TRANSFORMING PRESTON CITY REGION

TRANSFORMING CITIES FUND BID – STRATEGIC OUTLINE BUSINESS CASE (SOBC)

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Transforming Preston City Region

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ATKINSONS
BEDS AND
FURNITURE


Hogarths
gap
HARRY'S
BAR

EXECUTIVE SUMMARY

Background

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

Encouraging an increase in journeys made by low carbon, sustainable modes is a key objective of the Fund. Additionally, the Fund aims to support wider cross-cutting priorities such as:

- Improving access to work and delivering growth
- Encouraging the use of new mobility systems and technology as part of the Grand
- Challenge on the Future of Mobility
- Tackling air pollution and reducing carbon emissions
- Delivering more homes
- Delivering apprenticeships and improving skills

This report presents the Strategic Outline Business Case (SOBC) to support the TCF bid for the Preston City Region as part of a co-development arrangement between Lancashire County Council (LCC) and the Department for Transport (DfT).

The document is structured around the HM Treasury Green Book "Five Case" model and with specific reference to DfT Guidance for Transport Business Cases, while also being informed by discussions with DfT since Preston's shortlisting in December 2018.

Strategic Case

Economic Context

Preston City-Region is Lancashire's powerhouse and generates more high-value jobs than local residents are able to take-up. A total of 800,000 working-age people live within a 30km radius and 25% of the UK's total workforce within one hour's drive-time. The City-Region has become a net attractor of workers, 35,000 each day. This adds demand to Preston's transport network, which manages 400,000 daily work journeys.

The proposals outlined in this businesses case aim to transform the attractiveness of public transport and active travel to commuters, including improvements to the local rail network, in order to unlock the latent productivity in the City Region and drive agglomeration, investment, jobs and international competitiveness.

The TCF proposals for Preston City Centre aim to fill in the gaps between these anchor points to create a coherent, highly walkable and integrated transport network across the City Centre, underpinning transformed connectivity to, from and between major employment and housing sites across the City Region, delivered through a network of bus priority and active travel corridors.

The TCF programme will connect this area with the rest of the City Centre completing the remaining gaps in cycling and walking provision, and will provide faster and more reliable bus journeys to and from the bus station from across the City Region, to ensure an interconnected sustainable transport network.

A key driver of the TCF programme is the need to better integrate the UCLan campus and area of the City into the heart of a fully connected and sustainable Preston.

The TCF programme interventions have been targeted along these routes to maximise the benefits and best manage the impacts of Preston's growth.

As the heart of the City Region's transport networks, the City Centre is of additional importance for interchanging

to other nodes within the public transport system.

Significant investment in sustainable and active travel through TCF is therefore urgently need to ensure that planned growth is matched with improvements to alternative travel modes to transform travel patterns and embed sustainable choices.

Preston's most deprived communities have been deliberately integrated into the interventions proposed by the TCF programme to maximise the economic, and labour market benefits of the TCF package.

The TCF programme provides the opportunity to deliver this early integrated transport provision through the delivery of integrated transport improvements to the City Centre, improved access to Preston Station by sustainable and active modes, and an enhanced cycle hub at Preston Station that will embed sustainable choices in accessing the station in advance of HS2's arrival.

Existing Issues: Congestion

Commuting is dominated by car travel - 75% of journeys to work, compared to just 9% for public transport. The City-Region is an integrated economic geography with high-value employment clusters and residential districts around its city core, but its economic corridors are poorly served by public transport. The adjacency of the city-centre and River Ribble funnels road journeys onto limited north-south radial crossing points and a single east-west spine through the city-centre (A6/A59 Ringway). This and high car-usage leads to serious congestion and air pollution.

As Preston is a major employment hub, it acts as a **large net importer of labour** from Lancashire and elsewhere with a net inflow of around 23,000 commuting trips. Private car is the main method of commuting. The percentage of people driving to work by car (59%) and as a passenger (7%) is significantly larger than rail (1%), bus (11%) or walking and cycling (16%). These commuter movements take place in the context of a highway network that is reaching capacity in a number of places.

The limited capacity of the road network, together with the very high traffic demand, results in **significant traffic congestion** in and around Preston. Congestion is especially severe at peak commuting times, but these times are getting longer and spreading as more and more people change their travel arrangements to avoid the 'rush hour'.

This congestion results in:

- Lengthy travel times by bus and poor bus service reliability.
- Poor quality walking and cycling opportunities, environments and as a result, low levels of usage of sustainable modes
- Poor public realm, poor perceptions of safety and high level of severance for active modes
- Limited accessibility and restricted job horizons, especially for those reliant upon public transport
- Reductions in the effective labour market of the City and key employment sites
- Losses to the economy through travel delays and constraints on business growth.
- Frustration to motorists.
- Worsening of local air quality, including at several identified Air Quality Management Areas.

Without intervention, the congestion and resultant constraints on the local economy are predicted to worsen over time.

Existing Issues: Bus

Existing bus-priority and bus-advantage infrastructure in Preston City Region is **extremely limited**, with only a small number of bus lanes and bus gates in central Preston, primarily around Fishergate, and recently introduced. In the rest of the City Region, buses must share road space with private vehicles, and are affected by the same capacity constraints and congestion.

The high levels of congestion, without priority, results in poor bus journey times and bus reliability, as well as increased running costs for the operators as additional vehicles and drivers have been required to maintain timetables on key routes during peak hours, which are in turn passed onto to passengers in the form of increased fares which further suppress patronage.

This impact is illustrated in research carried out by one of Preston's two main operators, Stagecoach[1], which demonstrated that a 10% decrease in operating speeds would result in a 5% - 5.6% fall in patronage, whether services were maintained with increasing costs passed on to customers or service frequencies reduced.

The TCF programme interventions have been targeted at the areas of the bus network where the most delay occurs, particularly around Ringway and on routes approaching the City Centre.

***Existing* Issues: Cycling and Walking**

Echoing the decline in bus patronage outlined above, Preston has experienced historical falls in walking and cycling as motorised traffic has increased. The modal share of cycling in the 2011 Census was **1%**, showing a decrease from 2% in the 2001 Census.

Although the number of people walking is higher in Preston (16% in 2011 Census) there is still **substantial scope for growth** given **37% of journeys in Preston are under 2km**.

The Preston Guild Wheel is a 21 mile "Greenway" that encircles the city of Preston, linking the city to the countryside. It is both a walking and cycling route, and **TCF investment in walking/cycling corridors will directly link into it on the radials around Preston to provide a transformed, accessible radial/ orbital network across Preston and its suburbs and communities through TCF investment.**

Cycle corridors with higher number of people currently cycling are included in the TCF corridor improvement proposals.

The TCF programme will provide a new gateway crossing of the Ribble, for pedestrians and cyclists with significantly improved Greenway routes connecting it to residential areas, creating a step change in the attractiveness of this crossing and preserving access to the City Centre.

Existing Issues: Rail

The Preston City Region's main rail station is Preston Station. The station is served by the West Coast Main Line between London and Glasgow and offers inter-city rail services to other key cities including Birmingham, Manchester, Liverpool and Edinburgh.. In addition, Preston station acts as a regional rail hub and interchange, with lines to Leeds via Blackburn, Liverpool via Ormskirk and the Blackpool and the Fylde peninsula all connecting with the West Coast Main Line in Preston. In addition to

[1] 'Congestion: Impact, Causation and Potential Mitigation' Stagecoach, February 2018

Preston station and the North and South Fylde lines, a small number of suburban stations serve the south of the City Region at Leyland, Bamber Bridge and Lostock Hall.

Preston's rail network is limited by station access and service frequency. Preston railway station's strengths are as a national and regional rail hub, a role recognised by the Great North Rail initiative and HS2. Local rail access, especially on eastern and western routes into the city-centre are constrained by hourly services which prevent rail from becoming a realistic alternative for many car-borne commuters travelling within the City-Region or to Preston Station for onward journeys.

Analysis of patronage and demand data demonstrates the significant impact of higher service frequencies on the attractiveness of rail as a mode of travel for communities on the Fylde Peninsula- and which has been a key consideration in developing the TCF rail proposals.

Existing Issues: Technology

Preston has historically been an early adopter of technology to enhance the management of and improve capacity on its highway network. The City Region was one of the DfT's original demonstrator sites for the DfT's UTMC (29A) development project and a very early adopter of ITS and UTMC systems.

However, the existing Urban Traffic Management and Control (UTMC) has in many cases become obsolete and other systems are reaching their end of life. Since 2008, financial constraints have resulted in limitations on Lancashire County Council's ability to maintain and upgrade these systems to extend their life or replace them. This limits the opportunities for optimising the performance of the network in both maintaining the level of service reliability and supporting and promoting public transport and other modes including walking and cycling. The reduced performance also can contribute to **increased levels of emissions** and subsequent impacts on health along with the potential to impact on the economy of the area from a congested network with businesses seeking to locate outside the area and consumers shopping elsewhere.

There is an **under-utilised opportunity** for the application of new technology to maximise the benefits of both other infrastructure/options, and of wider market and regulatory changes affecting transport. For example, there is the opportunity to enhance signal coordination and effectiveness throughout the network to tackle known congestion hotspots .

Such technological development however cannot be achieved without significant investment and in the absence of such investment the existing network will continue to operate at capacity, and this will thus negatively impact upon wider development.

As such, it is evident there is significant potential for technology to support the development of both the public transport network, and the highway network, in order to create a high-tech, demand responsive system which is easy, affordable and attractive for its users.

The Need for The Intervention

The City Region's future transport offer must overcome these issues and support Preston's growth potential. Improving sustainable travel options are an opportunity to better link the local working population with the widest possible number of jobs.

Bus Patronage

Highway congestion and the delivery of local growth ambitions cannot be fully addressed unless public transport options function as a realistic alternative to car-borne commuting.

To do this, intervention through the Transforming Cities Fund is needed to enable competitive travel times that maximise the number of workers willing to commute to each key employment centre.

Presently, the most poorly connected economic centre is Warton, where the EZ has the potential to provide 1,500 new jobs. Interventions that support additional bus services to Warton will improve access to job opportunities.

The TCF options, taken in their entirety, will create a step change in bus accessibility and provision in the City Region that will deliver improved journey times and reliability on all the key bus corridors in the City Region, with a particular focus on accessibility to the City Centre via Preston Bus Station and the Warton and Samlesbury Enterprise Zones and Lancashire Central Strategic Employment Site from deprived communities.

Sustainable Growth and Growth in Active Travel

The package of cycling and walking route interventions included within the TCF submission represents a step change in the standard of active travel infrastructure in Preston.

The TCF schemes will create a transformed level of access to the city and key employment sites by active means, providing high quality radial spur routes linking the Guild Wheel and other existing provision into the City Centre.

Public transport users will be able to walk from the public transport hubs to all major destinations in the City Centre through a continuous high-quality public realm- with TCF complementing other schemes in the City, and filling in the gaps, to give a connected, integrated network of active travel across the city- for the first time in its history.

Extending the reach of the City Region through Rail

The provision of a Cottam Parkway station will not only directly serve the North West Preston developments, but will also act as a Park and Ride to the west of Preston. The Preston Western Distributor, East-West Link Road and Cottam Link Road on the west edge of Preston, are under construction and provide access to the proposed Cottam Parkway site from the M55 and A583, making it an attractive alternative access point to the rail network. With high frequency services to Preston, the station will abstract a significant number of users from the Fylde peninsula who currently railhead to Preston Station. This will reduce traffic levels and congestion in Preston City Centre, complimenting the mode shift aspirations of other schemes within the TCF programme.

The delivery of Cottam Parkway station early in the North West Preston build-out phase will maximise opportunities to embed sustainable travel habits and patterns in new resident population, which is a reason why securing funding for the scheme through TCF is critical to maximising the benefits of the scheme.

Impact of Not Progressing

The Preston City Region has a number of significant transport challenges, as outlined in the previous section, which act as a constraint on future economic growth, and its productivity; and prevent the uptake of sustainable and active travel choices in the City Region.

Key impacts associated with failing to deliver the proposed TCF programme include:

- **Locked in Car Dependency**
- **Worsening City Centre Congestion**
- **Further Decline of Bus reliability and patronage**
- **Severance of the Ribble Crossings**
- **Constrained access to employment sites, limited job creation**

The Need for the Intervention and Programme Objectives

The TCF investment presents an opportunity to deliver tangible advantages to the Preston City Region – reduced travel time, carbon emissions, and improved reliability, safety, comfort, and accessibility to employment across the region.

The TCF package for the Preston City region is well aligned with the over-arching TCF objectives, with bus, walking and cycling and rail investment targeted on corridors that would transform their attractiveness to commuters, linking the city-centre with substantial growth opportunities such as the North-West Preston 6,600 home urban extension; 65ha commercial development at Lancashire Central; and 140ha development at Blackpool Airport Enterprise Zone (EZ).

In light of the existing situation and need for the intervention set out above, the TCF package of options has been developed from this evidence base, underpinned by both a set of strategic objectives to adress them, and the key criteria for the Transforming Cities Fund investment pertaining to guidance.

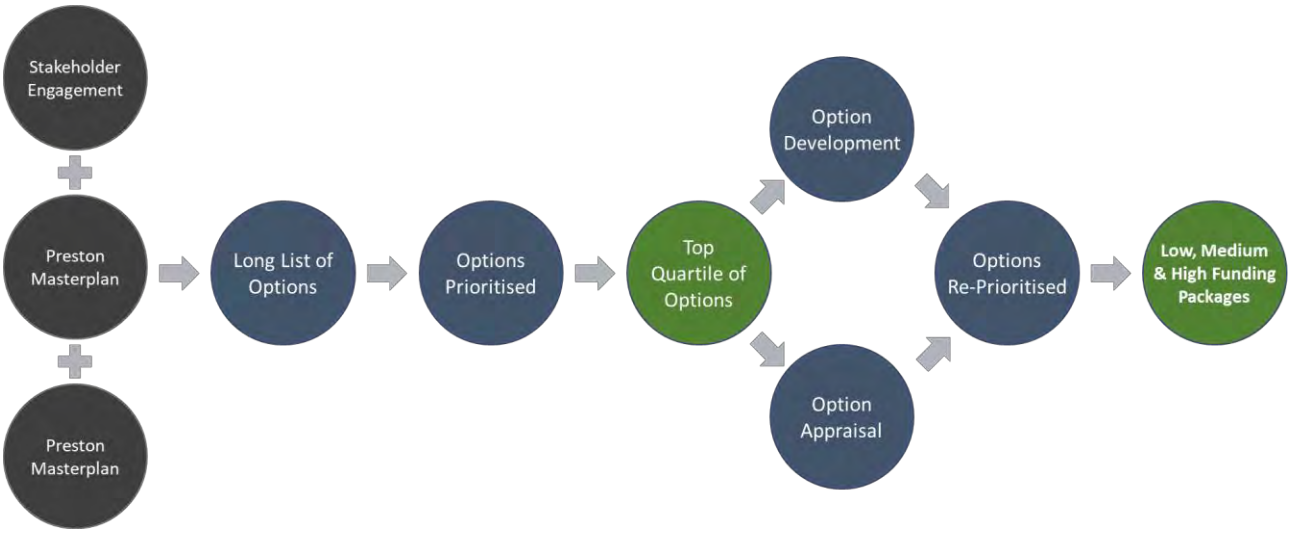
The strategic objectives have therefore been defined as follows:

Strategic Objectives underpinning Preston City Region's Transforming Cities Fund bid:

1. *To provide new infrastructure to support sustainable transport service improvements across the prioritised corridors.*
2. *To support access to the City Region's key employment centres and commercial development sites.*
3. *To support the delivery of major residential sites.*
4. *To deliver social and economic benefits to deprived communities.*
5. *To improve the reliability and resilience of the public transport network, particularly within congested bus corridors.*
6. *To increase the use of low carbon options and improve air quality*

Options Identification and Development

A flow diagram, shown below, has been produced to illustrate the key stages involved in determining which options have ultimately ended up forming the focus of the Preston TCF bid and their packaging. Each of the key stages is subsequently summarised below.



The Option Identification process started from the evidence base and problems and issues defined above, and drew on evidence from a number of sources including:

- Stakeholder Engagement
- Preston Masterplan
- Local Walking & Cycling Infrastructure Plan (LCWIP)

The option development process has focused on maximising the transformative strategic impact of the programme on transport, mode choice and accessibility in Preston, even where this would result in a lower value for money outcome than a less impactful option for those modes being specifically targeted by TCF investment.

This has included ensuring bus lanes extend as close to junctions as possible to maximise bus benefits, prioritising high-quality segregated and off-road cycle provision over on-road provision, and providing transformative walking and cycling CYCLOPS junctions and public realm changes that include the complete removal of traffic.

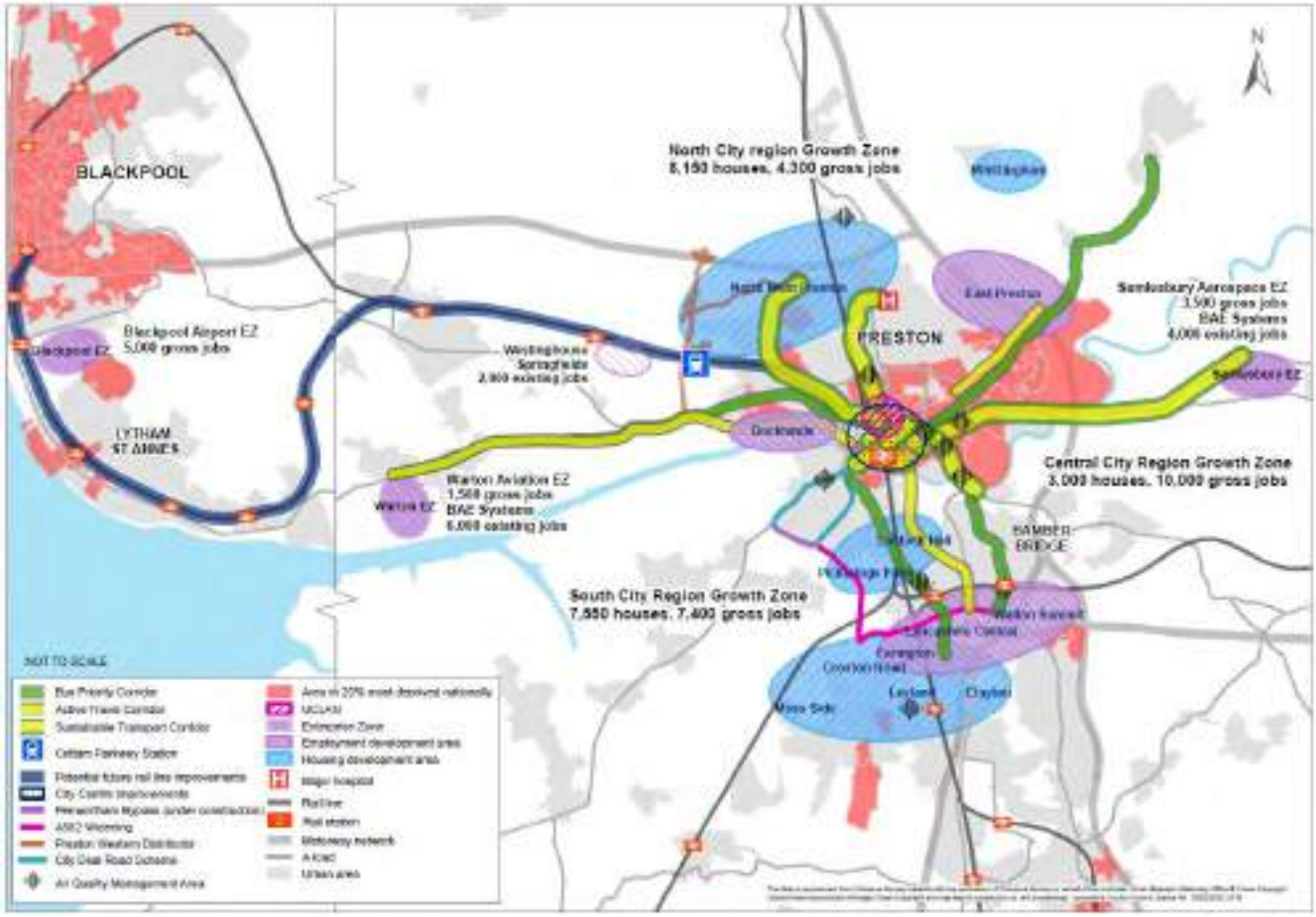
As mentioned by DfT during the co-development process, this is particularly important to note in consideration of the Preston TCF package in the Economic Case, and the transformative design principles for bus and active mode users that have been maintained.

The option prioritisation exercise was subsequently undertaken on all of the options in the 'long list', using an assessment tool which is consistent with the principles of the DfT's EAST tool, but specifically updated to ensure alignment with TCF objectives.

The shortlisted options have been grouped under the following headings (and associated Reference Code), which reflects the multi-modal nature of the bid:

- Rail Intervention (RW)
- Sustainable Active Travel Corridor (ST)
- Bus Priority intervention (BP)
- Technology Intervention (TN)

Consideration has also been given to the location of deprived areas to ensure the package of options will collectively have a truly transformative impact, especially for those most in need. Areas in red in the Figure below are output areas in the 20% most deprived areas nationally.

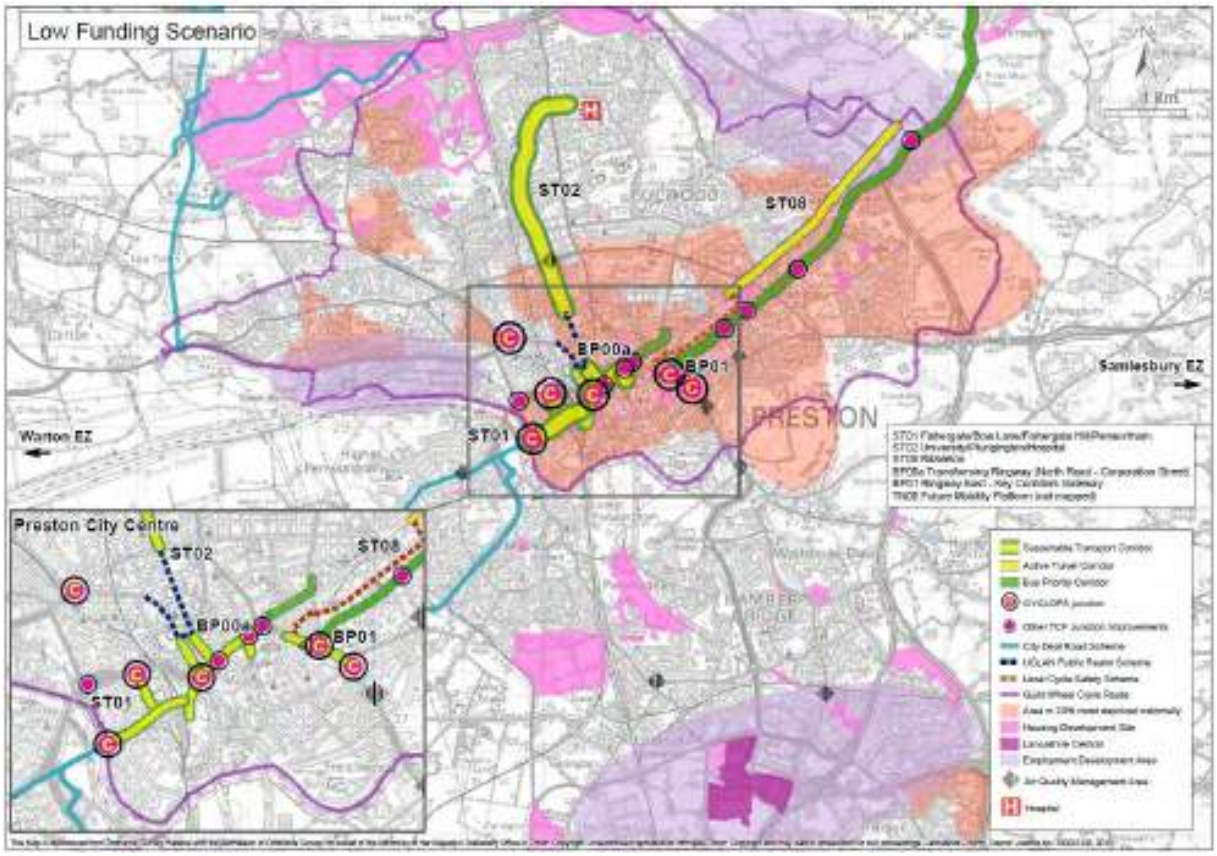


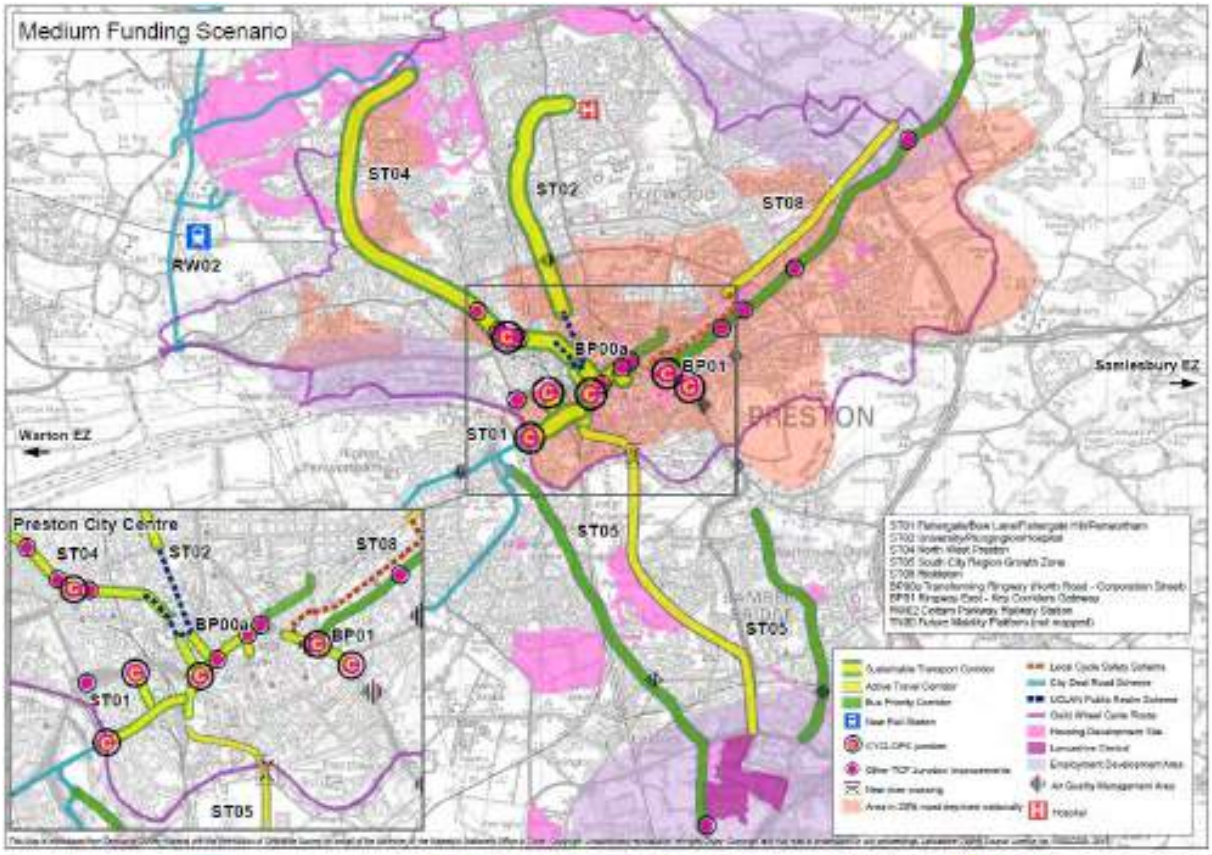
In response to the TCF guidance to make bids "*flexible enough to be scaled up or down"*, "low", "medium" and "high" funding scenarios have been created for the Preston TCF bid. The table below outlines the key differences between the 3 (high / medium / low) funding scenarios.

