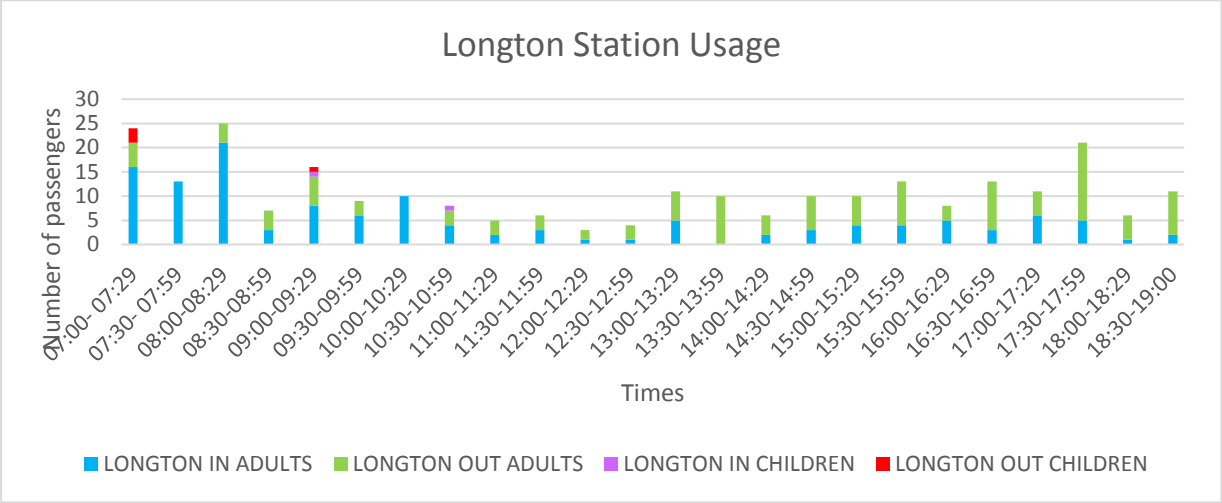
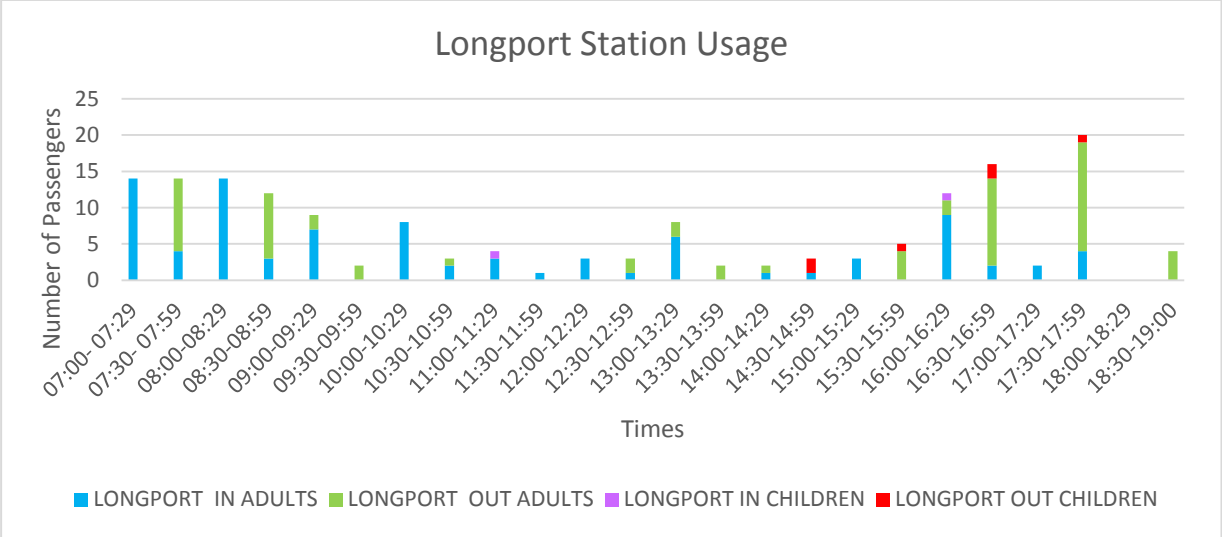


Figure 2-30 - Daily Passenger Flows Longton and Longport Stations



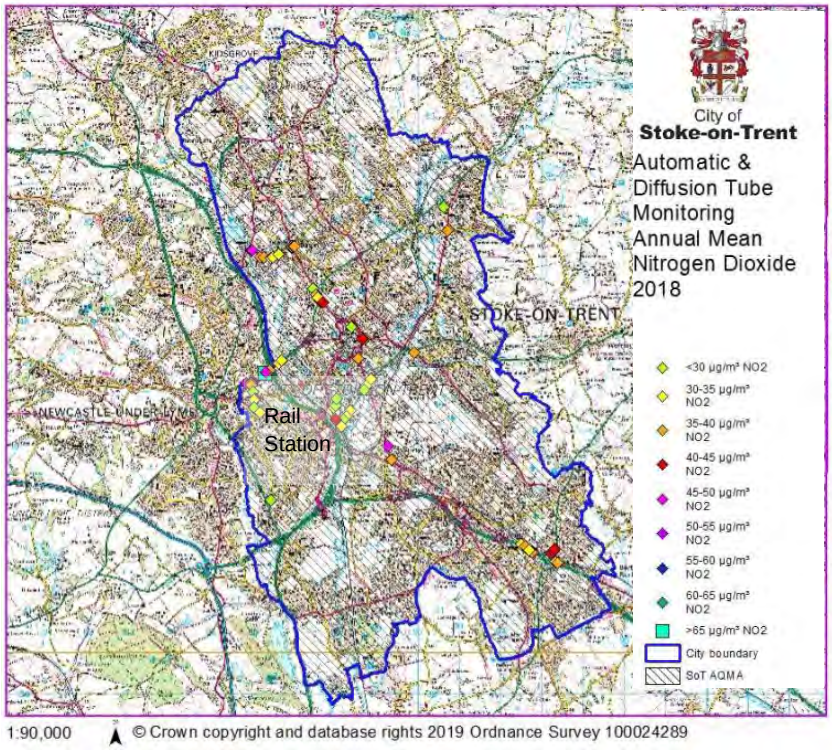


2.7.5. *Local Air Quality*

Stoke-On-Trent City Council together with its neighbour Newcastle-under-Lyme Borough Council is the subject of a Ministerial Direction as a third wave authority. There are NO_2 exceedances in the City sited on corridors which are proposed for bus priority measures in our Transforming Cities Fund bid which will assist flow of buses and enable more use of them by creating cross city bus links on these corridors. It is also likely that bus retrofits will feature in the proposals being considered to satisfy the requirements of the Ministerial Direction. There is, therefore, a close synergy between the two sets of proposals, with improved air quality a key consideration in our Transforming Cities Fund bid.

In urban areas, such as Stoke-on-Trent, the main source of NO_2 is vehicle emissions[14]. Away from road sources, the concentration of NO_2 is typically between 20-25 µg/m^3 [15]. In the exceedance areas, where traffic is a main source, NO_2 concentrations range between 31-81 µg/m^3. The concentration from vehicles in each of the identified monitoring sites is shown in **Figure 2-31**.

Figure 2-31 – 2018 Air Quality Monitoring[16] – Annual Mean NO_2



[14] Other sources of pollution have been considered, for example, the rail network in the city and industrial sources, however, neither is considered significant in the exceedance areas.
[15] Micrograms per cubic metre
[16] LAQM Annual Status Report 2019 (June 2019)

As can be seen from **Figure 2-31**, there is a particular air quality issue around the front of the Rail Station, which the Transforming Cities Fund proposals seek to address. As part of Tranche 1, the relocation of Station Car Park 1 to the rear of the station will reduce traffic flows on Station Road. Evidence collected in 2013[17] found buses to be the most significant source of vehicle emissions in this location.

2.7.6. Road Safety

In an environment where there is the increased potential for conflicts between vehicle and vulnerable users, road safety will always be a priority consideration and transport challenge. The multiplicity of functions undertaken on Station Road in the vicinity of the station entrance presents such an environment. As identified in previous studies:

- Limited pick-up / drop-off and short-stay car parking bays to the front of the square undermine the space, cause congestion and contribute to street clutter;
- Conflict on Station Road between vehicles and pedestrians as drivers make use of the limited pick-up / drop-off space on Station Road;
- Private hire taxis making use of the limited waiting spaces;
- Vehicles dropping passengers off in disabled bays provided on Station Road on approach to Winton Square;
- Highway access for car parks 1 & 2 are confined to Station Road, which is also used by buses, taxis and delivery vans. This puts pressure on the road network, particularly during busy hours, and makes road access to the station slow;
- 'Kiss and Ride' drop-off activities take place along both sides of the carriageway on Station Road. This causes conflict with other vehicles and pedestrians; and
- Short stay bays at Winton Square are difficult for vehicles to access and cause a delay to traffic on Station Road as they manoeuvre into the bays.

An analysis of the most recent 5-year personal injury collision data shows that while there is a risk perception, the area does not have a poor collision record.

2.8 WIDER CHALLENGES OF FUTURE MOBILITY

In addition to opportunities and challenges specific to the circumstances of Stoke-on-Trent, there is a wider range of challenges that come under the heading of future mobility. These challenges come from the way in which as a society we should approach planning transport provision reflecting the international and national mega trends that affect everyone and the developments in transport and mobility which are changing the way we travel.

[17] https://www.stoke.gov.uk/download/downloads/id/64/citywide_air_quality_action_plan.pdf

2.8.1. *A citizen and organisation-centric approach*

The traditional approach to transport provision has been focussed on the demands of the morning and evening peak periods, where the highest demand for travel usually occurs, with the primary consideration being the daily commute. However, there is a need to consider a wider set of journey demands, based on a broader range of peoples' and organisations' daily activities enabling a more complete picture of the market for mobility to be considered when planning transport provision. These activities cover both people and organisations and include:

- **Employment opportunities:** Access to employment, the commute, will continue to have the largest impact across all modes however 'digital as a mode' will have an increasing role to play in some sectors of the job market, offering the opportunity to not commute for at least part of the time although this may result in other trips making use of additional time.
- **Educational attainment:** Access to education is vital in equipping people with the skills they need to meet the needs of the Stoke-on-Trent economy.
- **Childcare:** With the increasing average age of first-time parents and the linked increase in the number of families where both parents work, there has been a resulting expansion in the need for childcare, both for pre-school and school-age children. The need to build accessing childcare providers into daily travel patterns has added significantly to the complexity of commuting journeys.
- **Health and social care:** Our growing, ageing population is going to need access to quality health and social care. There are already pressures on the social care system in terms of provision which provides an impetus for digital and remote healthcare for some conditions.
- **Retail, goods and services:** Reliable, resilient and timely access to goods and services (particularly food) is crucial to economic performance.
- **Accessing raw materials, products and markets:** Access to a reliable and resilient network is essential in keeping supply chains, many of which operate on a just-in-time basis, functioning effectively.
- **Leisure and Tourism:** Leisure and tourism is an essential part of the economy. Hassle free access to leisure and tourist attractions by all modes is vital in maintaining a competitive advantage.
- **Social interactions.** Mobility is crucial for social interaction whether it be via digital, sustainable or motorised modes.

The mobility or transport requirements resulting from these activities vary significantly and technology will have an increasingly significant role in meeting these activities, both physically and digitally.

2.8.2. *Focussing on People and Place*

Key to the development of future mobility is the consideration of how people interact with place. The need for mobility and how that mobility is undertaken comes from an interaction of people's and organisations' daily activities, and the locations they undertake those activities in. To an increasing degree, many of these activities no longer need an interaction with place through the development of 'digital-as-a-mode', however, the majority of activities still require physical mobility.

The interaction of people and place is key to the strength of mobility networks both in terms of connectivity and efficiency. The more closely aligned people are with the locations of activities, the simpler mobility networks can be and the more efficiently they can operate. Furthermore, the agglomeration and close location of activities also improves accessibility and reduces the need for, and complexity of, mobility.

Focussing on where activities are located in relation to those undertaking them helps to plan mobility and develop stronger networks.

2.8.3. *Mega Trends*

The access and mobility needs of our society are increasingly influenced by 'mega trends' that are shaping many aspects of society which in turn influence how, when, where and if people need to travel. For example, we are already experience the effects of a society with:

- an increasingly ageing population will have different transport needs and expectations;
- increasing retirement age and taking on larger financial burdens later in life means that people will need to work for longer;
- less people are undertaking physical activity and many are suffering ill-effects of an unhealthy, inactive lifestyle;
- cities growing at a rapid pace with people moving to them from more rural locations;
- people are buying less 'stuff' but are spending more doing things generating shifts in travel patterns;
- changes in technology mean a career for life may no longer exist with the resulting need to retrain at various life points;
- climate change and associated weather events will increasingly impact the UK;
- air quality is impacting urban areas and at key locations on the network;
- a rise of the 'gig' economy – people having multiple jobs being paid for the individual tasks they undertake; and
- automation hollowing out number of key employment sectors including manufacturing and administrative jobs.

2.8.4. *Mobility Trends*

The following key mobility trends which have been emerging over the last few years will significantly influence how we travel in the future:

- **Automation:** The automated agenda is gathering pace with advances in computing power and sensor capabilities having led to well publicised advancements in road, rail, water and aerial technology. Automation in the transport sector will significantly impact how modes function and perform as well as having potential impacts on place-making and utilisation of space.
- **Cleaner transport:** Alternative propulsion systems in transport are rapidly expanding and E-bike sales are on the increase with electric bikes being used for personal and commercial cargo use.
- **Changing attitudes:** Sharing of assets between users has been a developing and disruptive trend in transportation over the last few years. Facilitated by digital connectivity, solutions match demand (customers) with supply (available assets or journeys) generally via app-based solutions.
- **Business models:** With the trends above disrupting the traditional models of booking, paying for and accessing transport and mobility new business models are starting to emerge offering improved customer choice, flexibility and experience.
- **Data and connectivity:** Digital connectivity is already underpinning many of our daily activities where access to communications networks (fixed or mobile) is possible. Digital connectivity is vital for the ability to undertake daily activities remotely from the traditional locations at which they are undertaken. Working from home, or elsewhere remote from the workplace, online retail, distance learning, online medical appointments, to name but a few activities, all rely on strong digital connectivity in the development of 'digital as a mode' alongside traditional travel-based modes of transport.
- **New modes:** The trends outlined above are combining to deliver enhanced and new modes, which will work with existing traditional modes to develop a more capable and integrated transport network.
- **Mobility Hubs:** Mobility is strengthened through the aggregation of modes with a wider range of supporting facilities and economic activities; this fast-developing approach to improving interchange is termed a 'mobility hub'. Whilst not one of the major technological trends identified by DfT in its 'Future of Mobility: Urban Strategy', mobility hubs provide the translation of many of these trends into a place-focussed development. This approach increases integration between modes providing more options for users and catering for a greater range of onward journey needs. Mobility hubs integrate traditional and new modes as well as integrating first mile/last mile with 'middle mile' services and a range of user facilities.

More information on our approach to Future Mobility is included at **Appendix A**.

2.9 AN OPPORTUNITY FOR STOKE-ON-TRENT

2.9.1. Accessing a Growing City

Stoke-on-Trent Railway Station and the City Centre will play a key economic and strategic role in the future prosperity and growth of Stoke-on-Trent, the SSLEP area, and Midlands Engine.

The Midlands Connect Strategy for Powering the Midlands Engine and the HS2 Growth Strategy place Stoke-on-Trent, its City Centre, and Railway Station as a major strategic economic hub for the regions. It is for these reasons that the City Council is clear in its priorities that a major development of Stoke-on-Trent Rail Station into a high quality, next generation Mobility Hub is a prerequisite for transformational growth.

Significant new developments in the immediate vicinity of the Station and City Centre are already in the pipeline, and will only meet their full potential with enhanced transport connectivity linkages made by a multi-modal and multi-functional Station Hub being in place.

<u>Swift House</u>

The City Council's multi-million pound vision to redevelop Swift House next to Stoke-on-Trent Station with 76-room hotel, 200 student flats and three restaurants

<u>Staffordshire University Catalyst Building</u>

Planning permission very recently granted for the University's Catalyst Building. To open in August 2020, it will act as a study base for 6,500 new apprenticeships by 2030

<u>Former Minton Hollins Tile Factory</u>

Planning granted for erection of a seven multi storey building for 1,357 Student apartments, including retail unit, hair salon, launderette, café and leisure facilities.

<u>North Shelton Delivery Framework</u>

A framework for the delivery of up to 300 new dwellings prior to the end of March 2021 within the North Shelton area. This forms part of the Stoke Housing Zone requirement to secure the delivery of 1,200 new homes within the Zone

<u>Smithfield</u>

The City Council has an ambition for a new business quarter for the city. The Smithfield development will deliver up to 1.2 million sqft of office, residential, leisure, retail and hotel space. The public realm will include a central public square and a new

<u>Former East-West / Bus Station Site</u>

The City Council has ambitious plans for a Conference Complex for the former East-West Precinct site in the city centre, adjacent to the City Centre Bus

pedestrian boulevard designed to connect the site to the surrounding city centre, providing a seamless link to the wider area.	Station.

Etruria Valley

A 31.3 hectare brownfield site largely owned by Stoke-on-Trent Regeneration Ltd. (a joint venture between St Modwen and Stoke-on-Trent City Council). The site is clear and has early phases nearing completion. This is the SSLEP's priority employment site, and is currently benefiting from investment in significant road infrastructure largely as a result of the SSLEP Growth Deal

2.9.2. Station Hub Opportunities and Constraints

Station Hub: Site Ownership

The majority of non-adopted highway land within the Station envelope is in the ownership or control of Network Rail, as shown in **Figure 2-32**, including: station itself; surface car parks; strip of public realm in front of North Stafford Hotel; and land adjacent to Glebe Street / Swift House site.

The areas indicated in red are currently leased to Virgin West Coast. There are some land ownership / access constraints to potential options within the Station Hub area. These include:

- Privately owned buildings on Winton Square, including hotel
- Land adjacent to Vernon Road, sold by Network Rail into private ownership

Whilst site ownerships vary on the land parcels around the station, a collaborative approach to masterplanning and regeneration will provide opportunities for the future commercial redevelopment of significant parcels of land as shown in **Figure 2-33** including:

- Station Building (upper floors) – 0.2 hectares, bringing underused listed building back to life;
- Swift House redevelopment as described above;
- A multi-modal transit centre which incorporates car parking, a cycle hub, and community facilities; and
- Station West – 2.00 hectares, 7 ~ 9 storey buildings, 400,000 sq.ft. gross.

Figure 2-32 – Station Hub: Site ownership

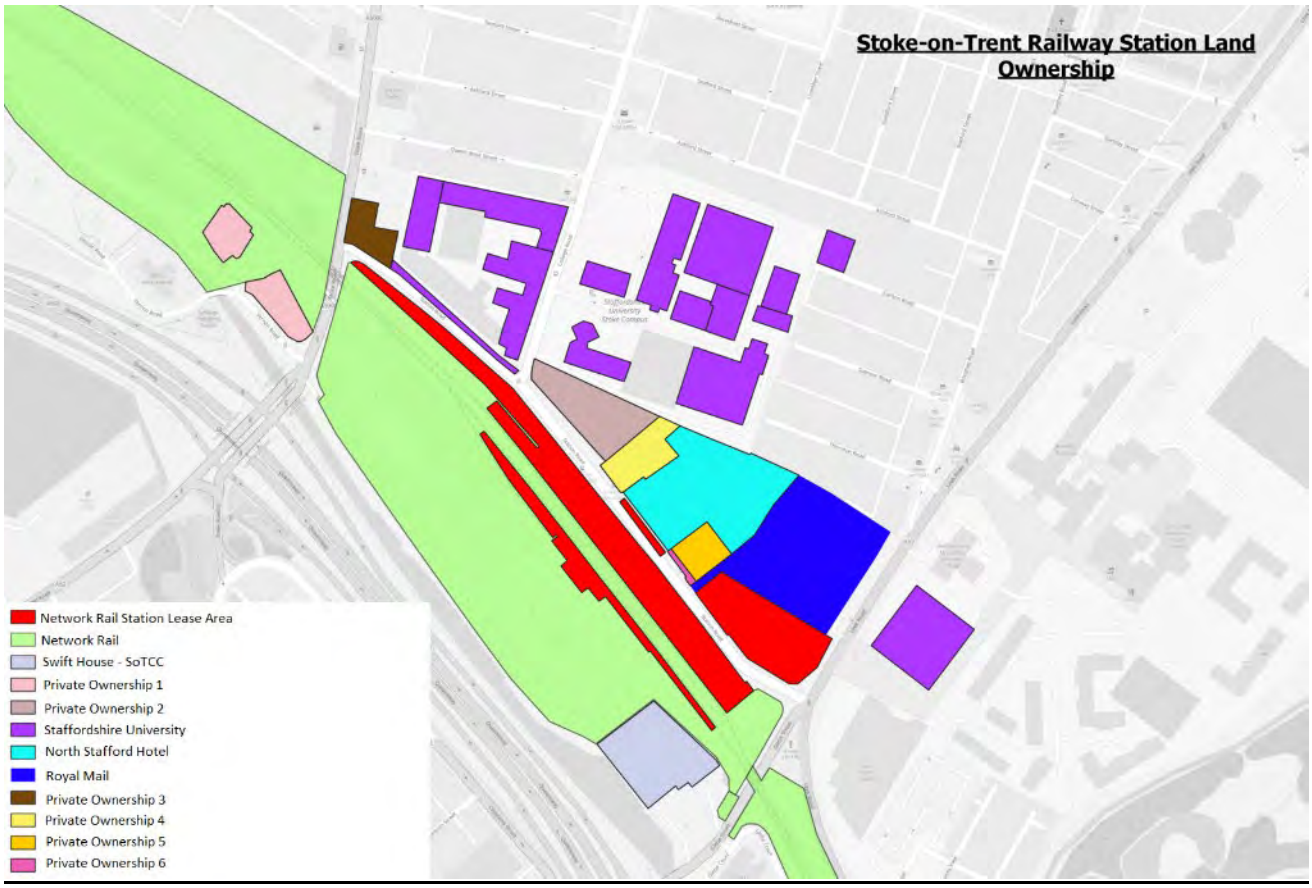
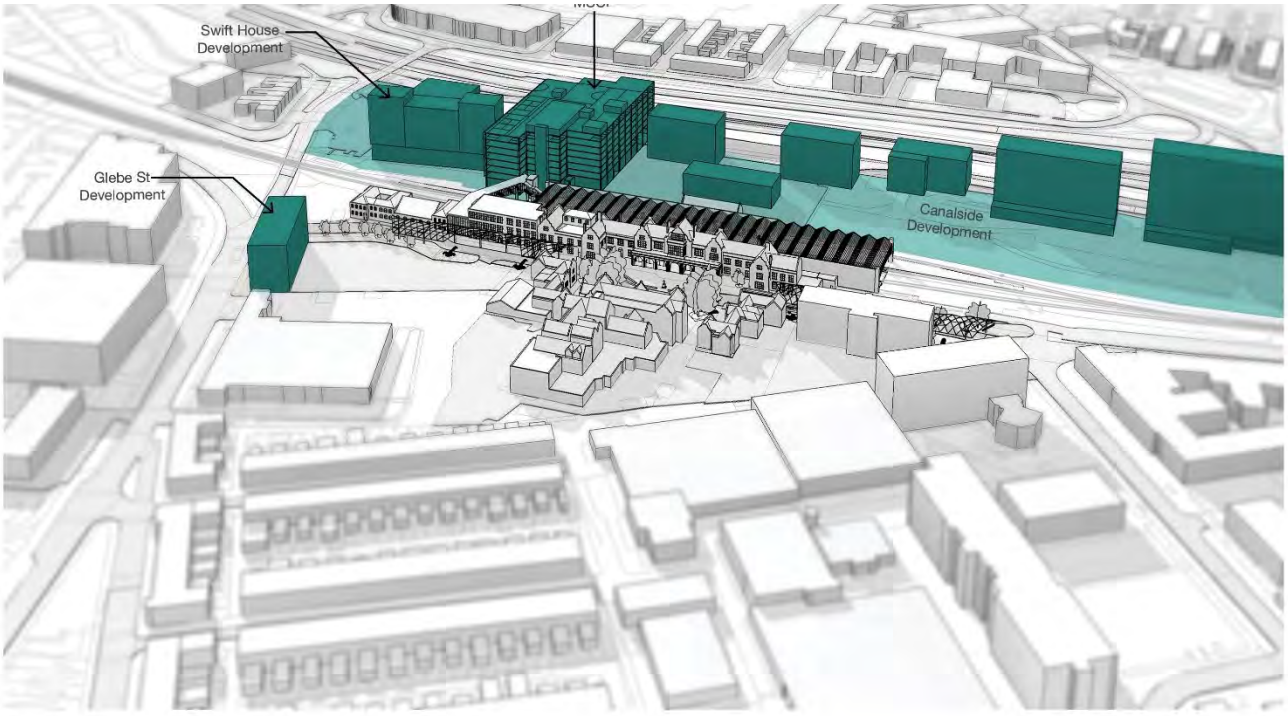


Figure 2-33 – Station Hub: Potential Future Development Plots



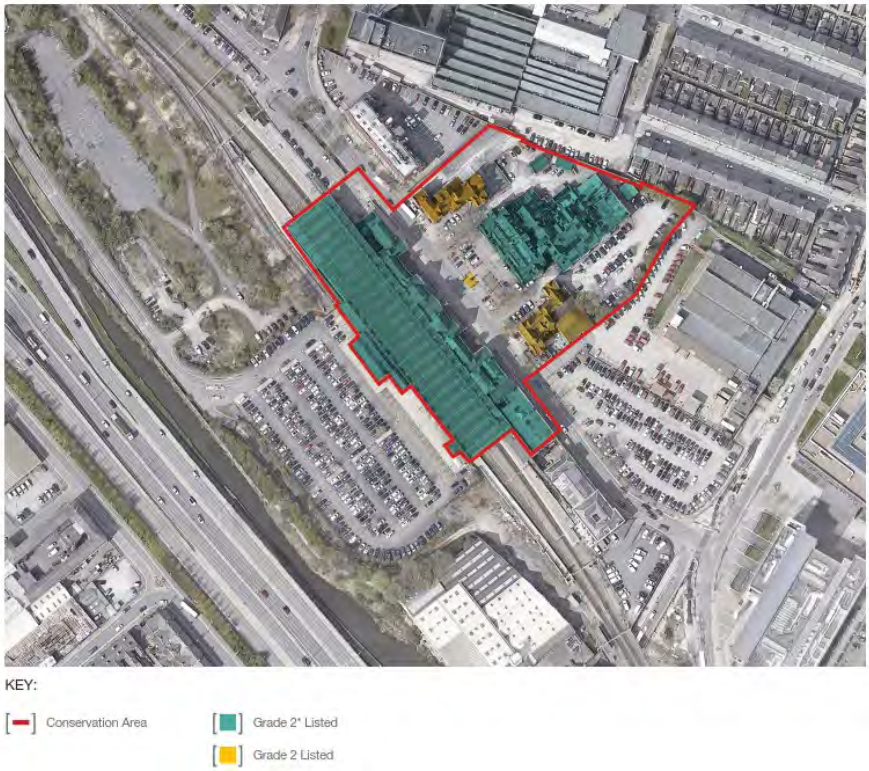
Winton Square Conservation Area

Winton Square is a small Conservation Area of high architectural quality, centred on the square and mainline Railway Station for the city as shown in **Figure 2-34**. All the buildings within the square are listed or curtilage buildings and the statue of Josiah Wedgwood in the centre of the square is listed in its own right.

Stoke-on-Trent Railway Station and Winton Square were built in 1848 in a Neo-Jacobean style to house the headquarters of the North Staffordshire railway company, while the North Stafford Hotel was opened the following year. 1863 saw the unveiling ceremony of the statue of Josiah Wedgwood, founder of the Wedgwood company and credited with the industrialisation of the manufacture of pottery.

The front elevations of the Station and hotel buildings are the most ornamental and decorated. The rear and side elevations of the original are simpler versions of the same style. This does not apply to the later extensions to the hotel which are on the whole square brick boxes with windows that do not match the original windows. All buildings are built of red brick laid in English bond with very thin white mortar joints. Common to all the buildings within the Conservation Area is use of blue brick diaperwork in random crosswork pattern. Stone is used to great effect in the detailing.

Figure 2-34 – Winton Square Conservation Area



Given the constraints and sensitivities of design, located within a Conservation Area, early engagement was held with the City Council's Principal Heritage and Conservation Officer to fully understand constraints and opportunities, with ongoing dialogue of paramount

importance during the option development phase(s). Rather than seen as constraint, through sensitive design the aim has been to enhance the setting of the Winton Square Conservation Area. Indeed, renowned architectural historian Sir Nikolaus Pevsner cited Winton Square as:

"the finest piece of Victorian axial planning in the County"

Figure 2-35 – Station Heritage Assets

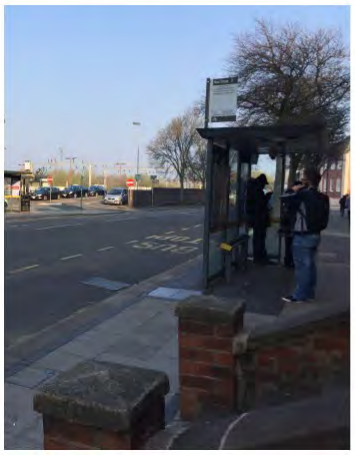
Central bays are ornamental and decorated

Gateway to the City

The Railway Station plays a crucial gateway role in the identity of Stoke-on-Trent for both local residents (as a source of civic pride) and visitors (providing their first and last impressions). It has a purpose that extends beyond its transport functions as a destination in its own right, providing facilities to users of the surrounding area. This importance will be strengthened as the areas around the Station continue their current regeneration.

Figure 2-36 – Gateway to the City Opportunities

Enhance interchange concept and function



Improve character and identity of Conservation Area

Strengthen identity of station

De-clutter Booking Hall

Enhance way-finding for arriving passengers

Introduce new uses into existing buildings

Stimulate local regeneration

Improve access between platforms

Provide street life and animation

Multi-Modal and Multi-Functional Mobility Hub

Stoke-on-Trent Rail Station is ideally placed to become a next generation multi-modal and multi-functional mobility hub, incorporating a range of first mile/last mile mode options with supporting land uses that would reduce local vehicle kilometres travelled through the combination of functions at a single location. In doing so would serve as a catalyst for reinvigoration of the local economy and communities.

Table 2-8 – Mobility Hub Components – Modes, Supporting Facilities and Economic Activities

Traditional Modes	New Modes
▪ Rail ▪ Light rail ▪ Bus ▪ Taxi ▪ Self-powered and owned cycle ▪ Self-powered and owned personal transporters ▪ Walking ▪ Car parking (‘Park & Ride’ and ‘Kiss & Ride’)	▪ Ride hailing ▪ Car club ▪ Digital as a mode Demand Responsive Transport ▪ Ride-sharing pick-up ▪ Self-powered and shared cycle ▪ Powered and shared cycle ▪ Self-powered and shared personal transporters ▪ Drones and delivery devices

Supporting Facilities

- Wayfinding
- Toilets, showers, lockers
- Covered/enclosed waiting space with seats and heating
- Live travel information
- Ticket sales and traveller information
- EV charging
- Wifi connectivity
- Cycle maintenance
- Vehicle and driver layover facilities
- Public space and parklets

Economic Activities

- Convenience retail
- Café
- Remote business hub
- Childcare
- Healthcare e.g. drop-in centre, surgery
- Community/exhibition space
- Residential
- Business incubator units
- Parcel locker

3 STRATEGIC CASE: DEVELOPING THE PROGRAMME

3.1 INTRODUCTION

With the need for intervention established, a set of priority plans and objectives need to be defined to steer transport intervention identification and package development.

3.2 THE CITY COUNCIL'S TRANSFORMING CITIES FUND PRIORITY PLANS

As part of the Government's Industrial Strategy and the National Productivity Investment Fund, the Transforming Cities Fund aims to drive up productivity through improved connections between urban centres and suburbs, by:

- Investing in new local transport infrastructure to boost productivity;
- Improving public and sustainable transport connectivity; and
- Improving access to employment sites, Enterprise Zones, development sites, or an urban centre that offers growth/employment opportunities.

Stoke-on-Trent's draft Economic Development Plan (2019 to 2024) sets out the vision and economic priorities for the city over the next four years and beyond, but also details what is going to be important to help the city achieve its ambitions. Using up-to-date performance data to establish a baseline, the plan highlights the key challenges and opportunities which will have a bearing on the future direction and ambition to transform Stoke-on-Trent's economy. In the context of the Fund the City Council's vision is to:

> *"Create a vibrant, productive and equitable City in which it is attractive to invest, live and work and where through improved public transport connectivity, a step change in quality and journey times everyone has the opportunity to access a better job."*

The Economic Plan considers national and regional plans, funds and initiatives, relating to economic growth, including the Government's National Industrial Strategy, which aims to increase UK productivity and earning potential. The Economic Plan, supports these policies at a more local level through the Local Industrial Strategy (LIS) developed by Stoke-on-Trent and Staffordshire Local Enterprise Partnership (SSLEP).

Working with the Stoke-on-Trent and Staffordshire LEP, central government and other key partners, the City Council has identified four major themes for transforming the city which combine to define new levels of aspiration for Stoke-on-Trent.

These themes have a range of overarching objectives and detailed delivery plans for each theme, to measure outcomes and track progression, which will enable the city to achieve its ambitions by 2024 and beyond.

A Dynamic Sustainable City	**City of Growth and Innovation**
Overarching Objectives: • Investment in our Towns and Cities • Repurposing Council and Heritage Assets • **Better Connectivity and Sustainable Transport** • Developing a Quality Housing Offer • Visitor and Cultural Economy	Overarching Objectives: • Attracting Investments • Business Growth • New Business Start-ups and Enterprise • Employment Land and Facilities for Growth • Key Sectors and Innovation • Ceramic Valley Enterprise Zone
A Smarter Greener City Overarching Objectives: • District Heating Network • Waste to Energy Facility • Full Fibre Connectivity • Air Quality Emissions • Smart Society	**A Prosperous and Inclusive City** Overarching Objectives: • Workplace • Workforce • Skilled City • DHN Academy • Inclusivity

Stoke-on-Trent is undergoing the most significant transformation in its economic fortunes that the city has experienced for more than 30 years. Having been among the fastest local economies to rebound from the recession, Stoke-on-Trent has continued to outstrip swathes of the UK in terms of economic growth, job creation and innovation. Significant challenges remain, but the foundations for prosperity have been laid. To continue to achieve economic growth and to remove the glass ceiling that the current transport barriers create the city must continue to build on its successes and strengths, but also challenge its weaknesses. To achieve this the Economic Plan sets out ambitious plans and develops a range of different and innovative ways that will deliver economic prosperity for its people, places and businesses. The city must also be open and encourage greater, private, public and third sector (social enterprise) working.

Inclusive Growth is a central theme for this plan, which means delivery for everyone. The overriding aim of the City Council is to improve outcomes for residents and communities by addressing fundamental barriers to local productivity and enabling and facilitating inward investment, innovation and regeneration.

People need to better understand how they are contributing to growth via ambition and plans for:

- Higher paid jobs and higher productivity businesses that will generate more jobs and provide more opportunities;

- Increased aspirations and pride in supporting growth of the local economy, through private and public partnerships; and
- **Use of infrastructure to better connect people to its economic bases and transforming areas.**

Physical regeneration has a vitally important role to play in enhancing the overall offer of Stoke-on-Trent to investors and employers. The Smithfield development (which will deliver up to 1.2 million sqft of office, residential, leisure, retail and hotel space) in the City Centre is an example of how the City Council can stimulate inward investment and job creation through the provision of quality infrastructure and facilities. Much of the focus over the next five years will involve the expansion of Smithfield, and revitalisation of town centres. Place will be a crucial factor in increasing productivity levels in the city. By improving the offer of place, and providing the right environment for business, Stoke-on-Trent will be more likely to attract and grow the high-value transaction service sector employers which create well paid employment opportunities.

Influencing and changing external perceptions of Stoke-on-Trent is a major challenge. Plans are in place to address this through development of a diverse range of quality housing right across the city, as well as provision of new office and commercial space with a particular focus on Smithfield and Ceramic Valley Enterprise Zone, as well as other significant sites across the city. The City Council's ambition is to make Stoke-on-Trent a business-winning city and a destination of choice for investors and employers who are considering locations in the West Midlands and North West. Investment in transport and infrastructure, is essential to ensure continued growth and investment in the city, commercial, leisure and residential. Planned major infrastructure projects include the District Heat Network, the 5G broadband project and delivery of the Etruria Valley Link Road.

Stoke-on-Trent Station plays a crucial gateway role in the identity of the City for local residents (as a source of civic pride), business and visitors (providing their first and last impressions), and which will be further enhanced by the arrival of HS2 – current perceptions, however, reflect a neglected and under-utilised major asset.

The City Council's ambition is to use the Transforming Cities Fund as a catalyst to unlock key investment and employment sites around the city, including the Station Hub, the Swift House regeneration project, the expansion of the city centre Smithfield development, and other major employment sites including the Ceramic Valley Enterprise Zone.

Stoke-on-Trent has a lower rate of productivity than many other local economies in the UK with a lower proportion of highly-skilled and highly-qualified adults than the average city. Although the total size of the economy is increasing rapidly, productivity levels remain challenging. Stoke-on-Trent had risen from 105th out of 391 local authorities for total Gross Value Added (GVA) in 2009 to 84th most productive local authority area in 2016. By 2024, the city must maintain this positive direction of travel and break into the top 50 most productive local areas in England in terms of total GVA.

Levels of productivity per head of population present a more significant challenge, although the direction of travel is very positive. In 2009, Stoke-on-Trent was ranked 288th of the 391 local authorities in England. By 2016, the city had pulled itself up to 222nd place. The challenge for 2024 is to ensure that Stoke-on-Trent exceeds this level of improvement in productivity per head and breaks through into the 150 most productive local authority areas in England by this measure

According to July 2018 – June 2019 ONS estimates there are 120,300 economically active people in the city. Again, according to 2017 ONS estimates there are 132,000 jobs in the city. Taking into account that not all economically active people will be working in the city and that some may have multiple jobs the implication is still that a fair proportion of employees are travelling into the city for work.

Improvement of mass transit will benefit both local employees and those travelling into the city for work. Bus is a fundamental and significant component in the delivery of a modern, integrated transport network. The absence of cross-city transit links, with buses terminating at the City Centre bus station, is a significant barrier that has a direct impact that limits access to employment, educational, healthcare, retail, leisure and social opportunities, particularly lower income groups. Strengthening links between the Station and City Centre and re-establishing cross-city service patterns will overcome these barriers and widen the travel horizons of the city's residents.

In order to raise levels of productivity per head of population investment and ease of access to education and skills will be of critical importance to people across the city, to increase skill levels and ensure that residents are equipped with the skills needed to secure higher-value jobs. The Staffordshire University campus, Stoke-on-Trent College, Stoke-on-Trent Sixth Form College, and Stoke-on-Trent Rail Station are all located within the University Quarter. In the region of £285 million is being invested to deliver the University Quarter development programme, making it the largest collaborative project for further, higher and school education in the UK.

A series of practical and modern buildings have been built since 2009, including a number of shared educational facilities. The project has transformed the University and College campuses, and has enabled the relocation of the Stoke-on-Trent Sixth Form College to new premises on Leek Road. Significant improvements have also been made to public spaces including Hanley Park. Planning permission has recently been granted for the University's Catalyst Building. Scheduled to open in August 2020, it will act as a study base for 6,500 new apprenticeships by 2030.

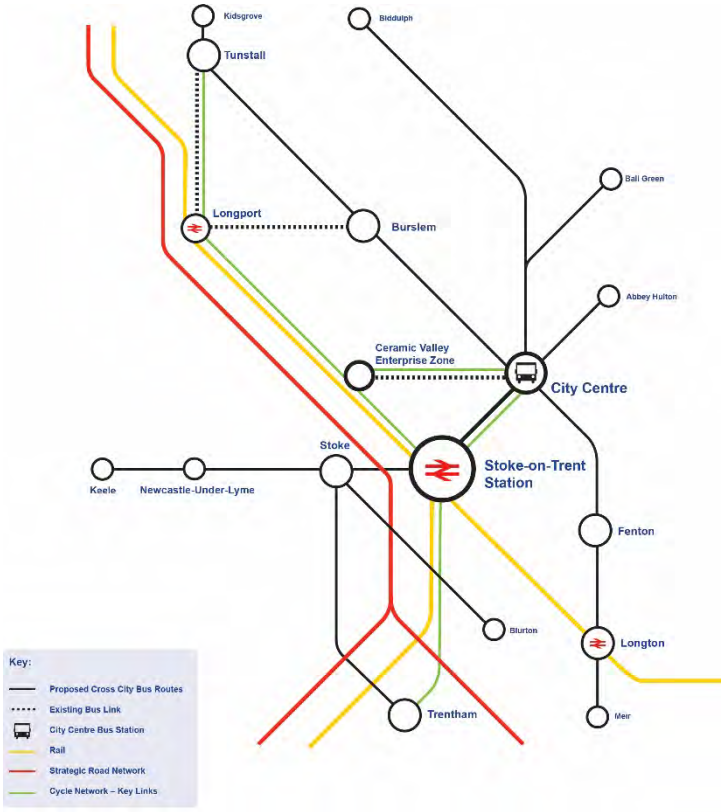
The Transforming Cities Fund would seek to build on these successes to support the University Quarter Masterplan, in creating a vibrant, safe and attractive environment that provides opportunity, investment and a better quality of life for all those living, studying and working in this area of Stoke-on-Trent.

Through identifying existing and future issues, and acknowledging the requirements of the Fund, the City Council's ambition is for a properly connected sustainable network linking:

- Stoke-on-Trent Station with more than 3.1 million passengers passing through per year;
- University Quarter and its 28,000 students and workforce;
- City Centre, with its growing retail and leisure offer and expanding council-led Smithfield site. A mile from the Rail Station and Strategic Road Network, a high quality public transport link is required to enable the City Centre to develop into the 'regional capital' referred to by the Constellation Partnership and the next Core City; and
- Wider city growth opportunities including the Ceramic Valley Enterprise Zone.

The above has resulted in a set of prioritised plans, for the Transforming Cities Fund, which the City Council has secured strong political support, namely:

- Undertake major development of Stoke-on-Trent Rail Station into the Station Hub; a next generation multi-modal and multi-functional Mobility Hub at the centre of the rail corridor including Longton and Longport Stations that serve the City;
- Provide high quality mass transit links to the City Centre; and
- Create onward improved cross-city mass transit and sustainable travel links including to Etruria Valley (part of the Ceramic Valley Enterprise Area) and wider connectivity to employment areas including Longton, Burslem and Tunstall, the Royal Stoke University Hospital and Trentham Lakes. It is within this context that the specific objectives for the scheme have been developed.



3.3 OBJECTIVES AND OUTCOMES

Defining objectives plays a key role in steering the development of transport schemes and assessing whether they have been successful once delivered. Essentially, objectives set out what a scheme, or indeed transport strategy, is designed to achieve.

The development of objectives for this project has been informed by Transport Appraisal Process guidance from WebTAG.

What a scheme should achieve can be expressed at a very high level, in terms of an aim and strategic objectives, or in much more detail including very specific objectives associated with detailed problems and issues. At this stage of the scheme development process, objectives should be higher level, avoiding indications of preferred solutions but enabling

more specific objectives to be developed as the project proceeds and options identified. Objectives at this stage should also be consistent with specific challenges identified.

Objectives should be based on a realistic understanding of the issues and context of a project, reflecting the opportunities and constraints identified. While objectives should be consistent with wider local, regional and national objectives, they should focus on addressing identified need rather than seeking to contribute to all these higher-level objectives. Where appropriate, objectives may focus on the five 'cases' used to development business cases (strategic, economic, financial, management and commercial).

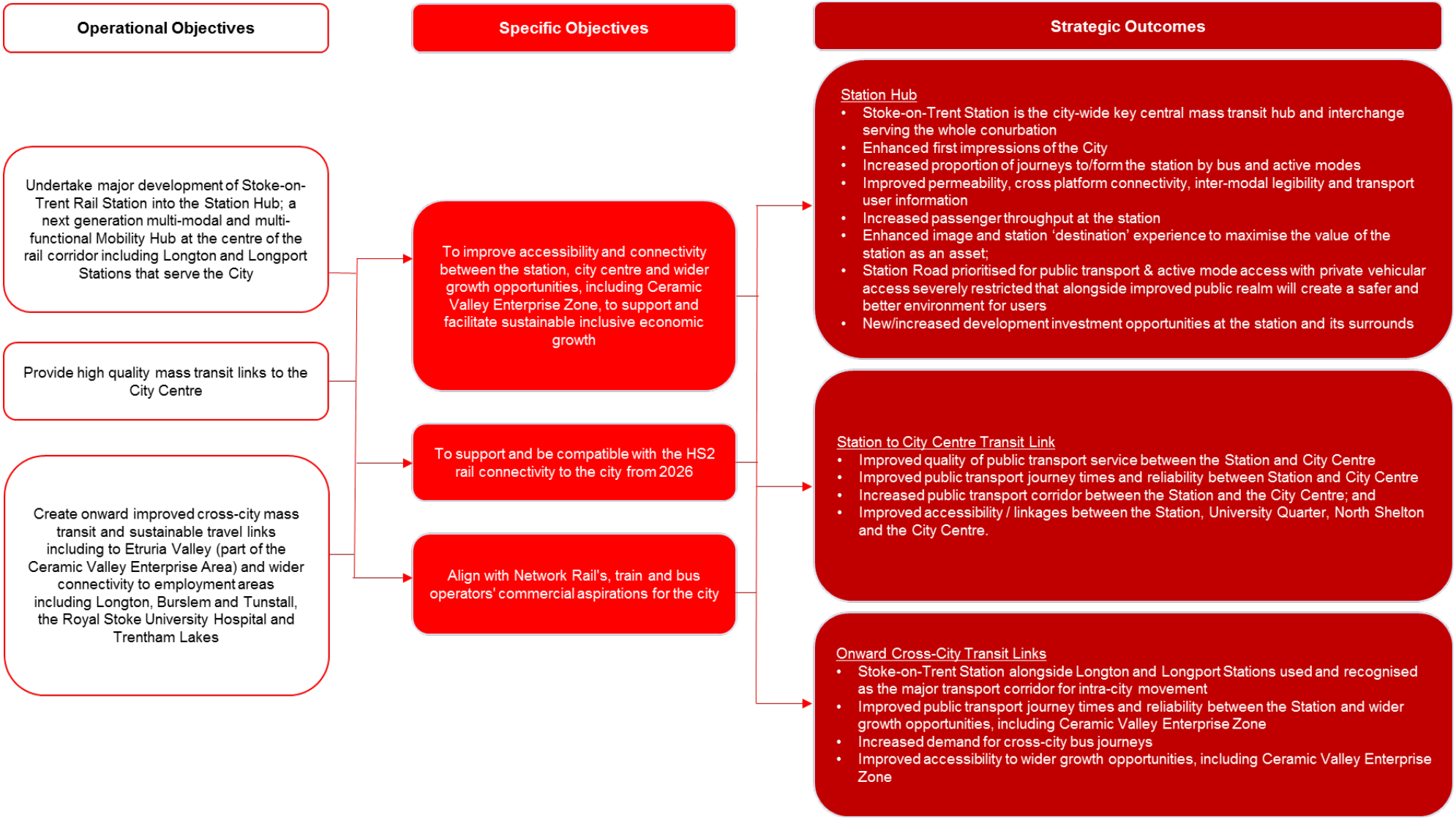
As stated in WebTAG, consideration should be given to developing a hierarchy of objectives, which clarifies the reasoning behind interventions and provides a framework for future appraisal and evaluation. WebTAG states that a three-level hierarchy may consist of:

- High level or strategic outcomes – these express the desired end state, and reflect the aims and ambitions for the area or population. These are generally objectives to which transport contributes, but not always in a direct manner;
- Specific or intermediate objectives – these represent the intermediate effects of the transport intervention, including the direct and short-term objectives which need to be achieved for the high level or strategic outcomes to be realised; and
- Operational objectives – these represent the desirable outputs which are necessary for the intermediate objectives to be achieved.

Where possible intermediate and operational objectives should be SMART (Specific-Measurable Accepted-Realistic-Time defined) and capable of quantification into specific targets as the scheme development process proceeds. It is likely that high level or strategic outcomes will be expressed in broader terms and be more qualitative.

The strategic outcomes, specific objectives and operational objectives for the package interventions are summarised within **Figure 3-1**.

Figure 3-1 - Relationship between Outcomes and Objectives



3.4 MEETING THE FUND'S OBJECTIVES & DELIVERABILITY

In developing a coherent package of interventions that will meet these strategic outcomes, the overarching objectives of the Fund will need to be met by schemes that:

- focus on improving capacity on commuting trips, access to employment centres, Enterprise Zones and development sites, improving reliability, and supporting economic growth; and
- reduce carbon emissions, for example by bringing about an increase in the volume and proportion of journeys made by low carbon, sustainable modes including walking and cycling

And where possible:

- help to deliver wider social and economic benefits for the community (e.g. improving skills and use of apprenticeships, accessibility and social inclusion);
- support housing delivery;
- bring about improvements to air quality, particularly to support compliance with legal limits in those areas where NO_2 exceedances have been identified and are in the process of developing plans; and
- align to the Future of Mobility Grand Challenge i.e. how robust options are to a range of futures, given wider societal and technological changes such as urbanisation and uptake of connected and autonomous vehicles.

The size of agreed funding packages, once approved, will be fixed. Should cost increases and/or delays occur, DfT will not provide additional funding and this will need to be accounted for within local budgets and there is no guarantee of any funding beyond 2022/23. The following deliverability, affordability, financial sustainability criteria and value for money have been considered:

- To what extent is the intervention anticipated to attract transport user, business user and political support?
- Is the scheme feasible without unacceptable detrimental impacts to other transport users and deliverable within the available funding period?
- Is there flexibility in the scheme scope?
- To what extent does the intervention have interdependencies that put it or the other interventions at risk?
- Is the scheme affordable in relation to the overall funding available and the Government's wish to maximise the number of proposals it can support?
- Is the scheme financially sustainable with benefits enduring beyond the Fund period without further DfT support, with plans where appropriate, for any guaranteed local authority and/or external funding support?
- To what extent is the intervention expected to represent good value for money and deliver additional benefits over and above those already planned in the Local Transport Plan and/ or funded from alternative sources?

3.5 OPTION IDENTIFICATION AND SHORTLISTING

The development of a long list of potential interventions has been determined through:

- Evidence review and previous studies;
- Project team workshops (both consultant and client teams); and
- 1-2-1 sessions with First Bus, Network Rail and Train Operating Companies

Following the creation of the longlist, a sifting process has been used to consider each potential intervention's strategic fit with the Fund's primary / supporting criteria, the Council's scheme objectives and deliverability.

This was based on a qualitative appraisal of each transport input's likely contribution to the relevant performance measures and deliverability using a four-point scoring scale as set out in **Table 3-1** below and aided through application/ reference to a set of conditional outputs (covering the four-point scale) for each criteria.

Table 3-1 – Qualitative Assessment Scoring Scale

Fund Criteria/ Scheme Objectives	Deliverability	Affordability	Financial Sustainability	Value for Money	Rating
A strong fit with the desired outcome with large beneficial impacts	Strongly deliverable	Affordable as part of a low investment package	Ongoing OPEX costs within normal limits & responsibilities	Strongly supports the VfM case / additional benefits of an investible package	
Good / reasonable fit with the desired outcome with beneficial impacts	Likely to be some deliverability issues but are not considered to be insurmountable	Affordable as part of a medium investment package	Ongoing OPEX costs within future budgeted limits & responsibilities	Supports the VfM case / additional benefits of an investible package	
Neutral / marginal impact on the outcome	Not applicable	Affordable as part of a high investment package	Potential for ongoing OPEX to be outside budgeted limits & responsibilities	Package component being delivered through alternative funding sources	
Conflicts with the desired outcome, and/or conflict with other interventions	Potential barriers to deliverability	Not considered affordable through TCF	Potential need for future revenue support	Unlikely to positively support the VfM case of an investible package	

The sifting tool also provides an overall 'performance rating' against the Fund's objectives and deliverability. This does not represent a summation or weighting of the individual performance indicator ratings ('scores'); but rather takes an informed risk-based view of how well/ poorly the potential intervention meets the Fund's objectives when considered across respective criteria.

In order to ensure a consistency of approach the sifting tool was subject to verification and moderation. The outcome of the sifting exercise was to classify potential interventions into one of three categories:

- Core Package Intervention which is considered to be deliverable within the funding period and has a strong fit against both the Fund's primary criteria and the City Council's scheme objectives;
- Complementary Package Intervention which is considered to be deliverable within the funding period and supports both the Fund's and City's Council's objectives as part of an integrated sustainable package; and
- Not to be pursued through the Transforming Cities Fund. Deliverability is a key aspect of the Fund – a particular focus of the value management, scheme development and optioneering process has been to challenge, in consultation with Partners, the realism of delivery within the funding period. Where potential barriers to deliverability exist, whether that be in terms of acceptability, practical feasibility, flexibility or inter-dependencies that put it or other interventions at risk, the decision has been taken not to pursue these interventions further through the TCF process. It is the City Council's and Partners' plan to continue to support and pursue a number of these interventions in the longer term through alternative funding routes and development opportunities.

Tranche 2 TCF investment packages prepared for low, medium and high funding levels are presented in **Table 3-2** overleaf with details of the Option Appraisal contained in **Appendix B**.

Table 3-2 – Tranche 2 Investment Packages

		Transforming Cities Fund
#		**Tranche 2 - High Investment Package**
1	L1	Station Road - multi-modal interchange and public realm
5	L2	Station building - frontage / de-clutter / retail & commercial / community hub
8	H1	New southern east-west (unpaid) footbridge connection through station
14	L3	Station Road / Leek Road junction improvement (complementary LEP scheme)
17	H2	Station West Car Park/ Glebe Street Cycle & Pedestrian Link
18	L4	Vernon Road Cycle & Pedestrian Link
21	L5	College Road corridor improvements
23	L6	Boughey Road improvements
27	L7	Bus corridor pinch point improvements
30	L8	City Centre bus station improvements
31	L9	City Centre bus priority measures
32	L10	Re-establish cross-city bus routes
33a	L11	Enhanced walking and cycling routes to Etruria Valley
33b	M3	Enhanced walking and cycling routes to Trentham Lakes
35	H5	Longport Station improvements
36	M4	Longton Station improvements

		Transforming Cities Fund
#		**Tranche 2 - Medium Investment Package**
1	L1	Station Road - multi-modal interchange and public realm
5	L2	Station building - frontage / de-clutter / retail & commercial / community hub
14	L3	Station Road / Leek Road junction improvement (complementary LEP scheme)
18	L4	Vernon Road Cycle & Pedestrian Link
21	L5	College Road corridor improvements
23	L6	Boughey Road improvements
27	L7	Bus corridor pinch point improvements
30	L8	City Centre bus station improvements
31	L9	City Centre bus priority measures
32	L10	Re-establish cross-city bus routes
33a	L11	Enhanced walking and cycling routes to Etruria Valley
33b	M3	Enhanced walking and cycling routes to Trentham Lakes
36	M4	Longton Station improvements

		Transforming Cities Fund
#		Tranche 2 - Low Investment Package
1	L1	Station Road - multi-modal interchange and public realm
5	L2	Station building - frontage / de-clutter / retail & commercial / community hub
14	L3	Station Road / Leek Road junction improvement (complementary LEP scheme)
18	L4	Vernon Road Cycle & Pedestrian Link
21	L5	College Road corridor improvements
23	L6	Boughey Road improvements
27	L7	Bus corridor pinch point improvements
30	L8	City Centre bus station improvements
31	L9	City Centre bus priority measures
32	L10	Re-establish cross-city bus routes
33a	L11	Enhanced walking and cycling routes to Etruria Valley

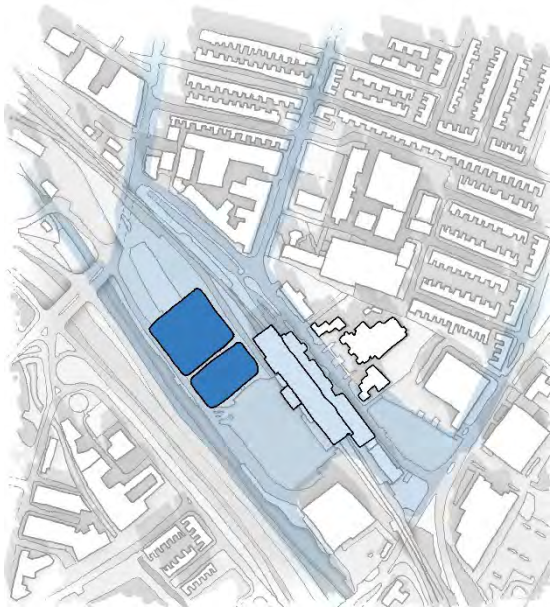
3.6 PACKAGING: A PHASED APPROACH TO DELIVERY

The City Council's funding request represents a **£69.4 million** coherent investment programme of interlinking interventions which will transform connectivity for the key commuter route in the City, better linking the Station to the City Centre and re-establishing cross-city connections, to meet the City Council's ambition for a properly connected sustainable network. **Table 3-3** overleaf summarises how the interventions may be packaged in a phased approach to delivery, based on types of schemes and delivery timescales that reflects the way in which packages may be shaped for LEP Assurance at later stages of development (which is described in more detailed in section 8.5.4 of the Management Case).

The following sections summarise the design proposals with detail provided in the RIBA Stage 2 Design Report contained in **Appendix C**, with scheme drawings contained in **Appendix D**.

Table 3-3 – Packaging Phased Approached to Delivery (High Package Scenario)

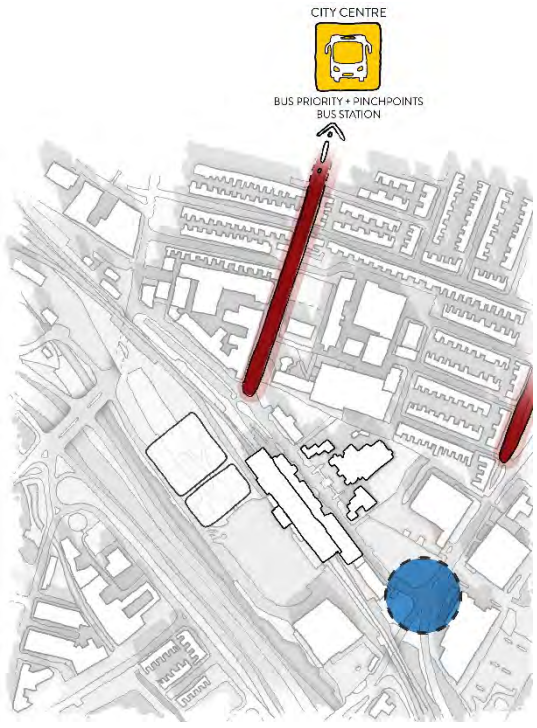
Tranche 1: Phase 1 (Funding Awarded Currently in Delivery)



The works around the Station Hub and improved connection to the City Centre has started with Tranche 1 works which include:

- Relocated car parking to the rear of the station;
- Creation of western taxi rank (drop off and pick up);
- Introduction of a new cycle hub;
- Early urban realm upgrades around Winton Square;
- Wayfinding and improved pedestrian / cycle linkages between the two Staffordshire University campuses at Boughey Road; and
- Canal tow path and Hanley Park improvements.

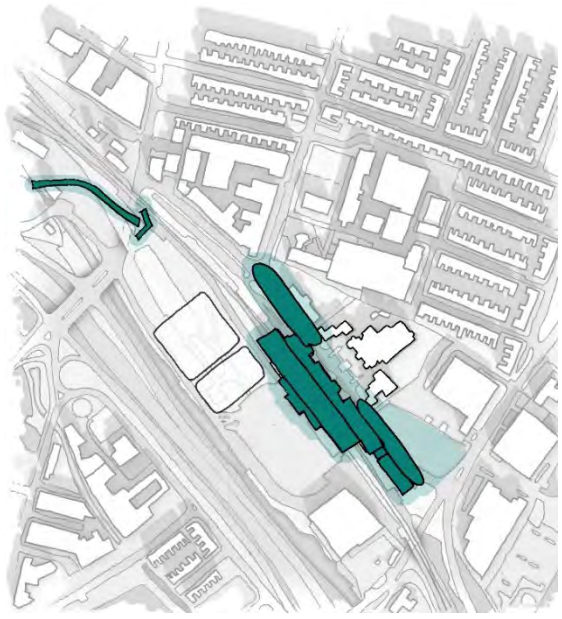
Tranche 2: Early Wins



These works will free up space and therefore enable Tranche 2 works to start on the eastern side of the station. The first package consists of works offering early wins:

- College Road Corridor Improvements;
- Boughey Road Pedestrian & Cycle Improvements;
- City Centre Bus Station Improvements;
- City Centre Bus Priority Measures;
- Bus Priority Pinch Point Improvements; and
- Enhanced Walking and Cycling Routes to Etruria Valley.

Tranche 2: Station Hub Package



These works are focussed on the Station Hub and comprise:

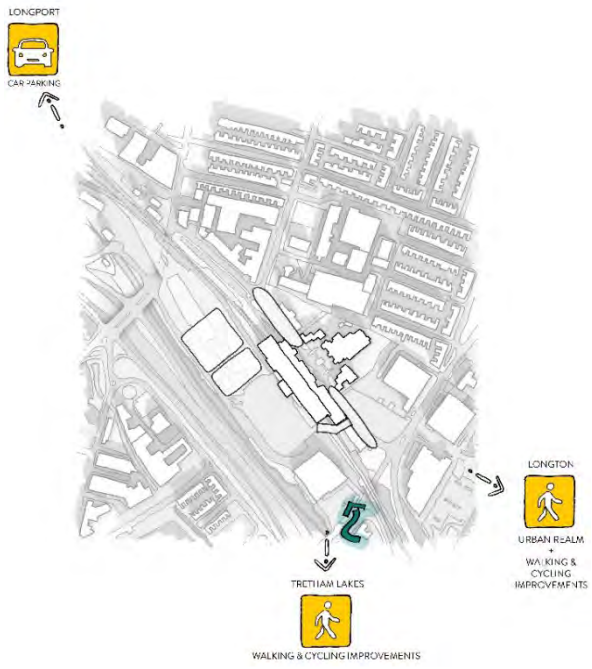
- Station Road highways, public realm and multi-modal interchange;
- Station building; and
- Vernon Road pedestrian & cycle access link.

Tranche 2: Network Rail Package

The package consists of rail industry related works and includes:

- Stoke-on-Trent Station new footbridge;
- Longport Station access for all facilities; and
- Longton Station access for all facilities.

Tranche 2: Late Wins



This package consists of:

- Stoke Station West car park and Glebe Street pedestrian & cycle access link;
- Enhanced walking & cycling routes to Trentham Lakes;
- Longton station public realm, cycle hub and waiting shelters; and
- Longport station car & cycle parking

Future Vision

To enable future growth, the works that are part of the TCF application were created with a long-term vision in mind, to safeguard for future expansion. After the implementation of the TCF works, the additional works can include:

- New concourse to the rear of the Station;
- Large scale development on both sides of the Station

3.6.1. *Station Hub*

Station Road

Station Road at present fails to provide a sense of place or identity to users of the station. A series of benefits would be unlocked by changes to the character and functions of the street:

- Prioritisation of pedestrian flows would overcome the current dominance of vehicles (including removal of private car access)
- Enhanced bus stops would promote ease of access and encourage increased usage
- New surface finishes and landscape features would improve the setting of the listed buildings and the character of the Winton Square conservation area
- Providing elements of shelter would provide weather protection
- Signage structures to the ends of the road would provide identity and define the interchange

The core concept for Station Road is to create an integrated transport interchange that unites the internal and external space of the station. To provide the shelter to Station Road, a series of new canopies are proposed - divided into two ranges:

- the first covers Station Road from Winton Square to Leek Road to the east; and
- the second provides shelter to the western leg of the road from Winton Square to College Road.

Figure 3-2 – Station Road Canopies

Figure 3-3 – Streetscape Development

- Road and vehicle dominated environment
- Narrow pavement for pedestrian circulation
- No shelter for pedestrian movement to station interdependences (e.g. taxis)
- Basic bus shelter fails to promote this as an important interchange
- Limited pedestrian crossings

- Road and vehicle traffic reduced and slowed
- Wide pavement for pedestrian dominated environment
- Shelter for pedestrian movement to station interdependences (e.g. bus stops)
- Visibility to the station building retained
- A bus stop provided with digital information screens, WiFi and phone charging
- Pedestrian crossings located on key desire lines improving pedestrian connections
- Raised road surface slowing traffic and indicating shared spaces

The proposed relocation of the statue and access road will create a wider, pedestrian space with a more appropriate setting for the station frontage and statue. To maximise the space around the station frontage it is proposed to extend the public realm finishes and character into the station booking hall by removing the non-original walls which infill the original portico. From this more restful space, pedestrian routes head in either direction towards Leek Road and College Road. The width of the pavement changes emphasis in response to the key pedestrian flows, switching from one side to the other.

The coordinated design of the canopies and landscaping is essential to minimise the clutter of street furniture that can dominate transport interchanges:

- all street lighting will be integrated into the supporting columns of the canopy, as will directional signage
- the canopies will dip down at the bus stops, meaning that no freestanding shelters will be required. Vertical structures will collect together passenger information and services (charging points, etc.)
- bespoke benches and low walls will be designed and sited to minimise the need for bollards placed to address security and terrorism concerns.

Figure 3-4 – Proposed Circulation Patterns

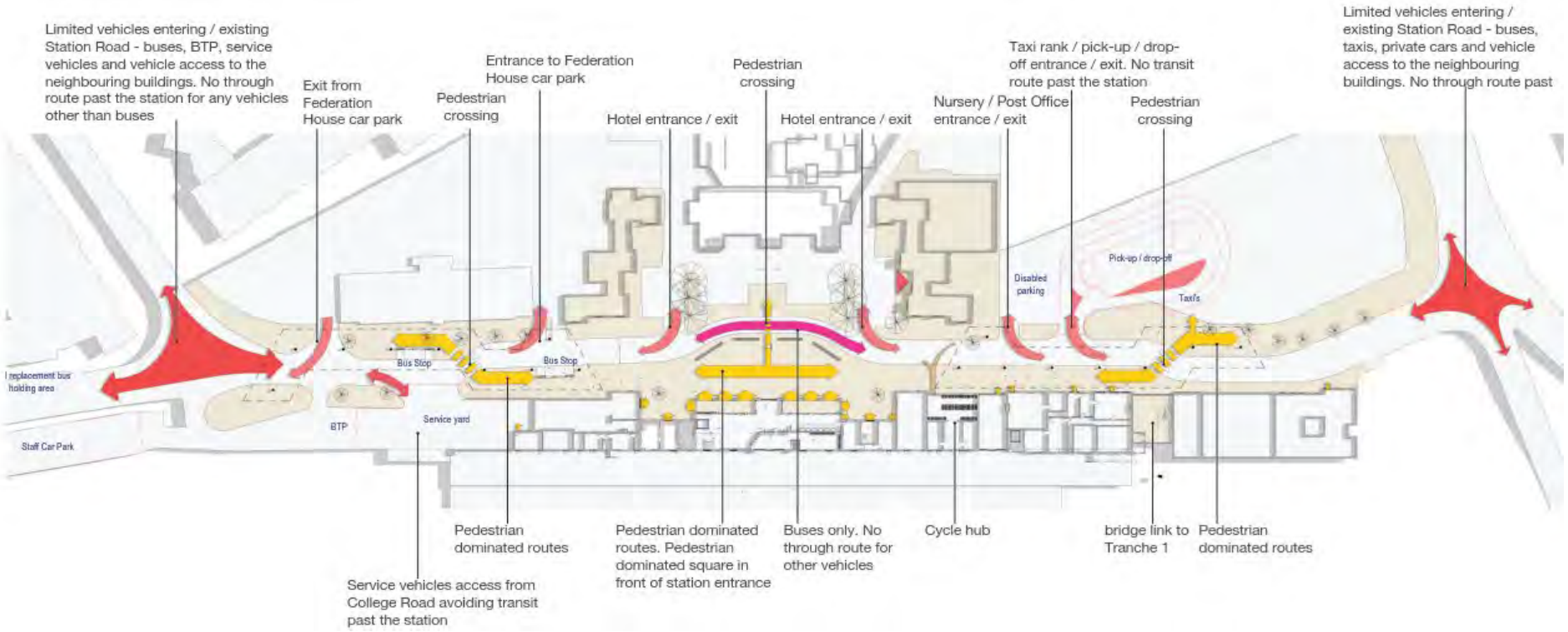


Figure 3-5 – Station Road – Enhanced Public Realm

Station Building

The current station building function positively on the internal train shed elevation with activity provided by the cafés and pub that spill out onto the wide platform adjacent. However, onto Station Road the buildings give very little to the pedestrian streetscape. There are very few door openings through the external façade onto Station Road that offer access or animation to the public realm. To compound this negative character, the upper storeys of the original station building and its extension to the south-east are currently vacant. There is a clear opportunity to transform this situation and provide benefits in terms of passenger access, station identity and commercial opportunities.