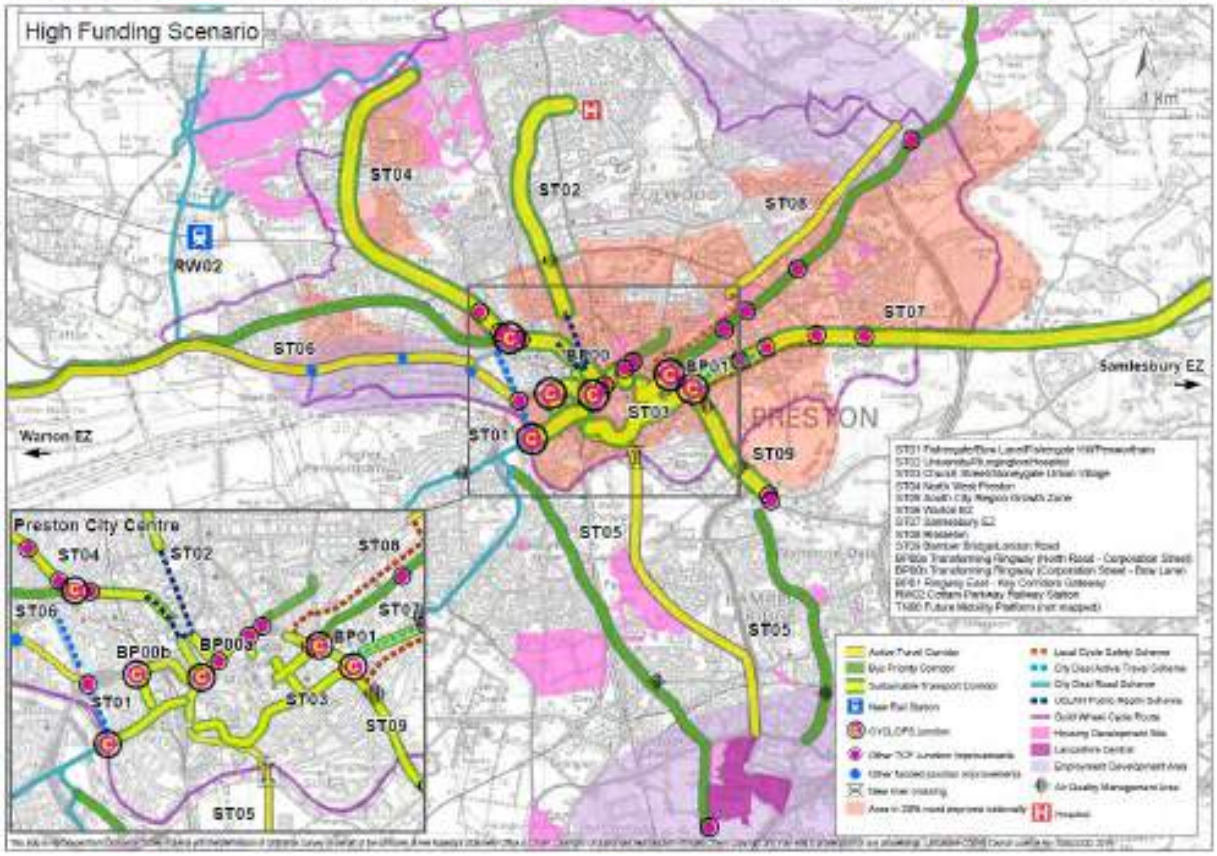
The three funding scenarios; **low, medium** and **high**, are shown in the table below.

Ref	Option	Low	Medium	High
BP00a	Transforming Ringway (North Rd – Corporation St)	✓	✓	✓
BP01	Ringway East - Key Corridors Gateway	✓	✓	✓
BP00b	Transforming Ringway (Corporation St – Bow Ln)			✓
ST01	SATC Fishergate/Fishergate Hill/Penwortham	✓	✓	✓
ST02	SATC University/Plungington	✓	✓	✓
ST08	SATC Ribbleton	✓	✓	✓
ST04	SATC NW Preston		✓	✓
ST05	SATC South City Region Growth Zone		✓	✓
ST03	Church St/Stoneygate Urban Village			✓
ST06	SATC Warton EZ			✓
ST07	SATC Samlesbury EZ			✓
ST09	SATC Bamber Bridge/London Road			✓
RW02	Cottam Parkway Station		✓	✓
TN00	Future Mobility Platform	✓	✓	✓

The options are also shown in the plans below:




Medium Funding Scenario
ST04
ST02
ST08
RW02
BP00a
BP01
Samlesbury EZ
Warton EZ
ST01
PRESTON
ST05
Preston City Centre
ST04
ST02
ST08
BP00a
BP01
ST01
ST05


High Funding Scenario
ST04
ST02
ST08
RW02
ST07
ST06
BP00
BP01
Samlesbury EZ
ST03
Warton EZ
ST01
PRESTON
ST09
ST05
Preston City Centre
ST04
ST02
ST08
ST06
ST07
BP00b
BP00a
BP01
ST01
ST03
ST09
ST05

The Sustainable and Active Travel Corridors (SATCs) contained in options ST01 – ST08, and the Ringway City Centre gateway schemes (BP00 and BP01) have been subject to an intensive period of option development in the period from June 2019 to November 2019 and have been developed to concept design level. The concept designs will be the subject of ongoing stakeholder engagement and public consultation to help further refine the designs and incorporate the feedback of user groups.

Synergies and Complimentary Initiatives

Preston's TCF programme is essential for delivering the emerging vision for Preston Station Gateway, creating sustainable access to/from and around the station prior to 2026, and realising the High Speed Rail opportunity for the City Region and UK as a whole.

The arrival of HS2 services at Preston in 2026 is likely to require significant upgrade work at Preston station. During this period, the provision of Cottam Parkway as an alternative access to the rail network and will provide much needed network resilience during the time that Preston Station is operationally limited.

In addition, bus operators in Preston have committed to make significant investments in their bus fleets alongside the TCF programme. Stagecoach has committed to investing in new buses for Preston's bus fleet, and Transdev has committed to investing £470,000 in replacing their Preston – Blackburn/Burnley Hotline service fleet. This investment is conditioned on the TCF investment, as the operating cost reductions and revenue increases generated by the TCF are essential in supporting this investment.

As investment through Transforming Cities Funding is made, LCC and bus operators have committed to work towards developing a more formal partnership approach culminating in the establishment of an Advanced Quality Bus Partnership on key corridors to build on and protect the investment made by all partners and enable further service developments along these key routes in the City Region area.

The Transforming Cities Fund proposals, taken together, will deliver the necessary transformation of the core of Preston City Centre that will enable these further future projects.

Stakeholders & Stakeholder Engagement

Close collaboration with the DfT throughout the co-development process has helped strengthen and develop the TCF programme focusing on interventions that will have the most transformational impact on public transport and sustainable and active travel use within Preston and the strongest impact on productivity and connecting deprived communities to skills and employment opportunities.

Much of the work to improve the operational reliability of the local bus network has been focussed on suggestions made by the operators, over a period of time, and they are in general very pleased with the progress that has been made in the TCF plans.

Delivery Constraints

While several environmental constraints have been identified in proximity to the TCF schemes, none of these are considered likely to impede the delivery of the programme.

Statutory Undertakers' infrastructure in the City Centre is already known about and allowances have been made in the costings and TCF programme by specialist design teams who are aware of local stats issues and to ensure suitable allowances have been made in scheme design, costings and timescales for delivery.

Policy Alignment and Business Strategy

The package of interventions has been derived on the basis that this will collectively create transformational change through a long-term shift towards sustainable travel modes and thereby relieve pressure on the existing highway network, and improve air quality and public health. The package of interventions identified are considered deliverable within the specified TCF timeframe, and the outcomes from the Appraisal Summary Table demonstrate that the interventions will continue to benefit the City Region long after the TCF investment is delivered.

Economic Case

The Economic Case assesses the impacts of the TCF packages, and the resulting value for money, to fulfil HM Treasury's requirements for appraisal and demonstrate value for money in the use of taxpayers' money.

In line with HM Treasury's appraisal requirements, the impacts considered are not limited to those directly impacting on the measured economy, nor to those which can be monetised.

The economic, environmental, social and distributional impacts of a proposal are all examined, using qualitative, quantitative and monetised information. In assessing value for money, all of these are consolidated to determine the extent to which a proposal's benefits outweigh its costs, and in the overall Value for Money Statement.

GENECON have been appointed to assess wider economic benefits associated with the TCF pacakges. The assessment focuses only the 'Level 2' benefits outlined in TAG Unit A2.1 (connectivity based impacts). Level 3 benefits (based on land use changes) have been excluded.

The table below provides a summary of the monetised benefits that are able to be calculated at an individual scheme level.

	Benefits (£m) for 20 Year Appraisal Period (2010 prices, discounted to 2010)						
	Bus User Benefits	**Bus Reliability**	**Cycling / Walking**	**Rail**	**Urban Realm**	**WEBs**	**Total**
RW02				46.8		32.79	**79.59**
BP01	2.68	1.29	0.21			5.05	**9.24**
ST09	0.76	0.33	3.87			3.51	**8.46**
BP00a	2.57	1.00	20.05		15.35	1.60	**40.55**
BP00b			1.67		8.47		**10.14**
ST06	0.30	0.17	3.40			7.30	**11.17**
ST07	2.00	0.72	3.67			12.26	**18.65**
ST01	0.88	0.37	5.62			3.10	**9.97**
ST02	1.97	0.61	4.47			8.73	**15.78**
ST03	1.64	0.72	14.17			2.84	**19.37**
ST08	1.56	0.51	0.32			14.12	**16.51**
ST04	1.19	0.48	5.14			13.76	**20.58**
ST05	0.29	0.14	2.67			8.30	**11.40**
TN00						15.91	**15.91**

The Value for Money assessment of each funding package (low / medium / high) has been undertaken based upon a combination of the economic, environmental, social and distributional impacts of the proposed schemes and is based on qualitative, quantitative and monetised information.

WebTAG guidance recommends Benefit Cost Ratio (BCR) metrics to define the Value for Money category of a scheme. The categories include:

- **Poor VfM** if BCR is below 1.0;
- **Low VfM** if the BCR is between 1.0 and 1.5;
- **Medium VfM** if the BCR is between 1.5 and 2;
- **High VfM** if the BCR is between 2.0 and 4.0; and
- **Very High VfM** if the BCR is greater than 4.0.

A summary of the overall monetised costs and benefits for each funding package is provided in the table below.

		Funding Scenario		
		Low	**Med**	**High**
Benefits (£m, 2010 prices, discounted to 2010)				
Established benefits	Bus User Benefits	9.7	11.1	15.8
	Cycling / Walking	30.7	38.5	65.3
	Rail	0.0	46.8	46.8
	Highway disbenefits	-46.2	-48.9	-51.6
Emerging benefits	Urban Realm	15.3	15.3	23.8
	Wider Economic Benefits	49	103	129
	Bus Reliability	3.8	4.4	6.3
Initial PVB (excluding reliability, urban realm and wider economic benefits)		-5.8	47.5	76.3
Adjusted PVB		**58.0**	**166.2**	**229.4**
Present Value of Costs (PVC)		65.8	104.4	152.1
Initial Benefit to Cost Ratio (excluding reliability, urban realm and wider economic benefits)		-0.1	0.5	0.5
Adjusted Benefit to Cost Ratio		0.9	1.6	1.5

There are also several impacts which were not possible to be robustly monetised, but should still form part of the overall value for money assessment. The most significant non-monetised impacts would come from:

- Benefits from improved **journey quality**
- Benefits from increased **option and non-use values**
- Benefits increased **accessibility** for non-car owners
- **Regeneration** benefits by supporting the reduction of unemployment in some of the most deprived communitiies
- Clear positive **distributional impacts**, with the scheme benefitting some of the most disadvantaged communities

An overall Value for Money category has been assigned to each of the three funding package options. These take into account the BCR, the clear non-monetised benefits across all funding pacakges which further support

the BCR obtained, and the extent to which each package would support the desired transformational impact that TCF investment would have on Preston. The various sensitivity tests were also taken into account. The overall Value for Money categories are shown in the table below.

	Funding Scenario		
	Low	Medium	High
VfM Assessment Category	Low value for money	Medium value for money	Medium value for money

The low funding package represents low value for money, as the initial allocation of roadspace to achieve bus, walking and cycling modal shift results in disbenefits to highway users. As more corridors are improved in the medium and high funding scenarios, a more integrated set of alternatives for active and sustainable modes are delivered, linking to more growth sites across the city. There is therefore a significant increase in walking, cycling, bus and urban realm benefits, resulting in higher value for money packages.

Financial Case

The Financial Case presents cost estimates for each option contained within the Preston TCF bid. A detailed breakdown of costs for each option is provided, including design and preparatory costs, preliminaries, ecology surveys and mitigation, construction and supervision, statutory undertakers' diversions, land acquisition and traffic management. In addition, the final capital costs include allowance for inflation based on the delivery programme and a risk allowance derived from a Quantitative Risk Assessment.

The financial case also presents consideration of the whole life costs of the TCF schemes, including ongoing operating and maintenance costs, potential income generation and efficiencies, and monitoring and evaluation costs for the programme.

The scheme costs for the constituent schemes that make up the low, medium, and high TCF funding packages are presented below.

Funding Scenarios

	Ref	Option	Base Cost	Inflation	QRA
Low	TN00	Future Mobility Platform	£5.72m	£0.74m	£0.26m
	BP00a	Transforming Ringway (North Rd to Corporation St)	£23.89m	£6.81m	£3.66m
	BP01	Ringway East - Key Corridors Gateway	£12.81m	£2.73m	£1.14m
	ST01	SATC Fishergate/Fishergate Hill/Penwortham	£8.42m	£1.99m	£1.24m
	ST02	SATC University/Plungington	£1.67m	£0.36m	£0.19m
	ST08	SATC Ribbleton	£8.97m	£1.94m	£0.60m
	Subtotal		**£61.48m**	**£14.57m**	**£7.09m**
	Low Funding Scenario Monitoring and Evaluation		**£0.3m**		
	Low Funding Scenario Total		**£83.45m**		
Medium	All Low Scenario Schemes, plus				
	ST04	SATC NW Preston	£12.10m	£2.89m	£1.03m
	ST05	SATC South City Region Growth Zone	£22.27m	£2.14m	£2.48m
	RW02	Cottam Parkway Station	£18.64m	£5.80m	£2.42m
	Subtotal		**£50.59m**	**£10.83m**	**£5.94m**
	Medium Funding Scenario Monitoring and Evaluation		**£0.43m**		
	Medium Funding Scenario Total		**£150.92,**		
High	All Low and Medium Scenario Schemes, plus				
	BP00b	Transforming Ringway (Corporation St – Bow Ln)	£3.53m	£1.01m	£0.54m
	ST03	Church St/Stoneygate Urban Village	£11.41m	£2.73m	£0.80m
	ST06	SATC Warton EZ	£20.18m	£4.77m	£1.52m
	ST07	SATC Samlesbury EZ	£5.12m	£1.22m	£0.62m
	ST09	SATC Bamber Bridge/London Road	£5.02m	£1.11m	£0.88m
	Subtotal		**£45.26m**	**£10.85m**	**£4.37m**
	High Funding Scenario Monitoring and Evaluation		**£0.50m**		
	High Funding Scenario Total		**£211.48m**		

The DfT guidance for TCF submissions notes that "*The Department wishes to see local commitment to the proposed scheme. All proposals must therefore include a private and/or local financial contribution towards the overall costs of the measures put forward."* Accordingly, the table below sets out the proposed funding arrangements for the Preston TCF bid, for each funding scenario; the figures presented are illustrative of the mix of TCF investment and local contributions that LCC anticipates.

Funding level	Total cost	TCF grant		Local contribution (inc. CIL/s106)	
High *Transformational*	£211.5m	£182.0m	86.1%	£29.5m	13.9%
Medium *City Region impact*	£150.9m	£123.8m	82.0%	£27.2m	18.0%
Low *City Centre focus*	£83.5m	£74.8m	89.6%	£8.7m	10.4%

The funding arrangements for the programme, including confirmation of local and third party contributions, and capital expenditure profiles are presented. Additional complimentary third party investments by operators are also presented.

Work has been undertaken for the final SOBC to develop the schemes and reach more accurate and precise cost estimates that have been subject to a QRA process. The allowance for risk & contingencies is expected to reduce as the scheme cost estimates develop.

LCC will continue to forward fund continued work on the schemes ahead of DfT decision making on TCF, so that scheme development continues, and to support deliverability of all schemes within the TCF programme timescales.

Commercial Case

The commercial case provides evidence on the commercial viability of the proposals and the procurement strategy that will be used to engage the market. It presents evidence on risk allocation and transfer, contract timescales and implementation timescales as well as details of the capability and skills of the team delivering the project and any personnel implications arising from the proposal.

The commercial case for the Preston City Region Transforming Cities bid, is be discussed under the following headings:

- Output Based Specification

- Procurement strategy and Sourcing Options
- Contract Strategy and pricing framework
- Risk Allocation and Transfer Approach
- Contract Management Approach

Output Based Specification & Certainty of Outputs to be Procured

Due to the key differences between the nature of the Sustainable and Active Travel Corridor (SATC) interventions, Cottam Parkway Station and the Future Mobility Platform, that different procurement approaches will be identified and adopted as most appropriate for the different schemes. Despite these differences, the commercial case for all schemes is based on the same essential requirements, namely the need to;

- Deliver the transformational impacts envisaged for the programme as outlined in the Strategic Case;
- Deliver the programme within the available funding;
- Ensure stakeholders' acceptance and support;
- Ensure Best Value is delivered; and,
- Ensure that appropriate quality is delivered.

Procurement strategy and Sourcing Options

Overarching Delivery and Procurement Strategy

As Highways Authority for the area, Lancashire County Council lead the delivery of all elements of the strategic transport infrastructure under TCF, with the exception of rail, which it will work in partnership with Network Rail.

Aside from Cottam Parkway Station, schemes are deliverable within existing highway boundaries or land ownership and will not require Planning Permission or Land Assembly. Preston City Council are the Planning

Authority for the district where Cottam Parkway Station will be delivered, and Lancashire County Council will work with them to ensure appropriate planning procedures are followed for this scheme. Network Rail is responsible for the management of the strategic rail infrastructure and will lead the delivery of the rail element of the programme.

The component infrastructure works that make up the Preston TCF programme will be procured in compliance with the Lancashire County Council Procurement Strategy, and national public sector procurement regulations. **Lancashire County Council and Network Rail have already existing, competitive multi-provider frameworks which have previously been used for delivery of similar schemes** and comply with all OJEU requirements.

Contract Strategy and pricing framework

Where externally contracted (excepting rail schemes), the form of contract used will be the Engineering and Construction Contract (ECC), part of the New Engineering Contract (NEC) family of contract documents, which is the standard form of construction contract in the UK and widespread in use across Europe. The county council has adopted the ECC as standard for this type of contract. The form of the contracts is not yet developed at this stage and may vary between interventions to maximise value of each individual scheme in the programme.

Risk Allocation and Transfer Approach

At the project level, risks will be managed by the TCF Project Board. However, the Commercial Case describes how Lancashire County Council's delivery and procurement strategy will seek to place risk with the party best placed to manage or mitigate that risk, or manage the consequences should they transpire.

Sustainable & Active Travel Corridors

The use of Lancashire County Council's "in-house" delivery team for the majority of the TCF programme projects will help manage risks to the programme, as it will allow for resource to be dynamically shifted and reassigned to different projects within the programme without the risk of claims being made against the project. This will expose LCC to a higher proportion of design and construction risk, however LCC's Highways Operations team are well placed to manage these risks through their extensive experience with similar projects in the Preston area and through their existing procurement frameworks and processes.

To offset this, Early Contractor Involvement will be used, in conjunction with NEC3 suite of contracts with pain-gain risk transfer mechanisms, on the higher risk elements of the programme such as the new Ribble Crossing. Risk transfer will also be achieved through the external tendering through LCC's existing procurement frameworks.

Rail

For rail improvements contained within the programme, Network Rail's GRIP process governs how risks associated with the station design and construction are identified, mitigated or removed, and re-evaluated at each GRIP stage. The process is robust, well documented and calls for a Quantified Risk Assessment at GRIP 3 which is then re-assessed and updated at each subsequent stage. Part of this assessment is to assign risks to relevant owners for action. This process and assessment will be integrated into LCC's overall approach to the assessment and mitigation of programme risks.

The contracts will specify ownership of risk based on who is best placed to manage the risk and specific parties' responsibilities should cost overruns materialise, depending on the reason for the overrun.

Contract Management Approach

The County Council has experienced, and dedicated contract management capacity to deliver effective contract management, and as utilised in a range of local, previous projects identified in section the Management Case, and listed as previous examples above.

Contract negotiations and ongoing contract management will be supported by the county council's legal team and quantity surveying support either 'in house' or via framework consultancy support.

Management Case

Introduction

The Management Case assesses whether a proposal is deliverable. It tests the project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance.

High Level and Steering Governance

In view of the close and complementary relationship with the substantial transport and road building interventions delivered and under construction as part of the Preston, South Ribble and Lancashire City Deal, delivery of the Preston City Region TCF Programme will be encompassed within the overall accountabilities of the City Deal governance arrangements.

Management of the TCF fund arrangements will sit outside the City Deal in order to ensure that responsibility for the TCF fund under the funding agreement put in place with the DfT - including related matters of project assurance, monitoring and evaluation - is carried out independently and under separate governance. This model draws close parallels with long-standing arrangements established for Lancashire's Growth Deal with government.

The City Deal has been in place since 2013 and has evolved in its structure since its inception, picking up on lessons learned to create an effective, efficient structure, honed on project delivery. There has been a range of projects delivered by the City Deal, from concept through development stage and construction.

The structure draws on current practice that has successfully governed the delivery of an infrastructure programme comprising comparable interventions supporting sustainable transport, active travel and urban realm schemes, alongside substantial new road building projects in the form of the Broughton Bypass, Penwortham Bypass, Preston Western Distributor and A582 South Ribble Western Distributor.

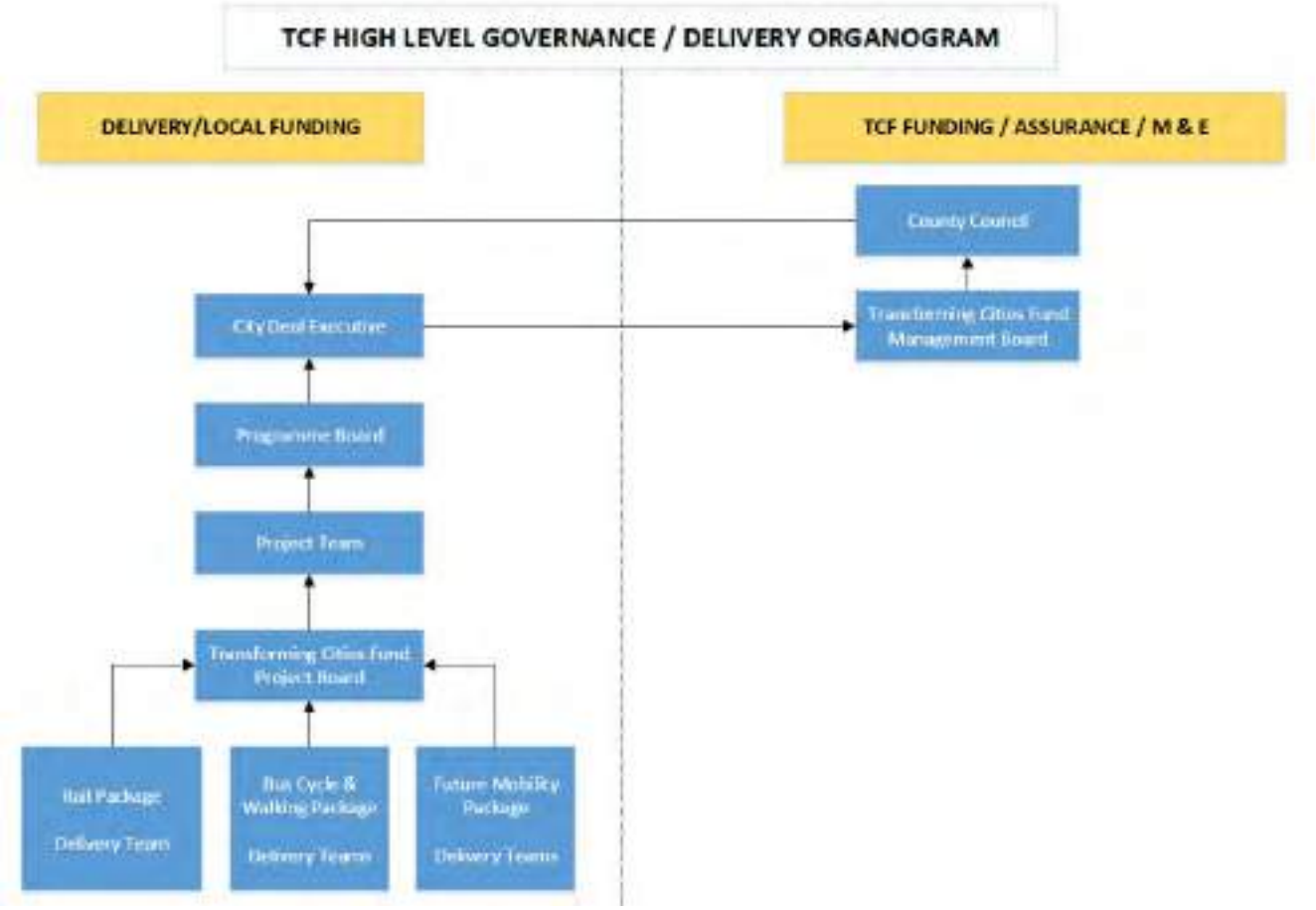
Within this structure, a new **TCF Management Board** will be established in order to provide separate independent governance and accountability locally for the financial management of the Preston City Region TCF Fund, and related matters of project assurance, monitoring and evaluation. The TCF Management Board will make recommendations to the County Council's Cabinet Member for Highways and Transport for approval to award TCF funding to projects progressed through satisfactory business case assurance.

Phil Green will be the Senior Responsible Officer and Programme Director for the Transforming Cities Fund Programme. His responsibility covers decisions affecting delivery.

Stephen Young will Chair the TCF Management Board with responsibility covering TCF Fund decisions.

Andrew Barrow will be the Programme Manager, with responsibility for owning and updating the Delivery Programme, Risk Register and Communication strategy and overall leadership of the Project Managers and Project Teams

These individuals have accumulated a considerable breadth and depth of knowledge and experience working in the public sector of project delivery, procurement, contract and financial management of construction schemes of scale, including through their roles in the delivery of the City Deal Infrastructure Programme.



Delivery Structure

Underpinning the high level and steering governance set out above, is a project management structure developed to ensure effective and timely development and implementation of the TCF infrastructure programme, under the direction of a TCF Project Board supported by dedicated programme and project management resources.

As local transport and highway authority for the Preston City Region, Lancashire County Council will be leading the delivery of all elements of the TCF infrastructure programme. Preston City and South Ribble Borough Councils are local partners to the City Deal, and are relevant planning authorities for the districts where the interventions will be delivered and local public and private (developer) contributions are secured / will be sought.

Network Rail is responsible for the management of the strategic rail infrastructure and will need to be closely involved with the delivery of the rail elements of the programme.

TCF Project Board

A TCF Project Board will be established to provide detailed technical project direction and scrutiny on all interventions under the TCF infrastructure programme. The board will commence its inaugural meeting in January 2020.

The Project Board will meet on a monthly basis and will be chaired by **Phil Green**, Chair and **Senior Responsible Officer** / Programme Director (LCC Director of Growth, Environment and Planning), attended by representatives of senior users/senior suppliers to the programme, which includes the bus operators and Network Rail.

Evidence of Successful Project Delivery

The Preston City Region TCF partners have a strong track record of project delivery under similar governance arrangements through the City Deal, and local management capability and levels of resource able to be deployed onto TCF from City Deal projects which are approaching completion.

As these schemes are completed in the near future, capacity will be freed up to deliver the TCF proposals. The team in place has a significant level of recent and relevant design and delivery experience to ensure delivery programmes are achievable within the TCF timeframes and scheme costings are accurate to recent out-turn costs. The lessons learnt from delivery of the above projects both external and within the Design and Operations teams are shared across the wider delivery structure to ensure the widespread learning for other projects, such as Preston City Region TCF.

TCF Assurance Framework

As the Accountable Body, Lancashire County Council will incorporate TCF project assurance arrangements into established arrangements carried out in line with DfT requirements, modelled on the Transport for Lancashire Assurance Framework approved by DfT.

Approval Process

The TCF Management Board will require business case submissions to comply with the Department for Transport's Transport Business Cases guidance (January 2013).

Risk Management

Risks associated with delivery of the Preston TCF programme will be owned and proactively managed according to Lancashire County Council's corporate approach to risk. This requires risk registers to be produced and maintained for individual schemes once approved. In addition, a programme risk register has been created to manage the overarching risks which affect all or most of the proposed schemes or pertain to the combined effects of all the schemes on the city region as a whole, especially the highway network.

A Programme Risk Register has been prepared and is attached as Appendix C.4 The Programme Risk register is owned by the Programme Manager and will be a live document which is updated regularly

Communications and Stakeholder Management

LCC have developed a communications strategy for the TCF Programme and individual schemes which defines and sets out the principles, objectives and approach for the engagement with stakeholders and consultation with

interested parties. The Communications Strategy sets out to ensure an inclusive approach during the ongoing dialogue throughout the scheme development and construction process. The TCF programme communications will be framed within the wider communications strategy for the City Deal.

A specific Preston City Region TCF Communications Strategy has been developed for each project stage by the Programme Manager with the help of the constituent partners' Communications Teams and this will be made available to the Independent Assurance Team in advance of the funding decision.

The Communications Strategy is included at **Appendix M.5.**

A detailed summary of the consultation undertaken to date for all TCF programme schemes is provided in **Appendix M.6**.

As the TCF Programme projects are developed from concept stage to detailed design and full business case, **extensive stakeholder and public engagement will be undertaken in early 2020**.

Monitoring and Evaluation Strategy

The TCF partners have a track record of successfully conducting monitoring and evaluation developed through the delivery of schemes of various sizes and complexity under the Lancashire Growth Deal and Preston and Central Lancashire City Deal.

Costs for Monitoring and Evaluation activities have been included in the overall programme costs in the financial case to ensure that robust funding is in place for carrying out the monitoring and evaluation plans. Importantly, LCC and its partners are already routinely collecting comprehensive data in and around the Preston City Region, and that forms an important starting point for Monitoring & Evaluation.

In addition, Benefits Realisation Plans will be developed for TCF programme schemes to ensure scheme outputs and realised, alongside effective monitoring and evaluation of scheme delivery and impacts.

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INTRODUCTION

1. Introduction

1.1 Background

As part of the Government's Industrial Strategy and the National Productivity Investment Fund, the **Transforming Cities Fund** (TCF) aims to drive up productivity through improved connections between urban centres and suburbs. To do this, the fund will invest in infrastructure to improve public and sustainable transport connectivity in some of England's largest cities and to drive modal shift from private car towards more sustainable travel choices.

Encouraging an increase in journeys made by low carbon, sustainable modes is a key objective of the Fund. Additionally, the Fund aims to support wider cross-cutting priorities such as:

- Improving access to work and delivering growth;
- Encouraging the use of new mobility systems and technology as part of the Grand Tackling air pollution and reducing carbon emissions;
- Delivering more homes;
- Delivering apprenticeships and improving skills;
- Making best use of the new powers created by the Bus Act.

In January 2018, Lancashire County Council (LCC) submitted an Expression of Interest to the Department for Transport for a Transforming Cities Fund (TCF) bid for the Preston City Region. A copy of the Expression of Interest for Preston City Region is included within the supporting documents contained within **Appendix S.2** of this document.

On the 17th December 2018, Preston's bid was shortlisted in the TCF competition.

1.2 Document Purpose and Structure

Preston's TCF bid has been co-developed with the Department for Transport (DfT), in accordance with the TCF supplementary guidance for Shortlisted City Regions: Tranche 2, released by the DfT in January 2019. As part of the co-development with DfT, a draft Strategic Outline Business Case (SOBC) was submitted in June 2019, in order to allow DfT to review progress against all five cases and provide feedback to assist the development of a final SOBC.

DfT feedback on the draft SOBC has been incorporated into the development of this final SOBC. This SOBC has also taken advantage of TCF updates released by DfT, and a range of co-production meetings and agreements to the key appraisal approaches adopted in the SOBC submission.

The document is structured around the HM Treasury Green Book "Five Case" model and with specific reference to DfT Guidance for Transport Business Cases, while also being informed by discussions with DfT since Preston's shortlisting in December 2018.

Accordingly, the document comprises the:

- **Strategic Case**, which sets out the background transport and economic context for the bid; opportunities presented by the TCF package in relation to Preston's economic and housing growth; and the existing arrangements and need for the intervention. The Strategic Case also considers the objectives of Preston's TCF package; the proposed options and funding levels; demonstrates strong stakeholder support, and the synergies and opportunities with other transport policies and schemes being developed in the City Region.

- **Economic Case**. This builds on the ASR LCC submitted in May 2019, the DfT's comments in June 2019 and subsequent technical notes issued to the DfT and describes the methodologies deployed to assess the value for money of the requested low, medium and high funding packages. The Economic case presents the monetised and non-monetised benefits and costs of each package, and the key differences

between the packages in impacts and Value for Money terms, as well as sensitivity testing and a final Value for Money Statement for the Preston TCF programme.

- **Financial Case**, which provides information on the capital and operating costs, and the proposed funding arrangements for each of the low, medium and high funding packages for the TCF programme. Also included are the assumptions applied with regards to estimating the scheme costs and the treatment of inflation, risk and contingencies.

- **Commercial Case**, which confirms the procurement approach for the TCF programme and demonstrates that a robust procurement strategy and proven route to market exists for the delivery of the TCF schemes.

- **Management Case**, which outlines the sequence in which the project and benefits will be delivered, and which confirms the governance, management and assurance arrangements for the programme, based on LCC's recent, local experience of major City Region wide infrastructure delivery through the City Deal.

1.3 Next Steps

LCC looks forward to approval of the submission in early 2020 and will continue to work with the Department for Transport to confirm the final TCF funding package selected.

Following this SOBC submission, LCC and its consultants (Jacobs, Genecon and Planit) together with Network Rail will continue to work on the development of the TCF schemes, to continue to progress scheme development ahead of DfT decision making, and in preparation for wider stakeholder engagement and public consultation on the proposals during the first half of 2020. This consultation will inform the further development of the programme, leading to individual Business Cases for schemes within the TCF package.

STRATEGIC CASE

LANCASHIRE COUNTY COUNCIL
NOVEMBER 2019

2. Strategic Case

2.1 Introduction

The Strategic Case has been developed with reference to DfT guidance on Transport Business Cases (latest update 2017) to ensure the final options meet the objective of creating transformational growth across the region.

Accordingly, the Strategic Case is presented under the following sub-sections:

- Economic Context (including internal and external drivers for change)
- Existing Arrangements
- Need for Intervention
- Objectives
- Options
- Opportunities
- Impact of Not Progressing the Options
- Assessment of Success
- Delivery Constraints
- Synergies and Interdependencies
- Stakeholders
- Policy Alignment and Business Strategy
- Summary

2.2 Preston's Economic Context

Preston City Region plays an important role in a range of **nationally important economic capabilities** and is a key driver of both the Lancashire and Northern Powerhouse economy. The City Region is a globally-competitive hub in the Advanced Manufacturing, Aerospace Engineering and Energy sectors and its **£9.4bn economy** includes the 4th largest aerospace cluster in the world. If these sectors are to remain at the heart of the UK's role in the global economy, and the UK to remain a prominent player in these industries globally, then it must be easy for them to interrelate with their nearest City and City Centre, access the skilled workforce that they need and attract and retain staff in the Preston City Region.

When combined with other key advantages enjoyed by the City Region, such as the **strong growth of excellent universities, primarily** at University of Central Lancashire (UCLAN) which is at the heart of the City Centre and home to approximately 38,000 student and staff community. UCLAN has also committed to grow with plans to build a new Engineering Innovation Centre (EIC) with an aim to provide a source of graduates reflecting the economic growth of the North West. Edge Hill and Lancaster are also in close proximity and with the forthcoming **High-Speed Rail** arriving in Preston, the time is right to explore and define how we want transport to transform Preston.

Preston's **job-rich, high-value economy** outperforms all of the Northern Powerhouse City Regions bar Manchester and Leeds, making the success of this multipolar metropolitan area critical to ambitions to improving the overall productivity of the North of England and UK as a whole. Preston's economic strategy focuses on: maximising its clear competitive strengths in aerospace and energy; strengthening the internal connections between its production assets and its City Centre professional services; and furthering its role as a hub within the national road and rail networks to create a **highly connected place** to live, work and invest.

Preston is an important connecting node on the national north-south and east-west transport corridors. The West Coast Main Line and the Trans Pennine East Lancashire/Calder Valley line intersect at Preston, as the M6 does with the easterly M65 and westerly M55. Preston also has strong links to Manchester with the M61, and links to the East of the country with the M62 Corridor. Preston Station also has prominent connections to Manchester City Centre and Manchester Airport. This role is expected to strengthen considerably over the next decade, with the city taking on a hub role on the HS2 network from 2026. Preston Station will become the centre point for **53 surrounding stations across Lancashire and south Cumbria**, supporting growth in passenger numbers of 5m per annum by 2033/34 (+70%).

As a result of the city's increased regional significance and the reduction in journey time to **London to 78 minutes** as a result of the introduction of HS2 Phase 2b services. Preston will be well placed to capture additional employment activity and to become a more attractive residential location, increasing the employment and residential densities within the City Centre.

In recent years, this agenda has been advanced across Preston though the 2013 Preston, South Ribble and Lancashire City Deal. This agreement with Government aims to deliver 17,000 new homes and 20,000 jobs by 2024, largely though substantial highways investment to unlock housing and employment sites. With this investment now taking place on the ground and delivering capacity ahead of future growth, **there exists an opportunity to delivery significant modal shift and travel sustainability to drive transformational and inclusive growth**.

As the regional Centre for Lancashire, Preston is interdependent with the surrounding area, sharing employment opportunities and residential communities across dispersed labour and housing markets, particularly in Blackpool and Fylde, as well as providing a link to wider opportunities in Manchester and Lancaster. These relationships are changing, and the long-standing north-south axis is refocusing east-west as a consequence of transport, housing and economic development initiatives.

The importance of Preston City Region

Recent decades have seen the emergence and growth of a **City Region centred on Preston**, as the expansion of the urban area and increased travel between the city and outlying settlements and economic sites has led to the agglomeration of the labour markets across Central Lancashire. Preston City Centre remains the heart of the City Region, and the growth of the region has been intrinsically linked to interaction between the City Centre and prime industrial clusters surrounding the city.

The City Region's advanced production capacity is supported by the **largest national cluster** of advanced manufacturing Enterprise Zones. **Samlesbury and Warton EZs** are being developed around BAE Systems' sites to the east and west of Preston, which play a key role in UK's largest ever trade deal – the F35 programme, to generate 6,000 highly-skilled jobs in technology and manufacturing, and the 140ha Blackpool Airport EZ is an emerging centre for energy activity. Each supports the county's economic competitiveness, as targeted in the ***Lancashire Innovation Plan, 2018***. The plan also aims to improve collaboration between industry and research bodies to encourage the commercialisation of technology. At Samlesbury EZ, the new North West Advanced Manufacturing Research Centre will demonstrate technologies, tools and techniques to support local manufacturing competitiveness. The Springfields' Small Modular Reactor is a national nuclear asset and will further drive innovation activity within the City Region.

The growth potential of the City Region has been recognised through the £434m ***Preston, South Ribble and Lancashire City Deal, 2013,*** which looks beyond the city's administrative boundary with the aim of delivering **20,000 new jobs and 17,000 new homes by 2024.** New housing is planned for the Vernon Carus, Lostock Hall and Pickering's Farm sites in the South Ribble area – enabled through investment in additional road capacity – as well as at the former Moss Side track in Leyland. The nearby Lancashire Central strategic site (**65ha**) at Cuerden has capacity for thousands of jobs and is part of a much wider South City employment growth zone stretching several miles east-west from Walton Summit bordering the motorway network to Lancashire Business Park to the west of the West Coast Main Line. The Preston Western Distributor, which is now under construction, will enable **6,600 new homes** in North West Preston.

The City Region is seeking to build on its prime industrial strengths in the aerospace and advanced manufacturing sectors and develop its stock of production and innovation assets. This activity relies upon the financial, professional and education services hosted in the City Centre, as well as workers from across the City Region , and as a result internal connectivity within the City Region is central to the Councils' ambition of providing an investible city for businesses and an attractive place to live and work with enhanced quality of life.

Given the importance of the internal connectivity of the City Region to enable and **drive agglomeration and productivity benefits** between these spatially separate key sites, Lancashire County Council and Preston City Council are looking to invest in linking the City Region's dispersed production and innovation assets with the support services available within in the City Centre through the Transforming Cities Fund. Connections between employees and businesses are also key to expanding the potential labour market and ensuring the future success of Preston's economy.

The proposals outlined in this businesses case aim to transform the attractiveness of public transport and active travel to commuters, including improvements to the local rail network, in order to unlock the latent productivity in the City Region and drive agglomeration, investment, jobs and international competitiveness.

Preston City Centre

Preston City Centre is Lancashire's **priority Growth area**. The City Centre includes important anchor assets such as the county administrative centre, a growing university and a major retail destination. The area also has substantial capacity for new development and significant levels of economic and housing growth are planned. City leaders are working towards a more productive, sustainable and inclusive Preston by:

- Providing modern, high-grade business accommodation, facilitating workforce expansion, and focussing on specialist and knowledge-based industries (***Preston City Centre Area Action Plan, 2016***);
- Creating a liveable environment, a place for knowledge, learning and employment, and a high-quality retail and leisure offer (***City Living Strategy, 2017***);
- Delivering the Preston City Transport Plan, which is strongly aligned with the Transforming Cities bid (***commissioned by the Preston, South Ribble and Lancashire City Deal, 2019***); and,
- Continue work on the Station Gateway Proposals to maximise the growth opportunity for the City, and City Region associated with HS2.

The aim is to attract **new business activity** and ensure a **talented labour pool** for local businesses to draw on. There is a particular case for growing **knowledge-based employment** in the City Centre in conjunction with the ongoing development of a new campus for the University of Central Lancashire (UCLan) to support activities across the wider City Region.

Alongside this, Preston City Council (PCC) and Lancashire County Council recognise the need to re-purpose the City Centre, given the ongoing transformation of town and City Centres across the country. The diverse range of functions necessary to ensure the City Centre's long-term vitality requires a re-orientated towards leisure activity (see Box 2.1 overleaf) that will underpin and support the intensification of Preston City Centre's commercial role. This will also be important given Preston's pursuit of an ever wider and more agglomerated range of professionals, and its increasing role as a **regional economic centre**.

Box 2.1 – Recent and Planned Retail and Leisure Investments

- ❑ Supporting work by Signature Living to redevelop the **Old Post Office** as a 60-room hotel and spa, to include a 170-cover restaurant;
- ❑ Supporting upgrades to the 3,000+ capacity **Preston Guild Hall / Charter Theatre** complex to improve the arts and entertainment offer of the concert hall and theatre;
- ❑ Investing in a modernised **Market Hall** to provide evening event space and a revitalised boxpark-style market;
- ❑ Investing in a tree-lined shared-space for pedestrians and vehicles along many of the city's primary retail frontages and civic areas, including **Fishergate** to improve the City's gateways and access to the bus and rail stations;
- ❑ Investing in **Cannon Street** to provide a new independent shopping destination;
- ❑ Investing in the restoration of the **Winckley Square gardens** to provide improved City Centre social spaces;
- ❑ Promoting the **Harris Quarter** development to replace the old indoor market with a new cinema and restaurant complex and public square;
- ❑ Promoting the transformation of the **Harris Museum, Art Gallery and Library** to provide a community-led cultural hub;
- ❑ Promoting the development of a **Creative Commercial Corridor** between UCLan and Preston Station to attract new independent businesses, including through the proposed ALTUS office building.

The **transformation of Preston City Centre is already underway**, centred around three anchor points which will drive regeneration. These are **Preston Bus Station and Market**, the **UCLan Campus Masterplan**, and the forthcoming **Preston Station Gateway**.

The TCF proposals for Preston City Centre aim to fill in the gaps between these anchor points to create a coherent, highly walkable and integrated transport network across the City Centre, underpinning transformed connectivity to, from and between major employment and housing sites across the City Region, delivered through a network of bus priority and active travel corridors.

Preston Bus Station has recently undergone a £25m refurbishment and restoration to enable better bus journeys in the city. A new public square is currently under construction on the station's west side, due for completion in 2020, will join the Bus Station to the recently refurbished Preston Markets.

The TCF programme will connect this area with the rest of the City Centre completing the remaining gaps in cycling and walking provision, and will provide faster and more reliable bus journeys to and from the bus station from across the City Region, to ensure an interconnected sustainable transport network.

With 25,000 students, the University is a key growth element for the City Region. The £200m ***UCLan Campus Masterplan*** has been designed in part to create jobs, catalyse regeneration and attract investment to the city. To

With 25,000 students, the University is a key growth element for the City Region. The £200m ***UCLan Campus Masterplan*** has been designed in part to create jobs, catalyse regeneration and attract investment to the city. To date, multiple social and welfare spaces have been delivered, along with the Engineering Innovation Centre, an integrated teaching/research space that aims to graduate 500 aerospace and oil and gas students each year.

A key driver of the TCF programme is the need to better integrate the UCLan campus and area of the City into the heart of a fully connected and sustainable Preston.

Preston Station Gateway will deliver the enhancements needed to make Preston "High Speed Ready" for the arrival of ***HS2*** services at Preston Station from 2026 and the transformation of Preston station into a regional rail hub and access point to the high-speed network. **A new Central Business District** will not only develop commercial activity in its own right but will support significant manufacturing, research, innovation knowledge based sectors and assets across the university, Enterprise Zones and major sector employers. The new quarter will allow the City to retain and attract key business, headquarters and government agencies and departments to realise growth opportunities that are intrinsically linked to the success of the City Centre. The new office quarter will provide the opportunity to create further agglomeration where productivity is higher, and innovation fostered.

These three economic anchors also form the focal points for the other projects in the TCF programme. **Sustainable and Active Travel Corridors** will deliver enhanced gateways into the City Centre, reduce severance across Ringway, and the River Ribble, which represent the critical, **current highway constraints** needing to be overcome to develop an effective, integrated network of bus priority and walking and cycling provision connecting the City Centre to key employment growth sites and residential areas. Rail enhancement projects will improve rail travel to Preston Station Gateway for communities across the Fylde Peninsula through the provision of a **new Cottam Parkway station** to the west of Preston, and potential future development of the south Fylde line. Lastly a new **Future Mobility Platform** will improve travel across the City Region through the deployment of new connected technologies and artificial intelligence to better co-ordinate and manage travel demand across the urban area.

2.3 Opportunity for Transformational Change

The **Preston City Transport Plan** shows why Preston cannot simply carry on trying to accommodate today's level of car use, particularly for commuting. Preston's commuter footprint grew by almost **70,000 people** from 2001 to 2011 Census information, and is continuing to accelerate. Work undertaken **identifies five key opportunities** for the City Region, that funding from TCF can go towards delivering:

- The City Region is an opportune scale, including its hinterland, where change can have a real influence and be meaningful;
- Preston is a City with momentum, not least from the previous Preston, South Ribble and Lancashire City Deal and UCLAN Masterplan delivery, but also in the development of city living and improving the leisure offer;
- It has already been a pioneer in enhancing the public realm in the city, particularly with the flagship Fishergate Scheme and indeed there is an appetite for further change;
- There are many underused corridors that fan out into the wider geography, of which more use can be made through TCF to link to substantial areas of development activity;
- The station, being an underutilised asset, has significant transformational potential. Whilst already a nationally significant gateway, better access and movement within and better accessibility to and from will allow it to contend with anticipated increases in demand and provide incentive for people to utilise its rail offer; now, as a stepping stone to long-term transformation through HS2 and the Preston Station Gateway proposals, that TCF will help enable and unlock through improved access, especially by sustainable modes.

Linking the City Region's people to centres of employment and economic growth

As outlined above, Preston City Region is one of the **fastest growing locations** in the country. The City Deal is contributing to significant and increasing rates of new housing and job creation year-on-year, and the regional centre is only out-performed in the North by Manchester and Leeds in terms of GVA per head.

On top of this, Preston City Centre offers strong and improving rail and road connectivity to other major economic centres,but is chronically underprovided for in terms of access by sustainable modes from within its own City Region. There is a high level of ambition for Preston, and Preston has considerable potential.

An analysis of the City Region's economy and demography has identified the primary clusters of **highly-productive or high-value businesses**, as well as the residential neighbourhoods with the greatest potential to contribute to Preston's workforce. The analysis above highlights that more accessible, more convenient travel options will be needed to connect workers to centres of employment, and an increasing need to focus on the City-Region's **east-west connectivity**, given 70% of future employment growth will be delivered along this axis.

Strengthening the public and active transport connections between these locations will improve residents' access to employment, as well as the availability of labour within the City Region. The potential economic outcomes include productivity improvements from the more effective use of time and better job matches. This is demonstrated by the significant benefits to the City Region's economy identified in the Economic Case.

Focus on East-West, North-South corridors

Overlaid with the City Region's major development sites, four clear priority transport corridors emerge:

1) a North-South sustainable travel axis;

2) an East-West rail corridor;

3) an East-West sustainable travel axis and

4) a North-East/South-West sustainable travel axis.

These corridors, and the clusters of economic activity and residential populations served by them, are shown in Figure 2-1 below.

The exercise to identify and evaluate beneficial, deliverable and affordable interventions for this TCF programme has been targeted along these routes to maximise the opportunities presented by the city and current activity under the City Deal and best manage the impacts of Preston's growth.

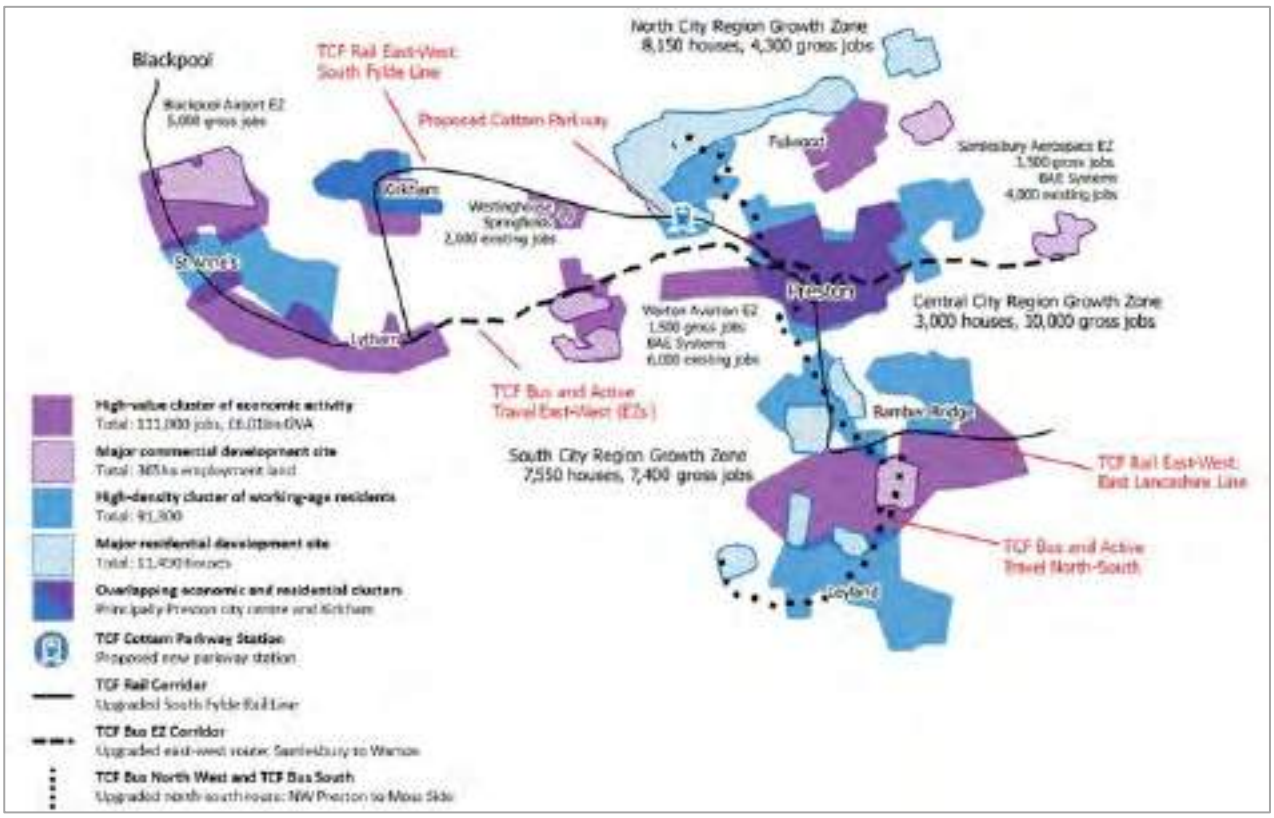


Figure 2-1: Economic activity and concentrations of working-age residents across Preston City Region

Figure 2-1 identifies a number of **major opportunity locations**, including the Lostock Hall and North West Preston areas where there is clear potential for transformational change through rail, bus and active transport improvements to serve both new and existing communities. These well-placed areas have already been identified for **9,000 new homes and 4,500 new jobs**.