The booking hall area has a legacy of gradual change to the station. The originally open arches to the central portion of the building from Station Road were closed-up with masonry and window infills; some of these still provide access, but a more comprehensive approach would promote easier access in and out of the station. The booking hall has suffered from the slow accumulation of signage, information displays, leaflet / timetable racks and ticket gates over a long period of time. Modern ticket selling techniques and information provision could simplify these operations, and a clear out of other clutter in conjunction with the removal of some internal walls would transform this space into a true gateway to the city and the heart of a next generation multi-modal and multi-functional mobility hub.

The upper storeys of the building are currently vacant and are in various levels of condition. The building today has a disappointing character that results in part from non-original finishes that appear to conceal original wall, floor and ceiling surfaces.

Figure 3-6 – Proposed Layout of Station Building

The building creates a clear opportunity for a holistic development across all levels that accommodates public facilities for station users and surrounding communities. It can do this through the provision of diverse activities and an arrangement of new vertical circulation that provides step-free access for all users. Minor adaptations to the existing fabric, including openings formed in existing floors, can create a transformed building at the heart of the TCF project.

The centrepiece of the station frontage proposals is the expansion of the existing booking hall, both horizontally and vertically:

- the rationalisation and modernisation of ticketing and information provision can support a strategy to de-clutter the space;
- the selective removal of some internal walls can create additional space for passenger movement;
- providing new vertical circulation (lift and stairs) to the upper levels will create step-free access to much of the first floor as a continuation of the previous point, a visually prominent combination of stairs and a lift will promote the activities featured at first floor level; and
- to further emphasise the activities throughout the building, a new void formed in the first floor structure, encircled with a glazed balustrade would be created.

This space will be enlivened by these changes, embodying the concept of the station as a multi-modal multi-functional mobility hub at the heart of the TCF project in Stoke-on-Trent.

Figure 3-7 – Proposed Station Building Booking Hall

As currently proposed, the ground floor level of the building is proposed to accommodate:

- commercial units, which are an obvious use for inclusion at modern railway stations; appropriate locations for retail and food & beverage outlets have been suggested where they can be beneficial and viable (further consideration of rental returns and planning policy will be necessary as the scheme moves forward);

- passenger facilities such as Customer Assistance (Station Reception) and toilets;
- contemporary best practice cycle hub which expands on the current secure storage provision and the Tranche 1 scheme with facilities such as showers, lockers and a workshop area;
- some of the commercial units could dovetail with public facilities provided elsewhere in the building as part of the multi-functional mobility hub concept, for example cycle-related retail and a pharmacy;
- a staff base for platform and ticket gateline personnel;
- a refuse and recycling area to service the expanded range of station functions; and
- the existing British Transport Police facilities.

It is at the first floor level of the building where many of the activities of a multi-functional mobility hub would be realised, subject to agreement with First Trenitalia at the next stage of development, providing a wide range of services consistent with the vision of such hubs and what they can offer to the communities they serve. Public-facing uses are perfect to bring currently disused spaces back to life as they support public transport users and promote sustainable transport modes. A diverse range of uses are proposed at first floor level as part of the multi-functional mobility hub:

- a multi-use exhibition and event space, arranged around a 'Minstrels gallery' overlooking a void to be created in the existing first floor structure;
- a medical centre which can provide a range of GP and dental services through the week (supported by a pharmacy at ground floor level); and
- a co-working / start-up business centre with a separate designated entrance and reception area from the station footbridge.

Station Footbridge

Currently pedestrian access linkages to the western part of the city are poor – low level bridges on both Stoke Road and Glebe Street are uninviting to pedestrians. A new east-west footbridge connection linking to the other proposed pedestrian access improvements to the rear of the Station e.g. link through Swift House on to Glebe Street, would fulfil this function - as well as accommodating future capacity requirements, stimulating new uses in the existing station buildings through the creation of a new access to the First Floor business centre and providing a catalyst for regeneration to the south and west of the station.

Furthermore, the new footbridge will expand the capacity of cross-station movements between the platforms and provide a more pleasant passenger environment than the existing subway and footbridge. A single structure is proposed to provide two parallel access routes. The footbridge is proposed to be divided in two, with a separating screen running along the centre of the bridge deck. The through route for non-rail-users will be free to access, with the cross-station route within the revenue-protected part of the station. When anticipated changes to ticket revenue protection have evolved, it is likely to be the case that the screen could be reviewed or removed in the future.

Figure 3-8 – Proposed New Station Footbridge

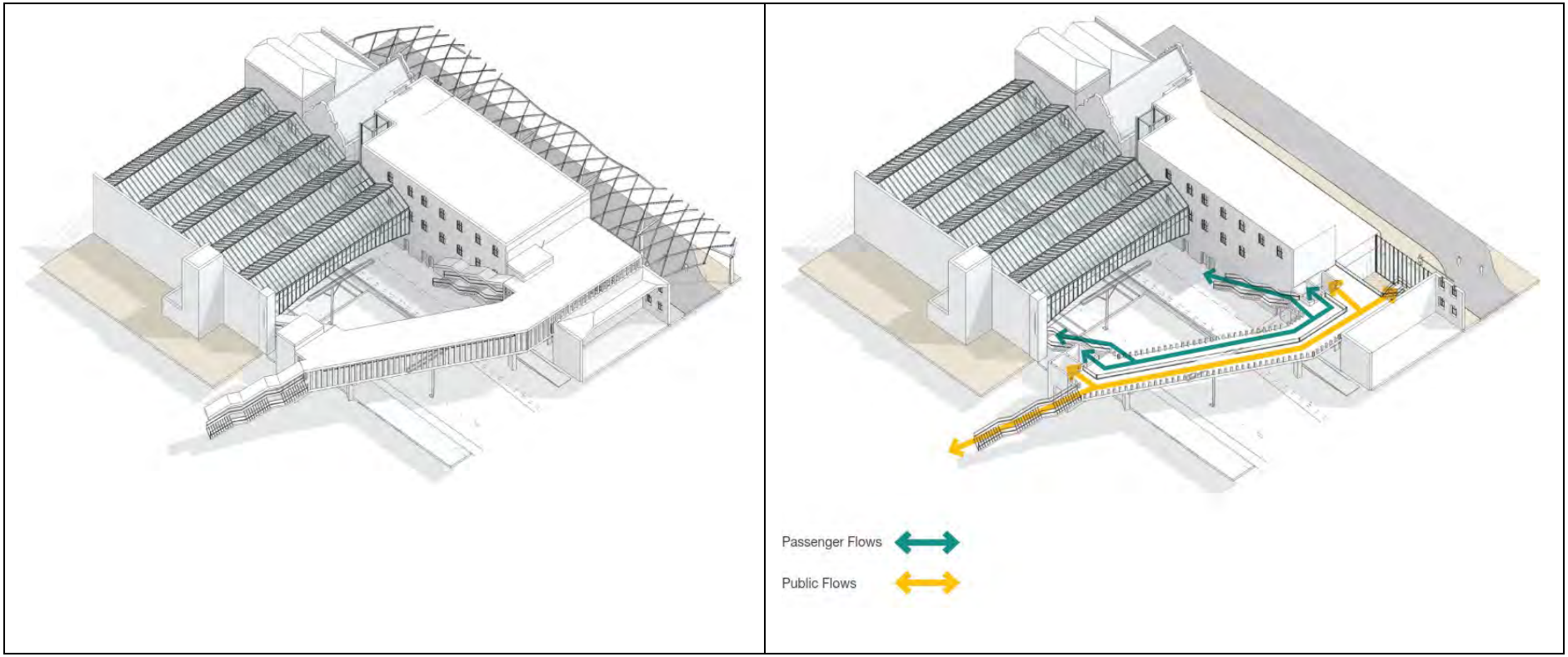


Figure 3-9 – Entrance to Footbridge and Station from Station Road

3.6.2. *Station to City Centre Transit Links*

College Road and Boughey Road are key movement corridors between Stoke-on-Trent Railway Station and the City Centre; the corridors include major attractors such as the Staffordshire University, Stoke-on-Trent College and Stoke-on-Trent Sixth Form College. The removal of through traffic on Station Road will lead to a significant reduction in traffic using College Road therefore providing an opportunity to enable a series of improvements. These can strengthen its function as a priority bus corridor, linking the Station to the City Centre, whilst reflecting the changing needs of its place to prioritise the needs of pedestrians, cyclists and bus users.

To complement the proposals to enhance pedestrian and cycle facilities on College Road, further improved pedestrian and cycling linkages through the University Quarter including Boughey Road are proposed which would link together the Tranche 1 legible city proposals through Hanley Park with those at Boughey Road / Leek Road.

College Road

University Quarter

Along College Road between the University and Hanley Park a series of street improvements are planned which will help to transform the streetscene, encouraging greater footfall and cycling as well as uplifting the local identity and sense of place. Around the University the design proposes an uplift in surfacing along the footways, taking influence from local public realm design guides and agreed surface palettes to better tie in College Road with the adjoining public open spaces. At key nodal points, crossings and local

destinations (i.e. local shopping parades) the uplift in surface will extend to the carriageway providing a strong visual link, tying in both sides of the street.

The lowering of kerbs and a flush central refuge will further enhance the streetscene balancing both the pedestrian users and slowing moving vehicles to help embed College Road into its immediate surroundings.

Figure 3-10 – College Road: University Quarter

Hanley Park

The second half of College Road is delineated by the crossroad junction and main entrance gateway into Hanley Park. At this point the surroundings transform from urban into parkland. From this junction up to Cleveland Road street improvements are planned to create a better visual relationship between the park and the road corridor. Proposals look to

promote cycling and walking, provide better exposure for the park at key entrances and transform the overall sense of place. Blurring the edges of Hanley Park alongside College Road will help to integrate the highway with the Park and create the impression of cycling through the Park itself rather than around the outside of the Park.

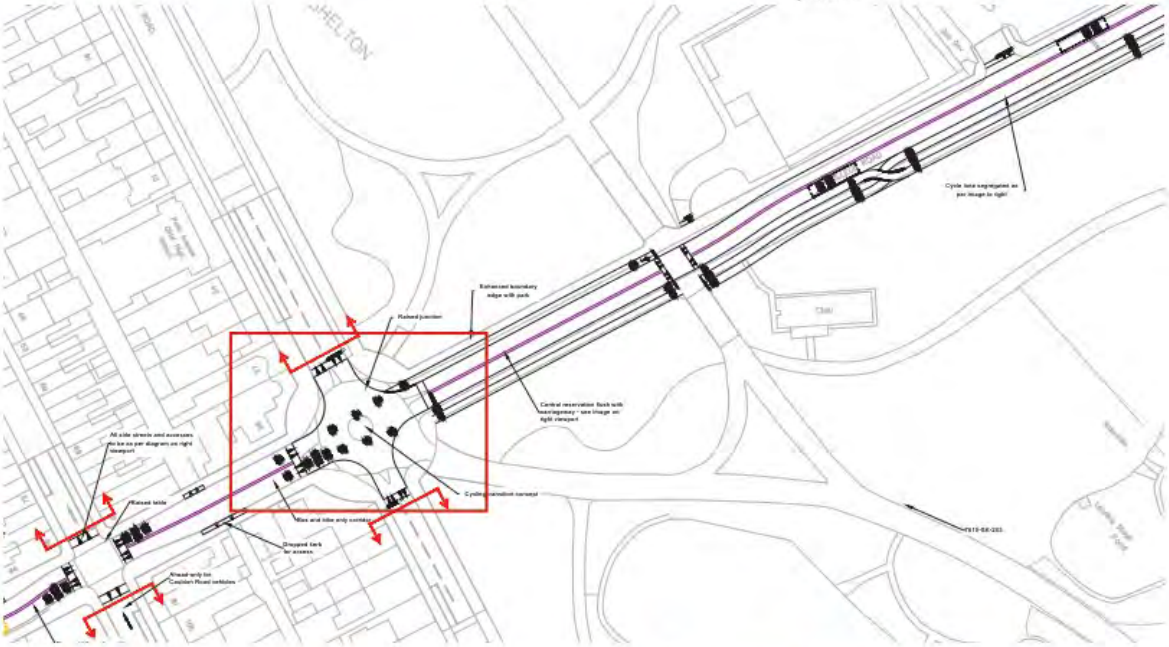
Along College Road up to Cleveland Road street improvements are planned to protect the integrity of the Park entrances by creating a ‘special’ surface treatment at these locations. Raised tables, surface treatments and subtle changes in level delineated by raised kerbs will support the local identity and streetscape character. A continuous two-way cycle route will wrap around the Park encouraging a sustainable transport link between the Station and the city centre. At the key entrances the design of the cycleways will change in response to the importance of setting a quality sense of arrival into Hanley Park.

Figure 3-11 – College Road: Hanley Park

Open up and showcase the gateways and entry points into Hanley Park

Supplement boundary walls and railings with planting to help better integrate College Road with the Park

Example illustrates how to make a feature of an important gateway/crossing point at a crossroad junction.



Landmark gateway feature

Branding and signage for park

Consider nodal points at entrances to Hanley Park

Boughey Road

This location has benefitted from recent streetscape improvements, therefore designs will continue to support the design character, working with the existing surface palettes already established in the area.

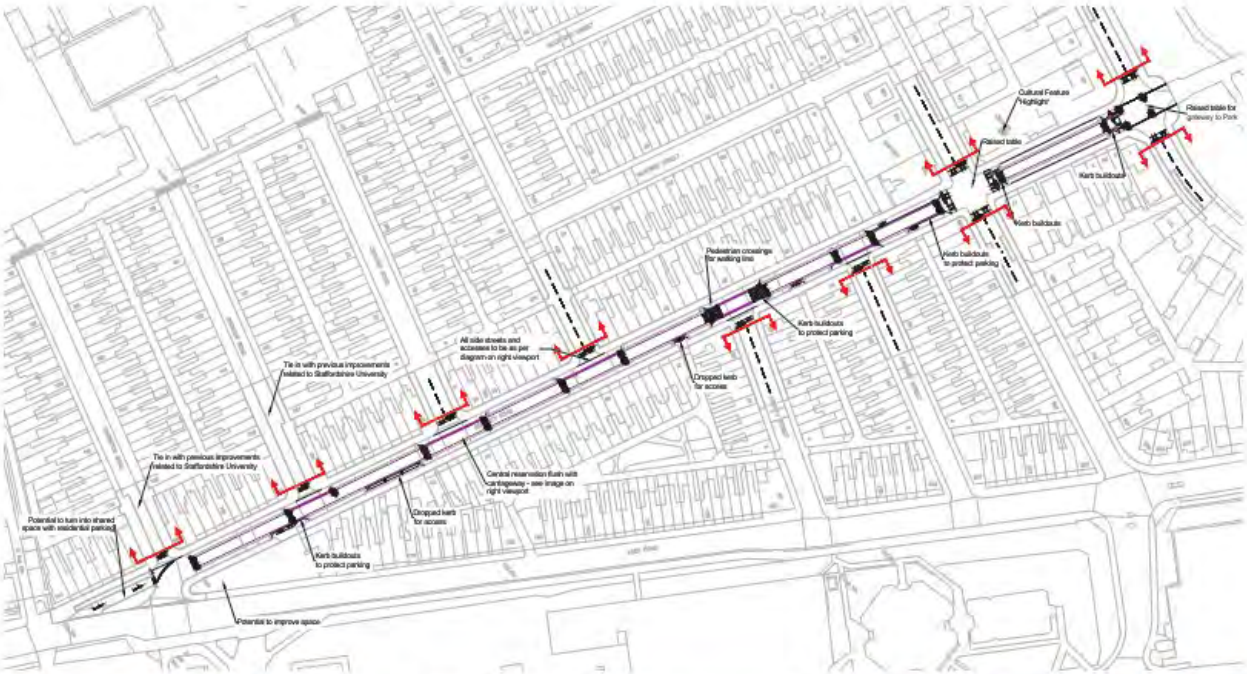
Visual road narrowing, central refuges and dropping of kerb heights will also support this design approach. At key nodal points (i.e. shopping parades where pedestrian activity increases) the proposal looks to introduce a continuous surface treatment across the public realm.

Figure 3-12 – Boughey Road

Delineate and uplift the quality of the cycle paths at key entrances to the park. Raised kerbs and surface changes can help provide a subtle separation

Central refuge creates the perception of narrow street

Continuous pavements where vehicle side streets are secondary to pedestrian footfall



Identify nodal points along the street with highlights/ uplift in the surfaces

Delineate and uplift the quality of the cycle paths at key entrances to the park. Raised kerbs and surface changes can help provide a subtle separation

Example of street narrowing by the use of paving to visually extend out the kerb line alongside lowering kerb heights for greater accessibility

3.6.3. *Onward Cross-City Transit Links*

Bus Priority & Re-Establishing Cross-City Services

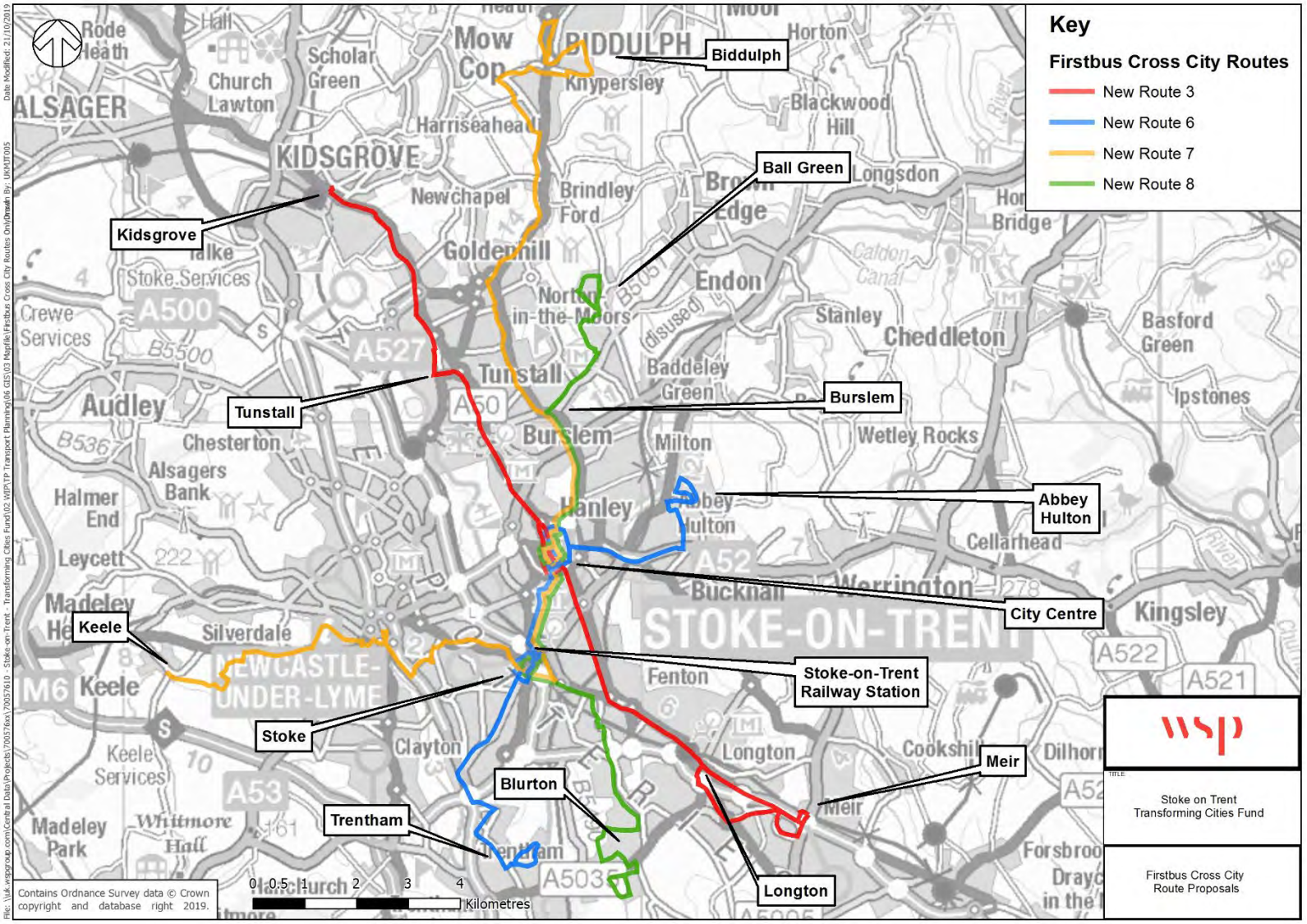
Bus is a fundamental and significant component in the delivery of a modern, integrated transport network and a priority outcome for this programme is to support the re-establishment of cross-city bus links. Congestion on key bus corridors through the city has a major impact on bus journey times and punctuality leading to unreliable journey times which in turn results in poor overall customer satisfaction, and currently necessitates services terminating at the City Centre bus station. The main bus operator, First Bus, does not have the confidence to operate cross-city services, limiting access to employment opportunities due to interchange penalties of time, cost and inconvenience.

Working closely with the main bus operator, significant works, including bus pinch point improvements, city centre bus priority and improved bus facilities at the City Centre bus station have been identified and developed, to improve bus flows on key radial routes focused on Stoke-on-Trent Railway Station and the City Centre. These interventions will in turn facilitate the re-introduction by First Bus of cross city transit links to the benefit of existing passengers and future users. Taken together this will represent a step-change in the bus offer in Stoke-on-Trent, with the shared aim of reversing recent patronage declines in the Potteries bus market.

> *We are also supportive of the Railway Station Multi Modal Hub proposals that include the relocation of bus stops, modern passenger waiting facilities and better customer information; the reduction in car based vehicular traffic in Station Road coupled with the proposed bus gate at the junction of College Road and Station Road; and the creation of a rapid route for buses to the city centre via College Road This will enhance the crucial "front door" to Potteries for travellers arriving by rail.*
>
> *Nigel Eggleton, Managing Director, First Midlands*

The City Council working closely with First Bus have agreed the key routes for intervention between the centres of employment, learning and other parts of the polycentric city, so that the maximum impacts of reducing residents' reliance on the car, encouraging the switch to public transport and improving access, journey time and reliance can be realised.

Figure 3-13 – Proposed New Cross City Bus Routes



Bus and rail accessibility is a vital part of improving educational attainment in the city – upskilling the next generation. Reference is made to this by one of the establishments close to the rail station:

> *The onward cross city transit links to be created through TCF are particularly welcomed by Stoke-on-Trent Sixth Form College. The College has 1550 young people on its further education programmes of which 398 are entitled to a bursary to support them financially. This financial support includes help with the purchase of a bus pass or rail pass of which 285 have been issued for bus travel and 33 for train travel. Coupled with a further 152 students outside of the bursary cohort purchasing a bus pass through College a total of 437 young people use the bus to access their learning representing 28% of the total student population.*

First Bus has committed to establishing the cross-city bus links once the physical infrastructure works are completed, with an undertaking that the savings First Bus could make particularly through the city centre improvements will be reinvested to deliver a significant modernisation of the current fleet. If the TCF bid is successful, First Bus has committed to invest £3.5 million 'in-kind' match funding into the purchase of at least 15 new double decker Euro VI vehicles.

Taken together with planned and expected JAQU funded retrofits and the related “cascade in” of newer vehicles over this period, this should achieve a c50% Euro VI fleet for Potteries with a reduction in average age from 10.8 years to 5.2 years.

First Bus is also keen to further progress the digital ticketing offer in the city with the early roll out of “tap on/tap off” ticketing across the area, so that passengers know that no matter how much they travel, they won’t be charged more than a fixed amount. Crucially, it will drastically reduce dwell times, hugely improving end to end journey times. Nationally, First Bus is aiming to deliver a contactless price cap on day and weekly tickets by 2022. Within the bid, there is a funding request for a second card reader per bus, so that passengers can “tap on/tap off”. If this support is forthcoming, First Bus will commit to bringing forward the single operator then multi-operator capping scheme in the city from 2020, paving the way for eventual national rollout.

Longton & Longport Railway Stations

Rail travel has an opportunity to play a much more significant role in movement around the City. Longton and Longport stations lie towards the south and north of the City, either side of Stoke-on-Trent Railway Station. Along with commuter stations just outside the City, such as Blythe Bridge and Kidsgrove, they provide a corridor through the heart of the urban area. The City Council is working hard with partners such as Transport for the North, Midlands Connect and relevant TOCs to increase frequency of services, with a minimum two trains per hour being the initial requirement.

Whilst the North Staffordshire Community Rail Partnership has attracted considerable investment over the years and has an active station adoption and delivery programme, local stations and their surrounding environments do need further investment. Therefore,

Longton and Longport stations are seen as a valuable asset for investment, with the potential for significant increases in footfall, and particularly complementary to the Stoke Station Hub proposals.

In addition, schemes will build on the East Midlands Railway franchise commitments to upgrade basic station facilities at both stations.

At Longton Station it is proposed that the existing facilities will be enhanced with the following:

- Lifts to each platform to provide step-free access;
- Platform shelters to provide weather protection;
- A cycle hub to promote sustainable travel;
- Improved public realm including an improved pedestrian connection to the existing bus station and Town Hall / Library;
- An enclosed concourse area connecting beneath the viaduct; and
- Modifications to the stairs to align them better with the lifts and concourse area.

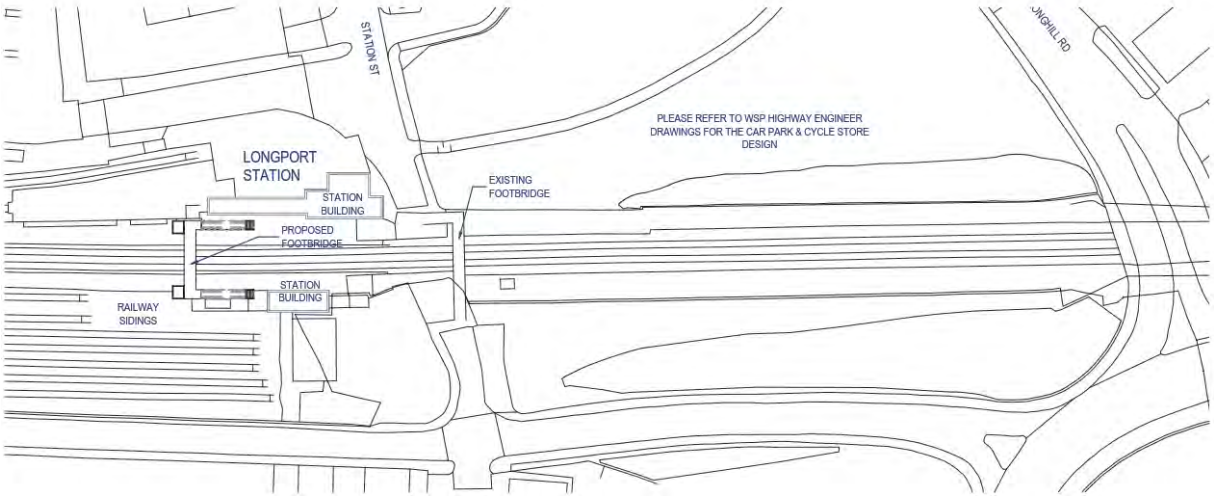
The resultant building will make a more positive impression in the surrounding area, encouraging local residents to utilise sustainable transport modes.

Figure 3-14 – Longton Station

At Longport Station it is proposed that the existing facilities will be enhanced with the following:

- A new footbridge providing staircases compliant with relevant legislation and lifts to provide step-free access;
- Secure cycle parking to promote sustainable travel; and
- Car parking facilities.

Figure 3-15 – Longport Station



3.7 STAKEHOLDER INVOLVEMENT

There are a large number of stakeholders with an interest in the scheme, given its multi-faceted nature, and wide area coverage of the package of measures. A consultation and engagement strategy has been developed to identify any issues, minimise conflicts and generate solutions that are as acceptable to all parties as possible.

The scheme has attracted strong political support (as set out in **Appendix E**):

> *Stoke-on-Trent faces unique challenges in its transport infrastructure. Limited bus and rail services, combined with the unusual geography of a linear city, mean that the vast majority of journeys are completed by car. The constraints of significant congestion that results from this create a major barrier to economic growth and connectivity in the city.*
>
> *Improved access to Stoke-on-Trent Rail Station is vital for the city to be able to grow and fulfil our huge often untapped potential. An improved and better-connected railway network will play a key role as Stoke-on-Trent's main gateway, catalysing economic prosperity by linking together HS2, the strategic rail network to local networks. This would ensure that all our communities have the ability to access new opportunities, helping deliver the new jobs and new homes that our city needs.*
>
> *Stoke-on-Trent has seen significant economic growth over the last few years, bucking national trends especially in manufacturing and I am determined that this will increase further. Despite this recent success, we are still one of the lowest paid areas and have some of the lowest land values in the country. Improvements to the main railway station and local transport connectivity are key in removing constraints to overcome these challenges.*
>
> *Jack Brereton MP*
> *Member of Parliament for Stoke-on-Trent (14th October 2019)*

In addition, the TCF proposals have been developed with key stakeholder support from:

- Network Rail
- Virgin Trains
- First Trenitalia
- East Midlands Railway
- First Bus
- Canal & River Trust
- Sustrans
- Stoke-on-Trent & Staffordshire LEP
- Midlands Engine
- Midlands Connect
- Staffordshire Chambers of Commerce
- Staffordshire University
- Stoke-on-Trent Sixth Form College
- Stoke-on-Trent College
- Railfuture
- intu Potteries

Table 3-4 provides a summary of the main activity areas of stakeholder involvement in developing the TCF proposals.

Table 3-4 – Main Activity Areas of Stakeholder Involvement

Stakeholder	Main activity areas
Network Rail	Representatives from Network Rail's Business Development, Sponsor and Property teams have been active members of the Rail Industry Steering Group, established to guide the development of the rail aspects of the programme through this initial SOBC stage. Specifically, Network Rail have provided detailed commentary on asset ownership / management, station capacity, delivery route options, funding agreements and legal aspects of land ownership and access rights, as well as providing feedback at various stages of design development. Network Rail will deliver the rail-related aspects of the programme (where possessions and isolations are required), subject to a suitable funding agreement being established.
Virgin Trains	Representatives from Virgin Trains have been involved in the development of TCF proposals from inception, initially working with Stoke on Trent City Council to develop both the Tranche 1 and Tranche 2 bids. More recently, they have been active members of the Rail Industry Steering Group, providing valuable feedback on station operations aspects of the design, as well as providing data to inform the economic appraisal. They have co-operated well with First Trenitalia during the franchise mobilisation and handover period.
First Trenitalia	Engagement with First Trenitalia commenced shortly after franchise award announcement in August 2019. Since that date, representatives have attended Rail Industry Steering Group meetings and provided as detailed feedback as permitted on design proposals in light of their currently confidential future plans for the station. First Trenitalia will deliver the station building scheme subject to a suitable funding agreement being established.
East Midlands Railway	With Longton and Longport's late addition to the TCF programme, engagement with East Midlands Railway has been limited to a single meeting and email exchanges. They have confirmed details of their franchise commitments (both services and stations), and indicated their willingness to work closely with us to develop the schemes further, including aspects such as accepting new assets into the station lease, remote operation of lifts and potential delivery of schemes.
First Bus	Ongoing engagement with the bus operator to identify and agree the scope of improvement to local bus services to meet TCF objectives. This has included ongoing informal engagement, sharing of ideas at the early concept stage as well as working collaboratively to shortlist locations for interventions across the network to improve journey times and reliability. Final stages of engagement have focused on agreeing solutions to agreed pinch points, and prioritising cross-city connectivity based on an agreed evidence base

Stakeholder	Main activity areas
Canal & River Trust	Meetings have been held with CRT to discuss working jointly to increase access for pedestrians and cyclists to the canal network to raise participation. Agreement has been reached on the routes selected. CRT has also assisted in checking prices, discussed materials to be used and future maintenance liability. CRT has confirmed their investment into the City to 2023 in support of the TCF Programme including healthy living schemes.
Sustrans	Active mode interventions have been discussed and agreed with Sustrans. Sustrans will deliver the new Vernon Road pedestrian / cycle route in close liaison with Network Rail utilising their national Memorandum of Understanding / Licence model.
Stoke-on-Trent & Staffordshire LEP	The SSLEP have been engaged to advise and endorse that the Governance approach outlined in the SOBC meets their SSLEP Assurance Framework. The SSLEP Company Executive Board and Audit and Finance Committee will oversee the TCF Programme ensuring that Stoke-on-Trent City Council is held accountable for delivery in line with the DfT's funding requirements.
Staffordshire Chambers of Commerce	Staffordshire Chamber of Commerce has been engaged in the TCF bid and is keen to work with the City Council to publicise and engage its 1000+ membership in the Programme through articles in its weekly electronic business newsletter and quarterly Focus magazine publication. Furthermore, the Chamber has offered to assist the City Council in further stakeholder engagement through two of its member led groups the Transport Forum and Energy and Sustainability Forum both of which meet quarterly.
Staffordshire University	Staffordshire University has provided extensive data including student numbers, catchment and commuter patterns of its student population including mapped 'heat maps' showing where concentrations of students are travelling to and from to reach campus. This information has assisted not only in the development of the Stoke Station Gateway Package and Bus Priority corridors but also the prioritisation of works at Longton Station.
Stoke-on-Trent Sixth Form College	The Sixth Form College is supportive of the TCF plans and have contributed to their development through the supply of background data. This includes student numbers and the number of disadvantaged students receiving bursaries towards travel costs.
Stoke-on-Trent College	Stoke-on-Trent College has provided data on the number of students and staff attending its Stoke campus that has fed into the College Road proposals.
Railway Heritage Trust	The Railway Heritage Trust assists the operational railway companies in the preservation and upkeep of listed buildings and structures, and in the transfer of non-operational premises and structures to outside bodies willing to undertake their preservation. The Trust has been engaged and is supportive of the TCF bid. An offer has been made to work with the TCF Programme Team to realise grant aid of up to £200k pa through their annual grants programme for eligible elements of the Station Package.
Railfuture	Railfuture campaigns for a bigger better railway including more seats, value for money, quicker journeys, a more enjoyable journey experience and new services and lines to increase journey opportunities. The West Midlands Branch will be engaged in the detailed development of the TCF railway station proposals
intu Potteries	intu Potteries is a major employer and visitor destination in the City Centre. In the north of the city centre, it does not have direct bus access to services from the south, west and east of the city. The bus stops there also have a poor waiting environment. intu is working with us to improve the waiting environment, and the proposed investment to enable cross city services to better connect them, has strengthened

Stakeholder	Main activity areas
	their commitment to partner with us.