Table 2-1 below maps the three corridors across to further identified development sites, summarising the potential of each broad area. The most significant areas to ensure access to for new employment opportunities are the **Central City Region Growth Zone** and the **Enterprise Zones**.

As the heart of the City Region's transport networks, the City Centre is of additional importance for interchanging to other nodes within the public transport system.

Table 2-1: Links between priority transport corridors and key development sites / growth areas

Key Development Site	Growth Zone	Jobs	Houses	TCF Bus & AT North-South	TCF Bus & AT East-West (EZs)	TCF Rail East-West
North West Preston/ Cottam	North		6,700	✓		✓
Preston East	North	3,400				
Other North Sites	North	500	1,450			
Preston City Centre	Central	10,000	800	✓	✓	✓
Cuerdon	South	4,500	200	✓		✓
Pickering's Farm/ Lostock Hall	South		1,550	✓		✓
Moss Side Test Track	South		750	✓		
Grasmere Avenue/ Wheatton Lane	South		600	✓		
Other South Sites	South	2,900	4,050			✓
Samlesbury EZ	EZ	3,500			✓	
Warton EZ	EZ	1,300			✓	
Blackpool EZ	EZ	5,000				✓
					Corridor Connection	✓

Growth Zones	Jobs	Houses
North City Region Growth Zone	4,300	8,150
Central City Region Growth Zone	10,000	3,000
South City Region Growth Zone	7,400	7,550
Enterprise Zones	10,000	
Total	**31,700**	**18,700**

The City Deal Window of Opportunity

This is a period of significant change and growth in the Central Lancashire area with TCF seeking to continue transformation now being delivered under the City Deal. Investment of £434 million is being delivered **on the ground right now**, helping expand transport infrastructure in Preston and South Ribble to drive identified growth opportunities. As a result of this significant ongoing investment, Preston received national recognition for its position of **most-improved city** in the Demos-PwC Good Growth for Cities 2018 index.

Preston has needed **significant highway capacity improvements around its edges** to be able to grow. Aligned with the Central Lancashire Highways and Transport Masterplan (CLHTM), the City Deal is helping deliver substantial improvements in transport infrastructure and additional distributor road capacity to serve Preston

The Preston Western Distributor (PWD) began construction in October 2019, junction improvements and dualling along the South Ribble Western Distributor (SRWD) began in 2014 and is expected to complete in 2024, the Penwortham Bypass opens to traffic in December 2019, and the Broughton Bypass was completed in October 2017. Preston Bus Station refurbishment has been completed and the bus station civic square will be completed by the end of 2019.

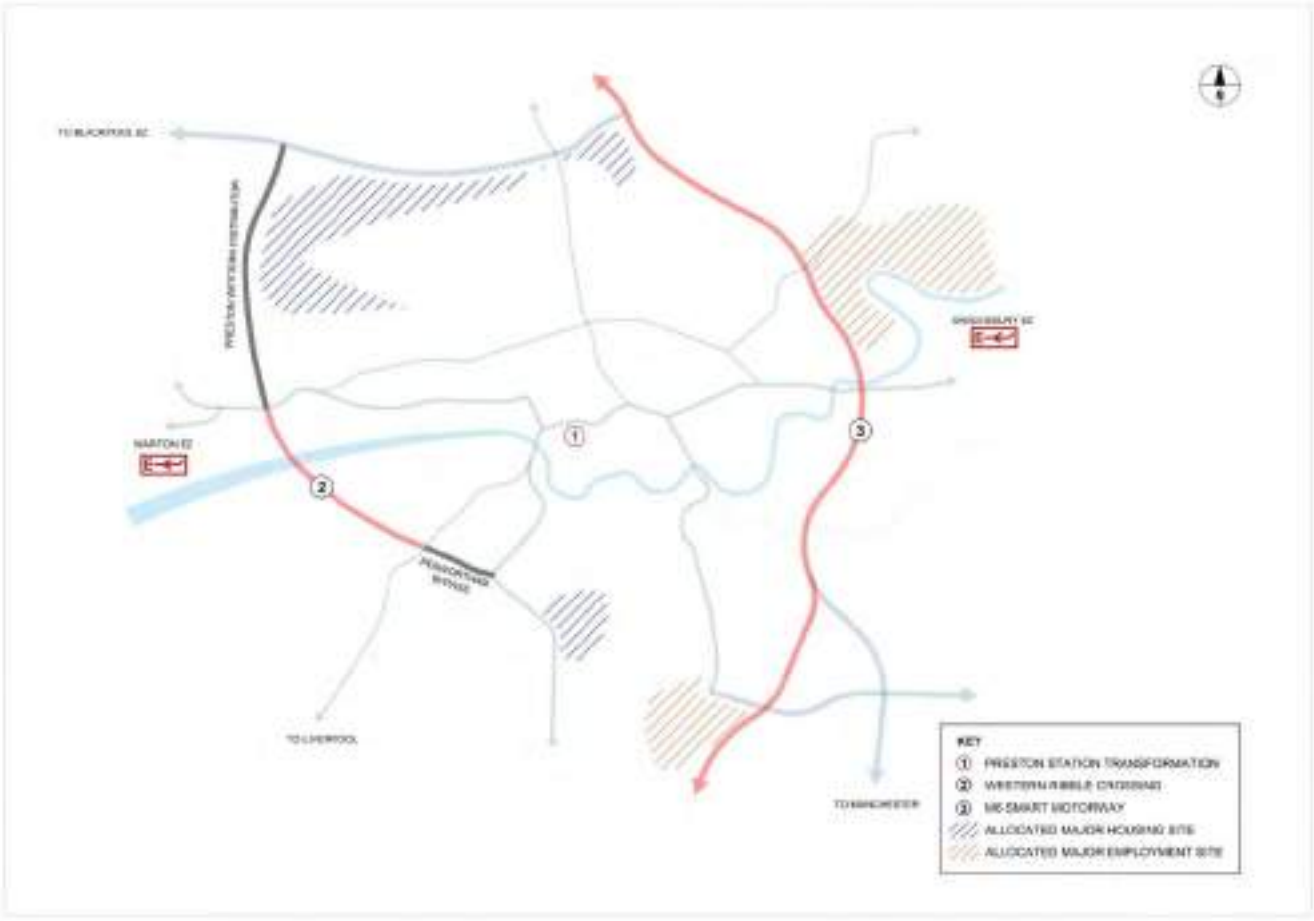


Figure 2-2: City Deal Transport Infrastructure improvements and potential future major interventions

Despite these significant improvements in highway capacity, **investment in sustainable modes** is badly needed to complete the vision for Preston. If this is not delivered, there is a risk that planned growth will only be supported by highway improvements and that this will lock-in car dependent lifestyles.

Significant investment in sustainable and active travel through TCF is therefore urgently need to ensure that planned growth is matched with improvements to alternative travel modes to transform travel patterns and embed sustainable choices.

The City Deal transport infrastructure schemes are already on site or at the planning or detailed design stage, and when completed will alleviate pressure on Preston City Centre, key arterial routes and local centres, creating these exact opportunities for more pedestrian/cycle friendly spaces, and to reconnect local communities.

The advanced delivery of the new infrastructure through the City Deal, ahead of the completion of unlocked housing and employment sites, will result in a period during which long-term congestion growth trends will be temporarily reversed. This Provides **a narrow window of opportunity** to affect **significant change** to Preston's transport network and travel behaviour. In this short timeframe, significant enhancements to rebalance the provision of transport in favour of more sustainable modes need to be delivered to bring all modes of transport to the same high standard across the City Region, giving residents a genuine choice over how they travel and encouraging sustainable and healthy travel choices.

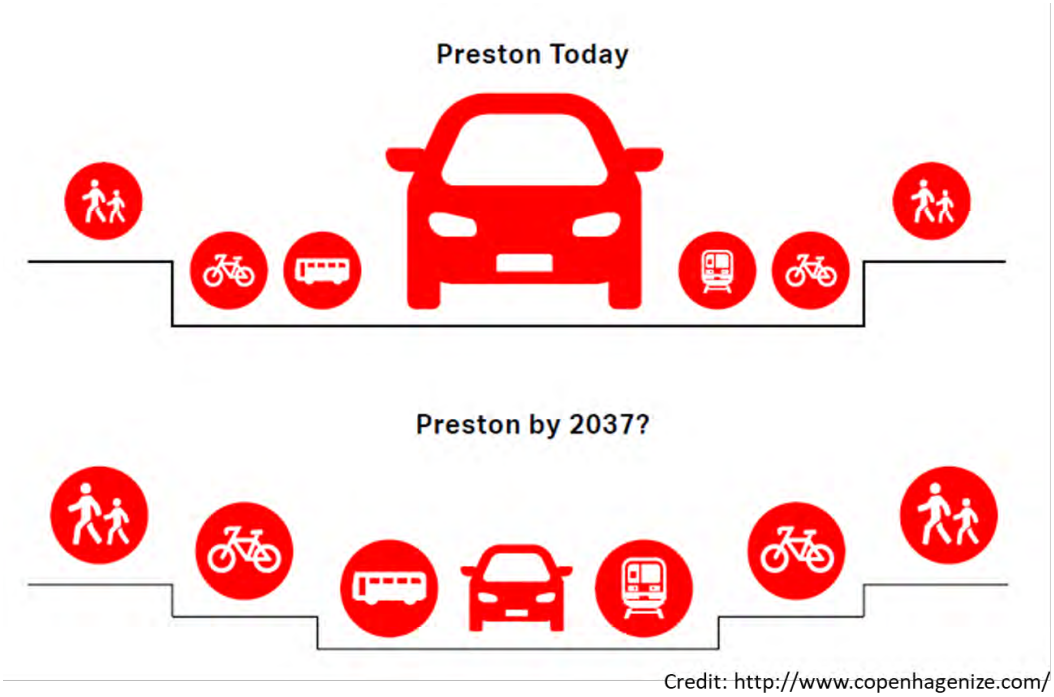


Figure 2-3**: Preston's current and potential future transport mix (Preston City Transport Plan)**

Improving links / travel choices to the Central City Region Growth Zone

Preston City Centre is the focus of the City Region's growth ambitions for the services sector and higher-level occupations. The Government Property Unit is currently exploring the area's suitability for a **new Government Hub** of 4,000 civil servants and there are around 55 commercial and residential development sites within walking distance of the rail station alone.

Within the Stoneygate Urban Village area of the city, there is potential for close to 200,000m^2 new commercial floorspace. Should the station operate as an HS2 Hub from 2026, the potential for the City Centre to deliver new housing may be higher at **8,500 homes**.

Improving links / travel choices to the City Region's Enterprise Zones

- *Blackpool Airport Enterprise Zone* is a **20ha strategic regeneration site** partially located in Fylde. The EZ is targeting clean energy and industrial activity and is undergoing a transformative £28m development programme. Given the scale of the economic and employment opportunity at Blackpool Airport, this is a key strategic location on the City Region's reoriented east-west axis.
- *Warton Enterprise Zone* is an aviation and advanced manufacturing focussed EZ **with 65ha of developable land** across three zones. BAE Systems employ 6,000 across a 72ha facility.
- *Samlesbury Enterprise Zone* has the potential to deliver **125,000m^2 of commercial floorspace** by 2030. The anchor occupier is the £20m North West Advanced Manufacturing Research Centre, a specialist aerospace and advanced technologies institute. A £16m development programme will support the delivery of the site.

Improving links / travel choices from the City Region's most deprived communities

Tackling Preston City Region's transport challenges through improving the attractiveness of sustainable transport options would also help to address long-standing issues with **deprivation** and **low opportunity in certain pockets** of the City Region. In addition to improving the efficiency of existing patterns of economic activity and enabling the City Region's potential for new growth and development, the Transforming Cities Fund will improve

the **inclusivity** of the Preston's economy, and particularly drive connectivity and labour market opportunities for those most in need.

Lancashire includes many of the country's most deprived local authority districts, and areas of Preston City Region are **amongst the 10% most deprived neighbourhoods** in England. Barriers to employment are often significant, especially where suitable work may be found in locations that are difficult to access other than by car. This demonstrates the importance of a **resilient, reliable and cost-effective** public transport system to **all** residents of the City Region. Sustainable infrastructure can act to **integrate neighbourhoods** as well as making it quicker and easier to manage local commutes and expand travel horizons to underpin further business and productivity growth.

Preston's most deprived communities have been deliberately integrated into the interventions proposed by the TCF programme to maximise the economic, and labour market benefits of the TCF package.

Significant areas of deprivation exist in and to the north and north east of Preston City Centre, with additional pockets of deprivation in north west Preston, as shown in Figure 2-4. **The TCF programme will provide significantly enhanced sustainable and active travel options to deprived communities**, linking them to the skills and employment opportunities in Preston City Centre and the UCLan campus, as well as the Preston East and Samlesbury Enterprise Zone growth areas.

This will both reduce levels of economic inactivity by providing access to skills and jobs, increase the agglomeration of the labour market in the City Region and shift employment into higher productivity sectors. These effects will drive increasing productivity in the City Region, the Northern Powerhouse, and part of **re-balancing and accelerating** the economic growth of the UK as a whole.

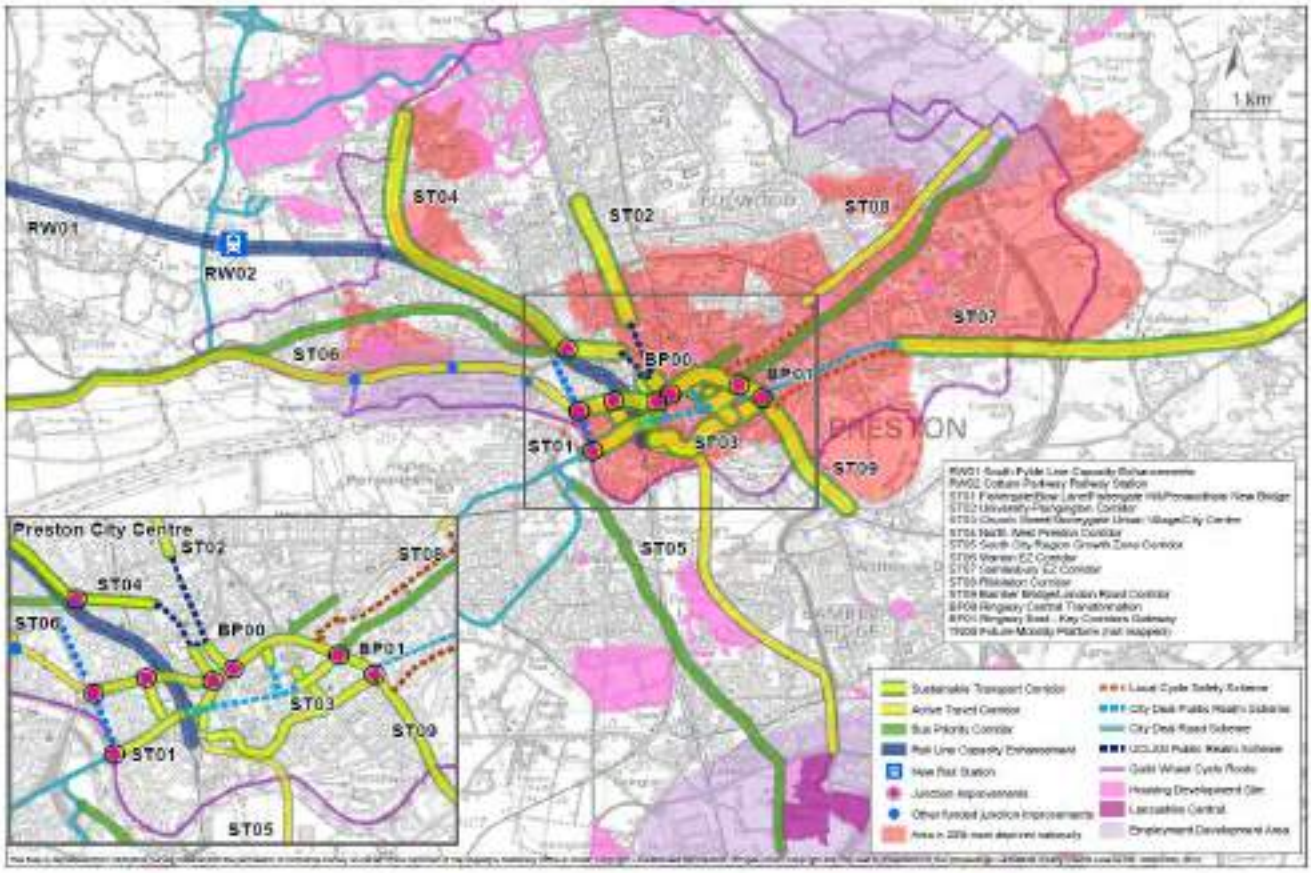


Figure 2-4: Locations of most deprived communities in Preston and TCF options

Preston Station Gateway and the High-Speed Rail Opportunity

The arrival of **HS2 Phase 1 and Phase 2b services** in Preston in 2026 and 2033 respectively will reinforce Preston's position as a strategic rail hub and the main access point in Lancashire to the High Speed rail network, providing higher speed and more frequent rail services to Manchester, Birmingham and London. The newly electrified Preston rail network has already enabled the recent introduction of brand new trains running on the lines between Cumbria and Manchester Airport. With the delivery of **Northern Powerhouse Rail**, this route will connect to high-speed services via Manchester and will better connect Preston to the rest of the Northern Powerhouse Economy.

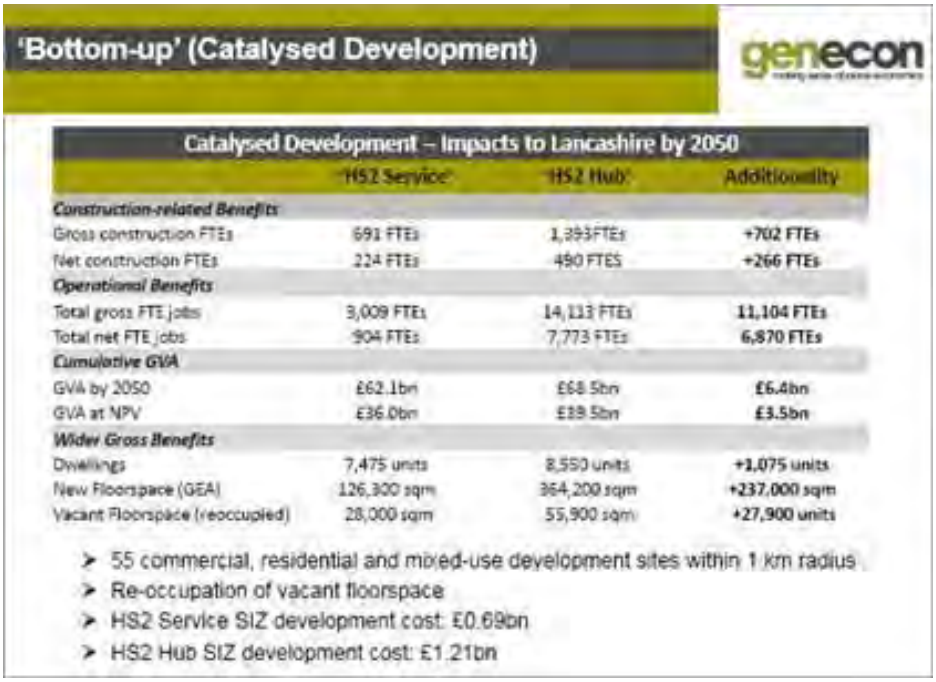
Lancashire Enterprise Partnership predict that productivity gains from the impact of HS2 services to the area could help provide an **extra £600m** for the region. A new Central Business District – the **Preston Station Gateway** – centred on Preston Station has the potential to deliver **8,550 dwellings and 364,200m^2 commercial floorspace** by 2050 through the HS2 opportunity and enhancing Preston City Centre's role as a regional hub.

This represents a fundamental growth and place-based opportunity to transform productivity in the City Region.

The benefits of the new quarter will begin to be felt in advance of HS2's arrival, as commitment to the scheme will give investors certainty of its arrival. To ensure that this can be accommodated, and to encourage the early investment that will deliver truly transformational growth, the first steps to a fully inclusive, sustainable access to the station gateway must be provided in advance as part of an integrated transport strategy.

The TCF programme provides the opportunity to deliver this early integrated transport provision through the delivery of integrated transport improvements to the City Centre, improved access to Preston Station by sustainable and active modes, and an enhanced cycle hub at Preston Station that will embed sustainable choices in accessing the station in advance of HS2's arrival.

The new quarter will allow the City to retain and attract key business, headquarters and government agencies and departments to realise growth opportunities that are intrinsically linked to the success of the City Centre. The new office quarter will provide the opportunity to create agglomerations where productivity is higher, competition more effective and innovation fostered.



Source: Preston Station HS2 Hub study, GENECON, 2019

2.4 Existing Issues

2.4.1 Strategic Transport Context

As Preston is a major employment hub, it acts as a **large net importer of labour** from Lancashire and elsewhere with a net inflow of around 23,000 commuting trips. Private car is the main method of commuting. The percentage of people driving to work by car (59%) and as a passenger (7%) is significantly larger than rail (1%), bus (11%) or walking and cycling (16%). These commuter movements take place in the context of a highway network that is reaching capacity in a number of places.

Preston also acts as Lancashire's strategic transport gateway and hub. On the road network, the city has two junctions on the M6 motorway and one on the M55. Preston railway station is a major stop on the West Coast Main Line, and has connecting services that run to the west to Blackpool, east to Leeds and York, south to London, and north to Lancaster, Barrow and Windermere.

Figure 2-5 below highlights the key strategic movements in Central Lancashire as identified in the Central Lancashire Highways and Transport Masterplan (CLTM). This demonstrates the extent of movements that pass-through Preston itself, and especially to its west where Cottam Parkway station is proposed, placing significant demand on the transport infrastructure. The continued effective operation of the transport networks is essential if the area is to remain competitive.

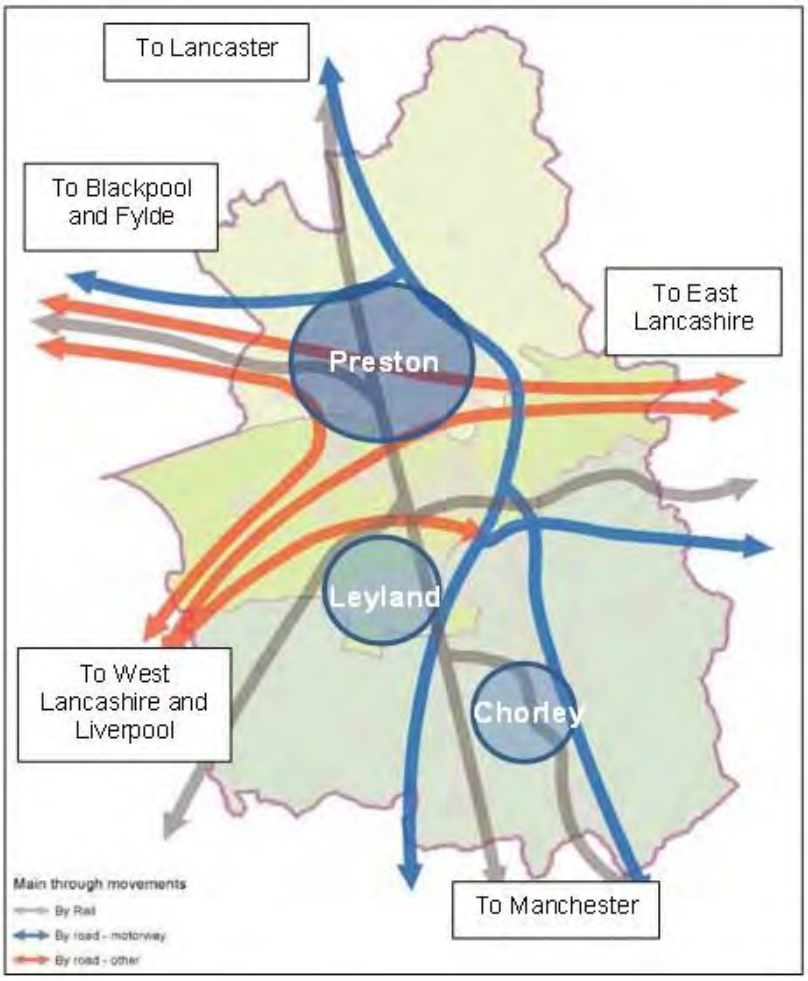


Figure 2-5: Key Flows Identified in the Central Lancashire Transport Masterplan

The limited capacity of the road network, together with the very high traffic demand, results in **significant traffic congestion** in and around Preston. Congestion is especially severe at peak commuting times, but these times are getting longer and spreading as more and more people change their travel arrangements to avoid the 'rush hour'.

Figure 2-6 highlights the congestion along key arterial routes during the morning peak using TrafficMaster data collected in November 2018. There are multiple locations along the key arterial routes where the average traffic speed is below 20mph. Access to the motorway network is also subject to significant queues and delays. There is significant congestion on A6, central Preston, and ringway as well as on (and at key junctions on/off) the Strategic Road Network.