Letters of key stakeholder support are contained in **Appendix E**.

4 ECONOMIC CASE

4.1 INTRODUCTION

This chapter presents the Economic Case for the three investment packages (representing low, medium & high funding levels) identified in the Strategic Case.

The Value for Money (VfM) of the investment packages appraised considers both the monetised and non-monetised impacts with regards to economic, environmental, social and distributional impacts. The schemes proposed seek to maximise the overall VfM of the packages (as opposed to an individual scheme level assessment), identifying all the positive and negative impacts including any uncertainties around the estimation of key impacts, and assumptions used in analysis.

Economic assessment involves the determination of costs and benefits of a scheme using travel demand, traffic flows, journey times and other inputs. By comparing the costs with the benefits of a scheme over a 60-year appraisal period, a Benefit to Cost Ratio (BCR) can be calculated, which represents a measure of the VfM of the scheme. In standard cases, where Broad Transport Budget cost outlays exceed revenues or cost savings, the Department uses six VfM categories[18]:

- Less than or equal to 0 indicates Very Poor VfM;
- to 1.0 indicates Poor VfM;
- to 1.5 indicates Low VfM;
- 1.5 to 2.0 indicates Medium VfM;
- 2.0 to 4.0 indicates High VfM; and
- Greater than or equal to 4.0 indicates Very High VfM.

The Department's expectation for the Transforming Cities Fund is that only schemes representing High VfM should be put forward (BCR above 2 and accounting for significant non-monetised impacts and key uncertainties). Within this context, guidance promotes a flexible approach to economic appraisal to ensure that the time and resources spent on the development of a business case are proportionate to the size of the investment.

Overall, the benefits considered to derive the VfM assessment for the proposed scheme are listed below:

- Rail passenger benefits related to an improved environment and improved station facilities at Stoke-on-Trent, Longport and Longton Rail Stations, including actual and perceived journey time benefits;

[18] DfT Value for Money Framework guidance (July 2017)

- Bus passenger benefits from journey time saving between the Stoke-on-Trent Rail Station and the City Centre via College Road, improved and more reliable journey times through bus pinch-point locations and bus interchange time savings for re-established cross-city bus service journeys;
- Active mode user benefits in terms of amenity, physical activity and time saving benefits from improved Rail Station access, College Road and Boughey Road corridor improvements and improved access to strategic employment areas for pedestrians and cyclists; and
- Marginal external cost benefits resulting from road decongestion (due to fewer car kilometres on the road network).

Highway user impacts as a result of modifications to the highway network have also been taken into account, which include:

- Highway journey time user changes for car users; and
- Noise, air quality, and carbon changes as a result in the change in car kilometres.

To develop a robust economic case, the approach to appraisal has brought together a range of modelling and appraisal techniques, to ensure that all sources of benefits are captured appropriately. The details of this are set out in the Appraisal Specification Report, contained in **Appendix F**, and prepared under co-development arrangements with DfT.

The following sections summarise the approach undertaken to capturing and quantifying benefits and impacts to inform the value for money and wider appraisal (non-quantified).

4.2 METHODOLOGY OVERVIEW

4.2.1. Rail Passenger Benefits

Stoke-on-Trent Rail Station

The focus of the proposed scheme and its objectives relate to the delivery of a multi-modal and multi-functional mobility hub at Stoke-on-Trent Rail Station. This aims to improve passenger experience for rail users with onward travel by other modes and to present a world class first impression of the City when arriving at the Station as a destination.

The nature of the improvements to the rail station can be categorised as:

- Facility / environmental upgrade to facilities;
- Increase in passenger handling capacity; and
- Generalised journey time savings within the station for access between modes.

Baseline demand has been derived from the Office of Rail Regulation (ORR) observed passenger usage data for 2017-18. The recent study on journeys per ticket[19] found that the number of journeys made on a season ticket is lower than was assumed for the ORR figures - in order to correct for this an appropriate adjustment has been made for new journeys per season ticket values as part of the demand calculations.

In "The Value of Station Investment[20]", several different types / levels of station investment are identified:

1. **Improvements to Station Facilities:** The scheme will deliver an improved passenger experience by providing a vast improvement in the standard of facilities at the station. Such measures are ordinarily assessed through the Passenger Demand Forecasting Handbook (PDFH) willingness to pay (WTP) approach and uplift in demand. As the list of facilities are generally already in place at Stoke-on-Trent station (accepting that these would be upgraded as part of the TCF scheme) only a small proportion (25%) of the WTP and demand uplift values have been applied to replicate an improvement in the quality of these facilities.
2. **Improvements to the Overall Station Environment:** This considers aspects such as light, space, noise, sightlines and wayfinding, all of which combine to give a perception of safety and comfort to passengers, which will drive passenger growth in its own right. As there is no recognised industry standard methodology for appraisal this aspect of the scheme has been assessed in qualitative terms.
3. **Accessibility Improvements:** This considers access to the station by other modes, and also within the station for Persons with Reduced Mobility (PRMs) in the following manner:
   - Journey time savings for rail passengers arriving at the station by various modes, using observed survey data to map rail passenger flow / desire lines and forecast future flows to new routes and modes. Time savings to both pedestrian and cycle users through provision of quicker or shorter routes have been calculated using a separate spreadsheet. It uses walking and cycling count data at a number of locations to show the demand, including those that are regularly used to access Stoke-on-Trent Railway Station. The spreadsheet then applies the journey purpose splits and Values of Time (VOT) from the WebTAG databook to find the monetised economic benefits of the time savings. For rail users, where the walking or cycling part of their trip is access or egress to the rail station, a factor of 2.0 has been applied to their time saving in line with PDFH section B4.8 for rail access and egress. The assumptions used are in line with those used for the AMAT, presented in **Table 4-4**;

[19] Department for Transport (April 2019) Journeys per season ticket study. Available from https://www.gov.uk/government/publications/rail-journeys-per-ticket-study

[20] The Value of Station Investment: Research on Regenerative Impacts. Steer Davies Gleave, November 2011

- Within the station, PRMs are currently disadvantaged as their route to cross from one platform to the other (via lifts and an isolated and enclosed footbridge) is significantly longer than the main route via the subway. It should be noted that TCF aims to positively discriminate for PRMs, so improving the safety and quality of the accessible route assists in achieving this aim, even if direct benefits to PRMs do not outweigh costs;

A pedestrian capacity appraisal of the station has also been undertaken to consider current and future conditions under all growth scenarios, including the expected future arrival of HS2. This considers the existing layout, and the proposed layout, and journey time savings calculated.

4. **Bus/Taxi Interchange:** This considers the improved interchange space outside the main entrance of the station for users changing to bus or taxi for onward travel. This includes the provision of the station canopies. The appraisal of this element utilises the generalised minute values for soft factors in Table M3.2.1 of the databook, applying the value for the "New Interchange Facilities" to all users who are interchanging from rail to bus or taxi at Stoke-on-Trent station.

   In addition, public realm improvements as a result of better use of Station Road as a bus interchange, have been calculated using the Valuing Urban Realm Toolkit (VURT). VURT has been used to inform the quantification of urban realm benefits beyond those captured in the AMAT described below. This was developed by Transport for London (TfL) to "*provide objective, evidence-based justifications for investment in the public realm. In monetising some of the less tangible benefits of better streets and spaces, VURT enables them to be considered on equal terms with conventional time-saving, safety and other benefits, both in assessing options and when building the Business Case for scheme implementation*[21]*".*

   In order to assess the potential quantum of benefit that may be brought as a result of public realm improvements, the Pedestrian Environment Review System (PERS) developed by the TRL has been used to assess the quality of the urban realm in situ and the potential levels of improvements. This was then quantified using VURT to assess the monetary user benefits (the values people say they give to changes in urban realm quality i.e. their willingness to pay) over the assessment period. The tool has only been used to quantify benefits for static users who are expected to dwell in the proposed new area of public realm, to avoid any double counting with the AMAT.

5. **Wider Area development:** This considers commercial or residential development on adjacent land, or retail within the station footprint.
   - The scheme has the potential to bring about induced investment through dependent development as set out in WebTAG Induced Investment (TAG unit A2.2). At this

[21] Transport for London (November 2016) Valuing Urban Realm Toolkit 2016 - User Guide

SOBC stage the level of development dependent that can reasonably be attributed to the scheme has been determined through discussions with the local planning authority and Network Rail, taking account of land value uplift adjustments for displacement and land amenity value impacts and use of DfT's Valuing Dependent Development Workbook[22].

- Engagement with the Train Operating Company[23] has been undertaken to establish the uplift in retail revenue resulting from an increase in the retail floor area within the station building.

Longport and Longton Stations

The medium and high funding investment packages include station improvements at Longton and Longport rail stations to maximise and capitalise on Midlands Engine Rail a £3.5 billion programme of improvements to deliver a step-change in rail connectivity across the region, which seeks to upgrade the line in relation to its capacity and frequency of service. In addition, schemes will build on the East Midlands Railway franchise commitments to upgrade basic station facilities at both stations.

As part of the programme, improvements at both stations include the provision of step free access throughout, along with secure cycle parking facilities. Additional improvements are also expected at the stations including station retail and waiting shelters at Longton and a new car park at Longport. To appraise the benefits, a basket of attribute values has been selected representing the holistic improved experience to those waiting for their rail service at the station (entries only).

The changes proposed at these stations have been appraised using the PDFH 6.0 willingness to pay values in Table C8.5 for existing users and for new users the uplift in demand resulting from station improvements (Table B8.1).

4.2.2. Bus Passenger Benefits

Bus Journey Time Benefits

Bus journey time benefits have been based on user time savings resulting from direct bus journey times on a selected number of key bus corridors serving the Stoke-on-Trent Station and the City Centre. The bus corridors, and the interventions identified to unlock improvements to the bus service have been identified, developed and agreed with First Bus, the principal local bus service operator. First Move data, provided by First Bus, has been

[22] The workbook contains residential, agricultural, commercial and industrial land values for Local Authorities throughout the UK. These are estimated based upon MHCLG's 'Land Value Estimates for Policy Appraisal' (May 2017) and contains externality cost of developing on different land types.
[23] And their retail agent

identified as the most appropriate representation of existing passenger demand and bus vehicle delay in the study area, which includes:

- Ticketing information at every bus stop for every passenger trip;
- Arrival, departure and dwell time for every bus, for every stop and trip; and
- Digitised service schedule information.

Automatic vehicle location (AVL) data is used to track vehicles, with passenger demand sourced from ticket machine data. This has been merged and processed to provide both vehicle and passenger weighted delay for all passengers on the network across all buses (over a specified period), based on comparing congested (peak) journey times to uncongested (off peak) journey times.

The impact on bus journey times in response to a range of bus priority intervention types has been based on empirical evidence and previous studies[24]. Unit values for time savings of each bus priority intervention type have been developed and integrated into a bespoke spreadsheet tool where overall time savings have been quantified.

The TCF bus corridor pinch point improvement proposals are to be introduction in a phased manner, the first phase of improvements alongside the City Centre Bus Station improvements and City Centre bus priority measures will enable four cross-city services to be re-introduced, namely:

- Kidsgrove – City Centre – Longton;
- Biddulph – City Centre – Station – Hospital – Keele;
- Abbey Hulton – City Centre – Station – Stoke – Trentham; and
- Ball Green – City Centre – Station – Blurton.

Benefits stemming from the removal of the need to interchange at the City Centre Bus Station has been assessed with reference to existing timetable information and interchange penalty based on those values recommended in TAG Unit M3.2.

Bus Journey Time Reliability Savings

The re-establishment of cross-city through bus services is dependent on both journey time savings and journey time reliability improvements. With limited dedicated physical infrastructure to give priority to bus services, and in order to achieve punctuality accounting for variable congestion, bus operators currently have to allow some extra time in their timetables (via a layover period at the City Centre Bus Station) to enable on-time departure from timing points.

[24] This approach was adopted for the development and appraisal of the Sprint bus rapid transit schemes in the West Midlands for TfWM. The West Midlands derived values were compared with data provided within the First Move database.

Appraisal of bus journey time reliability savings has been based on observed reliability data and application of the principles set out in TAG unit A1.3, using the off-peak observed travel time reliability data as a proxy for the Do Something With-Scheme scenario. The contribution and reasonableness of the bus reliability benefits have been reviewed relative to the bus journey time savings benefits to ensure these are being captured proportionately.

4.2.3. Active Mode User Benefits

Within the context of this study, active modes refer to walking and cycling, including:

- Pedestrian and cycle access to rail and bus facilities (including the pedestrian environment within the station);
- Improved walking and cycle access within the public transport corridor between the Railway Station and City Centre via College Road and Boughey Road (Hanley Park) corridors; and
- Improved walking and cycle access to strategic employment areas.

Count data has been used to estimate current walking and cycling demand where possible with the Propensity to Cycle Tool (PCT) utilised to supplement the count data where appropriate. The PCT is based on 2011 Census data in relation to travel to work journeys only.

Future cycling and walking demand has been calculated in accordance with WebTAG Unit A5.1 Active Mode Appraisal, utilising comparative study uplifts based on observed results from similar schemes.

The Active Mode Appraisal Tool (AMAT) has been used to assess the economic benefits for the walking and cycling schemes to capture:

- Physical activity benefits based on estimates of the number of new walkers or cycle users as a result of the scheme; the amount of time per day for which they will be active; and mortality rates applicable to the group affected by the scheme;
- Improved health benefits from increased physical activity (such as walking or cycling) can also lead to reductions in short term absence from work;
- Journey ambience benefits due to the improvement to the cycling or walking infrastructure; and
- The benefit to those who continue to use the highway (decongestion benefit) based on a mode shift towards walking and cycling, impact on indirect tax revenues, and environmental benefits (e.g. carbon savings).

4.2.4. Highway-Related Impact

The impact of the TCF package proposals on other highway users has been undertaken using the North Staffordshire Multi-Modal (NSMM) model, a four-stage transport model which covers detailed modelled areas of Stoke-on-Trent and Newcastle-Under-Lyme, while a peripheral area covers the surrounding North Staffordshire rural areas. The model has been used to assess and reflect all changes to the operation of the highway network arising

from the TCF package proposals, capturing both capacity and re-assignment effects, for example, as a result of the removal of general through traffic from Station Road and inclusion of bus priority measures.

4.3 MODELLING AND ASSUMPTIONS

4.3.1. North Staffordshire Multi-Modal Model

The North Staffordshire Multi-Modal Model (NSMM) is a WebTAG compliant four-stage transport model comprising demand, highway and public transport assignment models. Its area of scope covers detailed (full simulation) modelled areas of Stoke-on-Trent and Newcastle-Under-Lyme, while a peripheral (buffer) area covers the surrounding North Staffordshire rural areas.

The original 2009 base year model has been updated to reflect 2015 observed conditions. The updated transport model has most recently been used for the Etruria Valley Link Road (EVLR) major scheme[25], and incorporates model forecasts for 2022 and 2035 future years.

As set out in the ASR, local model validation has shown that the NSMM Highway Assignment Model (NSMM HAM) provides a suitable tool and basis for forecasting and appraising the highway-related impacts of the TCF packages proposals. As the NSMM Public Transport Assignment Model (NSMM PTAM) has not been updated or validated since 2009 it has been determined that it would be inappropriate for the NSMM PTAM to be used to appraise the bus user benefits of the TCF package proposals. As set out in Section 5.2.2. a bespoke bus appraisal spreadsheet tool has been utilised instead, drawing on observed passenger demand and bus vehicle delay in the study area, and unit value time savings for a range of bus priority intervention types.

Details of the Etruria Valley Link Road modelling are contained in **Appendix G**.

4.3.2. Appraisal Forecasting

Appraisal forecasts have been prepared for two future years: 2022 and 2035, and for the following core scenarios representing the most unbiased and realistic set of assumptions that form the central case:

- A do-minimum (DM) scenario which contains all committed[26] developments and committed transport schemes across the study area at 2022 and 2035 respectively; and;

[25] Planning permission for the Etruria Valley Link Road has recently been granted by Stoke-on-Trent City Council and Newcastle Borough Council. The scheme (and associated transport modelling) is currently the subject of DfT review and scrutiny for a final funding decision on the link road.

- Do-something (DS) scenarios, which includes all developments and schemes from the DM scenario, plus the TCF package proposals representing separately low, medium and high levels of investment.

Highway Demand Forecasting

Travel demand forecasts have been sourced from the EVLR Forecasting Report[27]. As the NSMM transport model is incremental, the change in the predicted travel demand between the 2015 base-year synthetic trip matrices and the future year synthetic trip matrices have been constrained to the appropriate National Trip End Model (NTEM) 7.2 dataset forecasts and National Transport Model (NTM) forecasts (for freight traffic) and additively applied to the 2015 validated assignment trip matrices to produce the required forecast trip matrices.

Declining Bus Patronage

Bus is a fundamental and significant component in the delivery of a modern, integrated transport network and accounts for a mode share of 8% of journeys for work within Stoke-on-Trent (2011 census). Accordingly, buses are a crucial component of the city's transport system. However, there has been a national trend showing a decline in bus journeys and Stoke-on-Trent is no exception. The annual number of bus journeys reduced from 15.6 million in 2009-10 to 10.4 million in 2017-18, a decline of 33%.

As previously described, First Move data provides an up-to-date source of 2019 base bus passenger demand for specific bus corridors which would benefit from the TCF package proposals including the re-establishment of cross-city bus services. In order to ensure WebTAG compliance and consistency with NTEM 7.2 dataset forecasts, bus trip end growth factors for Stoke-on-Trent have been applied to derive future levels of bus demand for 2022 and 2035 – which predicted continued decline in bus journeys and a circa -7 to -8% further reduction in patronage levels by 2035.

Rail Passenger Growth

The growth in passenger numbers on the rail network in recent years has been substantial. Stoke-on-Trent Rail Station attracted over 3.1 million entries and exits in 2017/18 and was used as a rail-to-rail interchange hub in a further 215,000 trips – most of these being interchanges between faster services between London, Manchester and Birmingham and stopping services on the Manchester – Stoke-on-Trent and Derby – Stoke-on-Trent – Crewe line. Over a 10-year period, from 2008/09 to 2017/18, the number of entries/exits[28] has almost doubled.

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[26] Local sources of uncertainty categorised as near certain and more than likely are included in the core scenario, along with those completed since the 2015 base year.
[27] NSMM Forecasting Report, Sweco, 2018
[28] ORR data

Future rail passenger growth has been based on WebTAG guidance (A5-3 and M4) and the latest DfT guidance on rail demand forecasting[29]. As part of the co-development process DfT has supplied demand and revenue growth rates for each year, for each of the three stations (Stoke-on-Trent, Longton and Longport), from 2018/19 through to 2039/40 based on the MOIRA[30] base matrix for 2018/19. Given future uncertainty beyond 2040, population growth provided in the May 2019 Databook has been used to growth the rail patronage data beyond this year until the end of the appraisal period.

In line with WebTAG M4 guidance, the rail passenger growth forecasts are based on the Demand Driver Generator (DDG) set of the inputs (June 2019) with separate values applicable for local / shorter rail journeys and for longer distance rail journeys.

In order to consider the transformational impact from the expected arrival of HS2, First Trenitalia[31] has provided a suitable demand uplift over and above the DfT growth forecast for sensitivity testing purposes.

Uplifts in Walking and Cycling Demand

Baseline data

Baseline data was predominantly gained from count data from the sites in question. The exception to this was at Etruria Road where it was not possible to gain data of this type. In this case the Propensity to Cycle Tool (PCT) was used to estimate the levels of cycle use by analysing the LSOA route network layer. This provided an estimate of existing levels of cycling on and near to the proposed intervention route. Assumptions were made regarding route choice within the wider corridor but Etruria Road is the main route on the alignment with few alternatives.

TEMPRO growth factors were applied to the baseline data to factor it for the scheme opening year of 2023. For walking trips along College Road, Boughey Road and Station Road some of the forecast growth in passenger numbers at Stoke-on-Trent Railway Station were used to amend the baseline walking levels in 2023. The rail background growth forecast of a 5.44% increase in journeys at the station was used in conjunction with data on the mode split and final destination of onward journeys to provide a small uplift to walking trips along both streets.

Uplifts

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https://dataportal.orr.gov.uk/statistics/usage/estimates-of-station-usage/

[29] Guidance on rail passenger demand forecasts to be used for long term planning purposes

[30] MOIRA is a software package developed and owned jointly by the rail industry and is used to model the demand and revenue impacts of changes to rail timetables.

[31] The new West Coast Partnership franchisee

The uplifts in walking and cycling demand were based on an analysis of comparative schemes implemented in similar locations in the last few years. The following sources of research and evidence on similar schemes was utilised:

a) CWIS Active Travel Investment Models: Model structure and evidence base – Technical Appendix 4: Overview of evidence on increasing active travel (2019)
b) Cycle City Ambition Programme: Interim Report (2019)
c) Meta-analysis of Outcomes of Investment in the 12 Local Sustainable Transport Fund Large Projects: Final Report (2017)
d) Sustainable Travel Towns: An evaluation of the longer-term impacts (2016)

(The sources used in the text below are denoted by the letters in the list above)

Experience and evidence from other projects that the project team have been involved in were also drawn on to develop appropriate uplifts for the schemes included.

Different uplifts were attributed to the different cycling and walking schemes within the bid, based on the type of infrastructure proposed. **Table 4-1** below summarises the uplifts and the subsequent text provides a background explanation.

Table 4-1 – Uplifts in Walking and Cycling Demand

Scheme	Uplift
Stoke-on-Trent Railway Station to City Centre (via College Road)	Cycling – 100% Walking – 100%
Station Road	Cycling – 100% Walking – 100%
Boughey Road	Cycling – 50% Walking – 100%
Etruria Road	Cycling – 100%
Trent & Mersey Canal	Cycling – 130% Walking – 50%
Station West Car Park / Glebe Street	Cycling – 130% Walking – 50%
Vernon Road	Cycling – 130% Walking – 50%

College Road, Station Road & Etruria Road (cycling only)

For cycling, evidence found how large capital schemes and flagship routes can increase cycle flows by up to 60%[a]. It was also found how schemes of this nature have recorded higher increases, with uplifts up to 200%[b].

Based on this data it was decided to base the core scenario uplift at 100% to represent how factors such as the surrounding student population, the significance of the trip generators on the route and major step-change in infrastructure that the proposal would bring about.

For walking, the evidence found how large capital schemes and flagship routes can increase pedestrian flows by up to 50%[a]. It was also found from other evidence that walking schemes can achieve higher increases and again based on the high likelihood of walking trips in the area an uplift of 100% was used.

Boughey Road

As the level of cycle infrastructure intervention on Boughey Road is less significant than College Road a lower uplift was used for the core scenario. Evidence from other schemes[d] was used to derive an uplift of 50% in the core scenario.

For walking, the proximity to key trip generators and density of land use in the area was deemed to validate a higher uplift in walking in the core scenario (100%) than what was in the CWIS Technical Appendix. For example, residential areas located close to local amenities and transport links have higher levels of walking than less dense areas.

Trent & Mersey Canal, Station West Car Park / Glebe Street and Vernon Road

For cycling on these off-highway routes a core uplift of 130% was derived based on evidence from similar schemes where uplifts of between 100% and 130% were found[c]. The same research included off-highway routes with similar proposals achieving higher uplifts but it was deemed that the uplifts chosen were more aligned with the scheme included in the TCF bid.

For walking, there was less clarity from the research about uplifts due to the interventions proposed. As such, it was deemed appropriate to select a more conservative approach to the uplifts. In addition, the lower levels of uplift relate to the more rural nature of the canal routes and the lower levels of connectivity and route density compared to the Boughey Road or College Road proposals.

Reassignment

Evidence showed that the increase in users on an improved section of infrastructure is a mixture of new users and those who are reassigned from other routes[a]. The AMAT attributes a significant proportion of benefit to new cycling or walking users that would have previously not travelled by these modes. This is due to the large health-related benefits that can be quantified from people becoming more active through their travel. As not to overestimate the level of benefit from the AMA that is applied to the uplifts, this reassignment was taken into account.

The research suggests that in the initial period after a route is improved, 18% of the increase in demand is from new users with the remaining proportion from people already walking and cycling on alternative routes[a]. However, it is also highlighted that over time, these shares even out with more of the uplift being new users as cycling and walking become more realistic options for users of other modes.

Taking this into account, the appraisal assumes that 50% of the uplift is from new users and 50% from existing users. To measure this in the appraisal, uplifts from new users were attributed the full benefits in the AMAT. Meanwhile, uplifts from reassigned users were measured in terms of the journey ambience benefits only. The benefits for each type of user were then combined to provide an overall level of benefits for each intervention.

4.3.3. Key Appraisal Assumptions

The scheme costs and benefits over a 60-year appraisal period were collated to establish the monetised value for money of the scheme. This approach follows a standard appraisal framework which aligns with DfT's economic appraisal guidance. All assumptions are based on WebTAG guidance unless explicitly stated. A summary of the key appraisal assumptions are identified below:

- 60-year appraisal period apart for cycle and walking schemes which were appraised over a 20-year appraisal period;
- For reasons of practicality the approach to quantifying the impacts of the TCF package proposals adopts a proportionate approach assuming a single 2023 opening year for all interventions. For internal consistency within the Economic Case the same approach has been taken with regards to implementation costs and lifecycle costs.
- Forecast years were assessed for 2022 and 2035 to align NSMM model forecast years
- All economic parameters and values are consistent with DfT Data Book May 2019 v1.12. Forthcoming changes announced in October 2019 with a release data expected late November 2019 **have not** been applied.
- All values are presented in 2010 market values and prices (discount rate of 3.5% applied for first 30 appraisal years, then 3.0% applied for last 30 appraisal years) and are converted to 2010 prices by GDP deflation.

To quantify the annual economic benefits of the scheme, annualisation factors were applied to each of the appraisal periods. For general highways benefits, the benefits apply to a representative working day factor per year, with weightings for both peak periods and the inter-peak derived from the analysis of local traffic count data.

Table 4-2 – Annualisation Factors

Hours	Period	From	To	Highway	Public Transport	Annualisation
12-hour	AM	0800-0900	0700-1000	2.605	2.784	253

average weekday	IP	1400-1500	1000-1600	5.828	5.861	
	PM	1700-1800	1600-1900	2.696	2.721	
AADT	AM	0800-0900	0700-1000	2.131		365
	IP	1400-1500	1000-1600 1900-0700	8.648		
	PM	1700-1800	1600-1900	2.396		

Table 4-3 presents a summary of the input and assumptions that were used in the Station Hub Appraisal undertaken for the business case.

Table 4-3 – Station Hub Appraisal Input and Assumptions

Topic	Category	Figure Used	Data source/evidence
General	Appraisal Period (Active Mode Infrastructure)	20 years	TAG Unit A5-1
	Appraisal Period (Rail Infrastructure)	60 Years	TAG Unit A5-3
	Car Occupancy (For Non-User MECs)	1.2	Databook
	Background rail growth (to 2040)	1.44% Average	DfT (MOIRA, DDG Inputs)
	Background rail growth (beyond 2040)	0.22% Average	Databook Population Growth
Rail Access	Average walk speed	5km/h	National Travel Survey data
	Average cycle speed	15km/h	National Travel Survey data
	Survey Growth Factor to 2023 – Walk	0.9956	TEMPro V7.2
	Survey Growth Factor to 2023 –Cycle	0.9905	TEMPro V7.2
	Time saving as a result of improved main entrance space	10 seconds	?
Multi-Modal Interchange	Onward mode split	Bus = 19.2% Taxi = 7.7%	Stoke Railway Station 'Gateway' Survey of train passengers -

			Questionnaire
	Annualisation Factor	253	All weekdays minus bank holidays
	GJT Saving	1.27 Minutes	WebTAG Databook M3.2.1 (New Interchange Facilities)
	Bus User GJT Elasticities	Commuting = -1.15 Work = -0.7 Other = -1.05	RAND Europe and SYSTRA - Bus fare and journey time elasticities and diversion factors for all modes
Station Facility Improvements	Stoke Demand Uplift	1.2%	PDFH Table B8.1
	Longton Demand Uplift	5.3%	
	Longport Demand Uplift	4.2%	
	Revenue per person – Stoke	£14.23	DfT (MOIRA, DDG Inputs) – 2023
	Revenue per person – Longton	£4.97	
	Revenue per person – Longport	£5.50	
Other	Stoke-On-Trent average car journey length	5.9 km	Census Journey to Work Origin/Destination data for the MSOAs Stoke-On-Trent 015 & 016
	Longton average car journey length	5.7 km	Census Journey to Work Origin/Destination data for the MSOAs Stoke-On-Trent 022 & 025
	Longport average car journey length	5.3 km	Census Journey to Work Origin/Destination data for the MSOAs Stoke-On-Trent 009
	Scheme opening year	2023	

Table 4-4 presents a summary of the input and assumptions that were used in the Active Mode Appraisal undertaken for the business case.

Table 4-4 – Active Mode Appraisal Input and Assumptions

Topic	Category	Figure Used	Data source/evidence
General	Appraisal Period	20 years	TAG Unit A5-1
	Decay Rate	0%	TAG Unit A5-1
	Number of days per year the scheme is used	253	TAG Unit A5-1
	Percentage of journeys that are return journeys	90%	TAG Unit A5-1
Walking	Average length of walking journey	1.18km	National Travel Survey data
	Average walk speed	5km/h	National Travel Survey data
	Percentage otherwise using a car	11%	As per the literature review carried out by RAND Europe/Systra for DfT.
	Percentage otherwise using a taxi	8%	As per the literature review carried out by RAND Europe/Systra for DfT.
Cycling	Average length of cycling journey	5.6km	National Travel Survey data
	Average cycle speed	15km/h	National Travel Survey data
	Percentage otherwise using a car	11%	As per the literature review carried out by RAND Europe/Systra for DfT.
	Percentage otherwise using a taxi	8%	As per the literature review carried out by RAND Europe/Systra for DfT.
Other	Scheme area	Other urban	TAG Unit A5-4
	Background growth	0.75%	National Travel Survey data
	Uplift characteristics	50% new users 50% reassigned users	CWIS Technical Appendix 4
	Scheme opening year	2023	

4.4 ASSESSMENT OF LOW, MEDIUM, AND HIGH PACKAGE SCENARIOS

4.4.1. Scheme Package Costs

Scheme costs are used alongside scheme benefits to produce an overall benefit-cost ratio. There are three main elements of a scheme cost estimate that need to be estimated and reported in scheme appraisals:

- **Base cost:** the basic costs of a scheme before allowing for risks, though these should incorporate realistic assumptions of changes in real costs over time, e.g. cost increases or reductions relative to the rate of general inflation;
- **Adjustment for risk:** which should cover all the risks that can be identified, the majority of which are assessed and quantified through a Quantified Cost Risk Assessment (QCRA) and included in the risk-adjusted cost estimate; and
- **Adjustment for optimism bias:** to reflect the well-established and continuing systematic bias for estimated scheme costs and delivery times to be too low and too short, respectively, and results in the risk and optimism bias-adjusted cost estimate.

The estimation of scheme costs is set out in Chapter 6 (The Financial Case) and detailed in the Scheme Cost Plan contained in **Appendix H**.

Base Cost

A summarised breakdown of the base cost estimate, excluding allowances for risk and optimism bias, for the each TCF package proposal assuming low, medium and high funding levels is presented below.

Table 4-5 – Scheme Base Cost (2019 Prices) (£000s)

TCF Package	Low Package Scenario	Medium Package Scenario	High Package Scenario
Station Hub	19,605	19,605	31,046
Station to City Centre Links	8,960	8,960	8,960
Onward Cross City Links	5,593	7,733	9,673
Programme, Stakeholder Engagement & Monitoring Costs	1,750	1,750	1,750
Total	**35,909**	**38,047**	**51,423**

Treatment of Cost Risk and Uncertainty

In appraisals there is always likely to be some difference between what is expected and what eventually happens. In the context of cost estimation 'risk' refers to identifiable future situations that could cause an over- or under-spend to occur. Risks that could cause an under-spend to occur are sometimes referred to as 'opportunities' whilst risks that could

cause an over-spend to occur are sometimes referred to as 'threats'. A copy of the risk register and quantified cost risk assessment is contained in **Appendix I**.

An uncertainty adjustment, based on a top-down view of the risk profile as opposed to individual risk elements has also been included on top of the base cost and QCRA estimate. Both have been determined at a P80 level of probability.

Table 4-6 – Scheme Risk Adjusted Base Cost (2019 Prices) (£000s)

TCF Package	Low Package Scenario	Medium Package Scenario	High Package Scenario
Station Hub	23,178	23,178	35,772
Station to City Centre Links	10,207	10,207	10,207
Onward Cross City Links	6,362	8,887	11,110
Programme, Stakeholder Engagement & Monitoring Costs	1,750	1,750	1,750
Total	**41,497**	**44,022**	**58,839**

Real Cost Increase

Real costs increases are the difference between land / construction sector inflation and economy-wide inflation and is used for the purposes of economic appraisal. This is different to the inflation that is applied for the calculation of scheme capital costs as part of The Financial Case, which includes absolute inflation (i.e. including RPI).

Tender inflation has been based upon the Royal Institute of Chartered Surveyors (RICS) Building Cost Information Services (BCIS) Civil Engineering Index as set out in **Table 5-2**, with a general rate of inflation of 2.5% per annum, and profiled to reflect the Delivery Plan contained in **Appendix J**.

Table 4-7 – Scheme Risk Adjusted Base Cost including Real Cost Increases (2019 Prices) (£000s)*

TCF Package	Low Package Scenario	Medium Package Scenario	High Package Scenario
Station Hub	24,879	24,879	38,003
Station to City Centre Links	10,589	10,586	10,586
Onward Cross City Links	6,362	9,453	11,770
Programme, Stakeholder Engagement & Monitoring Costs	1,750	1,750	1,750
Total	**41,497**	**46,668**	**62,109**

*excluding complementary committed schemes

Optimism Bias

Optimism bias (OB) is the demonstrated systematic tendency for appraisers to be overly optimistic about key parameters. OB guidance is only applicable to the Economic Case. The function of optimism bias adjustments is to confirm that the Economic Case remains robust if historically observed cost overruns were to be repeated and are most applicable when the cost estimate is immature.

As set out in WebTAG Unit A1.2, DfT expects the scheme cost estimate to be refined based on better quality data. As project-specific risks become better understood, quantified and valued, it should be possible to better capture the factors that contribute to OB within the risk management process. Therefore, as risk analysis improves as a scheme develops, it is expected that the risk-adjusted scheme cost estimate will become more certain while the applicable level of OB will decrease. The allowance for OB should therefore be largest at the initial stage of the life of a transport project (e.g. Strategic Outline Business Case); to decrease in a more detailed business case (e.g. Outline Business Case); and smallest in the presence of a fully detailed business case (e.g. Full Business Case).

The Supplementary Green Book Guidance on Optimism Bias (HM Treasury) sets out the contributory factors to the upper bound of optimism bias for different intervention types. The Managed Level of OB has been applied on the basis of:

- 32 % for the Station Building & New Footbridge at Stoke-on-Trent-Railway Station and improvements at Longton and Longport Stations; and
- 15% for other local road, walking & cycling facilities, and bus priority measures.

A copy of the OB estimator is contained in **Appendix K**.

Table 4-8 – Scheme Risk and Optimism Bias Cost including Real Cost Increases (2019 Prices) (£000s)*

TCF Package	Low Package Scenario	Medium Package Scenario	High Package Scenario
Station Hub	31,317	31,317	48,580
Station to City Centre Links	12,174	12,174	12,174
Onward Cross City Links	7,769	11,037	14,095
Programme, Stakeholder Engagement & Monitoring Costs	1,750	1,750	1,750
Total	**53,010**	**56,278**	**76,599**

*excluding complementary committed schemes

Present Value of Costs

The costs so far have been in real prices but in a 2019 price base year. For appraisal purposes the costs should be presented in the Department's base year, 2010. The GDP deflator for 2019 is 116.76 compared to 2010 index value. Costs have then been discounted to 2010 at a rate of 3.5% per annum and converted to market prices using an indirect tax correction factor of 1.190. Finally, a 5% uplift has then been applied to reflect ongoing incremental operation and maintenance costs over the appraisal period.

Table 4-9 below presents the present value of costs (PVC) for the low, medium and high package scenarios while **Table 4-10** provides a summary of the build-up of costs.

The present value cost contribution for complementary committed schemes at Station Road / Leek Road, Joiners Square and Cobridge are listed separately for transparency and for which an OB value of 3% has been applied. Further details are contained in the Scheme Cost Plan contained in **Appendix H**.

Table 4-9 – Present Value Costs (re-based and discounted in 2010 market prices) (£000s)*

TCF Package	Low Package Scenario	Medium Package Scenario	High Package Scenario
Station Hub	22,220	22,220	34,852
Station to City Centre Links	8,951	8,951	8,951
Onward Cross City Links	5,711	8,064	10,303
Programme, Stakeholder Engagement & Monitoring Costs	1,219	1,219	1,219
Total PVC (excluding complementary committed schemes)	**38,101**	**40,454**	**55,325**
Total PVC (including complementary committed schemes)	**48,399**	**50,752**	**65,623**

Table 4-10 – Summary Build-Up of Costs

	Low Package Scenario	Medium Package Scenario	High Package Scenario
Base costs (2019 prices)	35,909	38,047	51,423
Risk adjusted base cost (2019 prices)	41,497	44,022	58,839
Risk adjusted base cost including real cost increase (2019 prices)	41,497	46,668	62,109

Risk and optimism bias adjusted cost including real cost increases (2019 prices)	53,010	56,278	76,599
Present Value Costs (re-based and discounted in 2010 market prices)	**38,101**	**40,454**	**55,325**
Total PVC (including complementary committed schemes)	**48,399**	**50,752**	**65,623**

4.4.2. Economy Impacts

Following the structure of DfT's standard Appraisal Summary Table (AST), this section sets out the economic impacts on business users of the TCF Tranche 2 Programme, including the Transport Economic Efficiency (TEE) impacts which are represented within the Economic Appraisal. This section also contains an assessment of Regeneration / Wider Impacts for the Station Hub only. The impacts on non-business users (consumers) form part of the social impacts (section 5.4.6 below).

Business Users & Transport Providers

A summary of the business impacts estimated is provided in **Table 4-11**.

Table 4-11 – Business Impacts

Business Impact Benefits		Low Package Scenario	Medium Package Scenario	High Package Scenario
Travel time	Rail passenger	462	462	1,133
	Bus passenger	2,079	2,079	2,079
	Taxi	360	360	360
	Road user	-	-	-
Vehicle operating costs		-	-	-
User charges		-	-	-
Private Sector Revenue (Rail)		6,026	6,202	6,341
Subtotal		**8,927**	**9,103**	**9,912**

*Discounted present values, in 2010 prices and values (£000s) – excludes marginal external costs

The majority of the business impact benefits, 62% of the total under the high package scenario, are attributable to increased rail revenue associated with the Station Building proposals. The modest level of benefits arising from bus journey times savings is due the fact that bus passengers travelling in work time comprise less than 3% of journeys made by bus.

First Bus is committed to establishing the cross-city bus links once the physical infrastructure works are completed. Indeed, it is their intention that the savings First Bus

could make particularly through the city centre improvements will be reinvested to deliver a significant modernisation of the current fleet. If the TCF bid is successful, First Bus has made an undertaking to invest £3.5m 'in-kind' match funding into the purchase of at least 15 new double decker Euro VI vehicles. In the absence, however, of a formal agreement the economic appraisal has taken a conservative position to not include the bus purchase costs (as a developer contribution) nor to monetise any bus revenue or bus operating cost savings.

Overall, the assessment indicates a ***beneficial*** impact to business.

Reliability Impact on Business Users

The bus priority improvements and re-establishment of cross-city through bus services will bring with them additional journey time reliability improvements.

Relative to the value of business user travel time savings the assessment indicates a ***slight beneficial*** reliability impact.

Regeneration Impacts

The scheme has the potential to bring about induced investment through dependent development as set out in WebTAG Induced Investment (TAG unit A2.2) and MHCLG "Additionality Guidance".

In line with the sites identified in the Strategic Case, three specific sites in the vicinity of Stoke-on-Trent railway station were identified as having a degree of dependence upon the TCF programme being delivered. **Table 4-12** provides details of these sites.

Table 4-12 - Dependent Development Sites

Development Site	Land Type	Dependent Development Land (Ha's)	Source of Information
Stoke on Trent Railway Station building	Commercial	0.2	RIBA Stage 2 Report & Architect Drawings for this project
Swift House	Commercial	0.6	Masterplan / Concept Design for site
Swift House	Residential	0.6	Masterplan / Concept Design for site
Network Rail land to rear of station	Commercial	0.8	Assumptions based on feedback from Network Rail
Network Rail land to rear of station	Residential	0.8	Assumptions based on feedback from Network Rail

DfT's Valuing Dependent Development workbook was used, which includes MHCLG's 'Land Value Estimates for Policy Appraisal' (May 2017), to calculate the land value uplift driven by development.

To calculate housing benefit, additionality was applied. For this scheme we assumed deadweight was zero, with a level of displacement of 'low' (25% rate). Calculations led to land value uplifts as set out in **Table 4-13** below (in 2017 prices).

Table 4-13 - Land Value Uplift of Dependent Development (2017 prices)

Development Site	Dependent Development Land (Ha's)	Net private value of development (£'000s)
Stoke on Trent Railway Station building	0.2	93
Swift House (commercial)	0.6	506
Swift House (residential)	0.6	345
Network Rail land to rear of station (commercial)	0.8	633
Network Rail land to rear of station (residential)	0.8	715
Total	2.9	2,292

When this is converted to 2010 prices, this equates to ***£776,000*** of land value uplift associated with dependent development.

Overall, the assessment indicates a ***beneficia****l* regeneration impact.

Wider Impacts

The TCF package proposals have been developed to drive up productivity through a properly connected sustainable transport network for the city linking:

- Stoke-on-Trent Station with more than 3.1 million passengers passing through per year. The area immediately around the station is a key area of employment and economic growth, and the City Council has aspirations for the delivery of a Station Masterplan which brings forward a number of development sites totalling approximately 12 million sq. ft. within the vicinity of the station, bringing £130 million GVA growth per annum;
- The University Quarter and its 28,000 students and workforce. Staffordshire University continues to grow, and is investing in a new £40m "Catalyst Building" to drive economic growth and apprenticeships;
- The City Centre, with its growing retail and leisure offer incorporating the council-led Smithfield development delivery comprising 1.2m sq.ft. of office, leisure, retail and hotel space. A mile from the Rail Station and Strategic Road Network, a high quality public

transport link is required to enable the City Centre to develop into the 'regional capital'[32] and the next Core City; and

- Wider city growth opportunities such as the rapidly growing Ceramic Valley Enterprise Zone – with 1 million sq.ft. in the pipeline. This coupled with 1 million sq.ft. of pent up demand, plus over 300 office enquiries and forecast growth by 2020 means the City will be the 4th fastest growing economy in the UK given year-on-year improvements.

Overall, the assessment indicates a ***large beneficial*** impact on the wider economy.

Economic Impacts Summary

Table 4-14 provides a summary of the economy impacts from the TCF Tranche 2 Programme.

Table 4-14 – Summary of Economy Impacts

	Low Package Scenario	Medium Package Scenario	High Package Scenario
Economy Impacts			
Business impacts	8,927 Beneficial	9,103 Beneficial	9,912 Beneficial
Reliability impacts on business users	Slight beneficial	Slight beneficial	Slight beneficial
Regeneration	776 Beneficial	776 Beneficial	776 Beneficial
Wider impacts	Large beneficial	Large beneficial	Large beneficial

4.4.3. Environmental Impacts

Following the structure of DfT's standard Appraisal Summary Table (AST), this section sets out the environmental impacts of the TCF Tranche 2 Programme.

Local Air Quality

Stoke-on-Trent, like other major cities, has areas where the nitrogen dioxide (NO_2) air quality objectives are being breached. In urban areas, such as Stoke-on-Trent, the main source of NO_2 is vehicle emissions. Away from road sources, the concentration of NO_2 is typically between 20-25 µg/m^3. In the exceedance areas, where traffic is a main source, NO_2 concentrations range between 31-81 µg/m^3. There is a particular local air quality issue around the front of the Rail Station, which the Transforming Cities Fund proposals seek to address. As part of Tranche 1, the relocation of Station Car Park 1 to the rear of the station will reduce traffic flows on Station Road. The Tranche 2 proposals for Station Road and College Road will lead to the removal of all through traffic from both roads.

[32] As referred to by the Constellation Partnership

Table 4-15 provides a summary of the estimated monetised local air quality impacts estimated through marginal external costs.

Table 4-15 – Local Air Quality Impacts

Local Air Quality Impacts	Low Package Scenario	Medium Package Scenario	High Package Scenario
Local air quality	161	162	162

*Discounted present values, in 2010 prices and values (£000s)

Whilst not monetised the aggregation of activities within the multi-modal and multi-functional mobility hub has the potential to rationalise and simplify trip making (e.g. healthcare, childcare and retail activities). This will reduce and simplify journeys and have positive impacts on local air quality through the reduction in vehicle kilometres travelled. The provision of electric charging points for cars and taxis will encourage the uptake of electric vehicles and provide further improvements in local air quality.

Overall, the assessment indicates a ***beneficial*** impact on local air quality.

Noise

The significant reduction in traffic flows on College Road will have a beneficial impact in the noise environment to adjacent properties including sensitive receptors such as the Thomas Boughey Children's Centre & Nursey School.

Table 4-16 provides a summary of the estimated monetised noise impacts estimated through marginal external costs.

Table 4-16 – Noise Impacts

Noise Impacts	Low Package Scenario	Medium Package Scenario	High Package Scenario
Noise	59	60	60

*Discounted present values, in 2010 prices and values (£000s)

Overall, the assessment indicates a ***slight beneficial*** impact on noise.

Greenhouse Gases

Carbon dioxide (CO_2) is the main greenhouse gas, accounting for 81% of total UK greenhouse gas emissions. The provisional estimates[33] suggest that in 2018, total UK greenhouse gas emissions were 43.5% lower than in 1990 and 2.5% lower than 2017.

The total per capita CO_2 emissions in Stoke-on-Trent in 2017 (final figures) was 4.4 tonnes per person, 19% lower than 2016[34] - the second biggest annual decrease in emissions in the country within the scope of influence of the Local Authority.

In 2018, transport accounted for a third (33%) of all CO_2 emissions. In Stoke-on-Trent, CO_2 emissions from transport in 2017 comprised 30% of the total. The large majority of emissions from transport are from road transport - driven by continual growth in vehicle kilometres travelled on roads, transport CO_2 grew to a peak in 2007, 8.5% higher than in 1990. Since then emissions from this sector have fallen back to around 1990 levels, driven mainly by improvements in new car fuel efficiency, as well lower traffic growth than in previous years as a result of a dip following the 2008/2009 recession.

At a national level, transport CO_2 emissions saw a small rise of 0.4% in 2017 compared to 2016. Around 50% (194 out of 391) of Local Authorities, including Stoke-on-Trent, had a decrease in emissions, and 50% (197 out of 391) had an increase in emissions.

Table 4-17 provides a summary of the estimated greenhouse gases impacts estimated through marginal external costs.

Table 4-17 – Greenhouse Gases Impacts

Greenhouse Gases	Low Package Scenario	Medium Package Scenario	High Package Scenario
Greenhouse gases	258	258	259

*Discounted present values, in 2010 prices and values (£000s)

Similar to local air quality, whilst not monetised the aggregation of activities within the Station Hub will reduce and simplify journeys and have positive impacts on greenhouse gases through the reduction in vehicle kilometres travelled.

Overall, the assessment indicates a ***slight beneficial*** impact in terms of greenhouse gases.

33 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/790626/2018-provisional-emissions-statistics-report.pdf

34 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/812139/Local_authority_2017_greenhouse_gas_emissions_statistical_release.pdf

Landscape

Impact on the landscape involve both the physical and cultural characteristics of the land itself (i.e. its use and management) and the way in which we perceive those characteristics.

Given the dominant urban setting of the Tranche 2 proposals it is reasonable to conclude that there will be a ***neutral*** impact on the landscape.

Townscape

Townscape is the physical and social characteristics of the built and non-built urban environment and the way in which we perceive those characteristics. It is this mix of characteristics and perceptions that make up and contribute to townscape character and give a 'sense of place' or identity.

The space immediately in front of the station entrance is at present uncomfortable and does not meet the expectations as an arrival or departure point into the city, with the presence and proximity of the pedestrian crossing to the entrance doors doing nothing for the setting of the grade-II listed statue of Josiah Wedgwood in the wider context of the Winton Square Conservation Area..

A series of simultaneous benefits would be triggered by changes to the character and function of the street through the Tranche 2 proposals. This would enhance bus access and create a more pleasant pedestrian environment. New surface finishes and amended kerblines would reduce vehicular dominance, and providing elements of shelter would provide a degree of weather protection. These works will also (if correctly designed) improve the setting of the listed buildings and the character of the conservation area.

To improve the sense of arrival to passengers exiting the station into Winton Square, the pedestrian crossing would be relocated and the statue brought forward to become the focal point of the station entrance. Vehiclular traffic through this area would be reduced to buses only, using a priority route single lane which would snake around the rear of the statue.

New canopies would provide identity to station and interchange when approached from College Road or Leek Road, signposting the station from these directions where there is no expression of identity or location at present.

College Road is a key movement corridor between Stoke-on-Trent railway station and the City Centre, the corridor includes major developments such as the University of Staffordshire and Stoke College. It is a two-way single-carriageway road, with limited parking available on the eastern side of the road. Although subject to a 20mph speed limit, the current focus is on vehicular traffic movements.

The Tranche 2 proposals focus on improvements to the place and streetscape while recognising the need to maintain movement through the area. There is an aspiration to achieve a better balance towards walking, cycling and bus traffic and away from general traffic. Access will still need to be provided to local businesses and homes on College Road and that has been taken into consideration in the general principles of these proposals.

The proposals will provide gateway and identity to the local centre, improving the setting and attractiveness of the area. The link will be strengthened in its current role as a key destination in the local neighbourhood centre for residents and University staff and students while also providing sustainable access to the railway station.

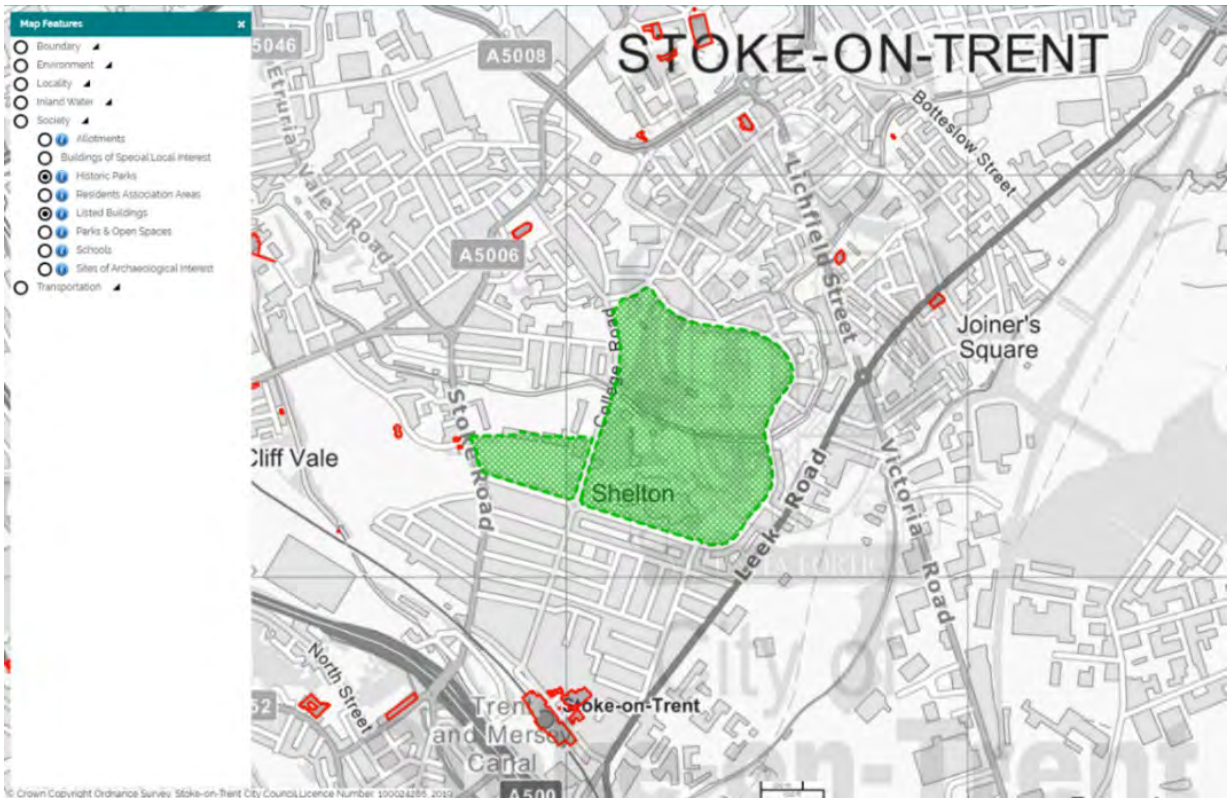
The proposals seek to minimise the role of College Road as a through route for private motorised vehicles, leading to the street becoming an obvious link for walking and cycling where users of active modes feel they have the highest priority. The improvements provide benefits for vulnerable users of the street, such as those accessing the Children's Centre.

Overall, the assessment indicates a ***large beneficial*** impact on the townscape.

Historic Environment

The man-made historic environment forms a key part of Stoke-on-Trent's industrial heritage creating the sense of identity and place which the TCF proposals seek to build upon and accentuate.

Figure 4-1 – Listed Buildings and Historic Parks



Winton Square is a small Conservation Area of high architectural quality, centred on the square and mainline Railway Station. All the buildings within the square are listed or curtilage buildings and Wedgwood's monument in the centre of the square is listed in its own right. Renowned architectural historian Sir Nikolaus Pevsner cited Winton Square as: *"the finest piece of Victorian axial planning in the County"*.

Given the sensitivities of design, located within a Conservation Area, early engagement was held with the City Council's Principal Heritage and Conservation Officer to fully understand the constraints and opportunities, with ongoing dialogue of paramount importance during the option development phase(s). Through sensitive design the Tranche 2 proposals for Station Road and to the Station Building seek to enhance the setting of the Winton Square Conservation Area.

Hanley Park is one of the city's heritage parks, located midway between the Railway Station and the City Centre. Officially opened on 20 June 1897, it is designated at Grade II* as a good example of a late Victorian municipal park. Although enhanced, most recently through Heritage Lottery Fund, the park's design is essentially unchanged from its original layout of 1897. The Tranche 1 proposals will improve the pedestrian and cycle routes through circa 63-acre park. The heritage lottery funded works included restoration of all the park gates and railings. As part of the Tranche 2 proposals the provision of the two-way segregated cycleway / footway on College Road will require moving the adjacent railings by approximately 0.5 metres, while the pedestrian / cycle infrastructure improvements on Boughey Road will provide a seamless high quality environment between the park and University Quarter / Railway Station.

Overall, the assessment indicates a **large *beneficial*** impact on the historic environment.

Biodiversity

The Tranche 2 proposals involve minimal land take or land take that is predominantly on currently built-up or brownfield land.

Overall, the assessment indicates a ***neutral*** impact in terms of biodiversity.

Water Environment

There is considered to be minimal risk that the Tranche 2 proposals would expose watercourses and other water assets, notably the Trent & Mersey and Caldon canals, to increased risk of transport-related pollution.

Overall, the assessment indicates a ***neutral*** impact on the water environment.

Environmental Impacts Summary

Table 4-18 provides a summary of the environmental impacts from the TCF Tranche 2 Programme.

Table 4-18 – Summary of Environmental Impacts

	Low Package Scenario	Medium Package Scenario	High Package Scenario
Environmental Impacts			
Noise	59 Slight beneficial	60 Slight beneficial	60 Slight beneficial
Local air quality	161 Beneficial	162 Beneficial	162 Beneficial
Greenhouse gases	258 Slight beneficial	258 Slight beneficial	259 Slight beneficial
Landscape	Neutral	Neutral	Neutral
Townscape	Large beneficial	Large beneficial	Large beneficial
Historic environment	Large beneficial	Large beneficial	Large beneficial
Biodiversity	Neutral	Neutral	Neutral
Water environment	Neutral	Neutral	Neutral

4.4.4. *Social Impacts*

Following the structure of DfT's standard AST, this section sets out the social impacts of the TCF Tranche 2 Programme, including the TEE impacts which are represented within the Economic Appraisal.

Commuting and Other Users

Table 4-19 provides a summary of the impacts on consumer users in terms of travel time savings, vehicle operating costs and user charges.

Table 4-19 – Consumer User Impacts

Consumer User Benefits		Low Package Scenario	Medium Package Scenario	High Package Scenario
Commuting travel time benefits	Rail passenger	1,170	1,170	2,331
	Bus passenger	11,561	11,561	11,561
	Taxi	200	200	200
	Road user	-	-	-
Other user travel time	Rail passenger	610	610	1,420
	Bus passenger	44,152	44,152	44,152

benefits	Taxi	87	87	87
	Road user	-	-	-
Vehicle operating costs	Commuter user	-	-	-
	Other user	-	-	-
User charges	Commuter user	-	-	-
	Other user	-	-	-
Subtotal		**57,780**	**57,299**	**59,750**

*Discounted present values, in 2010 prices and values (£000s) – excludes marginal external costs

The majority of benefits, 92% of the total under the high package scenario, are attributable to bus passenger journey time saving associated with: the removal of through traffic from Station Road & College Road; key bus corridors local pinch point improvements, that discriminate bus in favour of private car; city centre bus priority measures; and the removal of bus interchange penalties brought about through the re-establishment of cross-city bus services. In addition, although not monetised further bus passenger time savings can be expected from a second card reader per bus, so that passengers can "tap on/tap off".

Overall, the assessment indicates a **large beneficia**l impact.

Reliability Impact on Commuters and Other Users

With limited dedicated physical infrastructure to give priority to bus services, and in order to achieve punctuality accounting for variable congestion, bus operators have had to sacrifice fast journey times, allowing extra time in timetables (via a layover period at the City Centre Bus Station) to enable on-time departure from timing points. Local monitoring of bus punctuality has recorded a decline to less than 70% of buses on time at timing points.

The proposed bus priority improvements and re-establishment of cross-city through bus services will bring with them journey time reliability improvements. Using an approach applied on previous projects and with reference to DfT guidance[35] reliability impacts based upon 10% of travel time savings calculated may be expected, equating to circa **£4.6 million**.

Overall, the assessment indicates a ***beneficial*** reliability impact to commuters and other users.

[35] DfT, 2013. Value for Money Assessment: Advice Note for Local Transport Decision Makers

Physical Activity

Physical activity, in the context of appraising a transport intervention, is primarily related to the health benefits which can be attained from increased use of active travel modes such as walking and cycling.

The Tranche 2 proposals will provide improved pedestrian and cycle links, through the University Quarter which includes the Rail Station, with improved accessibility to the City Centre and other strategic employment areas from the Rail Station. New infrastructure includes public realm improvements, new segregated footways / cycleways, shared use footways / cycleways and station footbridges.

Table 4-20 provides a summary of the estimated monetised physical activity benefits including absenteeism.

Table 4-20 – Physical Activity Impacts

Physical Activity	Low Package Scenario	Medium Package Scenario	High Package Scenario
Physical activity (including absenteeism)	11,673	12,864	13,250

*Discounted present values, in 2010 prices and values (£000s)

Overall, the assessment indicates a ***beneficial*** impact in terms of physical activity.

Journey Quality

Journey quality is a measure of the real and perceived physical and social environment experienced while travelling. This includes factors such as travel information provision, perceptions of safety (e.g. street lighting, CCTV cameras, segregated cycle paths away from traffic), provisions for accessibility, physical crowding on public transport services, and so on. Journey quality factors may be an important influence on the travel choices made by individuals. Poor journey quality may dissuade individuals from using certain modes and interventions that improve this quality may induce a different mode choice.

The Tranche 2 proposals include a number of improvements to: public realm; wayfinding, travel information; enhanced cross-platform connections (particularly for persons of reduced mobility (PRMs)); enhanced rail / bus interchange waiting environment; reduced need for bus-to-bus interchange through the re-establishment of new cross-city bus services; improved dedicated and segregated walking and cycling routes to improve the safety and comfort of active modes users; and first mile/last mile facilities which will improve the journey experience. The removal of through traffic from Station Road and College Road will improve the pleasantness of the University Quarter environment (which includes the Rail Station) for all users, create a better sense of place and a make the Rail Station a destination in its own right. The station footbridge provides both a safer cross-platform route for PRMs, alongside a safer through route for non-rail users between the western and eastern sides of the city.

However, the standard appraisal of journey quality significantly underplays the potential impact of the Station Hub proposals which provide a step change in the level of provision and the transformation of the Station into a next generation multi-modal and multi-functional Mobility Hub. A key element of this transformation is the provision of a wider range of economic activities within the footprint of the building enabling travellers and the local communities to reduce the number and complexity of journeys by undertaking more activities in one place (e.g. commuting, childcare, healthcare and shopping). This will substantially improve the user experience and making daily activities simpler and easier.

Table 4-21 provides a summary of the monetised journey quality impacts.

Table 4-21 – Journey Quality Impacts

Journey Quality Impacts	Low Package Scenario	Medium Package Scenario	High Package Scenario
Journey quality	4,610	4,744	4,895

*Discounted present values, in 2010 prices and values (£000s)

Overall, the assessment indicates a ***large beneficial*** impact in terms of journey quality.

Accidents

Station Road is an environment that has the increased potential for conflicts between vehicles and vulnerable users:

- Limited pick-up / drop-off and short-stay car parking bays to the front of the square undermine the space, cause congestion and contribute to street clutter;
- Conflict on Station Road between vehicles and pedestrians as drivers make use of the limited pick-up / drop-off space on Station Road;
- Private hire taxis making use of the limited waiting spaces;
- Vehicles dropping passengers off in disabled bays provided on Station Road on approach to Winton Square;
- Highway access for car parks 1 & 2 are confined to Station Road, which is also used by buses, taxis and delivery vans. This puts pressure on the road network, particularly during busy hours, and makes road access to the station slow;
- 'Kiss and Ride' drop-off activities take place along both sides of the carriageway on Station Road. This causes conflict with other vehicles and pedestrians; and
- Short stay bays at Winton Square are difficult for vehicles to access and cause a delay to traffic on Station Road as they manoeuvre into the bays.

Similarly, the conflict between motorised vehicles and cyclists is acknowledged nationally. By providing additional dedicated and segregated facilities for cyclists in locations such as Vernon Road, College Road and Etruria Road, the potential for this conflict is reduced.

Although not monetised through careful design considerations the TCF proposals will ameliorate the majority of these impacts. **Table 4-22** provides a summary of the monetised accident impacts estimated through marginal external costs.

Table 4-22 – Accident Impacts

Accident Impacts	Low Package Scenario	Medium Package Scenario	High Package Scenario
Accidents	881	898	905

*Discounted present values, in 2010 prices and values (£000s)

Overall, the assessment indicates a ***slight beneficial*** impact in terms of accidents.

Security

The assessment of security impacts should reflect impacts on road users, public transport passengers or freight (all modes), or on combinations of these. Security indicators, as defined in WebTAG guidance, include formal and informal surveillance, landscaping, lighting and visibility and emergency calls.

The current accessible route through Stoke on Trent railway station places PRM's into an enclosed and isolated environment that does not provide a sense of comfort or security to already vulnerable individuals. Additionally, subways at railway stations are generally perceived to be less secure than footbridges. The new station footbridge is specifically designed to ameliorate this perception of insecurity.

Many access and egress points from the canal towpath, particularly in the vicinity of the station, are narrow, secluded and poorly lit. The unwillingness to use these routes is demonstrated by the very low user numbers recorded in surveys undertaken. By realigning these routes, along with improved surfacing and lighting, perceptions of security will improve.

Bus interchange is perceived by many as being insecure, particularly late at night. By providing cross-city services, the requirement for interchange will be removed, and a greater sense of security for bus users will be improved.

Overall, the impact on security is assessed as being ***beneficial***.

Accessibility

The assessment of accessibility impacts should include a distributional analysis as detailed at 5.4.5 below. Beyond this, it is important to assess the extent to which the programme expands the range of journey choices and journey opportunities to mitigate against social exclusion.

The Tranche 2 proposals specifically address the range of journey choices and journey opportunities available to residents. By making all sustainable modes more accessible, through improvement to physical facilities / infrastructure, services and perceptions of safety and security, in parts of Stoke on Trent that specifically require it, accessibility to transport is being improved.

Overall, the assessment indicates a ***beneficial*** impact in terms of accessibility.

Personal Affordability

Personal affordability deals with the fact that the monetary costs of travel can be a major barrier to mobility for certain groups of people, with particularly acute effects on their ability to access key destinations.

The Tranche 2 proposals would not, in themselves, alter public transport fares or the actual out-of-pocket travel costs to the users. Whilst it will change the generalised cost of travel, it is anticipated that the scheme will not change the cost to the users.

Overall, the assessment indicates a ***neutral*** impact on personal affordability.

Severance

The railway running north – south in parallel with both the Trent & Mersey Canal and the A500 creates significant severance between the polycentric centres within the city. Vehicular, pedestrian and cycle movement between the two sides of the city are constrained to a limited number of corridors, of which Glebe Street to the south, and Stoke Road to the north of the station are pivotal.

This situation is exacerbated even further as the existing station layout is predominantly unidirectional, facing eastwards towards the University Quarter and the City Centre, and effectively turning its back on the western side of the city. Although half the station car parking is currently to the west (rear) of the station and a station entrance is present, the route is so vehicular-dominated that pedestrians and cyclists do not choose to access the station from the rear, instead electing to travel by another mode, or use the longer walk to the front of the station.

The TCF programme including a new unpaid footbridge through the station will significant ameliorate this impact.

Overall, the assessment indicates a ***slight beneficial*** impact in terms of severance.

Option and non-use values

As set out in the WebTAG Unit 4.1 guidance, option and non-use values should be assessed if the scheme being appraised includes measures that will substantially change the availability of transport services within the study area.

The Tranche 2 proposals include phased implementation of junction improvements at key bus delay hotspots that provide positive discrimination towards bus in favour of private cars, city centre bus priority measures and improvements at the City Centre Bus Station to cater for through services and bus interchange. These measures will lead to both journey time savings and journey time reliability improvements which are both necessary to enable the re-establishment of cross-city bus services which will enhance the availability of transport services within the study area, including:

- Kidsgrove – City Centre – Longton;
- Biddulph – City Centre – Station – Hospital – Keele;
- Abbey Hulton – City Centre – Station – Stoke – Trentham; and

- Ball Green – City Centre – Station – Blurton.

Overall, the assessment indicates a ***beneficial*** impact on option and non-use values.

Social Impacts Summary

Table 4-23 provides a summary of the social impacts from the TCF Tranche 2 Programme.

Table 4-23 – Summary of Social Impacts

	Low Package Scenario	Medium Package Scenario	High Package Scenario
Social Impacts			
Commuting & other users	57,780 Large beneficial	57,780 Large beneficial	59,750 Large beneficial
Reliability impacts on commuting & other users	Beneficial	Beneficial	Beneficial
Physical activity	11,673 Beneficial	12,864 Beneficial	13,250 Beneficial
Journey quality	4,610 Large beneficial	4,744 Large beneficial	4,895 Large beneficial
Accidents	881 Slight beneficial	898 Slight beneficial	905 Slight beneficial
Security	Beneficial	Beneficial	Beneficial
Accessibility	Beneficial	Beneficial	Beneficial
Personal affordability	Neutral	Neutral	Neutral
Severance	Slight beneficial	Slight beneficial	Slight beneficial
Option and non-use values	Beneficial	Beneficial	Beneficial

4.4.5. Distribution Impacts

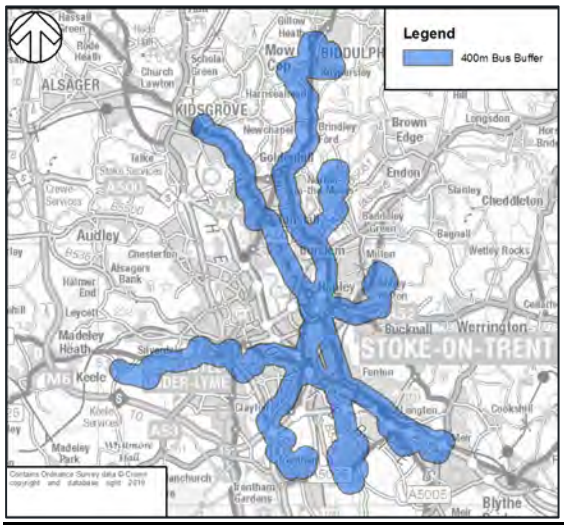
'Distributional' impacts relate to the extent to which there are differences in the way impacts affect different groups in society. For example, the noise impacts of an intervention will affect different groups of households, with some experiencing increases, and others decreases. Depending on the geographical locations of different groups of people, these groups will each experience different impacts.