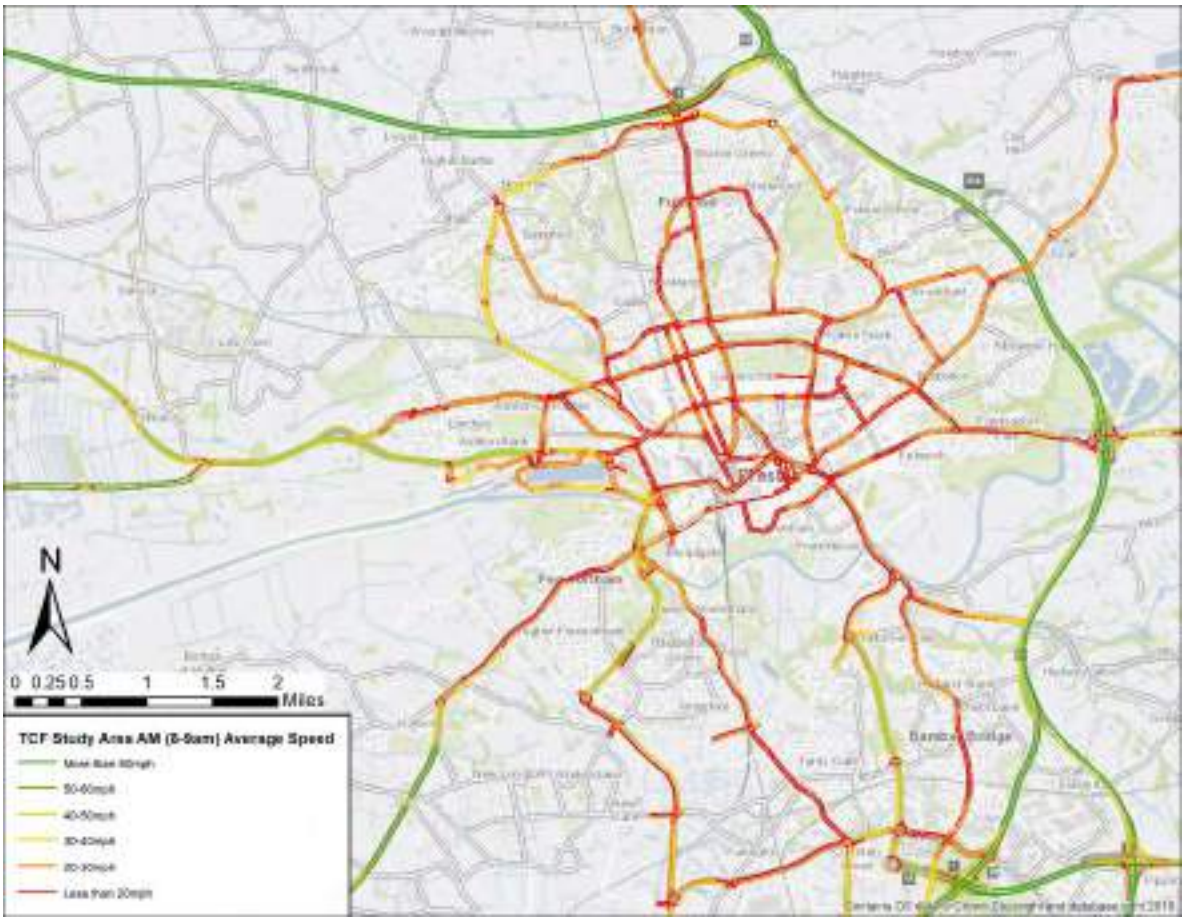


Figure 2-6: Traffic Speed Data in Morning Peak (Source, TrafficMaster 2018)

This congestion results in:

- Lengthy travel times by bus and poor bus service reliability.
- Poor quality walking and cycling opportunities, environments and as a result, low levels of usage of sustainable modes
- Poor public realm, poor perceptions of safety and high level of severance for active modes
- Limited accessibility and restricted job horizons, especially for those reliant upon public transport

- Reductions in the effective labour market of the City and key employment sites
- Losses to the economy through travel delays and constraints on business growth.
- Frustration to motorists.
- Worsening of local air quality, including at several identified Air Quality Management Areas.

Without intervention, the congestion and resultant constraints on the local economy are predicted to worsen over time.

2.4.2 Bus

Preston has a sizeable bus network connecting the City Centre to the wider urban area, suburban areas of the City Region in Preston and South Ribble and other nearby settlements in South Ribble and Fylde such as Leyland and Warton. In addition, inter-city buses operate to more distant destinations such as Chorley, Blackpool, Blackburn, Lancaster and Morecambe, Liverpool and Manchester. However, service frequencies on different routes and in different parts of the City Region are highly variable, with some services running every 10 minutes or more while other services have only hourly or less frequent provision, as shown in Figure 2-7 below. Services are presently dominated by two major operators, Preston Bus (a subsidiary of Rotala) and Stagecoach.

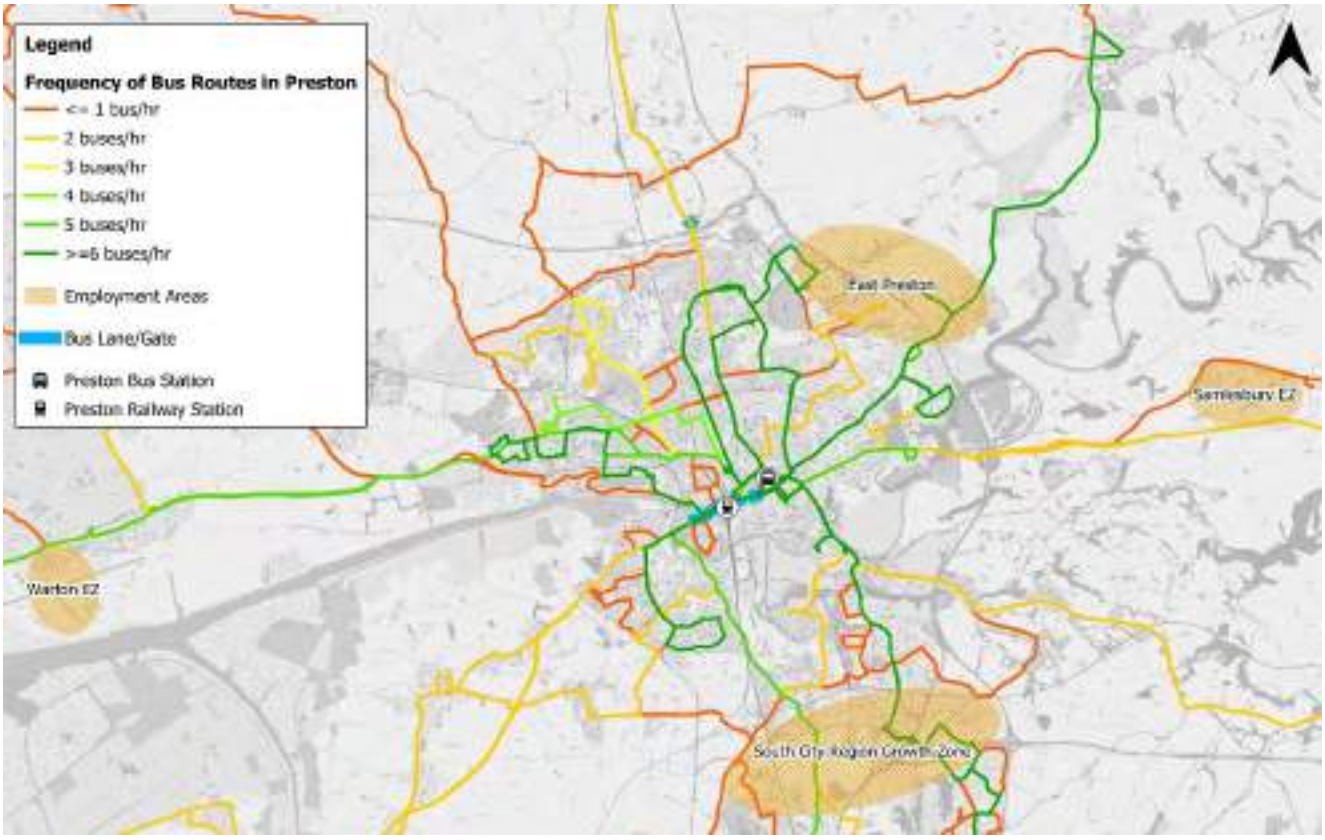


Figure 2-7: Bus routes and service frequencies in Preston City Region, bus priority infrastructure and key interchanges

The majority of buses in Preston run to, from or through Preston City Centre, to Preston Bus Station and Preston Rail Station, and must pass through significant congestion on Ringway and arterial routes and junctions approaching the City Centre where speeds are slowest. This significant congestion and its impact on buses can be seen in Figure 2-8 below.

Figure 2-8: Peak hour congestion on Ringway in central Preston

The majority of bus services begin or terminate at Preston Bus Station, with highest bus frequencies per hour on routes approaching the City Centre. The bus station recently underwent a £25m refurbishment funded through the Preston, South Ribble and Lancashire City Deal, restoring and conserving the 1969 Grade II listed brutalist building and adding a new information hub, rationalising retail units and adding enhanced public space outside the bus station by rationalising the bus stands to one side of the building.

Existing bus-priority and bus-advantage infrastructure in Preston City Region is **extremely limited**, with only a small number of bus lanes and bus gates in central Preston, primarily around Fishergate, and recently introduced. In the rest of the City Region, buses must share road space with private vehicles, and are affected by the same capacity constraints and congestion. The impact of this on buses in Preston is shown below in Figure 2-9 which shows the bus vehicle time lost due to congestion across the city.

The TCF programme interventions have been targeted at the areas of the bus network where the most delay occurs, particularly around Ringway and on routes approaching the City Centre, as shown below.

Figure 2-9: delays to buses due to congestion across the City Region in bus vehicle hours lost across an average weekday

The high levels of congestion, without priority, results in poor bus journey times and bus reliability, as well as increased running costs for the operators as additional vehicles and drivers have been required to maintain timetables on key routes during peak hours, which are in turn passed onto to passengers in the form of increased fares which further suppress patronage. These three issues were identified in the Begg Spiral of bus decline[1];

"1. Slower speeds leading to higher costs, higher fares, fewer passengers, service decline, fewer passengers.

2. Slower speeds leading to increased journey time, fewer passengers, service decline, fewer passengers.

3. Slower speeds, punctuality and reliability decline, fewer passengers, service decline, fewer passengers."

This impact is illustrated in research carried out by one of Preston's two main operators, Stagecoach[2], which demonstrated that a 10% decrease in operating speeds would result in a 5% - 5.6% fall in patronage, whether services were maintained with increasing costs passed on to customers or service frequencies reduced.

[1] The Impact of Congestion on Bus Passengers, Professor David Begg, Greener Journeys (2016)
[2] 'Congestion: Impact, Causation and Potential Mitigation' Stagecoach, February 2018

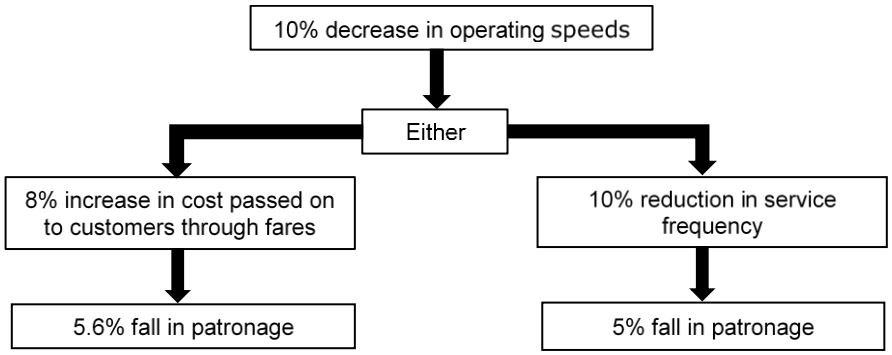


Figure 2-10: Impact of worsening congestion on bus patronage

The resultant decline in bus patronage in Lancashire is demonstrated in Figure 2-11, which shows an overall rise in total road traffic in Lancashire (in blue), compared to bus mileage reductions shown in red from DfT statistics.

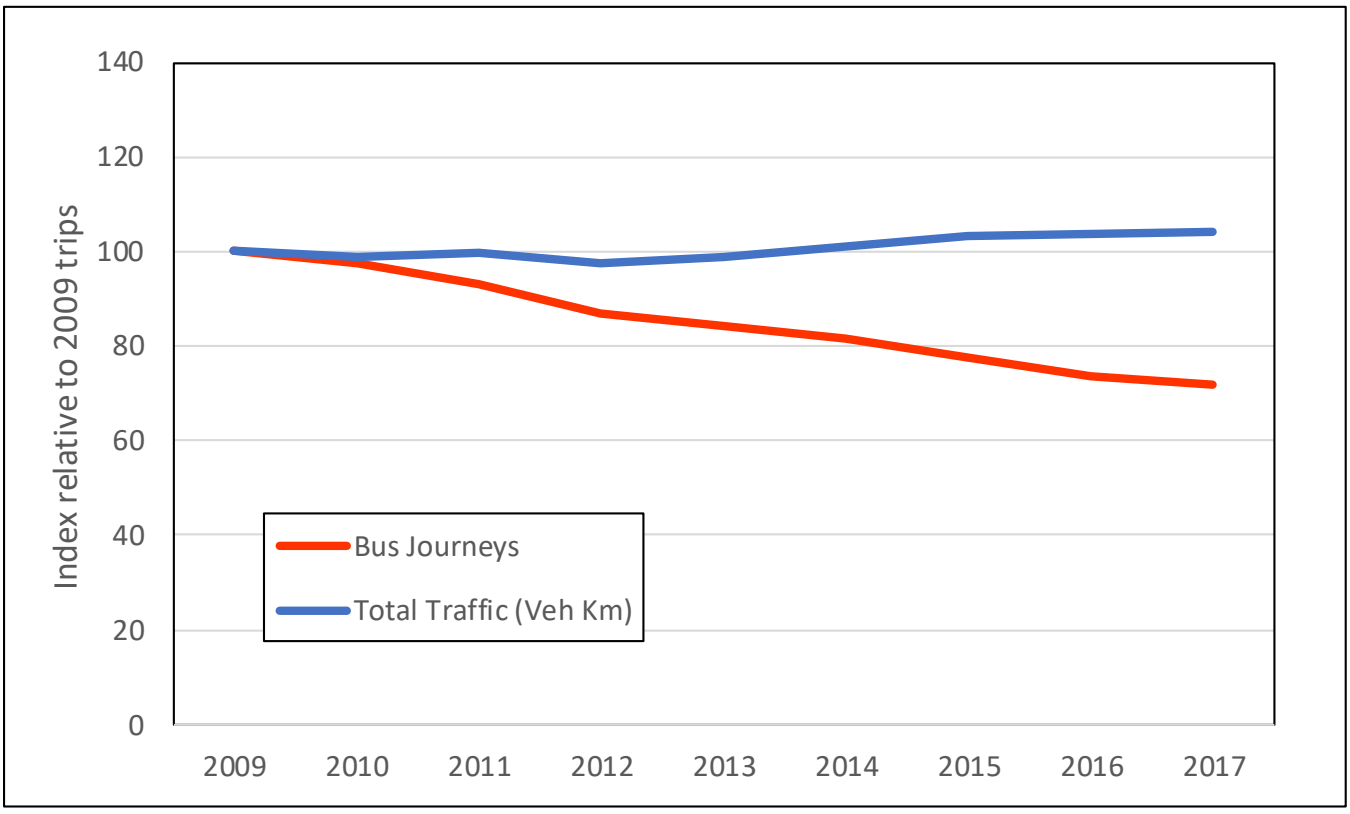


Figure 2-11: Decline in bus use in Lancashire (based on Lancashire-12 data from DfT)

This downwards spiral can be clearly seen in Preston's bus network, which has seen a number of withdrawals, curtailments and service frequency reductions in recent years. Three examples are highlighted below;

- Service 88A/88C Preston Orbit: the service started in 2006 with initial support through the Urban Bus Challenge, but continued as a commercial service linking residential areas, shopping zones and employment hubs outside the City Centre. Increasing congestion resulted in additional resources being required to maintain service frequencies, until in April 2016 the service became unsustainable and was withdrawn.

- Service 14 Preston – Holme Slack – (Longsands Lane): An extension of the 14 route to cover Longsands Lane Estate in north east Preston after the withdrawal of the 88A/88C Preston Orbit route, this service operated from April 2016 until 2018 when cost increases led to its curtailment. A less frequent non-commercial service was tendered by Lancashire County Council to maintain service to the Longsands Lane area.

- Service 4 Preston – Broughton – Whittingham – Longridge: This service was withdrawn in its entirety on 4th November 2019 due to severe congestion in North Preston. Lancashire County Council have stepped in to provide, on a tendered basis an alternative replacement service with support of developer funding.

2.4.3 Cycling and Walking

Echoing the decline in bus patronage outlined above, Preston has experienced historical falls in walking and cycling as motorised traffic has increased. The modal share of cycling in the 2011 Census was **1%**, showing a decrease from 2% in the 2001 Census.

Although the number of people walking is higher in Preston (16% in 2011 Census) there is still **substantial scope for growth** given **37% of journeys in Preston are under 2km**.

The *Lancashire Cycling and Walking Strategy* adopted by LCC in 2018[3] aims to double the number of people cycling and increase walking by 10% by 2028, with a key aim of 'creating a safe, high quality and joined up network for everyday travel'. In Preston, as in many areas of the UK, high levels of traffic result in people being reluctant to cycle with motorised traffic along key strategic corridors. Providing segregated and high quality routes will combat this issue, with the Sustrans Bike Life survey in 2018 reporting that 69% of people think more cycling would make their city a better place to live and work. Figure 2-12 shows the number of people cycling to work as recorded in the Census 2011.

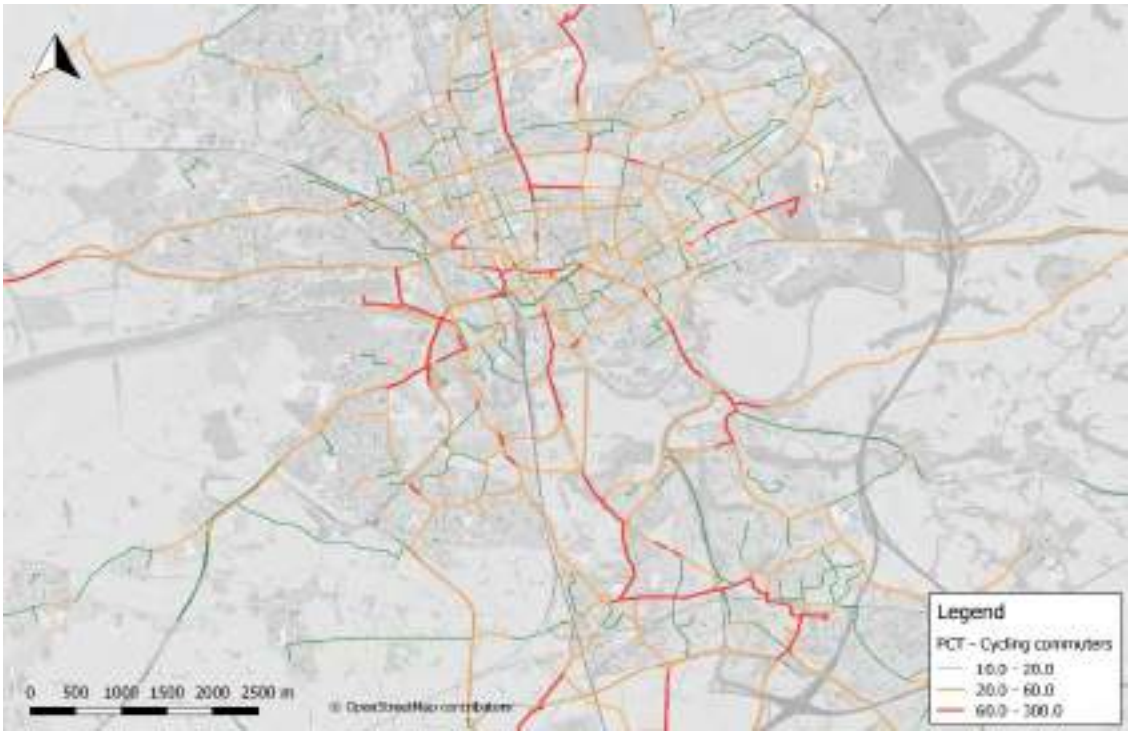


Figure 2-12 Number of people cycling to work - Census 2011. Propensity to Cycle Tool

[3] Actively Moving Forwards: Lancashire Cycling and Walking Strategy (2018)

It can be seen that most of the corridors with higher number of people currently cycling are included in the TCF corridor improvement proposals.

Recent investment in the cycle network of Preston has created the **Guild Wheel** cycle route which predominately provides an orbital leisure route around the edge of Preston.

The Guild Wheel route has proved popular for leisure journeys however most radial routes into Preston remain constrained by the issue of sharing congested road space with significant levels of traffic or not being suitable as a year-round route for commuting route due to lack of lighting.

The Preston Guild Wheel is a 21 mile "Greenway" that encircles the city of Preston, linking the city to the countryside. It is both a walking and cycling route, and **TCF investment in walking/cycling corridors will directly link into it on the radials around Preston to provide a transformed, accessible radial/ orbital network across Preston and its suburbs and communities through TCF investment.**

The Guild Wheel route is shown in Figure 2-13.

Figure 2-13 Guild Wheel route

The overall condition of the current cycling network, though, shows big gaps in the provision which significantly limit the number of people who are prepared to walk or cycle for their day-to-day needs. Some of the main corridors have either insufficient or entirely absent cycling and walking provision. This creates safety issues cyclists using these corridors must share road space with motorised vehicles. Pedestrians are either entirely excluded from these routes or forced to poor quality crossing facilities, creating significant severance. Figure 2-14 shows the current situation of some of the main corridors in Preston.

Figure 2-14 Current situation of some of the main road corridors in Preston

Walking and cycling access to Preston from suburban settlements in South Ribble is **highly dependent** on the twin bridge crossings of the River Ribble to Avenham and Miller Park. These crossings provide the only crossing of the river between the Riverside/Broadgate bridge and the A6 London Rd bridge, a distance of 2.7 miles, and are the most direct route to Preston City Centre from Lostock Hall, the Pickering's Farm strategic housing site and Lancashire Central strategic employment site.

The Old Tram Bridge was **closed to the public** in February 2019 due to fears of collapse. An engineering study commissioned by the county council, which identified over 200 structural defects, concluded that repairing the bridge was not viable[4]. As a result, the bridge has been closed permanently.

Figure 2-15: Old Tram Bridge in March 2015, left, and closure to public post-February 2019, right.

The Avenham Viaduct Bridge is privately owned and was opened as a public right of way through a section 39 agreement with the county council in 2010 for a period of 20 years. However, the bridge's owners have indicated that they are not able to sufficiently maintain the grade II listed structure. A staircase providing access

[4] https://www.bbc.co.uk/news/uk-england-lancashire-49370882

to the viaduct from the Guild Wheel route on the northern bank of the River Ribble has recently been closed due to collapse of the bank following subsidence, which has also damaged the path accessing the viaduct, and it is currently unclear whether this poses a risk to the viaduct structure itself.

Figure 2-16: Avenham Viaduct bridge, left, with damaged staircase and footpath posing risk to the structure, right

In the event that structural damage causes Avenham Viaduct Bridge to also be closed or the right-of-way was not renewed in 2030, significant areas of South Ribble will be effectively severed from Preston City Centre for walkers and cyclists. The significant length of the diversion routes, and the loss of connectivity to existing cycling and walking paths on both sides of the river including the Guild Wheel route, would act as a significant barrier to walking and cycling between South City Region Growth Area and central Preston.

The TCF programme will provide a new gateway crossing of the Ribble, for pedestrians and cyclistswith significantly improved Greenway routes connecting it to residential areas, creating a step change in the attractiveness of this crossing and preserving access to the City Centre.

2.4.4 Rail

The Preston City Region's main rail station is Preston Station. The station is served by the West Coast Main Line between London and Glasgow and offers inter-city rail services to other key cities including Birmingham, Manchester, Liverpool and Edinburgh.. In addition, Preston station acts as a regional rail hub and interchange, with lines to Leeds via Blackburn, Liverpool via Ormskirk and the Blackpool and the Fylde peninsula all connecting with the West Coast Main Line in Preston. In addition to Preston station and the North and South Fylde lines, a small number of suburban stations serve the south of the City Region at Leyland, Bamber Bridge and Lostock Hall. Figure 2-17 shows rail lines and stations in the Preston City Region.

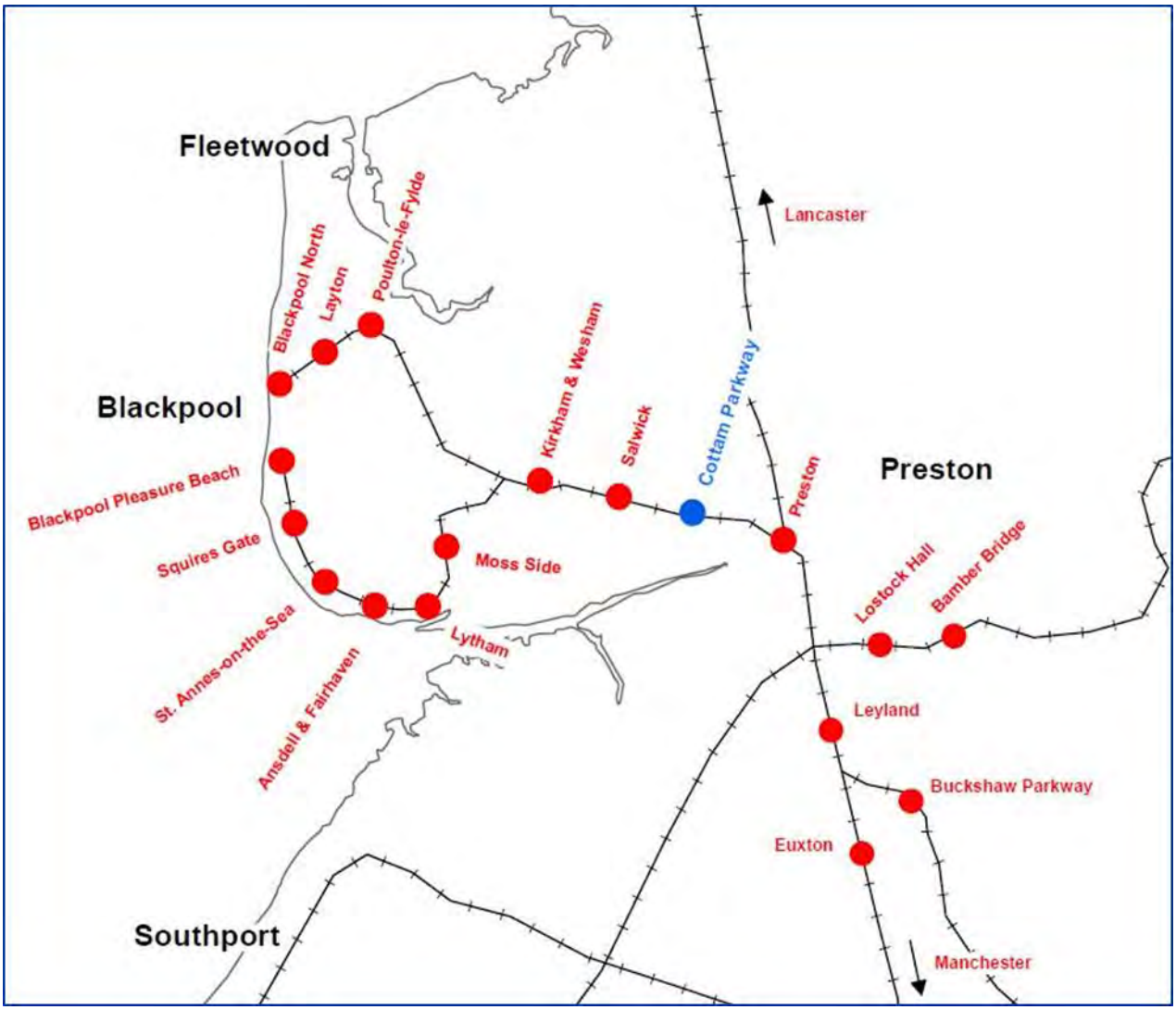


Figure 2-17: Railway network and stations in Preston City Region and the Fylde peninsula

Service patterns and times between Preston and key regional and national stations are summarised in Table 2-2. It can be seen that there are frequent services to Blackpool North/Poulton-le-Fylde, as well as Lancaster and Manchester. Notably services to Blackpool South (on the South Fylde line) are significantly less frequent than Blackpool North (on the North Fylde line) and have 68% greater journey time.