A user impact area for each user type has been derived by defining buffers set at various distances around the different scheme elements as shown in **Figure 4-2** where:

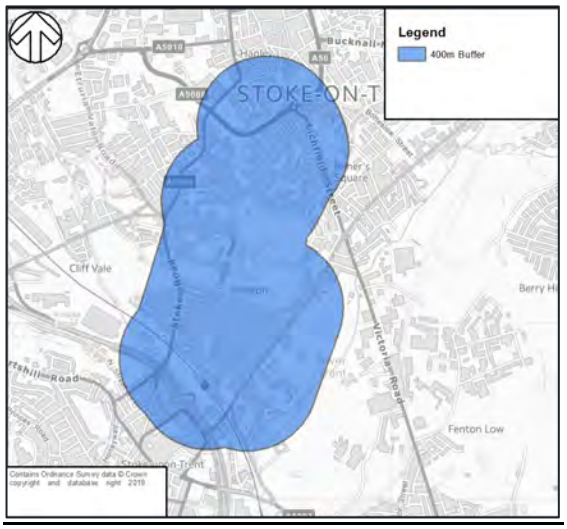
- Bus user – 400m buffer around bus routes and infrastructure;
- Active mode user – 400m around the College Road Corridor; and
- Rail user – 800m, 2,000m, and 5,000m around each rail station.

Figure 4-2 – User Impact Area

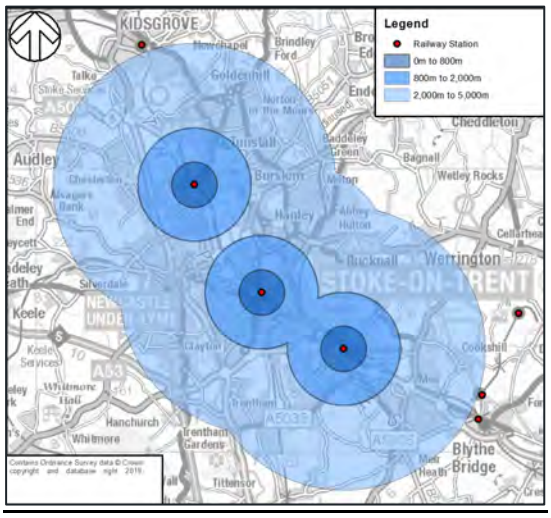
Bus User



Active Mode



Rail User



In order to establish the distribution of user benefits within the impact area household population data[36] at a postcode level and the Index for Multiple Deprivation (IMD) 2018 datasets has been used. This data was mapped using GIS software throughout the scheme impact areas and the proportion of the population in each IMD quintile was calculated to provide the spread of potential benefits across each social quintile group.

[36] An adjustment factor was applied to the 2018 population in each postcode area to account for localised population changes across the impact area since 2011. The adjustment factor is derived from 2018 population estimates at a district level.

Table 4-24 presents the distribution of user benefits across the population within the scheme impact area by IMD quintile for each element of the scheme.

Table 4-24 – User Benefits Appraisal

Social Quintile	Bus User		Active Modes User		Rail User		Overall Scheme	
	Adjusted Pop	Impact Area %	Adjusted Pop	Impact Area %	Adjusted Pop	Impact Area %	Adjusted Pop	Impact Area %
20%	93,537	54%	3,250	39%	53124	44%	97,962	54%
40%	35,852	21%	5,042	61%	25521	21%	36,486	20%
60%	21,799	13%	0	0%	22657	19%	24,592	14%
80%	8,987	5%	0	0%	11124	9%	9,073	5%
100%	11,717	7%	0	0%	7826	7%	11,799	7%
Total	**171,893**	**100%**	**8,293**	**100%**	**120,251**	**100%**	**179,913**	**100%**

In summary, the distribution analysis shows the following:

- Bus users – 75% of benefits are experienced by those in the 40% most income deprived communities.
- Active Mode Users – 100% of benefits are experienced by those in the 40% most deprived communities
- Rail users – 65% of benefits are experienced by those in the 40% most deprived communities

Overall, 74% of the scheme user benefits are experienced by those in the 40% most deprived communities.

Table 4-25 – Social and Distributional Analysis

Item	Expected Impacts positive or negative
1. User Benefits	**Positive** The analysis detailed above has shown that the proportional spread of user benefits following delivery of the scheme will be concentrated within the 40% most deprived areas.
2. Noise	**Neutral** Minor changes due to more trips by sustainable modes but not significant
3. Air Quality	**Neutral** Minor changes due to more trips by sustainable modes but not significant

4. Accidents	**Neutral** Limited impact on the road network however the active mode improvements may lead to some safety benefits for pedestrians and cyclists
5. Security	**Positive** Improvements the station access to include CCTV and lighting providing some enhancements to security. Active mode improvements to College Road corridor may improve natural surveillance.
6. Severance	**Positive** Programme delivery should remove severance between the different communities and areas within Stoke on Trent by improving social mobility between areas.
7. Accessibility	**Positive** Much improved station facilities will positively benefit disadvantaged groups such as older people and those with a disability. There is an absence of data on these social groups using the station. Better bus provision will lead to increased opportunities for disadvantaged groups and those without access to a car to take advantage of various employment, retail and education opportunities.
8. Affordability	**Neutral** Assuming no increases in bus and rail fares.

4.4.6. Public Accounts Impacts

This section outlines the impact of the TCF Tranche 2 Programme on public accounts both in terms of the Broad Transport Budget and the indirect taxation impact on Wider Public Finances. Implementation of transport interventions can result in an impact on HM Treasury tax receipts. This results from changes in fuel consumption, from changes in travel distance and/or speed of mode shift to public transport, affecting the fuel duty received by HM Treasury.

Table 4-26 provides a summary of the public accounts impacts from the TCF Tranche 2 Programme.

Table 4-26 – Public Accounts Impacts

	Low Package Scenario	Medium Package Scenario	High Package Scenario
Local Government Funding			
Revenue	-	-	-
Operating Costs	1,750	1,862	2,570
Investment Costs	3,635	3,859	5,275
Developer and the Contributions	-	-	-
Grant / Subsidy	-	-	-

Net Impact	***5,385***	***5,721***	***7,846***
Central Government Funding: Transport			
Revenue	-	-	-
Operating Costs	-	-	-
Investment Costs	32,716	34,733	47,479
Developer and the Contributions	-	-	-
Grant / Subsidy	-	-	-
Net Impact	**32,716**	**34,733**	**47,479**
Central Government Funding: Non-Transport			
Indirect Tax Revenues	2,564	2,564	2,564
TOTALS			
Broad Transport Budget	**38,101**	**40,454**	**55,325**
Wider Public Finances	**1,353**	**1,360**	**1,362**

*Discounted present values, in 2010 prices and values (£000s)

4.5 VALUE FOR MONEY ASSESSMENT

4.5.1. Introduction

A VfM appraisal of the TCF Programme has been undertaken with reference to DfT's Transport Appraisal Guidance[37] as current at May 2018.

4.5.2. Economic Appraisal.

Monetised analyses from the economic, environmental, social and public accounts impacts, come together as the Economic Appraisal of the TCF Programme. DfT's BCR represents the ratio: **net-non-transport-budget impacts : net-transport-budget impacts**

The latter being represented by the cost to broad transport budget and the former by the sum of all other impacts. DfT's second VfM indicator is the Net Present Value (NPV); the sum of all monetised impacts. Details of the Economic Appraisal are contained in **Appendix L.**

[37] https://www.gov.uk/guidance/transport-analysis-guidance-webtag

Table 4-27 – Transport Economic Efficiency

	Low Package Scenario	Medium Package Scenario	High Package Scenario
Non-Business User Benefits: Commuting			
Travel time	12,931	12,931	13,927
Vehicle operating costs	-	-	-
User charges	-	-	-
During construction & maintenance	-	-	-
Net Non-Business User Benefits: Commuting	**12,931**	**12,931**	**13,927**
Non-Business User Benefits: Other			
Travel time	44,849	44,849	45,001
Vehicle operating costs	-	-	-
User charges	-	-	-
During construction & maintenance	-	-	-
Net Non-Business User Benefits: Other	**44,849**	**44,192**	**45,001**
Business Benefits			
User benefits			
Travel time	2,901	2,884	3,554
Vehicle operating costs	-	-	-
User charges	-	-	-
During construction & maintenance	-	-	-
Subtotal	***2,901***	***2,884***	***3,554***
Private Sector Provider Impacts			
Revenue	6,026	6,202	6,341
Operating costs	-	-	-
Investment costs	-	-	-
Grant/subsidy	-	-	-
Subtotal	***6,026***	***6,202***	***6,341***
Other business impacts			
Developer contributions	**-**	**-**	**-**
Net Business Impact	**8,927**	**9,086**	**9,895**
Present Value of TEE Benefits	**66,707**	**66,045**	**68,823**

*Discounted present values, in 2010 prices and values (£000s)

First Bus' 'in-kind' match funding into the purchase of at least 15 new double decker Euro VI vehicles has not been included as a developer contribution (without formal agreement) and neither have any bus revenue / operational benefits.

Table 4-28 – Analysis of Monetised Costs and Benefits

	Low Package Scenario	Medium Package Scenario	High Package Scenario
Congestion (marginal external costs)	6,008	6,094	6,133
Noise	59	60	60
Local Air Quality	161	162	162
Greenhouse Gases	258	258	259
Journey Quality	4,610	4,744	4,895
Physical Activity	11,673	12,864	13,250
Accidents	881	898	905
TEE: Consumer User (Commuting)	12,931	12,931	14,091
TEE: Consumer User (Other)	44,849	44,849	45,659
TEE: Business Users and Providers	8,927	9,103	9,912
Indirect Taxation Revenues	-1,353	-1,360	-1,362
Present Vale of Benefits (PVB)	**89,002**	**90,603**	**93,964**
Present Value of Costs (PVC)	**38,101**	**40,454**	**55,325**
Overall Impacts Initial BCR			
Net Present Value (NPV)	**50,901**	**50,150**	**38,639**
Benefit to Cost Ratio (BCR)	**2.34**	**2.24**	**1.70**

*Discounted present values, in 2010 prices and values (£000s)

4.5.3. *Appraisal Summary Table*

An AST which allows comparison of the impacts of the TCF Tranche 2 programme under low, medium and high package scenarios is presented in **Table 4-29**.

Table 4-29 – Comparative Appraisal Summary Table

Impacts		Low Package Scenario	Medium Package Scenario	High Package Scenario
Economy	Business user benefits**	8,927 Beneficial	9,103 Beneficial	9,912 Beneficial
	Reliability impacts on business users	Slight beneficial	Slight beneficial	Slight beneficial
	Regeneration	776 Beneficial	776 Beneficial	776 Beneficial
	Wider impacts	Large beneficial	Large beneficial	Large beneficial
Environmental	Noise	59 Slight beneficial	60 Slight beneficial	60 Slight beneficial
	Local Air quality	308 Beneficial	308 Beneficial	308 Beneficial
	Greenhouse gases	161 Slight beneficial	162 Slight beneficial	162 Slight beneficial
	Landscape	Neutral	Neutral	Neutral
	Townscape	Large beneficial	Large beneficial	Large beneficial
	Historic environment	Large beneficial	Large beneficial	Large beneficial
	Biodiversity	Neutral	Neutral	Neutral
	Water environment	Neutral	Neutral	Neutral
Social	Commuting & other users	57,780 Large beneficial	57,780 Large beneficial	59,750 Large beneficial
	Reliability impacts on commuting & other users**	Beneficial	Beneficial	Beneficial
	Physical activity	11,673 Beneficial	12,864 Beneficial	13,250 Beneficial
	Journey quality	4,610 Large beneficial	4,744 Large beneficial	4,895 Large beneficial
	Accidents	881 Slight beneficial	898 Slight beneficial	905 Slight beneficial
	Security	Beneficial	Beneficial	Beneficial
	Accessibility	Beneficial	Beneficial	Beneficial
	Personal affordability	Neutral	Neutral	Neutral
	Severance	Slight beneficial	Slight beneficial	Slight beneficial
	Option and non-use values	Beneficial	Beneficial	Beneficial
Public Account	Cost to the broad transport budge	38,101	40,454	55,324
	Indirect tax revenues	1,353	1,360	1,362

*Discounted present values, in 2010 prices and values (£000s)
**Excludes congestion marginal external costs

4.6 ROBUSTNESS OF APPRAISAL

The City Council has a core responsibility to manage the efficient and effective use of its highway network for all road users. There are a number of longstanding transport and travel problems including several constraints on the network resulting in issues around journey time reliability and local air quality.

During the TCF period the City Council is committed to delivery of following highway schemes which form an integral and complementary component of the TCF package:

- **Station Road / Leek Road:** Complementary improvements to the Station Road / Leek Road junction will be delivered SSLEP funding. The aims of the scheme are to: reduce congestion and delay at this junction; reduce journey times (including those to the City Centre); improve pedestrian crossing facilities and linkages between the two Staffordshire University campuses; improve safety; and improve local air quality. Heads of Terms to acquire the required land for the scheme have been submitted to Stoke-on-Trent Sixth Form College and Staffordshire University and the scheme will be delivered by March 2021.

Present: Leek Road / Station Road

- **Cobridge Junction:** Complementary improvements at Cobridge will see widening and realignment of the existing Waterloo Road/Cobridge Road A50/A53 junction and an upgrade of signals using smart technology which will reduce congestion, improve journey time reliability and serve new development set to come forward in the area. Improvements to support active travel will also be implemented. The scheme is being funding through the DfT National Productivity Infrastructure Fund and the City Council's capital programme.
- **Joiners Square:** Complementary improvements at Joiners Square aims to reduce congestion / improve capacity at the junction and improve air quality; reduce journey times for all users, including journeys to the City Centre; create a prominent Gateway to the City Centre; and enhance provision for pedestrians and cyclists. The scheme forms an 'early win' as part of the City East Link Road - also known as the Hanley-Bentilee link road - a Midlands Connect prioritised large local major transport scheme focussed on providing a new route to connect the inner urban core of Stoke-on-Trent and the south and east of the city onwards towards the Strategic Road Network (SRN). The £86 million City East Link Road project includes a brand new

Proposed Layout: Joiners Square

link between the A52 Leek Road and Dividy Road, along with improvements to the Lime Kiln lights, Botteslow Street and Joiners Square junctions.

In addition to their own scheme objectives, these schemes will help create the opportunity to target investment in sustainable travel options where their benefits can be maximised, for example by:

- Removing general through traffic from Station Road and College Road. This will improve the pleasantness of the University Quarter environment (including the Rail Station) for all users, create a better sense of place and a make the Rail Station a destination in its own right and in doing so stimulate economic activity; and
- Improving local air quality. There are NO_2 exceedances in the City sited on corridors which are proposed for bus priority measures in our Transforming Cities Fund bid which will assist flow of buses and enable more use of them by creating cross city bus links on these corridors.

The City Council's ambition is to develop and promote a road hierarchy that fully embeds these transport sustainability principles whilst maintaining an operational, efficient and effective highway network – to do otherwise would be counter-productive. Therefore, whilst the TCF options are yet to be fixed at this stage of scheme development, we have assumed as a worst case scenario that the highway-related impacts of the TCF proposals, prioritising sustainable travel over the private car, do not the exceed the transport economic efficiency savings brought about through the committed local capacity pinch-point schemes – and at the same time take account of the cost of these committed schemes for the robustness of appraisal.

Table 4-30 – Robustness of Appraisal – Highway-Related Impacts Sensitivity Test

	Low Package Scenario	Medium Package Scenario	High Package Scenario
Present Vale of Benefits (PVB) Unchanged	89,002	90,604	97,384
Present Value of Costs (PVC) Uplifted to take account of committed local capacity pinch point schemes	48,399	50,752	65,623
Net Present Value (NPV)	44,024	43,273	31,762
Benefit to Cost Ratio (BCR)	**1.84**	**1.79**	**1.48**

*Discounted present values, in 2010 prices and values (£000s)

4.7 VALUE FOR MONEY STATEMENT

<table>
<tr><td rowspan="3">Monetised Benefits</td><td colspan="3">Compared to a situation with no TCF scheme in place, completion of the scheme will lead to an increased proportion of journeys by bus, rail and active modes; improve the pleasantness of the University Quarter environment (which includes the Stoke-on-Trent Railway Station) for all users; improved accessibility / linkages between the Rail Station, City Centre and strategic employment areas; and improve public transport journey times through bus priority interventions and the re-establishment of cross-city bus routes.
The sum total of monetised benefits is represented by the Present Value of Benefits (PVB). For the purpose of this business case the PVB reflects changes in: travel time savings (predominantly bus passengers); rail revenue through an uplift in demand; physical activity; journey quality to active modes; and indirect tax revenues.
Based on a proportionate approach to scheme appraisal, benefits in terms of; decongestion; noise; local air quality; greenhouse gases and accident savings have been monetised through marginal external costs. Regeneration benefits are considered separately.</td></tr>
<tr><td>Low Scenario
PVB = £89.0 million</td><td>Medium Scenario
PVB = £90.6 million</td><td>High Scenario
PVB = £94.0 million</td></tr>
<tr><td colspan="3">Discounted present values, in 2010 prices and values</td></tr>
<tr><td rowspan="3">Costs</td><td colspan="3">The base cost estimate of the scheme includes: professional fees, construction costs, land and utilities.
The quantified cost risk assessment and uncertainty analysis together form the risk allowance for the TCF scheme. Both have been determined at a P80 level of probability. Tender inflation has been based upon the Royal Institute of Chartered Surveyors (RICS) Building Cost Information Services (BCIS) Civil Engineering Index.
For economic appraisal optimism bias has been applied at: 32% for the Station Building & New Footbridge at Stoke-on-Trent-Railway Station, and improvements at Longton and Longport Stations; and 15% for local road, walking & cycling facilities, and bus priority measures. A 5% uplift has then been applied to reflect ongoing incremental operation and maintenance costs over the appraisal period.</td></tr>
<tr><td>Low Scenario
PVC = £38.1 million</td><td>Medium Scenario
PVC = £40.5 million</td><td>High Scenario
PVC = £55.3 million</td></tr>
<tr><td colspan="3">Discounted present values, in 2010 prices and values</td></tr>
<tr><td>Initial Benefit to Cost Ratio (BCR)</td><td>Low Scenario
NPV = £50.9 million
BCR = 2.34</td><td>Medium Scenario
NPV = £50.1 million
BCR = 2.24</td><td>High Scenario
NPV = £38.6 million
BCR = 1.76</td></tr>
<tr><td>Non-monetised</td><td colspan="3">In addition to the monetised benefits the TCF scheme will also:
• enhance the physical and social characteristics of the built and</td></tr>
</table>

benefits/ disbenefits	non-built urban environment on both Station Road and College Road; • through sensitive design the proposals for Station Road and to the Station Building will enhance the setting of the Winton Square Conservation Area; • vastly improve public transport journey quality across the city, through infrastructure, vehicle and service enhancements that improve perceptions of safety and security • reduce severance and improve permeability, through cross platform connectivity, inter-modal legibility and transport user information; and • improve the local air quality and noise environment on Station Road and College Road.
Distributional Impacts (DI)	Despite an improving labour market picture, the City still has significant pockets of deprivation – which is much higher than the national average with 80% of the city being an area with some deprivation and 18% of households living in fuel poverty. The city is the 14th most deprived local authority area in England, and some 30% of residents live in areas classified in the 10% most deprived in England. Overall, 74% of the scheme user benefits are experienced by those in the 40% most deprived communities. The majority of schools in Stoke-on-Trent do not have sixth forms so to get any FE level qualifications young people need to go to the 6th Form College or Stoke College. The Apprentice Hub proposed for Staffordshire University will be a key destination for anyone wanting to do apprenticeships with improved access being a key part of the scheme.
Direct Economy Impacts (DEI)	The Stoke-on-Trent and Staffordshire economy has experienced strong growth over the past seven years and is set to be the 4th fastest growing economy in the UK by 2020 Despite its many strengths as a location, significant infrastructure challenges still remain which we need to address to continue this positive progress and ensure the city achieves its true potential - physical regeneration will be an important element of this process. Funding from the programme would support sustainable growth detailed in the Local Plan, which sets out how the city will develop circa 200 hectares of land, supporting 17,000 jobs and 27,800 new homes by 2033. The Fund will support delivery of three major regeneration areas within a five-year period all ahead of HS2, namely, the Smithfield development, City Centre Regeneration Area and wider Station Masterplan. It would also strengthen mass transit and sustainable transport infrastructure in time for HS2 services that are scheduled to run from the city by 2026, subject to infrastructure delivery and Royal Assent. Three development sites, two of which are identified in the Local Plan, have been identified as having some degree of dependency on the

<table>
<tr><td></td><td colspan="3">delivery of the TCF programme. This has been calculated as a land value uplift of £766,000 (2010 prices).</td></tr>
<tr><td rowspan="2">Robustness of the Appraisal</td><td colspan="3">During the TCF period the City Council is committed to the delivery of local congestion pinch point schemes at Station Road / Leek Road, Cobridge and Joiners Square which form an integral and complementary component of the TCF scheme. These schemes will help create the opportunity to target investment in sustainable travel options where their benefits can be maximised through the Fund.
Whilst the TCF options are yet to be fixed at this stage of scheme development, we have assumed as a worst case scenario that the highway-related impacts of the TCF proposals, prioritising sustainable travel over the private car, do not the exceed the transport economic efficiency savings brought about through the committed local capacity pinch-point schemes – and at the same time take account of the cost of these committed scheme for the robustness of appraisal.</td></tr>
<tr><td>Low Scenario
BCR = 1.84</td><td>Medium Scenario
BCR = 1.79</td><td>High Scenario
BCR = 1.43</td></tr>
<tr><td rowspan="2">Value for Money Category</td><td colspan="3">In conclusion, based on the scheme’s; initial BCR; its non-monetised, DI and DEI benefits; and taking account of the robustness of appraisal, the overall VfM band for the TFC scheme can be categorised in the following manner.</td></tr>
<tr><td>Low Scenario
High VfM</td><td>Medium Scenario
High VfM</td><td>High Scenario
Medium / High VfM</td></tr>
</table>

5 FINANCIAL CASE

5.1 PACKAGE COSTS

5.1.1. Cost Summary and Assumptions

A summary of the scheme costs for the package of measures within the programme for each of the City Council's priority plan areas is provided in **Table 5-1** below.

Table 5-1 – Outturn Package Costs (2019 prices)

Package	Priority Plan Area	Cost (£000)
High Package Scenario	Station Hub	£40,550
	Station to City Centre Links	£11,100
	Onward City Centre Links	£15,900
	Programme, Stakeholder Engagement & Monitoring Costs	£1,850
	Total	**£69,400**
Medium Package Scenario	Station Hub	£26,750
	Station to City Centre Links	£11,100
	Onward City Centre Links	£13,450
	Programme, Stakeholder Engagement & Monitoring Costs	£1,850
	Total	**£53,150**
Low Package Scenario	Station Hub	£26,750
	Station to City Centre Links	£11,100
	Onward City Centre Links	£10,600
	Programme, Stakeholder Engagement & Monitoring Costs	£1,850
	Total	**£50,300**

Scheme costs have generally been built-up in the following manner:

- Base construction rates (2019) are in the main based on industry standard cost data (Spons or BCIS) adjusted for inefficiency for working in a 'live' environment rather than greenfield;

- Allowance of 30-40% for preliminaries includes mobilisation/demobilisation, main contractor's supervision, traffic management and main contractor overheads & profit and is benchmarked from schemes where pedestrian and traffic management and the need to maintain business as usual for those affected is significant;
- Allowance of 20% for professional fees includes for design, site surveys and investigations, support through the consultation and planning phases, project and commercial management and site supervision;
- Allowance of 10% for statutory undertakers includes for service diversions and/or the provision for new as required;
- Quantified cost risk assessment (P80) and application of estimating uncertainty (P80); and
- Construction materials prices are expected to rise by between 3% and 5% per annum over the forecast period.

Table 5-2 - BCIS Construction Price Inflation

	1Q 2019 to 1Q 2020	1Q 2020 to 1Q 2021	1Q 2021 to 1Q 2022	1Q 2022 to 1Q 2023	1Q 2023 to 1Q 2024
Tender Price Index	4%	5%	6%	6%	6%
Building Cost Index	3%	4%	4%	5%	4%

5.1.2. Scheme Cost Plan

A copy of the scheme cost plan and approach to budget reporting is contained in **Appendix H.**

5.1.3. Funding Request and Profiling

Funding Request and Profiling

A summary of the funding request and profiling is set out in **Table 5-3** overleaf.

Local Contribution

At its meeting on the 19 November 2019 Cabinet approved a recommendation to City Council that subject to the outcome of the Transforming Cities Fund bid, an allocation for the Transforming Cities Fund Tranche 2 schemes, is included in the proposed 2020/21 Medium Term Financial Strategy Capital (MTFS) Programme that will be presented to City Council in February 2020.

Table 5-3 – Funding Request and Profiling

Funding request and profiling (£000s)									
HIGH SCENARIO	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	**Total (£)**	**% total**
Requested DfT funding		4,530,809	31,876,775	22,789,507				**59,304,259**	85%
LA contribution		852,010	852,010	852,010	4,033,333	52,024	55,145	**6,589,362**	9%
Third Party contribution				3,500,000				**3,500,000**	5%
Total		**5,382,819**	**32,728,784**	**27,141,517**	**4,033,333**	**52,024**	**55,145**	**69,393,621**	**100%**

MEDIUM SCENARIO	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	**Total (£)**	**% total**
Requested DfT funding		3,825,489	19,363,023	21,493,413				**44,681,926**	84%
LA contribution		326,801	326,801	326,801	3,984,254			**4,964,658**	9%
Third Party contribution				3,500,000				**3,500,000**	7%
Total		**4,152,291**	**19,689,825**	**25,320,215**	**3,984,254**			**53,146,584**	**100%**

LOW SCENARIO	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	**Total (£)**	**% total**
Requested DfT funding		3,780,669	18,498,685	19,838,769				**42,118,123**	84%
LA contribution		231,846	231,846	231,846	3,984,254			**4,679,791**	9%
Third Party contribution				3,500,000				**3,500,000**	7%
Total		**4,012,515**	**18,730,531**	**23,570,615**	**3,984,254**			**50,297,915**	**100%**

Third Party Contributions

A copy of the letter of support from First Bus is contained in **Appendix L**. First Bus has committed to establishing the cross-city bus links once the physical infrastructure works are completed, with an undertaking that the savings First Bus could make particularly through the city centre improvements will be reinvested to deliver a significant modernisation of the current fleet. If the TCF bid is successful, First Bus has committed to invest £3.5 million 'in-kind' match funding into the purchase of a least 15 new double decker Euro VI vehicles.

Ongoing Commitments and Potential Future Contributions

Complementary Committed Schemes

As set out in the Economic Case, during the TCF period the City Council is committed to delivery of following schemes which form an integral and complementary component of the TCF package:

- Station Road / Leek Road;
- Cobridge Junction; and
- Joiners Square.

These schemes are being funding through a combination of Central Government, LEP Growth Deal and Capital Programme and are not included in the funding submission request nor do they form any part of the Local Contribution match funding.

Canal & River Trust

Meetings have been held with the Canal & River Trust (CRT) to discuss working jointly to increase access for pedestrians and cyclists to the canal network to raise participation. Agreement has been reached on the routes selected. CRT has also assisted in checking prices, discussed materials to be used and future maintenance liability.

Rail Franchise Commitments

As described in the Strategic Case, both First Trenitalia (West Coast Partnership franchise) and East Midlands Railway have made franchise commitments to deliver improved rail services and station facilities at Stoke-on-Trent, Longton and Longport Stations. As these commitments are to all intents and purposes DfT contributions, it was not permitted to count them as match from a TCF perspective.

However, beyond their published franchise commitments, both First Trenitalia and EMR are likely to have mechanisms to enable further investment at stations. As part of our engagement with them, EMR provided information about both their ‘Community Fund’ (£2.4m across the life and geographical area of the franchise – bid for by local community groups) and their ‘Retail Fund’ which will enable the creation of shell units at stations for onward sub-leasing.

Railway Heritage Funding

As Stoke-on-Trent Railway Station is a Grade II Listed Building, we have engaged with Railway Heritage Trust during the development of the scheme. As part of this engagement, the opportunity to bid for up to £200k each financial year as a contribution to the restoration of heritage features within the listed curtilage was identified. Similar to rail franchise commitments, as this funding would be indirectly from DfT, it may not class as eligible match for TCF purposes, but has the potential to reduce the specific TCF funding ask.

Network Rail

Since the beginning of CP6, Network Rail is no longer funded to undertake enhancements to railway assets, with their focus being on operation, maintenance and renewal. As such, Network Rail has been transparent throughout our engagement with them that no financial contribution would be possible unless specific schemes / packages could be demonstrated to have an asset condition, safety or capacity business case. At this stage of design development, none of our proposals fall into these categories (although we believe there may be small potential for this, as intrusive surveys are progressed and analysed). However, Network Rail has agreed that after an initial three-year period where Stoke-on-Trent City Council will be liable to pay a commuted sum of £40k p.a. for the maintenance of the proposed station footbridge, the asset will then fall into the standard Network Rail regime and future maintenance, repair and renewal costs will be covered by them.

5.2 ALLOWANCE FOR RISK & INFLATION

A risk register for the programme has been prepared through discussion with officers at Stoke-on-Trent City Council at both an individual scheme and package/programme level. Risks have been assessed in terms of through impact on cost, time and quality, along with the probability of the risk occurring. As individual schemes are developed through the Assurance Framework individual scheme risk registers, and risk allowances will be developed.

The quantified cost risk assessment and uncertainty analysis together form the risk allowance for the TCF scheme which for the high package scenario equates to uninflated value of **£7.41 million**.

Inflation has been based upon the Royal Institute of Chartered Surveyors (RICS) Building Cost Information Services (BCIS) Civil Engineering Index, and a spend profile that reflects the Delivery Plan (contained in **Appendix J**), which for the high package scenario equates to uninflated value of **£10.56 million**.

5.3 MANAGING COST CERTAINTY

The size of any agreed DfT funding package, once approved, will be fixed. Any unavoidable cost increases and/or delays will be accounted for locally by utilising existing budgets where possible or by a formal increase to the capital programme. During the project life cycle, the scheme will be subject to regular value engineering where scheme scope & definition will be reviewed against the scheme objectives, value for money and cost budget. Any proposal to vary the scope of any works package will require Programme Board approval.

5.4 SECTION 151 OFFICER DECLARATION

4. **Section 151 Officer Declaration**	
As Section 151 Officer for the City of Stoke-on-Trent I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that the City of Stoke-on-Trent • has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution; • accepts responsibility for meeting any costs over and above the DfT contribution requested, including potential cost overruns and the underwriting of any funding contributions expected from third parties; • accepts responsibility for meeting any ongoing revenue and capital requirements in relation to the scheme; • accepts that no further increase in DfT funding will be considered beyond the maximum contribution requested and that no DfT funding will be provided after 2022/23; • Confirms that the authority has the necessary governance and assurance arrangements in place and the authority can provide, if required, evidence of a stakeholder analysis and communications plan in place.	
Name: Nick Edmonds	Signed: Nick Edmonds

6 COMMERCIAL CASE

6.1 INTRODUCTION

Establishing basic commercial viability is the first stage in conducting due diligence on any project. This section examines the commercial viability of the project which, combined with the overall economic benefits to society, are key factors in project financing.

6.2 OUTPUT BASED SPECIFICATION

6.2.1. Strategic Objectives

The procurement strategy is underpinned by the following essential requirements:

- A need to have cost certainty or certainty that the scheme can be delivered within the available funding constraints through the selection of appropriate contracts at the procurement stage; and
- A need to ensure that grant funding stepped down to delivery partners is procured and defrayed in a compliant manner.

In addition to the above, there are other less rigid constraints including:

- A desire to minimise further preparation costs with respect to design;
- A desire to use contractor experience and input to the design and construction programming to ensure funding requests are appropriate and the implementation programme robust and achievable;
- A desire to obtain further detailed contractor input to risk management and appraisal along with mitigation measures / actions in order to capitalise at an early stage on opportunities to reduce construction risk and thus improve out-turn cost certainty;
- Ensuring supply chain input into the delivery sequence and programming of the actual construction works to ensure full co-ordination between civil construction related works and improvements in service provision;
- Using and building upon the partners' in-house knowledge and experience by engaging through consultation with all stakeholders; and
- Contractors being incentivised to achieve 'a right first-time approach' that is measured by key performance indicators agreed with the contractor.

6.2.2. Scheme Specific Objectives

Primary and secondary objectives have been identified for the scheme and are detailed below. The primary objectives are those where the considered procurement options must deliver and the secondary objectives are those where it would be beneficial if a chosen solution delivered the outcome.

- **Primary:**
  - Enable Stoke City Council and its funding partners to commit to the project in full

- Deliver the scheme within the available funding
  Ensure that Value for Money is delivered
- Ensure that appropriate quality is delivered
- Reduce risks to an acceptable level
- Comply with current legislation including safe ways of working

- **Secondary:**
  - Engage Contractors early in the project planning
  - Provide Contractor input to the design, risk and programme
  - A desire to work with a proven considerate contractor
  - A desire to maximise social value including opportunities for the local supply chain, training and employment;
  - A desire to work with Contractors able to meet the entire requirement and/or supply chain management

6.2.3. Key Assessment Criteria

In formulating a procurement strategy, the key criteria against which the suitability of the procurement approach will be judged are as follows:

- **Price Certainty:** Cost certainty and limiting risk is a primary priority for the City Council particularly in regards to delivery of the TCF fund, in the interests of being prudent with a limited budget
- **Client Variations:** During the project life cycle, the scheme will be subject to regular value engineering where scheme scope & definition will be reviewed against the scheme objectives, value for money and cost budget;
- **Timing:** Completion is based on an overall delivery programme of 4-years with Tranche 1 projects scheduled for completion by March 2021 and Tranche 2 projects by March 2023;
- **Complexity:** The design and construction of the projects varies. Works with the Highway typically involve standard approaches. Works at rail stations and track side on the other hand are more complex with associated higher risk;
- **Responsibility:** By maintaining a single point of responsibility for the design and construction the risk of claims for delay and disruption should be minimised;
- **Risk Avoidance:** The City Council would prefer to see as much risk transferred to the prime contractor as is commercially sensible and legally valid;
- **Quality Level:** The project should incorporate good design, considerate construction and high quality mitigation measures. This is particularly important given the works are to be completed on the strategic network, will in part be undertaken in areas that have undergone disruptive construction works connected with other projects such as delivery of the District Heat Network in the recent past and will take place on key commuter routes to the City Centre; and

- **Social Value:** This will include maximising opportunities for maximising both the use of the local supply chain (especially sub-contractors from the SME sector) and training / employment opportunities (including apprenticeships).