Table 2-2: Rail Service Patterns from Preston

From Preston to:	Journey Time (mins)	Frequency (trains per hour)
Blackpool North	22	4 tph#
Blackpool South	37	1 tph
Manchester Piccadilly	36 - 52	4 tph
Manchester Victoria	56	1 tph
London	2h 09mins – 3hr 16 mins	2 tph#
Lancaster	14	3/4 tph
Liverpool	50	1 tph

From Preston to:	Journey Time (mins)	Frequency (trains per hour)
Leeds	1h 49mins	1 tph
Kirkham & Wesham	9	3 tph
Poulton-le-Fylde	15 – 18	4 tph

additional 6 trains per day between Blackpool North and London via Preston by Virgin Trains (Open Access)

Existing rail demand is growing significantly. This has been assessed through the analysis of Office of Rail Regulation (ORR) data showing annual entry and exit figures for key stations within the study area.

Figure 2-18 shows the change in annual entry and exit flows for Preston station.

Figure 2-19 show the same information for subsidiary stations . It can be seen that, over the past 10 years, there has been a significant growth in the number of rail passenger journeys. This is particularly apparent in Preston, which has experienced an increase from 4 million passengers per year in 2009/10 to 5 million passengers per year in 2018/19, a 25% increase. Similar increases are seen as subsidiary stations across the City Region, while the **new Buckshaw Parkway station has seen a near fourfold increase in demand** since opening in 2011/12.

The decline in demand in 2017/18 reflects the state of performance of the Northern franchise resulting from electrification works disruption and late delivery rather than a longer-term demand trend.

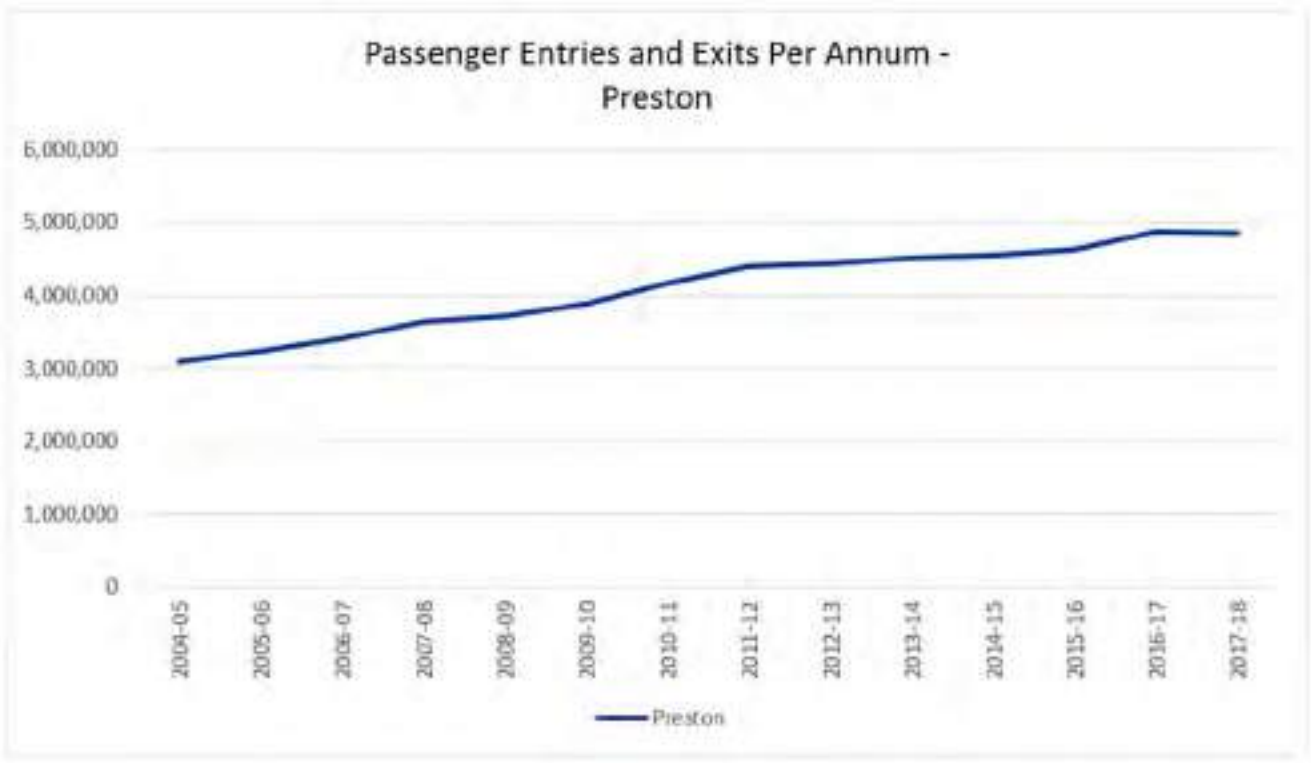


Figure 2-18: Graph of Passenger Entries and Exists Per Annum for Preston Station (ORR)

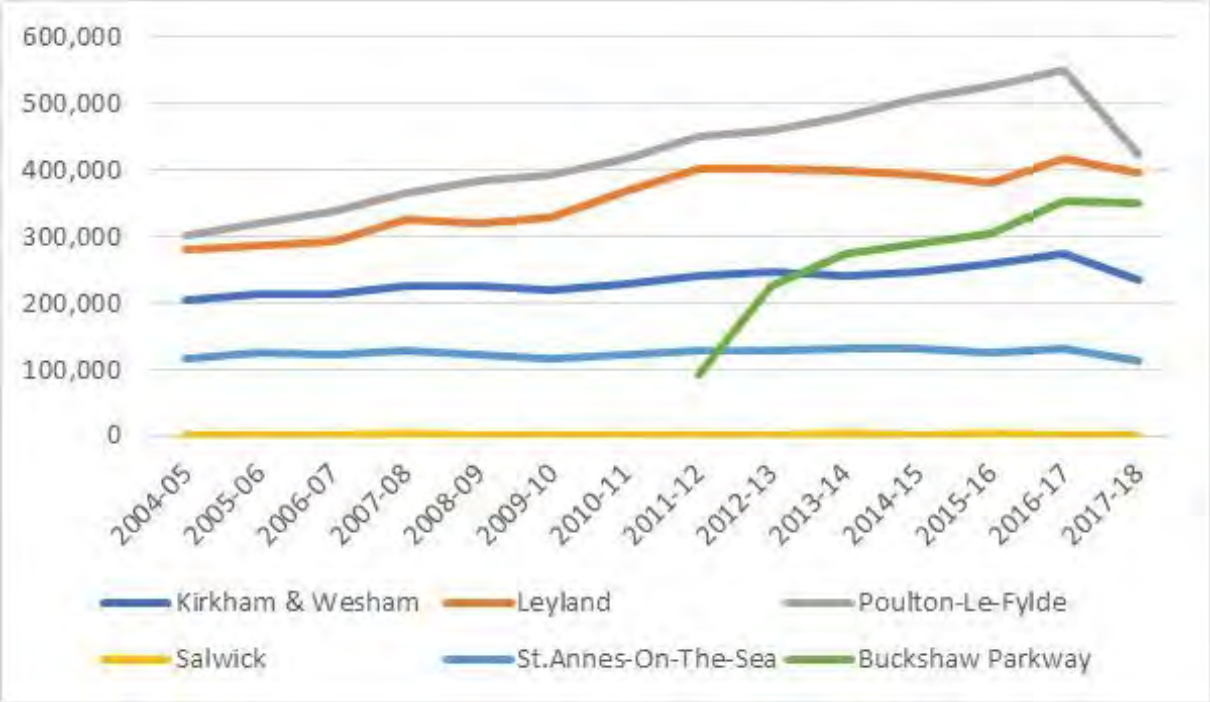


Figure 2-19: Graph of Passenger Entries and Exits per Annum for Subsidiary stations (ORR)

Analysis of patronage at Salwick and Kirkham & Wesham stations, the two stations closest Preston to the west, against average UK rail demand, based on local population characteristics and trip rates taken from the Passenger Demand Forecasting Handbook (PDFH v5) shows a significant difference in their relative levels of Patronage. At Salwick, which has only 3 direct services per day and two with a change to Preston, patronage is around half of UK average levels, while at Kirkham & Wesham which has 3 services per hour to Preston patronage slightly exceeds UK average.

This demonstrates the significant impact of higher service frequencies on the attractiveness of rail as a mode of travel for communities on the Fylde Peninsula- and which has been a key consideration in developing the TCF rail proposals.

Table 2-3: Application of PDFH Trip Rates to Population Data

Station	Population within 2km	Proportion of Population in work group			Forecast Annual Rail Journeys	Actual – Forecast Annual Rail Journeys
		Manual	Non-Manual	Inactive		
Kirkham & Wesham	11,011	45%	26%	29%	229.898	16,636
Salwick	1,849	48%	23%	29%	39,800	-37,578

Preston station is the most used station in the study area, and the closest station to the proposed **Cottam Parkway station.** A detailed assessment of the passengers using Preston was undertaken, based on the National Rail Travel Survey undertaken in 2005. Outside of an 800m walking distance of Preston station, the second most popular way (behind walking) to access Preston station was **by car.** For passengers from the North West of Preston – where Cottam Parkway would be located – this represented 30% of trips, including 20% who were dropped off by car and 10% who parked at or near to the station.

The journey origin of all passengers arriving at Preston station by car is shown in Figure 2-20. It shows that:

- Passengers travel from across Preston as well as from the surrounding area including Lytham, Blackpool and Kirkham.

- Despite a large number of local stations within the surrounding area, a significant number of passengers choose to drive to Preston, especially from near stations on the South Fylde line with low service frequencies.

- A significant number of passengers are driving to Preston Station from the west of the City Region, which contributing to worsening congestion in the City Centre which, as outlined above, negatively impacts bus and active travel users and limits the road space that can be reallocated to these modes.

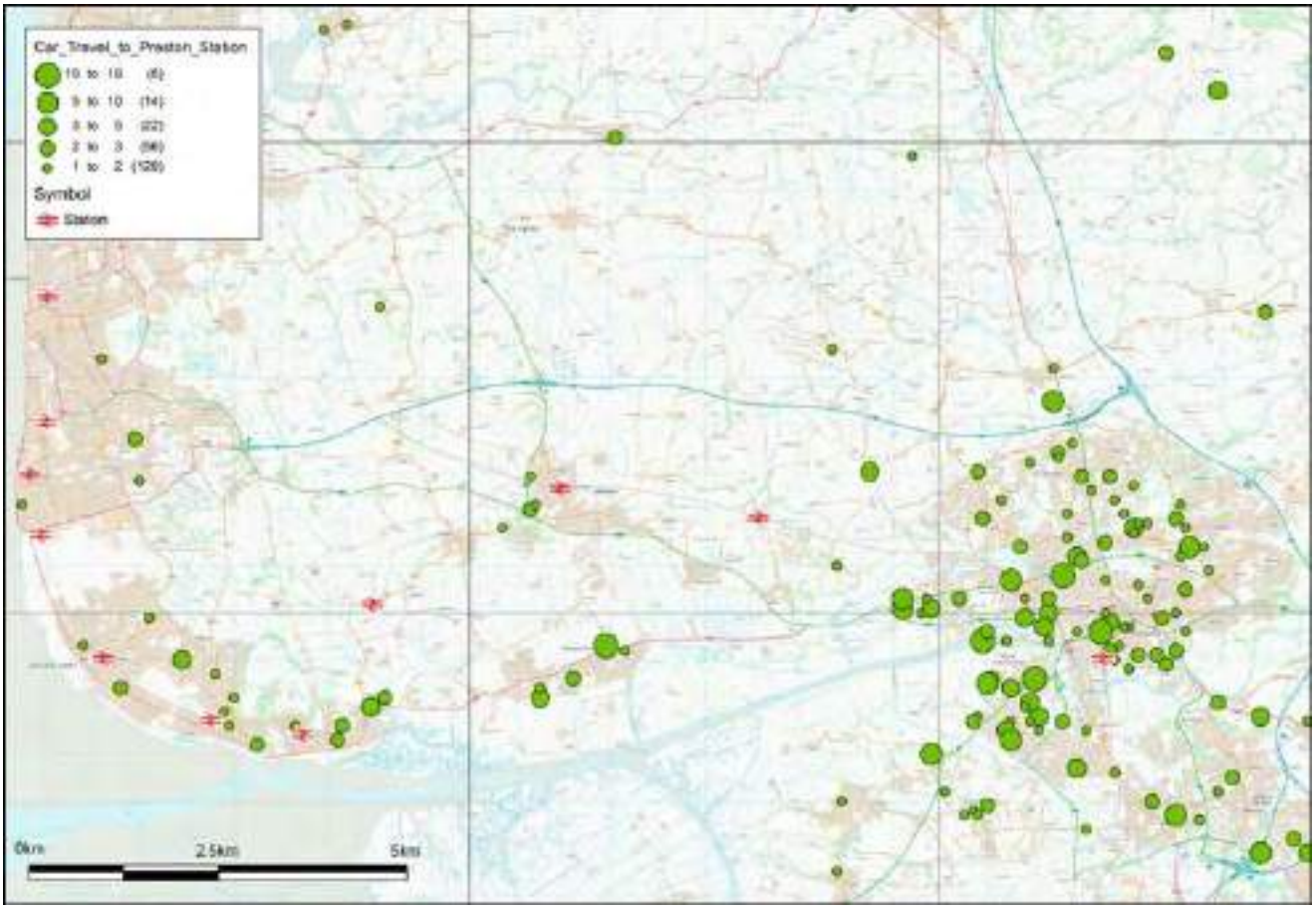


Figure 2-20: Journey origin of all passengers arriving at Preston Station by car

Significant growth of over **5.000 new homes** is **now on-site** for North West Preston as part of the City Deal, together with the Preston Western Distributor and Cottam Link Road under construction provide direct access to the site of the proposed Cottam Parkway Station, along with direct access to/from the station across the Fylde coast, making it an **effective parkway catchment** area for communities *right across* Fylde and Blackpool

In addition, the majority of those who might use the railway in Cottam's absence need to drive to Preston Station, thereby contributing to worsening congestion in Preston and around the City Centre; which demonstrates the **synergies of benefit** brought about by Cottam Parkway station delivery.

2.4.5 Technology

Preston has historically been an early adopter of technology to enhance the management of and improve capacity on its highway network. The City Region was one of the DfT's original demonstrator sites for the DfT's UTMC (29A) development project and a very early adopter of ITS and UTMC systems.

However, the existing Urban Traffic Management and Control (UTMC) has in many cases become obsolete and other systems are reaching their end of life. Since 2008, financial constraints have resulted in limitations on Lancashire County Council's ability to maintain and upgrade these systems to extend their life or replace them. This limits the opportunities for optimising the performance of the network in both maintaining the level of service reliability and supporting and promoting public transport and other modes including walking and cycling. The reduced performance also can contribute to **increased levels of emissions** and subsequent impacts on health along with the potential to impact on the economy of the area from a congested network with businesses seeking to locate outside the area and consumers shopping elsewhere.

A summary of the operational status of the systems is summarised in Table 2-4 below:

Table 2-4: Status of existing technology systems in Preston

Technology	Purpose	Integrity
Common Database (CDB)	To monitor, control and gather data from all connected traffic systems in the area.	Licence for the common database due for renewal at the end of 2019; system is currently not in use.
Bus Priority	Provide the ability to prioritise the movement of buses through the system to maintain timetabled services.	Early system using virtual loops has become obsolete and provision now by local loop detection.
Real Time Passenger Information	To provide up-to-date information on a particular asset or service, for example, buses, taxis, etc.	Early system has become obsolete and is no longer supported / used.
Variable Message Signs (VMS)	To provide a message to road users based on conditional factors such as presence, speed or hazard / warning.	Systems have become obsolete and are no longer maintained.
Traffic Signal Systems	To provide signalised control to the local area both for vehicular transport and pedestrians.	Variable age of controllers and associated functionality with a mix of SCOOT / MOVA control.
Journey Time Systems	Ability to validate and use data to understand the service level of the network and inform drivers.	Original systems have become obsolete and limited with current data being purchased externally. New isolated technologies being introduced.
Fault Monitoring / Fault Reporting Systems	Systems capable of monitoring, isolating, correcting (via operative intervention) and reporting of malfunctions on the traffic network.	Fault Management System now obsolete. Fault Reporting System – Online yet outdated and labour intensive due to siloed systems.
Communications (ADSL, Fibre, Wi-Fi)	To provide a wired / wireless data backhaul to either a common database or a central server to enable control of network assets and data acquisition.	Communications maintained to traffic signals.
IT	To help enable communication to and from the end assets along with upkeep of this network.	Currently operated by BT Lancashire Services (BTLS).
CCTV system	To provide general surveillance of the area.	CCTV is outdated but still operational. Systems are hosted by an external company (WCCTV) and are cloud based.
Traffic Counters	To provide vehicle use statistics on road networks.	Systems are hardwired and have been in place since early 1990s. No IP connectivity. Systems outdated.
Control Room Accommodation	Ability to provide accommodation to provide an environment that resources, can be brought together to maximise efficiencies and optimisation of operations.	Former Control room no longer retained with systems accessed in local general office accommodation. Little centralisation and control of systems.

Preston has an existing network of demand-responsive signal controlled junction across the city. Within the City Centre and around Ringway, a UTC/SCOOT system co-ordinates signal optimisation between a number of signalised junctions, while outside the City Centre junctions operate a VA/MOVA system with optimisation at an individual junction level. The locations of junctions operating these two systems is shown in Figure 2-21.

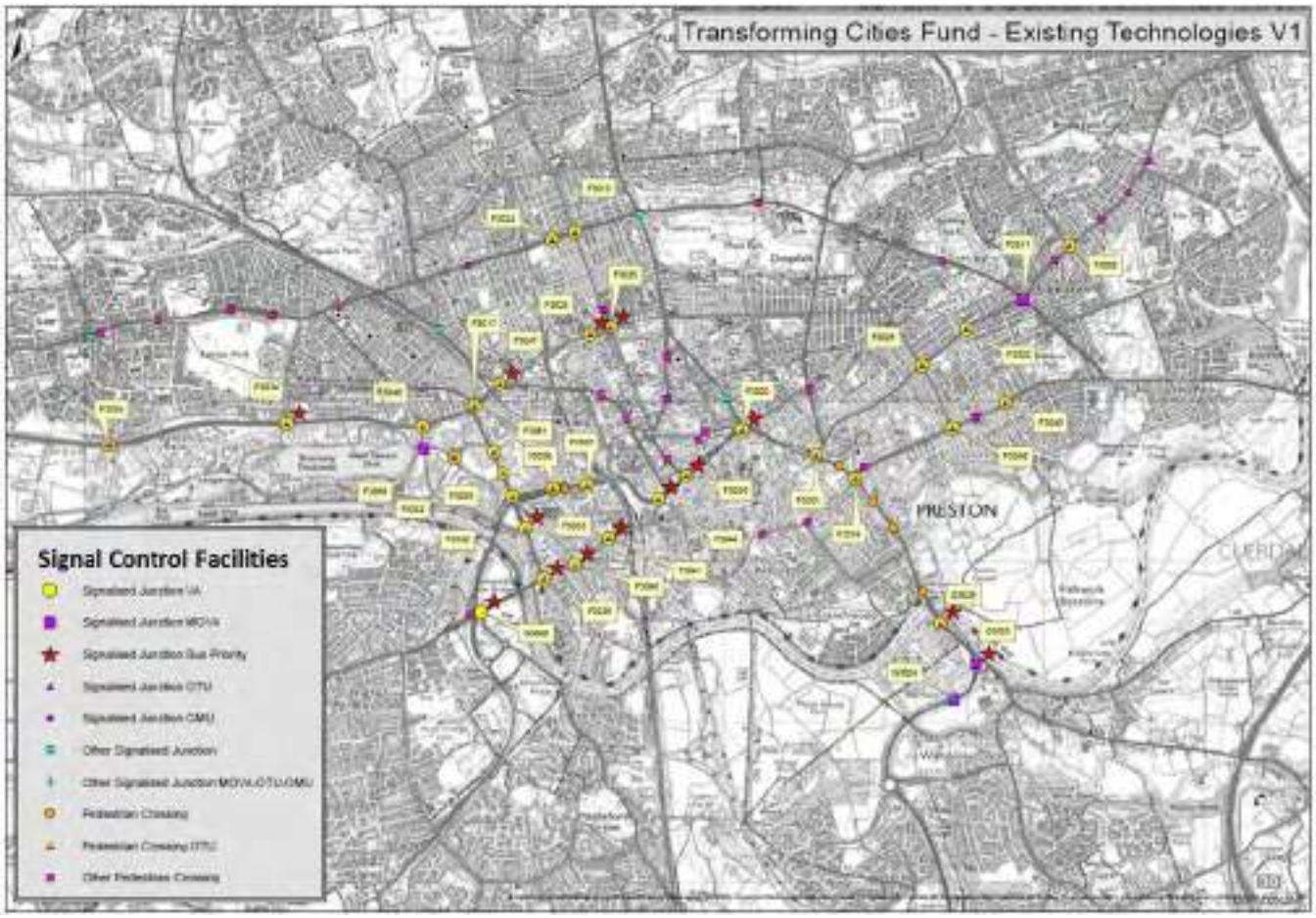


Figure 2-21: Locations of existing intelligent signal control facilities in Preston

There is an **under-utilised opportunity** for the application of new technology to maximise the benefits of both other infrastructure/options, and of wider market and regulatory changes affecting transport. For example, there is the opportunity to enhance signal coordination and effectiveness throughout the network to tackle known congestion hotspots .

Such technological development however cannot be achieved without significant investment and in the absence of such investment the existing network will continue to operate at capacity, and this will thus negatively impact upon wider development.

As such, it is evident there is significant potential for technology to support the development of both the public transport network, and the highway network, in order to create a high-tech, demand responsive system which is easy, affordable and attractive for its users.

This is not achievable under existing conditions which follow existing trends and technology, and there is therefore an essential requirement for significant investment into innovative technology and software development to bene fit all users.

2.5 The Need for Intervention

The City Region's transport network attempts to manage over 400,000 commutes a day. 75% of these are car-borne – **just 9%** utilise public transport. While the City Region hosts an integrated, high-value economy that attracts 35,000 additional workers a day, its principal economic corridors are poorly served by public transport. Severe road congestion around the City Centre constrains bus operators network-wide in terms of routes, service frequency, journey times and reliability, while the capacity of the local rail network offer limits the potential for rail to operate as a realistic alternative for car-borne commutes (station access and service frequency are the key identified constraints).

Given locally planned growth of 31,700 jobs and 18,700 homes for the next 15 years, sustaining the City-Region's economic success will require more accessible, more convenient travel options to connect workers to centres of employment. There is also an increasing need to focus on the City-Region's east-west connectivity, as 70% of future employment growth will be delivered along this axis. The current car-dominant approach has led to unacceptable levels of **air pollution** within the City Centre, with **AQMAs** declared along Ringway (A59) and adjacent roads and needs to be overcome to meet the de**carbonisation challenge** .

The City Region's future transport offer must overcome these issues and support Preston's growth potential. Improving sustainable travel options are an opportunity to better link the local working population with the widest possible number of jobs.

The preferred mode of commuting

Though many of the main locations within the City Region are connected by public transport routes, many point-to-point journeys are not perceived as commutable by workers. Given the (generalised) journey time of 60 minutes by rail between St Anne's and Preston, just 10% of local residents would be willing to make this commute[5]. By car however, the journey time is 37 minutes and 50% of local residents would be willing make this commute.

Even where journey times are shorter and the initial willingness to commute is higher, as between Lytham and Warton, commuting by car still has the stronger pull. This is despite, in both cases, the actual public transport journey time being equal to or shorter the car-borne time. This is due to service intervals.

Table 2-5 below provide a summary of journey time comparisons between public transport and car and a summary of willingness to commute improvements.

Table 2-5: Public Transport-Car Journey Comparison

	Journey time			Potential willingness to commute improvement (*percentage points*)	
	Public transport *(generalised)*	Car	Public transport (*actual*)		
Preston ↔ St Anne's	60 mins by rail	37 mins	30 mins by rail	10% → 50%	**+ 40%**
Preston ↔ Lytham	55 mins by rail	30 mins	25 mins by rail	16% → 70%	**+ 55%**
Preston ↔ Warton	45 mins by bus	20 mins	30 mins by bus	22% → 50%	**+ 28%**
Warton ↔ Lytham	20 mins by bus	9 mins	10 mins by bus	78% → 90%	**+ 12%**
Warton ↔ St Anne's	40 mins by bus	17 mins	30 mins by bus	30% → 60%	**+ 30%**

From the table above it is clear that improving service frequencies on the City Region's bus and rail routes has the potential to expand and intensify local labour markets by increasing the propensity to switch travel modes. It can also be seen that certain improvements offer larger potential payoffs than others. Saving 10 minutes between St Anne's and Warton induces three times the response as saving 10 minutes between Lytham

[5] South Fylde Rail Line Stage 2 Report, Jacobs.

and Warton. This is because commuters are highly sensitive to changes in journey times between ~24 and ~38 minutes[6].

Highway congestion and the delivery of local growth ambitions cannot be fully addressed unless public transport options function as a realistic alternative to car-borne commuting.

To do this, intervention through the Transforming Cities Fund is needed to enable competitive travel times that maximise the number of workers willing to commute to each key employment centre.

Service frequency in Preston City Region

Long service intervals drive the significant excess journey time experienced by public transport users. They are a key contributing factor to the relative inconvenience of a public transport journey, along with poor journey time reliability and limited route coverage. Service frequency is not independent of other factors, however, and the constraints of the City Region's road and rail networks lengthen generalised journey times by limiting the number of services operators can feasibly run.

The number and service frequency of the City Region's bus routes are significantly constrained by the City Centre's capacity to accommodate free flowing traffic. Access to the central bus station is poor due to the severity of congestion on A59 Ringway, with consequences for operators, and commuters.

Operators have indicated that present congestion issues constrain the services they are able to provide by increasing round trip time and peak vehicle requirements, resulting in service frequencies being curtailed. Even modest reductions in delays would result in a decrease in the vehicle requirements which could enable service frequencies to be increased, both on directly impacted services and other services through a redistribution of fleet vehicles.

Presently, the most poorly connected economic centre is Warton, where the EZ has the potential to provide 1,500 new jobs. Interventions that support additional bus services to Warton will improve access to job opportunities.

Bus Patronage – the case for change

Although buses represent a highly efficient use of road space, and they are still the most used public transport option for local journeys, their usage within Lancashire has been declining. The overall demand increases for travel are not being matched by demand for buses, and their use as a proportion of overall travel share is declining.

One of the largest barriers to reversing this pattern of declining patronage is congestion. According to *the Impact of Congestion on Bus Passengers (Begg, 2016)*, there is a clear trend in the increase of bus journey times with an average of 1% annually in congested urban conurbations in the UK.

To cite Begg (2016):

"Over the last 50 years, bus journey times have increased by almost 50% in the more congested urban areas. If we had protected bus passengers from the growth in congestion there would arguably be between 48% and 70% more fare paying bus passenger journeys today. If the trend is allowed to continue, then our urban buses will no longer represent a viable mode of transport for the majority of its customers and will be populated largely by people with mobility difficulties."

The **lack of bus priority measures** across the Preston City Region results in buses suffering the same delays as other road users. This leads to long journey times and poor journey time reliability on bus services. Bus operators have made the case that congestion levels impede their ability to operate a reliable service in the area[7], resulting in the need for more drivers and vehicles to maintain timetables, with associated increases in operating costs subsequently passed on to passengers through fare rises.

[6] ibid
[7] https://www.lep.co.uk/news/traffic-and-travel/is-lancashire-s-public-transport-up-to-the-job-1-8949377

Bus use has therefore become the option of last resort for many, rather than the first choice for all, though for some it continues to be the only realistic means. This situation needs to change if Preston is to meet its commitments to support economic development while also reducing carbon emissions, improving personal health and well-being, and providing affordable travel options in the future.

Sustaining Preston City-Region's economic success calls for more accessible and convenient travel options connecting workers to the City-Region's employment centres and beyond. This cannot be achieved through private transport alone. To sustain growth over the next 15 years Preston must create a new balance between car, public and active transport. A number of studies from the UK make the point that continued declines in bus patronage are not inevitable, and that with improvement buses can see significant demand increases in their performance.

Research by Greener Journeys highlights a number of examples of bus passenger growth in England; including:

- In Brighton, bus patronage has grown by 10% over the last decade (10m additional bus passengers), contributing to a 3% reduction in City Centre traffic;
- Kent Fastrack has seen passenger numbers up 50% on forecasts, with 20% of Fastrack passengers previously having used their car for the same journey;
- In York there has been a 10% growth in bus patronage over the 10 years to 2014, a 1.4m increase in passenger numbers.

A range of other UK examples also make the same case that local bus priority interventions can be transformational.

The case studies below show that whilst variable, schemes typically provide a demand uplift on the corridor of >10%, with higher values noted on individual corridors and/ or at certain points along the corridor given the local growth context.

The variability of these results places important emphasis on the monitoring and evaluation for the scheme as part of the Management Case, but taken together, demonstrates that such schemes are typically successful in meeting the objectives of encouraging additional bus usage, and in reducing traffic levels (even in the context of a rising background trend).

Leeds A65-Quality corridor	Quality Bus Corridor scheme between West Yorkshire Combined Authority and operators, completed in 2012. The corridor improvements included: - Bus lanes and bus priority - 17 New Buses - Increased frequencies and new shelters/RTPI	Farebox data shows an increase in inbound boardings of 12% on key services within the extent of the scheme. Morning boardings on service 33/33A have increased by 27% since completion of the scheme.
Manchester QBC Routes	Range of measures provided along QBC routes, including: - Priority to improve punctuality and journey times (17 miles of bus lane) - Bus stop reviews and upgrades - RTI where possible - Clearway restrictions at stops to prevent inconsiderate parking	Sample of QBC corridors shows an average of 8.9% growth in passenger numbers. This compares with a decline of 4% in bus passengers across the rest of the network. Manchester A6 corridor partnership

Derby Road-Nottingham	Measures included: - Bus stops with RTI - Bus lanes - Operator investment in route branding - smartcards and on-vehicle information systems. - Marketing and Personalised Travel Planning	19% increase in patronage on NCT services on Derby Road. 8% increase in Trent Barton services on Derby Road. A3 Corridor ZIP Bus Priority Corridor Project
A3 Corridor-Hampshire and Portsmouth	Package including: - 6.5km of bus lane - Bus priority - 65 stops improved - Bus stops RTI provided	4.7% increase in passengers on Route 41. New services along the route which offer a faster journey time have increased passengers using this corridor by over 18%.
Bristol	The measures included: - New bus lanes and priority - Customer service enhancements - Bus stop RTI - Improved shelters - Redesigned junctions and road widening	17.6% increase in patronage on FirstGroup services using the ten corridors between 2008/09 and 2013/14. The greatest increase was 52% on the Portishead-Bristol corridor. Increase in on-time buses from 73% to 80%.

Delivering inclusive growth through improved bus journeys

Bus travel is a **key driver of economic growth**, with bus users accounting for 1/3 of all City Centre spending in England[8], and is key for transport connectivity and access to skills and employment opportunities, particularly for residents of deprived areas who are disproportionately likely to lack access to a private car.

The TCF options, taken in their entirety, will create a step change in bus accessibility and provision in the City Region that will deliver improved journey times and reliability on all the key bus corridors in the City Region, with a particular focus on accessibility to the City Centre via Preston Bus Station and the Warton and Samlesbury Enterprise Zones and Lancashire Central Strategic Employment Site from deprived communities.

The TCF package will significantly improve access to Preston Bus station, which acts as a central hub for the bus network across the City Region with frequent services to a number of employment sites. Travel time savings and reliability enhancements will both make bus travel more attractive and reduce operating costs, preventing future fare rises or service reductions and even potentially allowing service frequencies to the most deprived communities to be increased.

[8] A better deal for bus users, DfT, September 2019

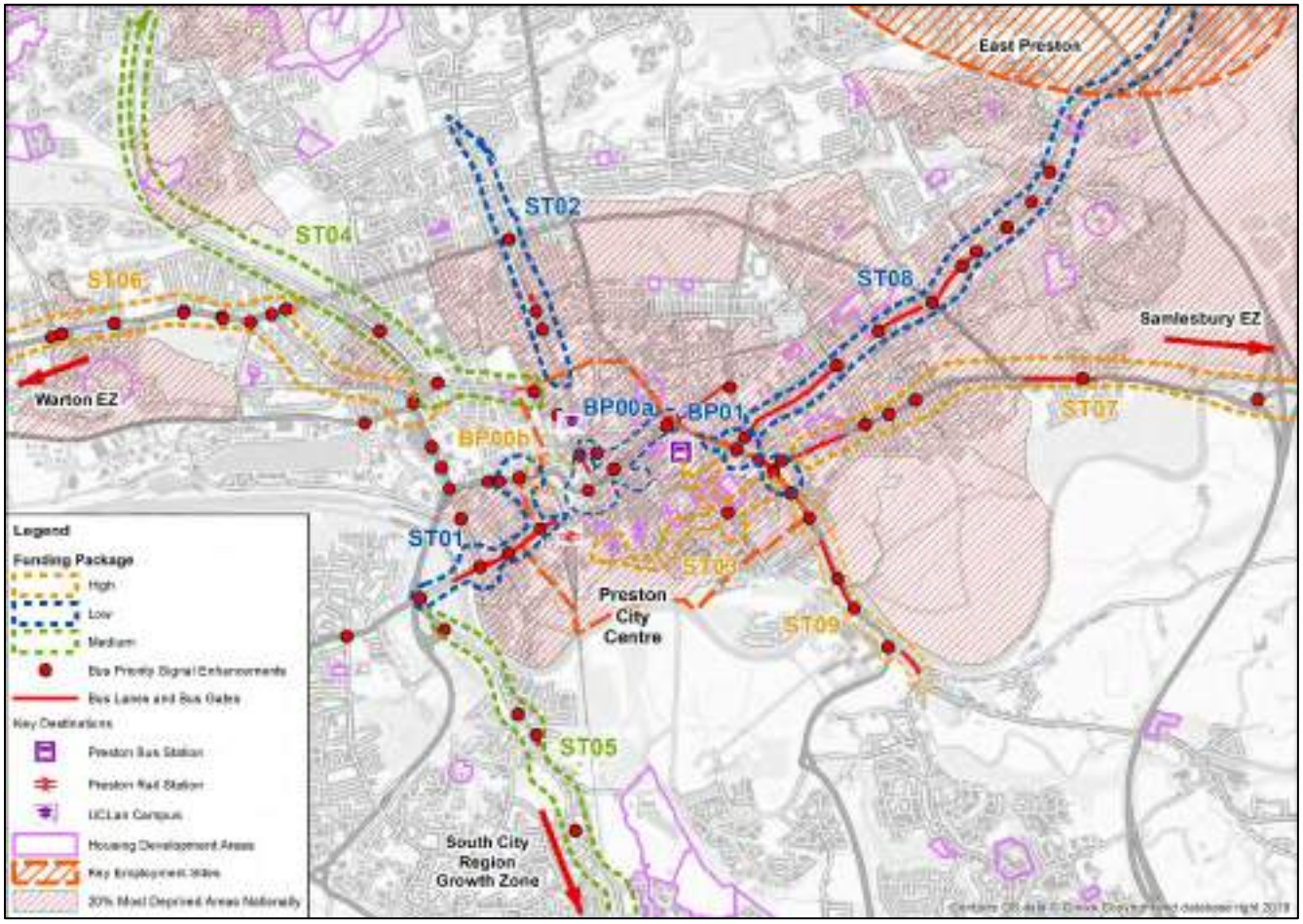


Figure 2-22: Bus priority provision through Preston TCF programme and connectivity with areas of high deprivation

In addition, **public realm** and **walking and cycling enhancements** in and around the City Centre delivered through both the TCF, ULCAN campus scheme and City Deal will enhance access to and from the bus stop for City Centre communities, and make key City Centre employers and skills and training opportunities easily accessible for bus users.

This improved connectivity will significantly reduce the **transport barriers** deprived communities face in accessing skills and employment opportunities. This will ensure that the benefits of economic growth delivered through the City Deal are more equitably distributed, particularly to deprived or vulnerable residents without access to cars. This in turn will help shift employment into higher-productivity sectors and as a result, raise the productivity of the City Region as a whole, attracting new employers and investment and delivering greater levels of growth than if opportunities to access higher paid and higher skilled jobs had remained restricted to those who already had car access.

Greater connectivity between employment hubs at Enterprise zones and the City Centre, as well as the UCLan campus, will also drive agglomeration benefits and increase levels of innovation in the City Region as a whole. This will be of significant benefit to key globally competitive hubs of Aerospace and Advanced Manufacturing in the City Region, resulting in greater development of the nationally significant and globally competitive industrial cluster in the City Region.

Achieving Sustainable Growth and Growth in Active Travel

The benefits of encouraging walking and cycling to be the natural choice for local journeys and leisure purposes in and around Preston are wide ranging and substantial. If it is safe, easy and convenient for people to walk or cycle to school, work, leisure destinations or to transport hubs, an uptake in the use of these sustainable transport modes will follow. Not only will this help create a healthier community and improve air quality, but also it will contribute to making Preston a better and more sustainable place to live with a thriving economy.

Walking and cycling is **intrinsically healthy** and not always just a method of getting from A to B. Walking and cycling for leisure can be an important pathway towards making more everyday trips to school, work or the shops. The Guild Wheel, a 21 mile circular route is one of the main cycling and walking routes in Preston covering Fulwood, Ribbleton and Lea. The route is mainly off-road and traffic free, that provides safe passage for all the family to use. Preston has lot to offer in terms of attractions and the growing walking and cycling tourism market can potentially bring additional income for local businesses.

There is increasing, and increasingly strong, evidence that walking and cycling can play a very significant role in optimising the contribution of transport to economic performance. In particular the five key areas where walking and cycling contribute towards economic performance are:

- **Keeping people and business moving** (reducing congestion): Current projections have suggested a cost to the economy of £11 billion a year due to congestion.

- **Supporting local businesses and high streets** (quality of life and retail vitality): Retail is a crucial sector of the UK economy and the contribution of sustainable transport to town and City Centre shopping areas is much greater than assumed[9] and so any investment would be more suitably focussed on improvements that support retailers.

- **Improving business efficiency** (reduced absenteeism as a result of a healthier and happier workforce): Reduced absenteeism has been linked directly to increased physical activity among employees, with the economic benefits of reduced presenteeism considered to be even greater. Here some statistics:

    - Workers that undertake physical activity take 27% fewer sick days[10].

    - Users of the cycle network, compared to the average worker, take approximately half the number of days off, resulting in a £13.7 billion annual boost to the British economy[11].

    - Actively promoting healthier travel options in the workplace has been shown to reduce absenteeism by up to 20%[12].

- **Direct job creation**: There is lots of evidence to show that continued reduction of car use through improving sustainable transport infrastructure provides a net increase in job creation. A study found that a transfer to sustainable transport in the UK results in a net employment increase as together bus, cycle and rail patronage increases employment more in the UK than is reduced by the impact on the motor industry[13].

- **Leisure and tourism and support for cycling industry**: Cycle tourism represents a growing and valuable tourist market, particularly in rural areas, and can provide new incentives for people to visit an area and help support local trade and businesses[14]. Long distance cycle routes, which are predominantly

[9] Sustrans (2013) Retail vitality report (unpublished).
[10] Pricewaterhouse Cooper (2008) Working towards wellness.
[11] Sustrans, 2013, Increasing business through sustainable travel.
[12] Promoting physical activity in the workplace (2008)
[13] Less Traffic, More Jobs: The Direct Employment Impacts of Developing a Sustainable Transport System in the UK, Friends of the Earth Ltd, 1997.
[14] Sustrans (1999), Cycle Tourism Information Pack, TT21

rural, can generate as much as £30 million per year to the local economy; enough to sustain over 600 full time equivalent jobs[15]

The package of cycling and walking route interventions included within the TCF submission represents a step change in the standard of active travel infrastructure in Preston.

They have been developed from a **Local Cycling and Walking Infrastructure Plan (LCWIP)** which has been produced for the Preston City Region (Appendix S.3). LCWIPs are a strategic approach to identifying walking and cycling improvements through creating a future walking and cycling network plan, prioritised programme of infrastructure improvements, and a strong evidence base to inform the recommended infrastructure improvements.

The Preston City Region LCWIP aims for high-quality infrastructure to achieve a transformational change in walking and cycling levels with the aim for walking and cycling becoming the natural choice of travel for everyday journeys.

The walking and cycling schemes which have been proposed as part of the package of interventions are **high quality 3rd generation designs**, which are accessible and attractive to new and existing pedestrians and cyclists. The concepts have been designed to overcoming the common barriers which limit the uptake of walking and cycling, including: safety concerns (both real and perceived), conflicts between pedestrian and cyclists resulting from shared paths, lack of coherence, and indirect routing.

The schemes will provide an **integrated, strategic cycle network** that links existing and new residential areas with key locations including Preston City Centre, Lancashire Central, University of Central Lancashire Campus and Preston Rail Station. Interventions include the provision of cycle tracks segregated from general traffic and pedestrians, crossing points and **CYCLOPS junction designs** that provide safe and convenient access across traffic routes, providing a high quality and attractive public realm, provision of street lighting and comprehensive route signage.

Key to delivering this high quality infrastructure will be **reallocation of highway space** along key east-west and north-south strategic corridors. Provision of highway capacity through distributor roads as part of the City Deal programme enables efficient movement of traffic around the city whilst enabling highways to be prioritised for sustainable modes along key strategic corridors into the City Centre.

Monitoring & Evaluation of Recent Schemes in Lancashire shows the following levels of uplift in cycling demand:

- SUSTRANS Connect2 Padiham scheme, where the percentage uplift in cycling was observed as **69%.**
- Guild Wheel circular route (Preston), where automatic counters have recorded an increase in daily counts of **129%** (over a 5-year period from 2009 to 2013).

Journey patterns within Preston are highly conductive to a major increase in cycling. Within the urban area of Preston **53%** of journeys to work are within 5km with relatively flat topography. In the case of the City Centre and Lancashire Central strategic employment areas, 50,000 residents live within 5km distance respectively, with new residential development to the north and south of Preston significantly adding to these numbers. The city hosts a major university campus, with experience elsewhere showing students to be early adopters of cycling given good infrastructure, thereby normalising cycling to encourage uptake from the wider population.

The Propensity to Cycle (PCT) tool shows 16.7% increases for the Go Dutch scenario for routes targeted within this package, however given the major increases in cycling seen from the provision of high quality segregated routes in Manchester and London it is considered demand **will exceed** the UK Government Target scenario in the PCT.

[15] Sustrans (2013) Sustrans Tourism report (unpublished)

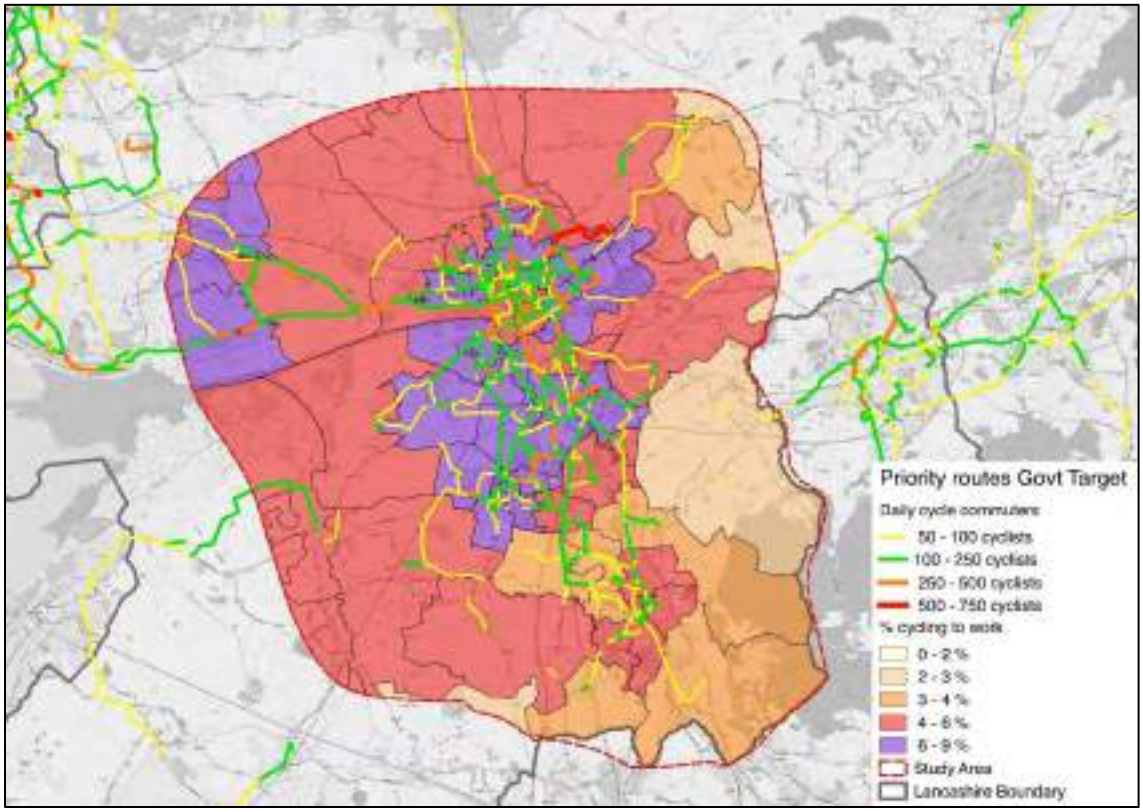


Figure 2-23 Mapping output from the Propensity to Cycle Tool overlaid on Census 2011 cycle modal share

Levels of walking in Preston are relatively low compared to that seen in other areas of England. The 2011 Census reported 16% of people walking to work, with significant scope to increase levels of walking with 37% of journeys to work within 2km. In terms of major destinations, approximately 10,000 people live within 2km of Preston City Centre and Lancashire Central.

Evidence from London as part of the Mini Holland programme shows that addressing severance from traffic and creating a more attractive public realm can significantly increase walking for everyday journeys. A recent study found people living in areas benefiting from improvements walk on average 32 minutes more on a weekly basis, representing an increase of 13%[16].

There is significant potential to increase levels cycling in Preston by delivering segregated cycle routes as part of a comprehensive network. In recent years, provision of these routes in other cities regions has led to significant increases in cycling for everyday journeys such as commuting. For example, in Manchester, investment through the Cycle City Ambition Grant programme has delivered a segregated cycle route along Oxford Road with 4,000 two-way cycle journeys each day recorded in June 2018.

[16] One-year findings from an evaluation of London's in-progress mini-Holland programme. https://www.sciencedirect.com/science/article/pii/S0965856417314866

A coherent city-wide cycle network

Preston has developed a network of cycling and walking routes in recent years with the opening of the **Guild Wheel,** which forms a complete circular route around the outskirts of the city. At its southern extent on the north bank of the Ribble, connections through Avenham park provide access close to the City Centre, and the Avenham Viaduct bridge across the Ribble provide walking access to residential areas south of the Ribble (although these routes are narrow and poorly lit and so are less attractive to cyclists). Additional walking and cycling provision to the south of the Ribble is being provided by City Deal infrastructure projects including an improved walking and cycling route across Penwortham Bridge and a new off-road walking and cycling route parallel to the A582 which will be delivered as part of the South Ribble Western Distributor.

In spite of these improvements, the active travel network in the Preston City Region remains poorly interconnected, with missing links both in the Lostock Hall area in South Ribble and no dedicated cycling provision joining the Guild Wheel to Preston rail station and the City Centre despite their close proximity. In addition, there is very limited provision between the Guild Wheel and City Centre on key arterial routes serving residential communities.

Figure 2-24: Preston TCF Active Travel investment in Preston City Centre

The TCF schemes will create a transformed level of access to the city and key employment sites by active means, providing high quality radial spur routes linking the Guild Wheel and other existing provision into the City Centre. SATCs ST04, ST05, ST06, ST07, ST08 and ST09 all connect both key employment sites and residential areas to the Guild Wheel and edge of the City Centre with radial routes. BP01, ST01 and ST03 create gateways between these routes and the core of the City Centre, with CYCLOPS junctions on all major access points and safe, segregated cycle routes into the Preston Rail Station cycle hub and Fishergate shopping area.

The **Transforming Ringway scheme** (BP00) will create the **missing cycle links** through the City Centre with provision eastbound along Ringway to complement the westbound route along Fishergate, and north-south routes along Friargate and Corporation Street to join the cycle hub and City Centre to the UCLan campus.

The combined effect of these schemes will be to create a **coherent and connected city-region wide cycle network**, providing safe segregated cycle routes from all parts of the City Region to the City Centre, cycle hub and all key employment sites. The CYCLOPS junctions will form key interchanges in this network, allowing users to transfer between different routes at their natural intersection points with high quality and safe dedicated cycle facilities. This will allow travel across the City Region by active modes to be a viable and attractive alternative to driving.

Figure 2-25: Preston TCF proposed city-wide cycle network and interactions with City Deal Active Travel Schemes

A connected, walkable City Centre

Preston's urban core has **high levels of severance** due to a dense road network of unattractive streets and **significant arterial traffic routes** including Ringway which **splits the City Centre**. In addition to the revitalisation of the historic public spaces in the city, including Avenham Park and Winckley Square, recent and forthcoming projects are delivering new public realm and civic squares across the City Centre. These include the under-construction Preston Bus Station public square, the recently completed Preston Market and the Preston Rail Station and Fishergate public realm scheme and the upcoming UCLAN campus masterplan and transformation of Adelphi Square. However, at present the significant severance of Friargate across Ringway and gaps in the urban fabric creates a series of disconnects between these areas.

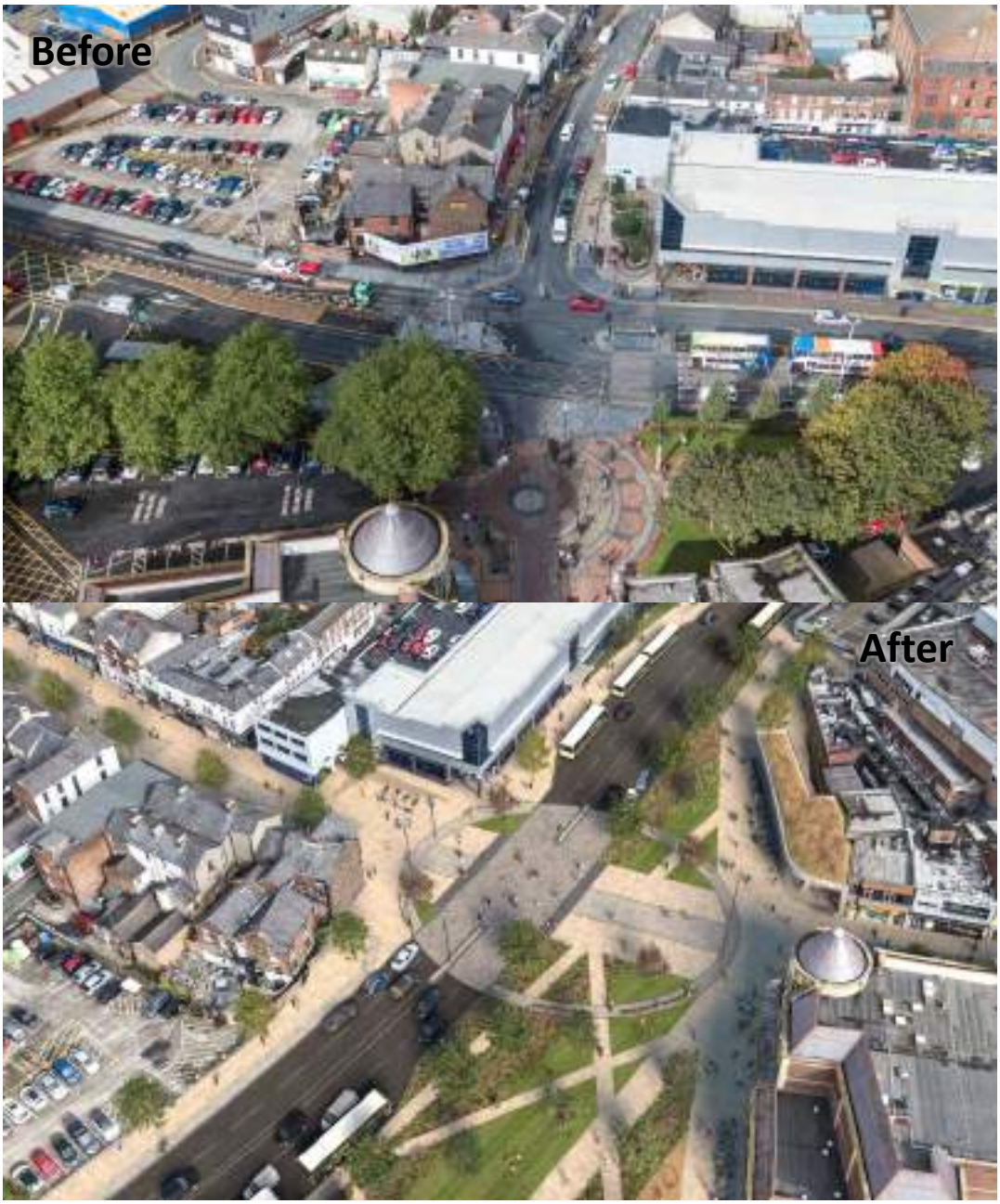
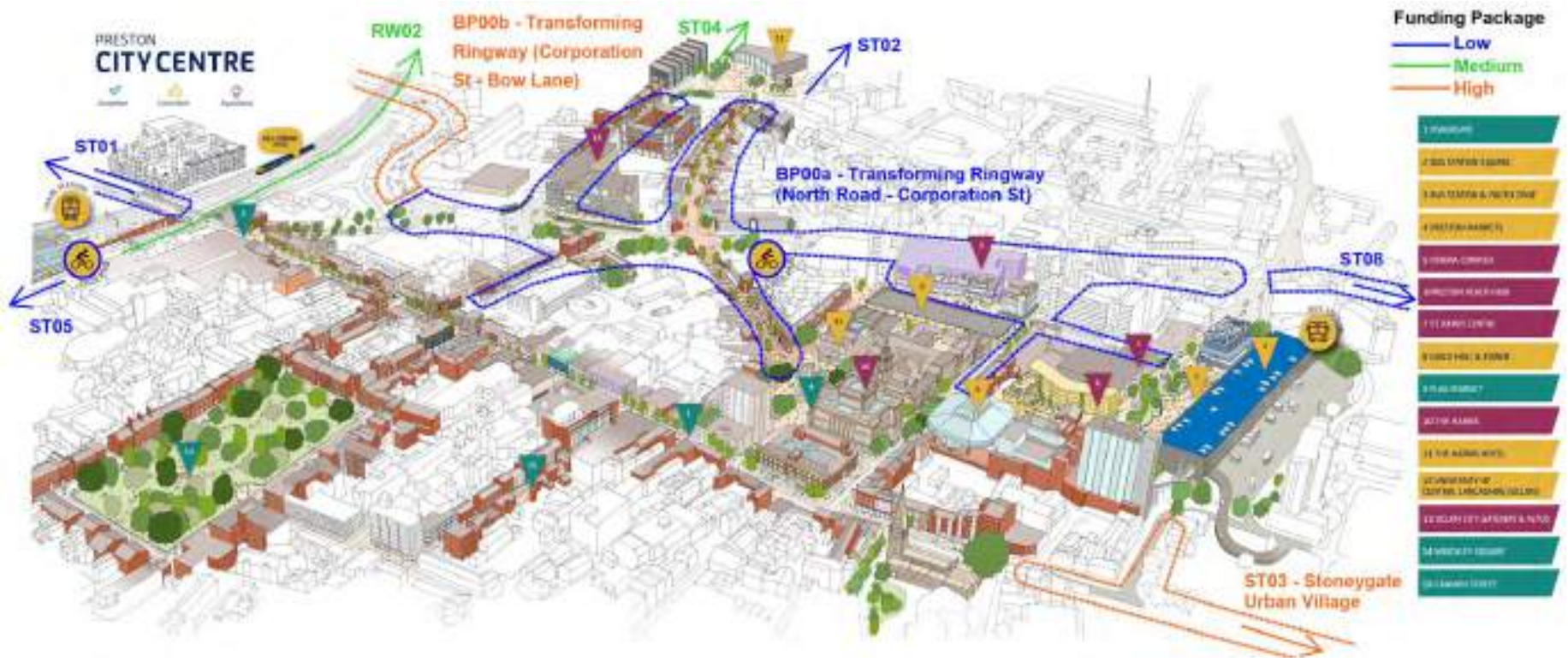


Figure 2-26: Junction of Ringway and Friargate at present (top) and after TCF transformation (bottom)

The Transforming Cities Fund Programme will deliver significant active mode improvements through the Transforming Ringway (BP00) and Stoneygate Urban Village (ST03) schemes which will **join up the City Centre** and extend high quality walking and cycling routes to the Stoneygate urban village regeneration area. **This will create a coherent and connected City Centre**, bounded by the West Coast Main Lineto the west, A6 Ringway and London Road to the East and connected to the UCLAN campus in the North that will be experienced by users as a coherent whole rather than as separate spaces. Consistency in the use of materials and design, as well as removal of traffic from Corporation St and Friargate, will create **attractive walking routes between** all the main public transport, civic, health and retail hubs in the City Centre.