6.3 PROCUREMENT, DELIVERY STRATEGY AND PRICING FRAMEWORK

6.3.1. Procurement Options

Since funding is to be secured entirely through public funds there are a number of procurement options available. Procurement can cover both acquisitions from third parties and from in-house providers. Option appraisal needs to be undertaken to determine whether delivery is in-house or external purchase. The following four potential procurement strategies for the detailed design and construction stages of the projects have been considered:

- **Internal Provision:** Utilising the City Council's own internal resources drawing upon staff knowledge, skill sets and capacity in-house.
- **City-Council Managed Frameworks:** The City Council has an established track record in setting up and managing frameworks (including acting as a central purchasing body). It is currently establishing its own "Professional Services in the Built Environment" framework, which will go live on 1st January 2020. The City Council will also seek to establish its own Works Framework for a four-year period, which will overlap with much of the duration of the Fund.
- **Regional & National Frameworks:** The City Council has established procurement frameworks and, as a mature client, has long term relationships with its suppliers. In addition, there are a range of other frameworks which the City Council has ease of access to. These include national frameworks:
  - Scape (Works & Services);
  - Pagabo (Works & Services);

  And regional frameworks:
  - Constructing West Midlands (Works);
  - Midlands Highways Alliance (Services); and
  - Staffordshire Construction (Works).

  At time of writing, all of the above can be accessed by the City Council and used to a greater or lesser extent to support the delivery of a successful TCF bid.
- **Competitive Tendering (through an Open procedure):** This approach would be used for one-off projects where the City Council would seek to get a strong range of competitive responses from the market. The City Council has extensive experience in managing competitive tendering processes, and this approach will be used where frameworks and internal provision are not suitable.

Further details of the main advantages and disadvantages of each option are including in the Procurement Strategy contained in **Appendix M**.

Other Approaches

The City Council has experience of, and is comfortable with, accessing other routes to market (e.g. Competitive Dialogue; Joint Ventures; Special Purpose Vehicles etc). However, the limited period in which the City Council has to deliver a TCF bid will not allow for any of these approaches to be established in a meaningful manner.

Rail Industry Procurement

Phasing and packaging of scheme elements will be undertaken to enable the most efficient delivery to both cost and programme, with the vast majority of the agreed deliverables to be procured by the City Council. However, within the rail corridor, on land owned by Network Rail, and for elements that cross the railway, alternative options are available through Network Rail or the Station Facility Owner (SFO).

These options are outlined in Network Rail's "Investing in the Network" guidance. Network Rail is mandated to charge for 'non-contestable services' that enable them to protect their asset and fulfil their regulatory obligations under the Network Code. Regardless of any other procurement decisions that are made, the cost for non-contestable asset protection services will be included within the overall project costs.

Network Rail also offers 'contestable services', including procurement of a contractor through the Network Rail Investment Projects team. In this instance, Network Rail would also take on Construction Design and Management (CDM) duties, including Client and Principal Designer roles. This is an alternative option to the City Council procuring its own contractor alongside Network Rail's non-contestable asset protection services.

Figure 6-1 below illustrates the procurement options and paths through project delivery for rail projects. Table 7-1 provides additional detail for each of the rail-related schemes identified within our overall TCF programme.

Figure 6-1 – Rail-Related Scheme Pathways

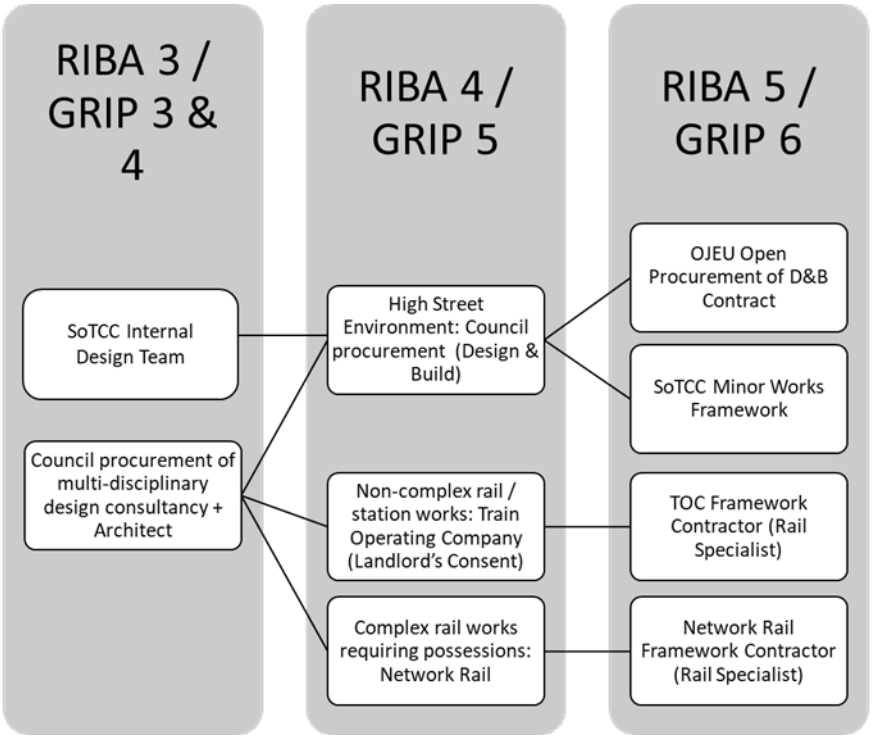

RIBA 3 / GRIP 3 & 4
RIBA 4 / GRIP 5
RIBA 5 / GRIP 6
SoTCC Internal Design Team
Council procurement of multi-disciplinary design consultancy + Architect
High Street Environment: Council procurement (Design & Build)
Non-complex rail / station works: Train Operating Company (Landlord's Consent)
Complex rail works requiring possessions: Network Rail
OJEU Open Procurement of D&B Contract
SoTCC Minor Works Framework
TOC Framework Contractor (Rail Specialist)
Network Rail Framework Contractor (Rail Specialist)

Figure 6-2 – Proposed Procurement Route for Rail-Related Schemes

Scheme	RIBA 3 / GRIP 3&4 Procurement	RIBA 3 / GRIP 3&4 Design Approval	RIBA 3 / GRIP 3&4 CDM Duty Holders	RIBA 4 / GRIP 5 Procurement	RIBA 4 / GRIP 5 Design Approval	RIBA 4 / GRIP 5 CDM Duty Holders
Multi-Modal Hub (exc. Canopy)	Stoke on Trent CC internal design team / built environment framework	Internal Council approvals	Client – SoTCC PD - Consultant	OJEU compliant framework – D&B	Internal Council approvals	Client – SoTCC PD – D&B Contractor PC – D&B Contractor
Station Canopies	Stoke on Trent CC – non-framework	Building Regs	Client – SoTCC PD - Consultant	OJEU compliant framework – D&B	Building Regs (?)	Client – SoTCC PD – D&B Contractor PC – D&B Contractor
Station Building	Stoke on Trent CC – non-framework	Network Rail Asset Protection (Form 001) & Station Change	Client – SoTCC PD - Consultant	TOC Framework	Landlord's Consent	Client – TOC PD – TOC appointed designer PC – TOC appointed contractor
Vernon Road Cycle Link	Sustrans	Network Rail / Sustrans MOU	Client – SoTCC PD – N/A (TBC)	Sustrans appointed contractor	Network Rail / Sustrans MOU	Client – SoTCC PD – N/A PC – Sustrans appointed contractor
Longton Cycle Hub & Waiting Shelters	N/A	N/A	Client – SoTCC PD – N/A (TBC)	TOC Framework	Landlord's Consent & Station Change	Client – TOC PD – N/A PC – TOC appointed contractor
Longton & Longport Access for All	Stoke on Trent CC – non-framework	Network Rail Asset Protection (Form 001)	Client – SoTCC PD – Consultant	Network Rail Framework	Network Rail (Forms 002 and 003)	Client – Network Rail PD – NR appointed contractor PC – NR appointed contractor
Longton & Longport Highways & Car Parking	Stoke on Trent CC internal design team	Internal Council approvals	Client – SoTCC PD – N/A (TBC)	SoTCC Minor Works framework	Internal Council approvals	Client – SoTCC PD – N/A PC – SoTCC appointed contractor
Stoke Station Footbridge	Stoke on Trent CC – non-framework	Network Rail Asset Protection (Form 001)	Client – SoTCC PD – Consultant	Network Rail Framework	Network Rail (Forms 002 and 003)	Client – Network Rail PD – NR appointed contractor PC – NR appointed contractor

6.3.2. *Requirements*

To understand the procurement requirements the City Council has identified the 'Types of Purchase' required for each deliverable these are broadly split into:

- **Services** – These will primarily be professional services relating to the built environment (which can be accessed via the City Council's new framework). However, other services for which there is likely to be a requirement could include:
  - Monitoring/ Evaluation Services
  - Marketing and Communications Services
  - Integration with City Council and Partner Data Systems Support Services.
- **Supplies/Goods** – These will generally be purchased by the relevant contractor. However, there may be a requirement by the City Council to purchase:
  - Highway & Public Realm goods e.g. signage, paving stone, kerbs, seating, trees, planters
  - Public Transport goods e.g. bus shelters, cycle storage
  - Specialist Software goods
- **Works** – Installation or construction of physical aspects of the Proposed Option in the built environment. This encompasses all civil works. However, in addition the requirement could include specialist contractors (e.g. contractors with an established track record in historic buildings).

6.3.3. *Procurement Process*

Where procurement is undertaken by the City Council it must be undertaken in accordance with its own Contract Procedure Rules (2017). In addition, the Council has also published a Procurement Process Guide (2017). This guidance ensures compliance with the City Council's Contract Procedure Rules and takes account of UK regulations and EU directives. The rules ensure fairness and transparency in the way that the tender process is conducted and supports equal treatment of all companies.

To ensure successful delivery, the right balance of the following criteria is essential:

- Timetable and mobilisation;
- Quality and methodology;
- Social value; and
- Cost (including cost certainty).

In order to meet the TCF expenditure timescale by 2023 the primary investment objective will be to deliver the works in the shortest possible time (whilst remaining legally compliant and driving value for money). The Procurement Strategy in **Appendix M** provides some indicative weightings to this end. Actual weightings will be finalised as part of the drafting and sign-off of procurement packs of tender documents for each individual scheme.

Other key criteria (including compliance with health & safety matters, environmental protection, employment rights, modern slavery etc) will be treated as Pass/Fail questions in accordance with the provisions of regulation 57 of the Public Contract Regulations 2015.

6.3.4. Contract Types

The types of contract open to the City Council could include the following:

- Design, Tender and Build; and
- Design and Build – Traditional.

The advantages and disadvantages of each are set out in the Procurement Strategy in **Appendix X**.

6.3.5. Preferred Procurement Strategy

The City Council's preferred procurement strategy is set out in **Table 1** in the Procurement Strategy in **Appendix M**. This sets out the rationale for the selection of the preferred route against alternatives and explains how costs and risks will be shared throughout the contract.

6.4 MARKET ASSESSMENT

The divisible nature of the programme provides flexibility if necessary to fit supplier availability. To ensure sufficient resources are available to deliver the programme on time:

- Early and informal engagement will be undertaken with private sector suppliers through a series of meet the buyer events;
- Work with infrastructure owners to identify more efficient way of working (for example enabling lengthier access to rail infrastructure); and
- Combine enhancement work with routine maintenance and renewal activity (e.g. bus fleet).

In delivering individual elements of the package, there will be a focus on maximising social value for local areas, a sustainable pipeline of skills, and diversity within the workforce.

6.5 RISK ALLOCATION, TRANSFER AND MITIGATION

Throughout the development stage of the scheme, risks will be identified, recorded and actively managed. Where appropriate, risk owners will be allocated and tasked with eliminating risks, where possible, or identifying mitigation measures for residual risks. The same ethos will be taken through to the delivery stage of the scheme.

Each scheme included in the programme will be categorised according to deliverability status. Early focus will be made on those schemes which are considered "low risk" or "early/easy-wins" offering timely elements of construction for the contractor to progress. This will offer the opportunity for early construction of isolated schemes, particularly those which do not rely on detailed consultation. It is also recognised that a fair amount of detailed design work for the schemes is informed by consultation. This can change the balance of the risk if significant differences in the aspirations emerge, especially from

different stakeholders. The governance arrangements detailed in **Chapter 8** will manage these risks to minimise delay to the programme.

6.6 REVENUE RISK

6.6.1. Operation and Maintenance Liabilities

The main construction contract will include a period of aftercare plus a period for defects correction.

The ongoing operation and maintenance liabilities will fall to the City Council, apart for Rail Station facilities which will be the responsibility of Network Rail and the Train Operating Companies in line with standard Station Access Conditions. Network Rail has agreed to receive payment of a commuted sum for a period of three years for the upkeep of the new Stoke-on-Trent station unpaid footbridge, after which the asset will be accepted into Network Rail's regular maintenance regime. This commuted sum will be paid for using the grant if the bid is successful.

6.6.2. Bus Revenue Risk

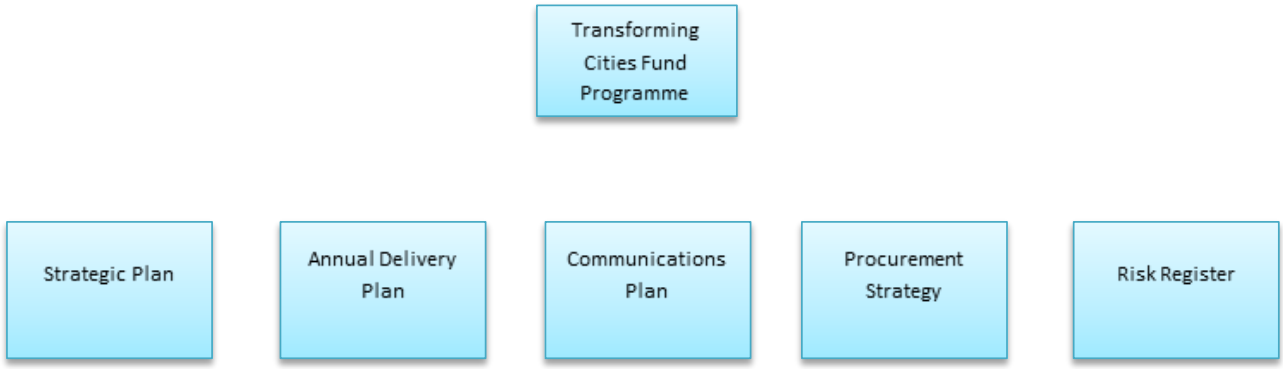
The existing bus network operates on a commercial basis across the city for the majority of services. The proposed scheme is assumed to deliver incremental improvements to existing bus services, with the aim of improving operational efficiency and passenger benefits. On this basis, the partnership approach to identifying and delivering improvements have been developed in partnership with the city's Bus Operators, who will take the revenue risk associated with the scheme. This is to be managed and maintained through a voluntary partnership between the authority and bus operators to ensure that the scheme is operated and maintained as designed.

7 MANAGEMENT CASE

7.1 INTRODUCTION

This chapter outlines the management case for the Transforming Cities Fund Tranche 2 programme. It addresses how this programme will be delivered and provides examples of Stoke-On-Trent's track record of delivering successful projects and an assessment of the market's capacity to deliver within the funding period. This chapter also outlines the governance structures, assurance framework, communications, and risks and how benefits will be realised, evaluated and monitored.

The processes and procedures for the project development and delivery will be set out in the Project Initiation Documents (PIDs).



The methodology used to define the process and procedures necessary to manage this project is based on the PRINCE2 methodology promoted by the Cabinet Office.

Copies of the above can be found in Strategic Plan (**Appendix N**), Annual Delivery Plan (**Appendix O**), Communications Plan (**Appendix P**), Procurement Strategy (**Appendix M**), and Risk Register (**Appendix I**).

7.2 CAPABILITY TO DELIVER

7.2.1. Previous experience / track record of delivery

The City Council has a track record of delivering mixed capital and revenue projects to tight timescales and budget with a range of partners:

- **LSTF Cycling and Walking Programme (SSLEP Growth Deal 2):** The City Council successfully delivered a £1m programme of works to time and budget and is currently delivering a further £1m of LSTF schemes.
- **Hanley Park Heritage Lottery Fund scheme:** The Hanley Park building restoration works incorporates 24 hectares of park with 8 buildings. The scheme is funded through Heritage lottery funds (HLF) Stoke-on-Trent City Council to the value of £6.7m. The

scheme is the largest investment by HLF to any park within the country. Works completed September 2019;

- **Legible Stoke Wayfinding Scheme:** Provision of wayfinding signage which aims to increase the number of children and adults who walk and cycle around the city, contributing towards increased life expectancy, a reduction in health inequalities, improvements in air quality and increased footfall to local businesses. The scheme resulted in delivery of a comprehensive wayfinding strategy, detailed mapping information and installation of 81 signs linking the City Centre to the Railway Station and Stoke Town Centre and extending along the Trent and Mersey Canal and Caldon Canal.
- **Smithfield Office Development:** Two office buildings in excess of 220,000 sq.ft. creating 1500 jobs. Delivered by Genr8 for £55m and funded through the City Council's capital programme.
- **City Centre Bus Station:** Delivered for £14m and funded through the City Council's capital programme. Opened in 2013, the station, built on the site of the former John Street car park, has 22 waiting bays for buses.
- **LSTF Travel Smart Programme 2012-2015 (joint with Staffordshire CC):** Comprised three different, but linked, elements: Element 1 - Better Buses; Element 2 - Smart Choices; and Element 3 - Cycling and Walking. Working with a wide range of partners including First Bus, Sustrans and Staffordshire Chambers of Commerce, the 3-year delivery programme included: bus priority measures; passenger ticketing and information upgrades; significant pedestrian and cycling infrastructure; alongside promotional and engagement activities.
- **Cycle Demonstration Town (CDT) 2008-2011:** New cycle infrastructure in Stoke-on-Trent funded through the CDT programme was delivered between September 2008 and March 2011 and included the creation or improvement of 20 greenways or cycle paths and the addition of 69 advanced stop lines, 10 cycle gates and 4 contra flow schemes. This increased the total cycle network from 124km to over 161km by March 2011.
- **Stoke-on-Trent City Centre Public Realm (European Regional Development Fund):** The project created high quality public realm that has provided a much needed visual uplift that has in turn helped to improve the image of the City Centre increasing private (and public) sector confidence as a place to invest. Total £6.932m comprising ERDF £3.468m, SoTCC £3.464m. Delivered 2.04 hectares of public realm improvements. This was one phase of 4 phases totalling £12.5 m of investment.

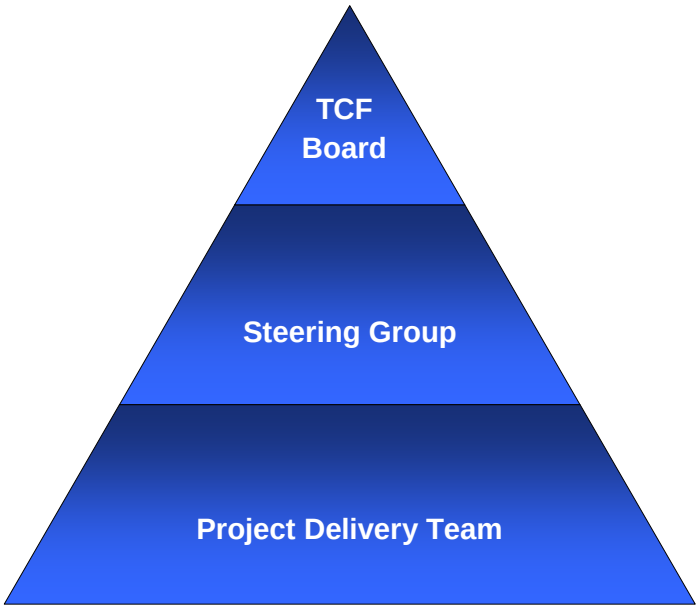
The City Council was also part of the Sustrans led LSTF Access to Education consortium (2012-15) and remains part of the Living Streets Walk To Access Fund consortium since its predecessor's conception in 2012. As part of the City Council's commitments to these partnerships the Council identified and delivered a number of infrastructure active travel schemes.

7.3 GOVERNANCE FOR DELIVERY

7.3.1. Overall Management Structure

In general terms, the management of the project is split up into three tiers consisting of the TCF Programme Board (that sits within the LEP Assurance Framework structure), the TCF Steering Group and Project Delivery Team.

Figure 7-1 – Overall Management Structure



7.3.2. TCF Programme Board

A core team of senior officers and leading members have been working on the Transforming Cities Fund bid since the launch of the expression of interest stage in spring 2018. The Board comprising Elected Members and City Council officers was established to provide strategic direction and leadership to ensure the Tranche 1 and Tranche 2 bids are robust and fit-for-purpose. The Terms of Reference effective from November 2018 continues until submission of the Final SOBC. Review of the Board and its membership will take place prior to delivery of the Programme following the Spring funding announcement. The proposed refreshed membership includes:

- **Chair:** Cabinet Member for Regeneration, Infrastructure and Heritage;
- **Senior Responsible Officer (SRO):** Director of Place, Growth and Prosperity;
- **TCF Programme Manager:** Senior Capital Project Manager;
- **Section 151 Officer:** Assistant Director Finance;
- **Representative from the Department of Transport:** TBC;
- **Network Rail:** Business Development Manager London North Western;
- **First Bus:** Managing Director First Midlands; and
- **Representative from the Train Operating Company:** TBC.

The TCF Board recognised within the SSLEP structure will meet on a on a quarterly basis and with a remit:

- to ensure delivery of the Programme delivers the change required set out in the Programme Vision so that the intended objectives are achieved;
- to provide strategic guidance to the project delivery and high-level stakeholder engagement;
- to report upon delivery of the TCF Programme quarterly to the SSLEP Company Executive Board;
- to ensure that Web TAG guidance is met for all schemes;
- to agree at the earliest opportunity with the SSLEP the proportionate approach to be taken for the assessment of low value schemes below £5m and any additional assessment methodologies to be employed;
- to ensure that minimum requirements as set out in Appendix B Transport Schemes are met and that independent scrutiny has been undertaken of all schemes over £1m in value; and
- to agree at the earliest opportunity with the SSLEP and the DfT the minimum VfM threshold to be employed and whether schemes with lower than 'high' value are able to proceed.

The TCF Board will be responsible for approving major changes to the delivery programme and constituent/ fundamental elements of the project delivery including budget.

The DfT will be invited to all programme board meetings, with observer status, where funding approval decisions are being considered.

7.3.3. TCF Steering Group

The role of the TCF Steering Group will be to develop and oversee delivery of the programme of schemes in order that they meet the requirements of the DfT. The Steering Group sets out to produce proposals which will deliver a step change in public transport quality and accessibility to help improve the city's productivity. Membership includes:

- **Senior Responsible Officer (SRO):** Director of Place, Growth and Prosperity;
- **TCF Programme Manager:** Senior Capital Project Manager;
- **TCF Project Manager:** Team Manager Transport Policy & Planning;
- Assistant Director – Investment, Regeneration & Planning;
- Engineering & Commissioning Manager;
- Strategic Manager – Regeneration & Economic Growth;
- Accountant - Senior Business Partner;
- Marketing and Communications Officer;
- Representative from First Bus TBC;
- Representative from Network Rail TBC; and
- Representative from the Train Operating Company TBC.

The Steering Group will meet on a monthly basis and its remit is:

- to support the SRO and Programme Manager in their decision making;
- to prepare the annual Delivery Plan in order to deliver the Programme Vision;
- to prepare and update the Risk Register and Issues Log in order to identify the need for and manage change control;
- to manage project assurance ensuring that projects are delivered on time, within budget through a gateway process;
- to report Programme progress to the DfT including scheme evaluation;
- to manage all communication with the TCF Programme Board; and
- to manage any subsequent bids for funding to increase the value of the Programme including Raliway Heritage Trust funds.

7.3.4. Project Delivery

Setting clear roles and responsibilities and single point accountability for different areas of work is vital to supporting effective project planning, delivery and decision-making.

The TCF Programme Manager will:

- ensure individual project elements are managed to budget, time and quality, and in accordance with any statutory and corporate requirements;
- ensure that the appropriate level of engagement is undertaken with key stakeholders;
- proactively monitor the Programmes progress across delivery of multiple projects, resolving day to day issues and initiating appropriate corrective action; and
- ensure that the Programme is planned and delivered within the agreed governance structure.

The TCF Project Manager will:

- be responsible for the day-to-day progress of the project and any issues regarding deliverability;
- ensuring that quality audits are undertaken in accordance with the quality requirements of the project and ensure that a quality compliance report is produced and presented to the Programme Manager and SRO for onward reporting to the TCF Board;
- ensure that any non-compliance and the associated actions are communicated to the Project Delivery Team in a timely manner such that actions are implemented quickly and effectively; and
- bring expert knowledge on the key components of the transport modelling and appraisal process to the Programme including Web TAG requirements.

Responsibility for the development of individual delivery packages has been assigned in the following manner.

Table 7-1 – Allocation of Delivery Packages by Project Manager

Priority Area	Delivery Package	Allocation
Station Hub	Station Road	Rail / Public Realm Project Manager
	Station Building	Rail Project Manager
	Station Footbridge	Rail Project Manager
	Station Pedestrian / Cycle Access	Pedestrian / Cycle Project Manager
Station to City Centre Transit Links	College Road Corridor Improvements	Highways / Public Realm Project Manager
	Boughey Road Pedestrian & Cycle Improvements	Pedestrian / Cycle Project Manager
Onward Cross-City Transit Links	City Centre Bus Station & City Centre Bus Priority	Bus Project Manager
	Bus Priority Pinch Point Improvements	Highways Project Manager
	Re-establish cross-city bus services	Bus Project Manager
	Enhanced Walking and Cycling Routes to Areas of Strategic Employment	Cycle Project Manager
	Longton and Longport Rail Station Improvements	Rail Project Manager

7.4 ASSURANCE

7.4.1. Internal Assurance

Stoke-on-Trent City Council in its capacity as highway, traffic and planning authority will, through its Executive Board, consider the strategic investment decisions, providing appropriate endorsement to strategic decision-making and proposals and ensure appropriate elected member input to the development and delivery of the programme.

7.4.2. Funding Approval

Formal DfT funding approval will be taken at a programme level, with all or most investment decisions on individual components of the package to be made locally in accordance with the city region's assurance framework.

7.4.3. SSLEP Assurance Framework

In order to ensure that the SSLEP is best placed to deliver its ambitious economic objectives a robust Assurance Framework has been developed which provides the necessary confidence to both stakeholders and funders that appropriate arrangements are in place to the deliver the SSLEP's Strategic Economic Plan. The date of the current

version is 12th September 2019[38] (contained in **Appendix Q)** and was formally approved by the SSLEP Company Executive Board on 19 September 2019. As a minimum the Assurance Framework is reviewed annually.

Working with partners (in this case the City Council) the SSLEP Company Executive Board's responsibility includes ensuring that the TCF programme of work is embedded within the delivery of SSLEP Local Industrial Strategy and the City Council are held accountable for the delivery of specific projects along with the overarching economic strategies for formal funding arrangements with Government. Following the receipt of any TCF Grant Award the Assurance Framework will be formally amended to reflect inclusion of the Transforming Cities Fund Programme. The following specific responsibilities will be captured:

SSLEP Company Executive Board (EB)

The SSLEP Company Executive Board list of permanent sub-groups will be extended to include the TCF Board. The SSLEP Executive Board will:

- Sign off the TCF Strategic Plan;
- Sign off the TCF annual Delivery Plan;
- Work with Stoke-on-Trent City Council to agree strategic targets for the TCF Programme against which performance will be monitored in line with DfT guidance; and
- Report quarterly to the SSLEP Partnership delivery of the TCF Programme in line with LEP governance arrangements.

SSLEP Strategic Programme Management Group (SPMG) / Audit & Finance Committee (AFC)

Reflecting guidance issued in the Local Enterprise Partnerships National Assurance Framework Appendix B Transport Schemes that proposed schemes will achieve value for money overview and scrutiny of the TCF Programme will be the responsibility of the Strategic Programme Management Group (SPMG).

Establishing overall SSLEP value for money is the responsibility of the Chair of the Committee. Value for money(VfM) statements for each scheme in line with published DfT Web TAG guidance and DfT advice on assessing VfM will be presented to the SPMG working on the advice of the LEP's Independent Technical Appraiser for approval to:

- Ensure that Web TAG guidance is met for all schemes;

[38] https://www.stokestaffslep.org.uk/app/uploads/2019/10/SSLEP-Assurance-Framework-September-2019v6.pdf

- Agree at the earliest opportunity with the TCF Programme Board the proportionate approach to be taken for the assessment of low value schemes below £5m and any additional assessment methodologies to be employed;
- Ensure that minimum requirements as set out in Appendix B Transport Schemes are met and that independent scrutiny has been undertaken of all schemes over £1m in value; and
- Agree at the earliest opportunity with the TCF Programme Board and the DfT the minimum VfM threshold to be employed and whether schemes with lower than 'high' value are able to proceed.

The VfM assessment for each scheme will be signed off by the Audit & Finance Committee (AFC) Chair before a scheme can progress to delivery. Oversight and approval of all schemes by the AFC will ensure that impacts of each scheme (monetised and non-monetised) are assessed on a consistent basis as recommended in the guidance. The Chair of the Committee is aided by the S151 to ensure that public funds are handled in line with relevant procedures and grant conditions and that the TCF funds are used with propriety, regularity and deliver value for money. The AFC will:

- Maintain an overview of delivery of the TCF Programme;
- Monitor the TCF projects and their outcomes and report the achievement of strategic targets to the Executive Board; and
- Have oversight of the risk register and associated mitigation plans prepared by the TCF Programme Board.

TCF Programme Board (to be a delegated sub-group of Executive Board)

The TCF Programme Board will manage delivery of the TCF Programme through the monitoring of projects and their outcomes:

- Report to the EB and/or AFC as appropriate on achievement of strategic targets, projects and timelines;
- Maintain strategic oversight of the TCF Programme including expenditure and investment to provide assurance to the EB that funds are being spend appropriately and in accordance with the DfT grant conditions;
- Maintain and manage the TCF Risk Register and associated mitigation plan;
- Present Web TAG developed schemes to the SPMG for their consideration and approval
- Ensure that for schemes over £1m VfM is independently scrutinised
- Propose strategic communications;
- Identify and action solutions to problems related to delivery of the TCF Programme;
- Recommend cost re-profiling of projects where project costs are increasing beyond budget or where overspends and underspends are likely; and
- Maintain and monitor records and ensure appropriate national returns are made accurately and in a timely manner.

In developing the approved package of projects from Concept Designs as contained in the Final SOBC to RIBA Plan of Work Stage 7 'In Use', the TCF Programme Board will utilise

SSLEP Assurance Framework documents to appraise and develop the funded projects. This will include the project business case process, business case template and the business case assessment template recently reviewed by the LEP.

The TCF Programme Board Terms of Reference will set out the criteria for additional scrutiny of full business cases that could include the needs for independent appraisal prior to funding being stepped down to project delivery leads.

7.4.4. Interface with DfT Approval/Scrutiny

For individual schemes over £40 million, business cases will be expected to successfully progress through Outline Business Case (OBC) and Full Business Case (FBC) stages to be fully awarded funding, in line with existing guidance. The DfT reserves the right to automatically 'retain' any schemes which total over £40 million, and any other schemes, if lower, for which the DfT believes further information would be helpful in deciding based on, for example, the level of complexity involved. These schemes would be 'retained' within a wider programme agreed at the SOBC stage which will then require DfT approval at OBC and FBC before funding is released.

Individual scheme business cases and funding approval documentation will be made available to the DfT on request.

7.5 PROGRAMME OF SCHEME DELIVERY

7.5.1. Interface with Other Schemes & Developments

The Tranche 2 proposals need to be developed to coordinate with the delivery timetables and resourcing of other schemes being planned for this geographical area. Key schemes & developments to consider will include:

- TCF Tranche 1
- Etruria Valley Link Road
- Swift House Development
- Smithfield Development
- Etruria Valley Development
- HS2

7.5.2. Constraints

The primary constraints on the project are the need to meet a number of key milestones in order to safeguard the progress of the project. These are:

- Achieve SOBC funding approval from DfT, and subsequent assurance approvals from the SSLEP;
- Delivery of the scheme maximising value for money;
- Other constraints include the need to obtain planning permission / listed building consent for some elements of the scheme;

- Need to manage impacts to all users on the transport network; and
- Need to consider key times for activities when planning delivery programme e.g. Christmas 2022 track possession for footbridge installations.

7.5.3. Assumptions

The primary assumption for the project is that the method of funding will be from the Transforming Cities Fund.

7.5.4. Project Plan

At the next phase of scheme development, a Programme Management Plan will be prepared describing the procedures that need to be followed for creating and maintaining the Programme to deliver the Tranche 2 proposals. The Programme shall be dynamic such that the impact of the current project performance will be reflected in future scheduled work, enabling Programme adjustments to be made should the outcome indicate problems ahead.

It is the aim of the Programme to provide full visibility of the current and future situation with respect to performance and will be used in conjunction with the Risk Management Plan to predict the potential impacts of identified risks.

This document will also define the responsibilities of the Programme Manager and the inputs required from the other project work streams. The project structure for the Stoke-on-Trent TCF scheme will be created by the use of the Work Breakdown Structure (WBS):

- Project Management
- Appraisal
- Business Case and Funding
- Preliminary Design
- Statutory Process
- Procurement / Implementation

One programme will be produced and this will be issued to the various workstreams for reference and reporting. The Programme will be updated and reviewed monthly, scheduling the key project milestones/activities.

Key Milestones

The Tranche 2 scheme comprises a wide range of coherent discrete interventions which for assurance and delivery purposes has been split in to four sub-packages based on types of schemes and delivery timescales.

1. **Early Wins:** College Road & Boughey Road improvement schemes; enhanced walking & cycling routes to Etruria Valley; City Centre bus station improvements, City Centre bus priority measures and key bus corridor pinch point improvements.
2. **Station Hub Package:** Station Road highways, public realm and multi-modal interchange; Station building and Vernon Road pedestrian & cycle access link;

3. **Network Rail Package:** Stoke-on-Trent Station footbridge; Longport & Longton Station access for all facilities; and
4. **Late Wins:** Stoke Station West car park and Glebe Street pedestrian & cycle access link; enhanced walking & cycling routes to Trentham Lakes; Longton station public realm, cycle hub and waiting shelters and Longport station car & cycle parking.

Table 7-2 overleaf sets out key milestones associated with the delivery of the Tranche 2 high package including scheduled construction start and end dates. A detailed **Delivery Plan** is contained in **Appendix J** based on a DfT Funding decision by March 2020.

General Programme Management

General programme management that will be followed on the TCF scheme will include:

- Internal review and update of the Programme will be fortnightly (minimum). Activity duration will be the most likely time required to complete the task; optimism should be avoided;
- The Programme for the following fortnight will then be discussed with the SRO who will acknowledge the dependencies of their work and accept that the Programme is acceptable;
- Reporting on the Programme will be monthly; it will be ascertained which, if any, activities have not been completed in accordance with the Programme, the reasons for this and the consequences of any delay. Constraints will be used only for external constraints (i.e. availability) or, where resource management is not utilised, for realistic start dates that differ from early dates. This will allow for a more representative baseline;
- Ownership of the work ahead will be established; and
- To a less formal degree, the work Programme for the next 2 months will also be reviewed.

Table 7-2: Tranche 2 High Package Scheme Delivery Summary

Sub-Packages	Delivery Package	Commence Detailed Design & Appraisal	Acquisition of Powers & Consents	Commence Construction Procurement	SSLEP Business Case Submission	SSLEP Business Case Approval	Start Construction	Disruptive Rail Track Possession	End Construction
Early Wins	College Road Corridor Improvements	Q2 2020	Q4 2020	Q4 2020	Q4 2020	Q2 2021	Q2 2021		Q2 2022
	Boughey Road Pedestrian & Cycle Improvements	Q2 2020	n/a	Q4 2020	Q4 2020	Q2 2021	Q2 2022		Q3 2022
	Enhanced Walking and Cycling Routes to Etruria Valley	Q2 2020	n/a	Q4 2020	Q4 2020	Q2 2021	Q2 2021		Q4 2021
	City Centre Bus Station Improvements	Q2 2020	Q4 2020	Q4 2020	Q4 2020	Q2 2021	Q2 2021		Q4 2021
	City Centre Bus Priority Measures	Q2 2020	n/a	Q4 2020	Q4 2020	Q2 2021	Q2 2021		Q4 2021
	Bus Priority Pinch Point Improvements	Q2 2020	n/a	Q4 2020	Q4 2020	Q2 2021	Q2 2021		Q4 2021
Station Hub Package	Station Road incl. Highway*, Public Realm & Multi-Modal Interchange	Q2 2020	Q2 2021	Q4 2021	Q4 2021	Q2 2022	Q2 2022		Q2 2023
	Station Building	Q2 2020	Q3 2021	Q4 2021	Q4 2021	Q2 2022	Q2 2022		Q4 2023
	Vernon Road Pedestrian / Cycle Access	Q2 2020	Q4 2020	Q4 2021	Q4 2021	Q2 2022	Q2 2022		Q3 2022
Network Rail Package	Stoke-on-Trent Station Footbridge	Q2 2020	Q3 2021	Q4 2021	Q3 2021	Q1 2022	Q3 2022	Q4 2022	Q2 2023
	Longport Station – Access for All	Q2 2020	Q2 2021	Q4 2021	Q3 2021	Q1 2022	Q3 2022	Q4 2022	Q2 2023
	Longton Station – Access for All	Q2 2020	Q2 2021	Q4 2021	Q3 2021	Q1 2022	Q3 2022	Q4 2022	Q2 2023
Late Wins	Stoke Station West car park / Glebe Street cycle and pedestrian	Q1 2022	n/a	Q3 2022	Q3 2022	Q4 2022	Q1 2023		Q2 2023
	Longton Station – Public Realm, Cycle Hub & Waiting Shelters	Q1 2022	Q3 2022	Q3 2022	Q3 2022	Q4 2022	Q1 2023		Q2 2023
	Longport Station – Car & Cycle Parking	Q1 2022	n/a	Q3 2022	Q3 2022	Q4 2022	Q1 2023		Q2 2023
	Enhanced Walking & Cycling Routes – Trentham Lakes and Longton	Q1 2022	n/a	Q3 2022	Q3 2022	Q4 2022	Q1 2023		Q2 2023

* Includes the Station Road / Leek Road junction improvement scheme which is a complementary fully approved SSLEP scheme which will be delivered by March 2021

7.5.5. *Planning Powers, Consents and Land Acquisition*

The requirements for any planning powers, consents and land acquisition for individual scheme components is set out in **Table 7-3** with further detail on delivery constraints provided in **Table 7-4**.

Table 7-3 – Consents Schedule

Priority Area	Delivery Package	Proposal	Consents, Approvals Agreements & Land Required	Consenting Authority / Affected Parties
Station Hub	Station Road	Enhanced provision of multi-modal facilities to the front of the station through an enhanced street environment incl. • Widen pavements / reduce carriageway widths • Provide shelter through canopies to pedestrian walking routes, bus stops and waiting areas • Pedestrian facilities at bus stops to (potentially) include wifi, phone charging, water point, etc. • Remove through access for private vehicles • Provision of hostile vehicle mitigation to improve safety/ security at the station • Rearrange taxi drop-off / pick-up to suit rebalanced arrangement between two sides of station (i.e. Tranche 1 works) • Maintain access to hotel and private properties flanking Winton Square • Relocate Josiah Wedgwood statue and provide priority one-way route for buses	Traffic Regulation Orders for authorised vehicles only Planning Permission Listed Building Consent Land Acquisition Building Regulations (canopies)	Stoke-on-Trent City Council Historic England Land Owners British Transport Police Authority Centre for the Protection of National Infrastructure
	Station Building	Transformation of the booking hall to open up the building with a more active street frontage. De-cluttering and re-use of vacant rooms within the ground floor to provide retail & commercial and community hub use opportunities	Engineering approval (equivalent to Building Regulations) Listed Building Consent Planning Permission Station Change	Stoke-on-Trent City Council Network Rail Train Operating Company Historic England
	Station Footbridge	New southern east-west (unpaid) footbridge connection through station including access provision to the upper floor of the station building	Engineering approval (equivalent to Building Regulations) Planning Permission & Listed Building Consent Track Possessions and Isolations	Stoke-on-Trent City Council Network Rail Train Operating Companies Historic England
	Station Pedestrian / Cycle Access	Creation of a new segregated cycle track and footpath across Station West car park onto the Trent-and-Mersey canal. Creation of a segregated cycle and pedestrian link from Glebe Street directly to the rear of Stoke Railway	New public access over third party land Licence / Wayleave (using Sustrans template) for public access over Network	Stoke-on-Trent City Council Network Rail

		Station via the Council's Swift House development site. Parallel crossing (pedestrian and cycle zebra) across Glebe Street. Creation of a new shared or segregated bicycle and pedestrian link directly from the Trent- and-Mersey canal (part of the National Sustrans Cycle Network) to rear of the Station via what is believed to be a redundant railway bridge	Rail land	
Station to City Centre Transit Links	College Road Corridor Improvements	Creation of a bus priority corridor and quiet street environment between the Station and City Centre following College Road / Cleveland Road / Bethesda Street. Provision for bicycle traffic that meets the core design principles for bicycle routes. A street environment that supports safe pedestrian movements along and across the street. Priority for buses over general traffic with high quality bus waiting infrastructure. Minimise general traffic using College Road as a through route. Create a better sense of place to support local businesses and key destinations. An enhanced neighbourhood for residents and visitors	Traffic Regulation Orders Listed Building Consent (Hanley Park railings)	Stoke-on-Trent City Council
	Boughey Road Pedestrian & Cycle Improvements	Improvements along Boughey Road designed to promote active mode walking and cycling links to the City Centre via Hanley Park		Stoke-on-Trent City Council
Onward Cross-City Transit Links	City Centre Bus Station & City Centre Bus Priority	Improvements to the City Centre bus station to cater for through services and passenger interchange and city centre bus priority measures	Traffic Regulation Orders Planning Permission	Stoke-on-Trent City Council
	Bus Priority Pinch Point Improvements	Phased implementation of junction improvements at key bus delay hotspots that provide positive discrimination towards bus in favour of private cars	Traffic Regulation Orders	Stoke-on-Trent City Council
	Re-establish cross-city bus routes	Phased implementation of cross-city bus services	Memorandum of Understanding	Stoke-on-Trent City Council Bus Operator
	Enhanced Walking & Cycling Route to Etruria Valley & Trentham Lakes	Phased introduction of improved surfacing, lighting and wayfinding of key bicycle and walking routes to areas of strategic employment.		Stoke-on-Trent City Council
	Longton and Longport Rail Station Improvements	Longton Station – Public Realm, Cycle Hub & Waiting Shelters Longport Station – Car & Cycle Parking Longton and Longport – Access for All facilities	Engineering approval (equivalent to Building Regulations) Station Change Track Possessions and Isolations Traffic Regulation Orders	Stoke-on-Trent City Council Network Rail Train Operating Company

Table 7-4 – Delivery Constraints

Delivery Constraint	Scheme Position
Planning Permission	It is anticipated that a full Planning Application will be required for the Station Hub scheme as the scale of the project is beyond that likely to be progressed under Network Rail's Permitted Development rights.
Listed Building Consent	Winton Square is a small Conservation Area of high architectural quality, centred on the square and mainline Railway Station. All the buildings within the square are listed or curtilage buildings and Wedgwood's monument in the centre of the square is listed in its own right. Hanley Park is designated at Grade II* as a good example of a late Victorian municipal park
Land acquisitions	Land acquisition will be required from Network Rail and possible other landowners (TBC). The scheme has been designed to mitigate the need for Compulsory Purchase Orders. Land ownership plans for Stoke-on-Trent, Longton and Longport rail stations are contained in **Appendix R**.
Public consultation	The aim is to deliver an initial public engagement in summer 2020, once this SOBC is approved. Subsequent public engagement will be programmed according to the proposed schedule for the development of preliminary and detailed design.
Public Inquiry	The scheme has been designed to mitigate the likelihood of a public inquiry.
Traffic Regulation Orders	A variety of Orders will be required in order to facilitate the scheme, none of the Orders are considered prohibitive.
Transport and Works Act	Not applicable
Railway Access/Possessions	Handled through communication with Network Rail. It will be necessary to obtain railway possessions for elements of the work. Disruptive possessions have been programmed for Christmas 2022, as these will need to be booked at least 2 years in advance through negotiation with Network Rail and Train / Freight operators. Early advice from Network Rail[39] is that there are currently no other possessions in the area and for the purpose of the TCF bid, there is nothing to suggest that Christmas 2022 would not be feasible.
Station Change*	Improvements to Stoke-on-Trent, Longton and Longport stations will necessitate the need for Station Change. This in part refers to the Station Access Conditions and associated charges that train operating company are required to pay to

[39] Jack Pickering, Business Development Manager, Network Rail

	Network Rail for the station.
Station Lease*	Changes to Station lease area for which train operating companies are responsible for - any changes will need to be negotiated with Network Rai and Station Facility Owners (SFOs) at the next stage of development.
Minor Modification and Closure*	This will be required if assets that are currently detailed within the Station Access Conditions are removed in their entirety and not replaced or replicated anywhere else within the station lease area. This may refer to items such as number of car parking spaces, cycle parking spaces or toilets. It is currently thought unlikely that this will be the case.

*These are all Rail Regulatory Constraints that require negotiation between Network Rail the Station Facility Owner. There are general procedures in place for a project such as this. They should not pose a significance risk to the project so long as all affected parties are liaised with throughout the process and do not object to any of the change proposals.

7.6 COMMUNICATION AND STAKEHOLDER MANAGEMENT

As part of the overall delivery of the programme, extensive public and stakeholder consultation will be required throughout programme development and delivery. This is required to ensure that the various aims and aspirations of the general public and key stakeholders are taken into account and to manage the communication of information relating to the project. Stakeholder consultation and engagement is key to the success of the project for the following reasons:

- It is a statutory requirement for obtaining the necessary powers for project delivery;
- It assists in mitigating potential objections to the project; and
- It contributes to optimising the technical solution proposed.

A Communications Plan has been developed for the project in line with the City Council's Corporate Communications, and Consultation and Engagement Strategies. The project's Communications Plan, contained in **Appendix P**, sets out an approach that ensures the benefits of the programme are clearly communicated and understood, setting out the level and type of communications required at different stages to ensure stakeholder involvement and input is included at appropriate times.

The Communications Plan identifies key stakeholders, and the level of engagement required with different stakeholders, from keeping them informed through to actively consulting and the requirement to secure strong buy-in. The Communications Plan also sets out the systems and processes for managing the communications strategy, including a time-based plan for responding to communications and media enquiries.

To inform the development of the Plan, the following five objectives have been identified:

- Objective 1: Statutory consultation
- Objective 2: Maintain strong leadership and support for the programme
- Objective 3: Increases public awareness of the programme

- Objective 4: Give stakeholders opportunities to provide views and recommendations for improvements to individual or groups of interventions
- Objective 5: Support staff in the delivery and dissemination of project information

Key stakeholders will continue to be identified as the schemes are developed further. A summary of stakeholders identified at this stage, and their role within the delivery programme is shown in **Table 7-5**.

Table 7-5 – Key Stakeholders

Stakeholder	Role
Department for Transport	Throughout the co-development process, the DfT Midlands Area Lead is the main point of contact, providing support and challenge to the City Council as it develops its plans, and acting as a link to the rest of the DfT with wider support available to meet the City Council's specific needs.
Network Rail	Close working and regular liaison is necessary to coordinate the scheme development of options associated with the Station Hub, including station operation, design and any land requirements. As well as holding a place on TCF Programme Board and Steering Group, Network Rail will be regular attendees at the proposed Rail Industry Working Delivery Group, specifically established to ensure delivery of the Station Hub workstream. Going forward, both First Trenitalia and East Midlands Railway will be regular attendees at the proposed Rail Industry Working Delivery Group, specifically established to ensure delivery of the Station Hub workstream.
Rail Transport Operating Company Virgin Trains, First Trenitalia, East Midlands Railway	Close working and regular liaison is necessary to co-ordinate the scheme development of options associated with the Station Hub including station licensee operations, design, tenancies and income protection.
Bus Operators First Bus, D & G Bus	Close working and regular liaison is necessary to coordinate the scheme development of options associated with improved connectivity from the Station to the City Centre and re-establishment of cross-city links, including hotspot identification and mitigation, commercial service patterns (and pairings), and bus fleet requirements.
Historic England	Engagement is necessary to confirm acceptability of proposals that may affect the character and setting of the Winton Square Conservation Area and listed buildings therein
Railway Heritage Trust	The Railway Heritage Trust assists the operational railway companies in the preservation and upkeep of listed buildings and structures, and in the transfer of non-operational premises and structures to outside bodies willing to undertake their preservation. Engagement is beneficial to gain expert advice and to explore the opportunity of grant availability.
Further & Higher Education Establishments	Engagement with Staffordshire University, Keele University, Stoke-on-Trent College and Stoke Sixth Form College to understand student and staff transport and travel demands and notify of improvements.
Land Owners, Local Businesses and Developers	Early engagement will be required with land owners and local businesses affected by the scheme to manage any local impacts, including during construction. Businesses will benefit from enhanced connectivity and an extended catchment from which to draw employees. Early engagement will

Stakeholder	Role
	also support businesses to ensure they maximise new opportunities. Early engagement with developers will help maximise the opportunity for sustainable travel to/from new developments.
Highways England	Engagement with Highways England is necessary to confirm acceptability of any proposals that may impact on the strategic highway network.
Sustrans	Sustrans manage the National Cycle Network. Early engagement is required to maximise the impact of proposals - working jointly to increase access for pedestrians and cyclists. Agreement will be needed from Sustrans to amend the National Cycle Network once new routes are opened. Sustrans will deliver the Vernon Road cycle path scheme under their Memorandum of Understanding with Network Rail.
Canal & River Trust	Early engagement required to maximise the impact of proposals – working jointly to increase access for pedestrians / cyclists and raising participation.
Hackney Carriage, Licenced Taxi's	Engagement is required during the delivery phase to manage any local impacts around access. Engagement should also highlight new opportunities including Taxi electric vehicle charging points and the siting of new taxi ranks and or pick up and drop off points. The approach to licensing at Stoke-on-Trent Railway Station may need to be amended, requiring consultation with taxi representatives.
Joint Air Quality Unit	The joint unit between DEFRA and the DfT was established to deliver national plans to improve air quality and meet EU limits. The package of measures being developed are being designed to help support these the aims, in liaison with JAQU.
Stoke-on-Trent & Staffordshire Local Enterprise Partnership	Formal engagement is required so that management and oversight of the Transforming Cities Fund Programme is captured as part of the SSLEP's Assurance Framework.
Constellation Partnership	HS2 provides the prospect of transformational change, which would give a major boost to the region. The City Council is key partners in the Constellation Partnership. Its HS2 Growth Strategy is centred on three HS2 transport hubs with Stoke-on-Trent its regional capital.
Midlands Connect	Midlands Connect is the transport arm of the Midlands Engine, with a remit to explore, develop and recommend transport projects which will provide the biggest possible economic and social benefits for the Midlands and the rest of the UK. Stoke-on-Trent is one of four economic hubs identified in the Midland Connect's economic impact study. This Fund presents the opportunity to deliver a future ready major Station Hub with high quality sustainable transport connections to help support the Midlands Engine vision of creating 300,000 additional jobs by 2030 and growing the economy by £54 billion.
British Transport Police	The national police force for the railways. Consultation and expert advice will be sought to ensure that our plans meet British Transport Police objectives to deliver a safe, secure, reliable and expanding transport system to get people home safe, secure and on time.
North Staffordshire Community Rail Partnership	The North Staffordshire Community Rail Partnership work to promote and develop the Crewe-Stoke-Derby rail route, known as the North Staffordshire Line. Its key aims are: involving the local community, including schools, businesses and local councils, in innovative projects to improve the route for

Stakeholder	Role
	passengers. Engagement to share plans.
Bus Users UK	Bus Users UK represents bus passengers. It aims to help communication between bus users and the people that provide bus services. Engagement will make sure the needs and concerns of communities affected by the Programme are heard. The group can facilitate Bus Users' Surgeries around the country, set up local groups of bus users and campaign on behalf of bus passengers.
Support Staffordshire	Engagement with Support Staffordshire will facilitate communication with organization's who work to support and enable disabled people and people with learning disabilities and difficulties. Groups include those who support specific conditions or impairments.
Age UK Staffordshire	Age UK Staffordshire is an independent charity working across the area to offer support and services to older people.

7.7 RISK MANAGEMENT

Management of risk is an integral part of the City Council's project management processes. Risk Management is about managing threats and opportunities to create an environment of 'No Surprises'. This policy aims to specify the right balance between risks, issues and reward by incorporating consideration of opportunities. Effective risk management:

- Puts the City Council in a stronger position to deliver on strategic objectives and priorities;
- Enables provision of improved services and better value for money;
- Supports effective resource allocation and management; and
- Promotes efficiency and successive improvements.

The approach to managing risk (see inset) is to establish an iterative and on-going cycle of risk management activity. The methodology for risk management is defined as follows:

- Risks are identified and recorded;
- Responsibility for risk management is assigned (City Council, Contractor, Shared);
- Risks are analysed and evaluated using likelihood and impact estimates, in line with the City Council's risk qualitative scoring scheme. This includes cost, schedule, reputation etc. Risks are analysed and a quantitative risk assessment (QRA) is produced regularly;
- Relevant actions are taken to manage risks;
- A suitable level of contingency is included to allow efficient project management of the risk identified;
- Risks are monitored and updated as the project progresses; and

- Risk workshops are held on a regular basis in order to identify, update or close risks, issues, opportunities and their actions. This allows the Project Lead to analyse risks for each of the projects.

7.7.1. Risk Identification

Risk identification is about collating information on relevant threats and opportunities. The test of relevance is the ability of the threat or opportunity to impact achievement on, for example, strategic objectives, finances and health and safety.

This identifies the key threats and potential mitigating actions to reduce their impact. The risk items will continue to be reviewed and updated on an ongoing basis throughout the lifecycle of the project. Risk identification will take place through the holding of risk workshops, meetings, risk interviews and structured questionnaires.

Operational risks identified and managed throughout the Project / Programme lifecycle may also be transferred to the appropriate operational risk register(s) at handover.

7.7.2. Risk Planning and Mitigation

Once threats and opportunities have been captured and recorded in the risk register, the most appropriate control measures will be identified in line with the following mitigation strategies:

- Treat the risk;
- Transfer the risk;
- Tolerate the risk;
- Terminate the risk; and
- Fall back planning.

All mitigation measures, once identified, will be assigned to a risk owner who has responsibility for ensuring that the risk is managed and monitored over time and that the mitigation measures are undertaken to the agreed timescales.

The City Council's approach to risk management is proactive and focuses on managing risks to optimism outcomes, rather than solely making financial provision for risk impacts.

7.7.3. Risk Reviewing and Reporting

Risk information is required to be up-to-date at all-times to facilitate reporting. Active risks and actions will be updated in line with the monthly reporting cycle, and updates will be undertaken through meetings with the risk manager, project manager and appropriate members of the project / programme teams. In addition, risk reviews will be undertaken ahead of any gateway reviews or following any significant changes.

7.7.4. Escalation of Risks

An important principle of the City Council's risk management approach is that the risk owner should be the person best able to manage the risk. This is often the person, with the appropriate accountability, that is closest to the risk.

Where an individual does not have appropriate accountability, the risk would need to be escalated and managed at a higher level. Risks may also require escalation if they cannot be resolved within the delivery team or if the risk has wider impacts beyond the scope of the project or programme area. Risk escalation levels are shown below with risks flowing upwards:

1. Project Delivery Team / Project Manager;
2. Steering Group / Senior Responsible Owner; and
3. TCF Programme Board.

7.7.5. Risk Register

Risk detail is provided in the risk register contained in **Appendix I**. A series of risk workshops have been held, the last workshop was held on 1st November 2019. A summary of the top risks is contained in **Table 7-6** below.

Table 7-6 – Top Risks

Event Description	Mitigations
Due to there being identified operational constraints and strict delivery timescales associated with the scheme, there is a threat that there will be hyperinflation of tender returns, leading to increased cost to the scheme. (Applies across all investment packages)	1. Early contractor engagement. 2. Early and ongoing engagement with key stakeholders: Train Operating Companies, Network Rail, Historic England, First Bus and British Transport Police.
There is a threat that possessions and isolations are not granted by Network Rail, resulting in works being undeliverable or more expensive than expected.	This may be considered a "show stopper" and not modelled in the Quantified Cost Risk Assessment (QCRA) on the basis that it would go beyond the project timescales. It is important, however, that this is raised as a key concern for the scheme. Mitigation would be to obtain additional funding for the scheme in the scenario where the possession is granted beyond March 2023. Early advice from Network Rail is that there is currently no other possessions in the area and for the purpose of the TCF bid, there is nothing to suggest that Christmas 2022 for disruptive possessions would not be feasible.
As a result of the design not being of sufficient maturity, there is a threat that the Contractor does not book the possessions in time for the works (assumption captured as this would need to be by Christmas 2020), resulting in additional cost to the scheme. (Stoke-on-Trent Railway Station New Footbridge)	1. Design continues following submission of the draft estimate 2. ECI - upfront cost. 3. Engagement with Network Rail access planning early within the design process. 4. SoTCC to employ a rail expert.

There is a threat that statutory undertaker equipment is not in the right place, resulting in additional cost and programme impact to divert utilities. (Applies across all investment packages)	1. Undertake surveys/ CAT scans to confirm position of utilities. This will form part of accommodation works once the scheme is awarded funding
There is a threat that the main bus operator does not support the scheme, resulting in redesign and abortive cost.	Establish a collaborative approach with the bus operator throughout the design process to ensure they are on board with the design proposals being taken forward.
There is a threat that intrusive surveys of Stoke-on-Trent Railway station building identify additional design variations/ repairs to the building required and associated cost.	1.Once building condition survey is done, we will pursue funding from Historic England in the case that the building is in worse condition than anticipated. 2. SoTCC is also eligible to apply for funding from Railway Heritage Trust.

7.8 EVALUATION AND MONITORING OF SCHEME IMPACTS

7.8.1. Commitment to Monitoring and Evaluation of TCF Activity & Collaborative Working

The City Council is committed to monitoring and evaluation of TCF activity.

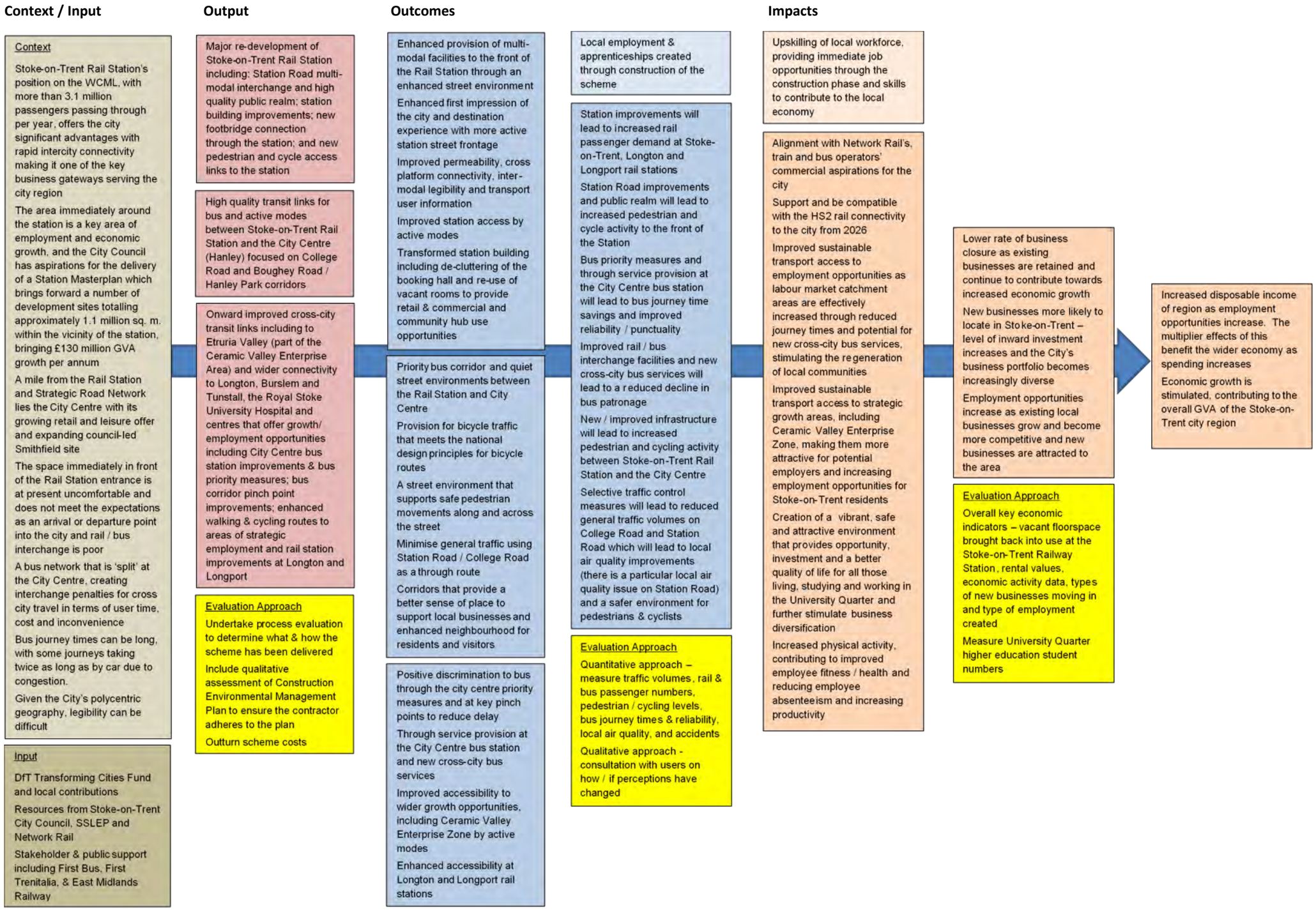
It is vital that the investments made as part of the Fund are measured for their impact. For the DfT it will inform future funding decisions; while for the City Council it will add to the evidence of which combination of measures are the most effective in specific circumstances and help design better interventions in the future.

The DfT supported by their appointed evaluation contractor will lead the Fund's overall evaluation. The City Council will work collaboratively with the evaluation contractor to develop appropriate baseline and monitoring data relating to the specific transport challenges facing Stoke-on-Trent that will be tackled through award of Tranche 2 funding.

7.8.2. Logic Modelling

The scheme logic model is shown in **Figure 8-2** overleaf provides a visual representation of the process by which the scheme outputs the wider and longer term impacts will be captured if the scheme is to achieve the scheme's objectives.

Figure 7-2 – Tranche 2 Logic Model



Logic modelling is an essential part of the evaluation process. It is a systematic and visual representation linking the key components of a scheme (or package of interventions) in order to produce a causal pathway. It includes:

- Inputs – what is being invested in terms of resources and activities;
- Outputs – the new & modified transport network that is being constructed;
- Outcomes – short and medium-term results, such as changes in traffic flow levels and journey times; and
- Impacts – long-term results such as land use development, better quality of life, environmental benefits, and economic benefits.

The process of drawing up the intervention logic ensures that the decision about what to evaluate and even how to evaluate (in terms of the approach to be selected) is based on a sound analysis and explicit articulation of the anticipated scope and scale of the intervention in terms of input, output, outcomes and impacts.

7.8.3. Monitoring and Evaluation

The Tranche 2 scheme will be subject to a programme of before and after monitoring and evaluation. This will demonstrate the extent to which scheme objectives were met, monitor performance of the scheme and ensure that any potential issues post implementation are identified and addressed.

The objectives of the Tranche 2 scheme evaluation plan will focus on understanding:

- Whether and how the scheme's main objectives have been achieved, exceeded or not reached.
- Provide transferable evidence that may be used to inform future decision-making on similar schemes;
- Improve the efficiency and effectiveness in the delivery of future schemes based on the lessons learnt from this scheme.
- Whether the benefits justify the costs?

The focus of this evaluation would therefore be demonstrating local accountability, achieved through measuring key outcome metrics and comparing them with ex-ante forecasts. As part of the DfT's knowledge development, the evaluation will incorporate the opportunity to learn lessons on the implementation of a scheme of this nature.

Process Evaluation

Understanding what has been delivered, how it was delivered and what changes/ delays were encountered along the way will all feed into the overall evaluation and provide important information on how to improve the management of other schemes.

Impact Evaluation

The impact evaluation will focus on monitoring outcomes and longer term impacts in line with the Department's recommended measures as below:

- Scheme objectives
- Impact on travel demand by mode
- Travel times and journey time reliability
- Changes in travel behaviour
- Impacts on the economy
- Carbon
- Noise
- Local air quality
- Highway safety

Specifically, the evaluation process will focus on measuring outcomes relating to:

- Changes in low carbon travel comprising rail, bus and active modes;
- Changes in traffic flows across the network and the associated impacts resulting from the removal of general traffic from Station Road / College Road and bus pinch point improvements;
- Changes in travel time saving and journey time reliability / punctuality for bus users;
- Changes in safety (number and severity of personal injury collisions);
- Changes in local air quality emissions;
- Changes in accessibility levels to employment opportunities and services by sustainable modes; and
- Regeneration and wider economic benefits.

Economic Evaluation

The economic evaluation will focus on the outturn appraisal assumptions. The outcomes from the impact evaluation will be used to calculate actual Transport Economic Efficiency and actual monetised benefits, for comparison with (pre-implementation) predicted values.

The questions that the economic evaluation will seek to answer are:

- Did the benefits justify the costs?
- Does the scheme represent value for money as anticipated in the business case?
- What are the actual opening year outturn benefits of the scheme, and how do these compare with those forecast in the business case?
- What contributing factors have influenced the potential variation in outturn benefits?
- What is the potential net return for the scheme over the appraisal period?

Evaluation Approach

It is noted that the scheme specific objectives will be realised over different timescales. One of the more immediate outcomes of the scheme opening will be a change traffic flow across the study area and improved bus journey times. In the medium term some improvements in vulnerable user safety may be noted, whilst the longer term scheme impacts relate to the less tangible economic growth and employment objectives. For these reasons, the scheme evaluation will be undertaken in three stages, as follows:

- Pre-construction/ Baseline Report;

- One Year Post Opening Outcome Evaluation Report; and
- Five Year Post Opening Impact Evaluation Report.

An Evaluation Plan Summary is provided in **Table 7-7**, which will be developed as the scheme progresses along with details on data requirements.

Table 7-7 – Evaluation Plan Summary

Evaluation Objectives / Criteria	Stage	Evaluation Methodology Outline	Pre-construction Baseline Report	Yr 1 Post Opening Evaluation	Yr 5 Post Opening Evaluation
Scheme build	Input	Use Programme/project plan assessment, including measures of delivery at key milestones (e.g. implementation log) to assess the project management in place with the aim of identifying good practice/ lessons learnt. This will include an assessment of stakeholder and risk management Monitor key delivery milestones throughout construction – and impact of change in delivery dates	✓	✓	
Delivered scheme	Output	Assessment of scheme outputs and a comparison with the scheme design – reasons and potential impact of changes. Identify and investigate unintended outcomes, and identify lessons learned	✓	✓	
Outturn costs	Input	Comparison of outturn investment costs with those in the funding bid, broken down by elements as in the funding bid. Identify savings and overruns and provide reasons. Are operating costs in line with the forecast and provide reasons if different	✓	✓	
Scheme objectives	Outcome/ Impact	Through reference to the scheme Logic Model	✓	✓	✓
Impact on travel demand	Outcome	Monitor traffic flows, rail & bus passengers numbers and active mode levels on key routes to assess the impact of the scheme on travel demand	✓	✓	✓
Bus travel times reliability / punctuality	Outcome	Calculate bus journey times and the standard deviations of these times for key bus routes using First Move data	✓	✓	✓

Impacts on the economy	Impact	Establish the overall change in economic indicators. Use quantitative and qualitative approach to assess impact of the scheme in relation to the change	✓		✓
Carbon	Outcome	Assess the net impact of carbon emissions after scheme implementation using traffic flow and speed data		✓	✓
Local air quality	Impact	Undertake monitoring to assess the effect of the scheme on local air quality at key locations. Compare this to forecasts	✓	✓	✓
Personal injury collisions	Impact	Effect of the scheme on personal injury collisions in the area of interest using STATS19 data over a five-year period Calculate actual safety PVB and compare it with forecast			✓
Delivery process	Input	Identification of other factors influencing the extent to which objectives have been achieved – assess contextual issues which may influence scheme impact Identification of what worked well and challenges through the delivery process, including how risks were managed	✓	✓	
Travel behaviour	Outcome	Assess the impact of the scheme on travel behaviour Consultation with businesses and users regarding the change in perception of the quality of the built environment from a transport users perspective	✓	✓	✓
Outturn appraisal assumptions	Outcome	Assess any changes to cost assumptions. Calculate outturn TEE and BCR and compare it with the forecast		✓	

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