The TCF proposals will transform permeability and connectivity across the City Centre for cyclists and buses while maintaining a pedestrian-friendly environment through demarcated space. Private car access to key destination points in the City Centre such as Preston Rail Station will be maintained, but the use of the City Centre as a through-route will be discouraged.

This will make walking the method of choice for getting around the City Centre, and public transport via either Preston Rail Station or Preston Bus Station the means of choice of accessing the City Centre for residents. Public transport users will be able to walk from the public transport hubs to all major destinations in the City Centre through a continuous high-quality public realm- **with TCF complementing other schemes in the City, and filling in the gaps, to give a connected, integrated network of active travel across the city- for the first time in its history**.

Extending the reach of the City Region through Rail

The future railway needs will be driven by ambitious plans to achieve a once-in-a-lifetime transformation of the area, as set out in the Central Lancashire Core Strategy (2012) and Preston Local Plan 2012-2026 (adopted 2015) and Blackpool and Fylde's Local Plans. **Thousands of new homes** are being delivered in all three districts within the catchment of Cottam Parkway station, including:

- North West Preston – on-site residential development of up to 5,300 dwellings.
- Cottam Hall and Former Brickworks – a 70ha residential development of up to 1,300 dwellings.
- Queensway, Lytham St Anne's – up to 922 dwellings
- Heyhouses Lane, St Anne's – up to 322 dwellings
- Foxhall Village, Blackpool – up to 410 dwellings

In addition, significant growth and development of Enterprise Zones is anticipated in the region, including;

- Warton Enterprise Zone (75 Ha of developable land)
- Blackpool Airport Enterprise Zone (20 Ha of developable land)
- Redevelopment of Blackpool Airport

These growth ambitions cannot be accommodated through highway investment alone, as roads in urban areas are already congested. There is additionally an imperative to expand the potential labour pool of the Enterprise Zones and local economy by better connecting to residential areas outside the existing urban cores, particularly in South Fylde. The south of Blackpool includes some of the most deprived communities in the UK, and extending opportunities to access jobs and skills to these areas is essential to realising ambitions for inclusive growth. This requires a public transport solution.

The locations of significant growth and infrastructure in the context of the Preston and Fylde peninsula rail network is shown in Figure 2-27 below.

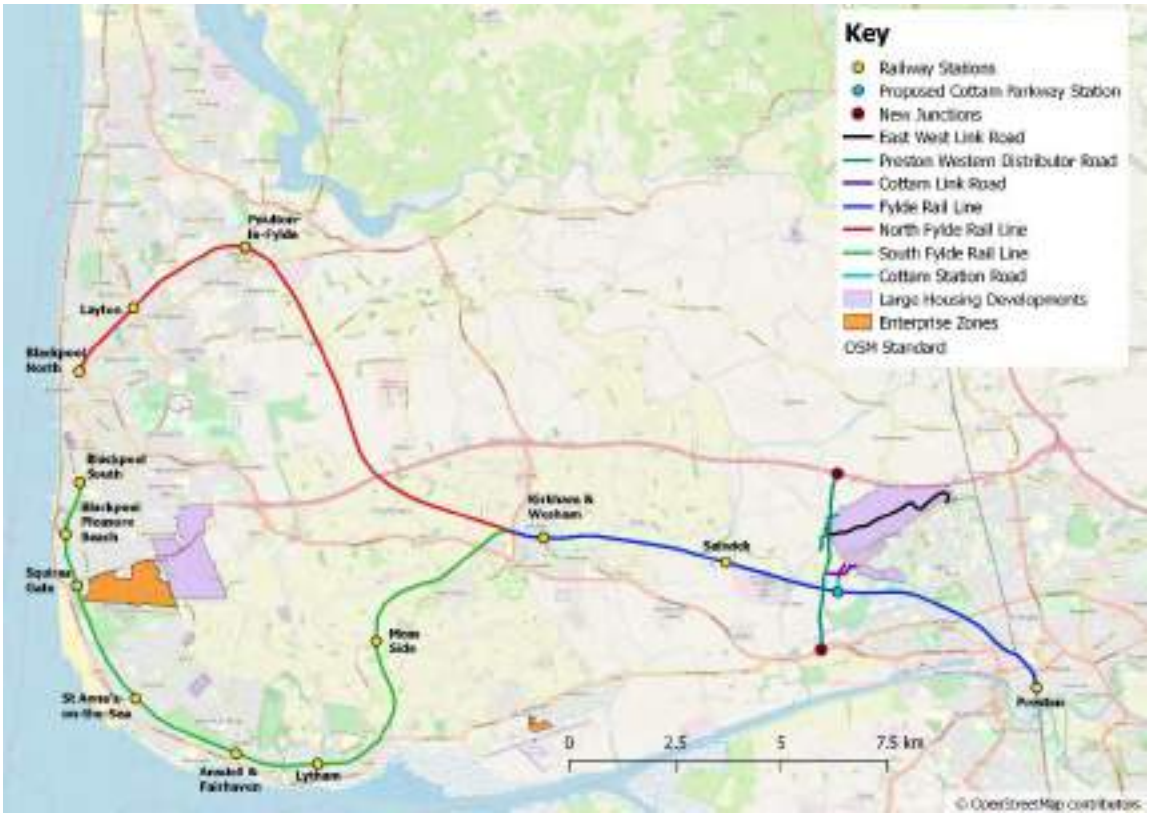


Figure 2-27: Location of major developments and infrastructure plans, including PWD, in relation to the proposed Cottam Parkway station, and North and South Fylde lines

Analysis of travel patterns to Preston Station has shown that residents from across the areas where these significant developments are proposed already drive to Preston station to access the rail network on account of poor service frequencies and unattractive travel times on the South Fylde line.

Without intervention, this railheading will worsen as many of the identified development sites will have poor or no local rail services. This will increase congestion on key corridors into Preston, and also result in significantly lower rail patronage than could be achieved with enhanced provision. Demand modelling has indicated that less than 10% of potential rail passengers from the North West Preston developments will actually choose to use rail without a local station at Cottam Parkway, due to the difficulty in accessing Preston station.

The provision of a Cottam Parkway station will not only directly serve the North West Preston developments, but will also act as a **Park and Ride** to the west of Preston. The Preston Western Distributor, East-West Link Road and Cottam Link Road on the west edge of Preston, are under construction and provide access to the proposed Cottam Parkway site from the M55 and A583, making it an attractive alternative access point to the rail network. With high frequency services to Preston, the station will abstract a significant number of users from the Fylde peninsula who currently railhead to Preston Station. This will reduce traffic levels and congestion in Preston City Centre, complimenting the mode shift aspirations of other schemes within the TCF programme.

Service frequencies of **3 or 4 trains per hour** will offer an attractive alternative access to both Preston City Centre and the wider rail network. Complimentary enhancements to the South Fylde line, which form part of LCC and Network Rail's aspirations for transforming rail provision on the Fylde Peninsula, could increase this to 4 trains per hour calling at Preston and two trains per hour to Blackpool Airport Enterprise Zone.

The delivery of Cottam Parkway station early in the North West Preston build-out phase will maximise opportunities to embed sustainable travel habits and patterns in new resident population, which is a reason why securing funding for the scheme through TCF is critical to maximising the benefits of the scheme.


BAZDOS

2.6 Impact of Not Progressing

The **Preston City Region** has a number of significant transport challenges, as outlined in the previous section, which act as a constraint on future economic growth, and its productivity; and prevent the uptake of sustainable and active travel choices in the City Region.

While significant ongoing investment in new highway capacity delivered through the City Deal will reduce congestion and associated issues in the short term, in the longer term the development being unlocked by the City Deal will result in this capacity being fully utilised and a return to present trends. Without timely intervention through TCF to create a step change in the transport fabric of the City Region, the present car-dominance, and associated challenges seen in Preston are expected to reassert themselves.

2.6.1 Locked in Car Dependency

Residents of the over 17,000 new homes and workers in the over 20,000 new jobs created through the City Deal will be presented with recently upgraded highway infrastructure but a lack of investment in and under-provision for sustainable and active travel options. As a result, they are likely to adopt car-dependant lifestyles which, once established, will become embedded and harder to change.

2.6.2 Worsening City Centre Congestion

Without intervention to reduce the dominance of private cars, the City Centre's highway network will continue to face increasing demand in excess of its capacity and congestion levels in the City Centre will continue to increase, with a worsening of associated reliability, severance, noise and air quality issues for those walking, cycling or on public transport.

2.6.3 Further Decline of Bus reliability and patronage

Bus patronage in Preston has been on a downward trend. This is at least significantly in part due to the impact of increasing congestion on bus reliability, which both increases journey times and operating costs, which are passed on to passenger through fare increases. As congestion worsens, especially on Ringway and around Preston Bus station where greatest current delays are noted, this trend will continue, with reliability worsening and patronage falling.

Without intervention to protect buses from increasing congestion, the increases in operating costs and decreases in patronage will make commercial services increasingly non-viable, resulting in either service reductions or calls on revenue support for uneconomic bus services.

2.6.4 Severance of the Ribble Crossings

Since the permanent closure of the Old Tram Bridge in February 2019 due to structural damage and risk of collapse, Avenham Viaduct Bridge has become the sole direct crossing of the River Ribble between Preston City Centre and the residential and employment areas in Lower Penwortham and Lostock Hall, including the Pickering's Farm strategic housing site and Lancashire Central strategic employment site.

Avenham Viaduct Bridge is privately owned and the right of way over the bridge is covered by a section 39 agreement due to expire in 2030. The structure and footpaths are also deteriorating, and this may force an early closure of the bridge. At this point, without intervention to replace the Old Tram Bridge, this crossing of the Ribble will be severed, cutting off a key arterial route for walking and cycling access to/ from the South City Region growth zone.

2.6.5 Constrained access to employment sites, limited job creation

Without intervention, future worsening traffic congestion, declines in bus reliability and the potential withdrawal of bus services will make accessing employment growth sites in the City Centre and Enterprise Zones more challenging, limiting the labour market catchment of both the City Region and individual sites and reducing the

distances workers are willing to travel to seek employment. This effect will be particularly severe for deprived communities where access to private cars is more limited and a greater proportion of residents rely on public transport to access employment opportunities.

Enterprise Zones at Warton and Samlesbury, as well as the Lancashire Central Strategic Employment Site, are already challenging to access by public transport, limiting the opportunity for vulnerable communities to make use of the job opportunities created at these sites. This will limit the labour pool employers are able to draw upon and constrain job creation and uptake in the globally competitive aerospace and advanced manufacturing clusters in the City Region, with negative consequences for productivity at a UK-wide level.

2.7 Programme Objectives

In light of the existing situation and need for the intervention set out above, the TCF package of options has been developed from this evidence base, underpinned by both a set of strategic objectives to adress them, and the key criteria for the Transforming Cities Fund investment pertaining to guidance.

The strategic objectives have therefore been defined as follows:

Strategic Objectives underpinning Preston City Region's Transforming Cities Fund bid:

1. ***To provide new infrastructure to support sustainable transport service improvements across the prioritised corridors.***

   (East / West Bus, North-East / South-West Bus, North / South Active travel, and East / West Rail)

2. ***To support access to the City Region's key employment centres and commercial development sites.***

   (Preston City Centre, Preston East, Lancashire Central Strategic Site and the Enterprise Zones)

3. ***To support the delivery of major residential sites.***

   (As identified across North West Preston, Preston City Centre, Pickering's Farm, Bamber Bridge and Leyland)

4. ***To deliver social and economic benefits to deprived communities.***

5. ***To improve the reliability and resilience of the public transport network, particularly within congested bus corridors.***

6. ***To increase the use of low carbon options and improve air quality.***

For TCF Investment, it is important to ensure that scheme objectives are integrated within national, regional and local policy, and Table 2-6 shows how the objectives achieve this, with a strong fit with plans for strategic growth. Further details on how the proposed options are in line with the policy framework is reported in Chapter 2.12.

Table 2-6 Policy Framework of TCF proposed options

Obj. 1	Obj. 1	Obj. 2	Obj. 3	Obj. 4	Obj. 5	Obj. 6
National Policy						
National Planning Policy Framework (February 2019)	✓	✓	✓	✓	✓	✓
DfT Cycling and Walking Investment Strategy, 2017	✓		✓	✓		✓
Transport Investment Strategy, July 2017		✓	✓			
Industrial Strategy White Paper, 2017	✓					✓

Housing White Paper, 2017			✓	✓		
DfT Clean Air Strategy, 2019	✓				✓	✓
Future of mobility: urban strategy, March 2019	✓			✓	✓	✓
The Bus Services Act 2017	✓	✓		✓	✓	✓
Sub-regional Policy						
TfN Strategic Transport Plan (2018)	✓	✓			✓	✓
Central Pennines Strategic Development Corridor Strategic Programme Outline Case		✓	✓			✓
TfN, draft Long Term Rail Strategy, January 2018	✓	✓	✓			✓
TfN, The Potential of Northern Powerhouse Rail (NPR), September 2019		✓	✓			✓
Local Policy						
Lancashire County Council Local Transport Plan 2011-2021		✓		✓	✓	✓
Central Lancashire Highways and Transport Masterplan (CLHTM) (March, 2013)		✓		✓	✓	
Central Lancashire Core Strategy (July 2012)	✓	✓	✓	✓		✓
Lancashire Strategic Economic Plan, 2014	✓	✓				
Preston, South Ribble and Lancashire City Deal, 2013	✓	✓	✓			
Lancashire Growth Deal Implementation Plan, 2018		✓	✓			
Preston City Centre Plan (June 2016)		✓	✓			✓
Preston City Transport Plan (October 2019)	✓	✓	✓	✓	✓	✓
Preston City Council declaration of a Climate Change Emergency (April 2019)	✓				✓	✓

In addition to their contribution to the overall TCF objectives, a number of specific objectives local to the Preston City Region are incorporated in the assessment of individual schemes (outlined in section 2.8.3) within the TCF programme to give 8 scheme-level objectives.

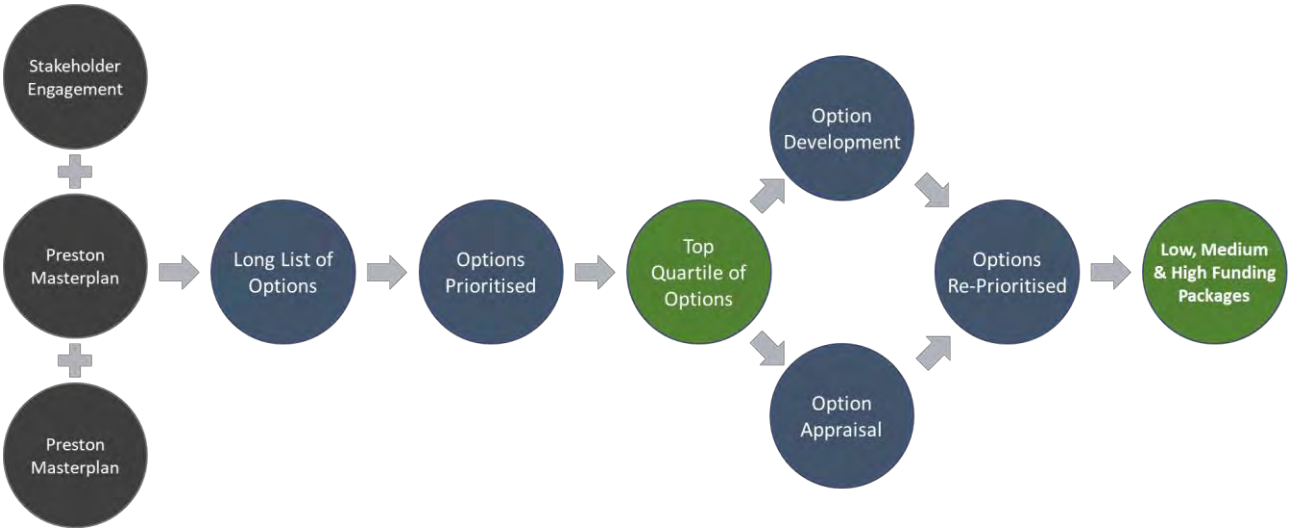
The scheme-level objectives are;

1) *Improve capacity for sustainable transport modes in key commuting corridors*
2) *Improve access to employment centres, Enterprise Zones and development sites*
3) *Improve reliability and resilience on the public transport network, particularly on congested bus corridors*
4) *Reduce carbon emissions through increased use of zero/low carbon and sustainable modes*
5) *Deliver wider social and economic benefits to the community (skills, apprenticeships, accessibility and social inclusion)*
6) *Support housing delivery at key housing delivery sites*
7) *Improve air quality (particularly NO2 compliance) in declared AQMAs*
8) *Align to Future of Mobility Grand Challenge by being robust against a range of futures*

2.8 Options Development

2.8.1 Introduction

A flow diagram, shown below, has been produced to illustrate the key stages involved in determining which options have ultimately ended up forming the focus of the Preston TCF bid and their packaging. Each of the key stages is subsequently summarised below.



2.8.2 Option Identification

The Option Identification process started from the evidence base and problems and issues defined above, and drew on evidence from a number of sources including:

- **Stakeholder Engagement** – this was primarily with Lancashire County Council and Preston City Council Officers, Network Rail and bus operators who are aware of the current problems and issues facing the City Region and consequently have ideas on potential solutions. Responses to past public consultation on the City Deal schemes also informed this element.

- **Preston Masterplan** – drawing on evidence and findings from the adopted 'City Centre Plan', the new 'Preston City Transport Plan' and other local policy documents (shown in Table 2-6) and recent work investigating the potential impact that HS2 may have on Preston station and the wider City Region.

- **Local Walking & Cycling Infrastructure Plan (LCWIP)** – a recent study which investigated potential Walking & Cycling improvement schemes in Central Lancashire (document available upon request).

Options were identified across the City Region and across all modes relevant to TCF guidance and funding criteria through a series of workshops. This led to the strategic prioritisation of a number of corridors across the City Region, shown in Figure 2-28, as identified at Expression of Interest Stage to link City Region growth areas with high-density clusters of working-age residents, and a long-list of potential options to improve connectivity by sustainable means along them.

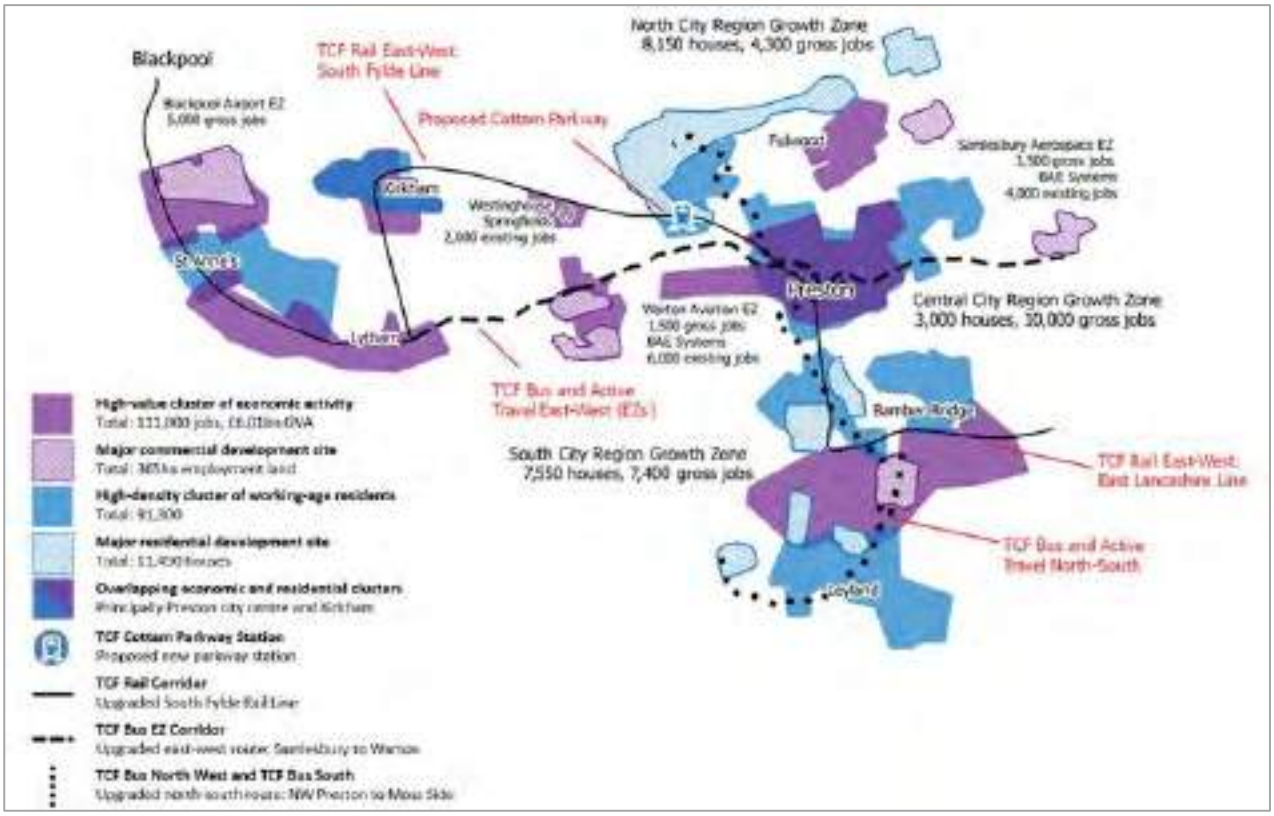


Figure 2-28: Prioritised Corridors linking Growth Areas with concentrations of working-age residents across the City Region

The option identification process ultimately resulted in the development of an evidence based **'long list' of options**, which was then subject to an evidence and objective-led **option prioritisation exercise**. The 'long list' of options is shown in Table 2-7 below.

Table 2-7: Original Long List of options considered for the TCF Programme

	Ref	Option	Corridor
INTERVENTIONS	RW01	South Fylde Line Capacity Enhancement	Rail EW
	RW02	Cottam Parkway railway station	Rail EW
	RW03	Midge Hall railway station	Rail NS
	RW04	Kirkham railway station car parking	Rail EW
	RW05	Buckshaw Parkway station car parking and cycle facilities/storage	Rail NS
	RW06	Leyland station car parking and cycle facilities/storage	Rail NS
	RW07	Bamber Bridge & Lostock Hall station improvements, incl. cycle facili	Rail EW
	BP01	A6/A59 Ringway Enhancements (junctions)	Bus EW
	BP02	Bus priority (traffic signal control): Warton EZ corridor	Bus EW
	BP03	Bus priority (traffic signal control): Samlesbury EZ corridor	Bus EW
	BP04	Bus priority corridor - Fishergate / Fishergate Hill & Penwortham Ne	Bus NE/SW
	BP05	Traffic restrictions - Friargate & wider city centre public realm (Uclan	Active NS
	BP06	Sustainable transport corridor – Friargate-University-Plungington	Active NS
	BP07	Sustainable transport corridor - Church Street to the city centre / Sto	Bus EW
	BP08	Bus priority (traffic signal control): NW Preston corridor	Active NS
	BP09	Bus priority (traffic signal control): Lancashire Central corridor	Active NS
	BP10	Bus priority (traffic signal control): Broughton corridor	Active NS
	BP11	Bus priority with enhanced traffic signal control: Bamber Bridge corr	Active NS
	BP12	Bus priority with enhanced traffic signal control: Penwortham corrid	Bus NE/SW
	BP13	Bus priority (traffic signal control): Ribbleton corridor	Bus NE/SW
	BP14	Bus lane camera enforcement	FMP
	OB01	Development of bus interchange/hubs at key locations (railways sta	Network
	OB02	Improved infrastructure to create a sense of ownership and civic pri	Network
	OB03	Development of Community Transport	Network
	OB04	Market engagement through Transport Focus and consistent marketi	Revenue
	OB05a	Grants to bus operators to retrofit vehicles to Euro 5 or better	Network
	OB05b	Grant to establish trailblazer electric bus fleet	Bus NE/SW
	OB06	Development of cross-city links with fast bus corridors	Revenue
	OB07	Use of powers in Bus Services Act 2017 to develop an Advanced Qual	Revenue
	OB08	Young person's travel scheme	Revenue
	OB09	Audio-visual information display on buses	Network
	CW01	Cycle link Kirkham railway station to Warton Enterprise Zone	Bus EW
	CW02	Cycle link Cottam Parkway railway station to Warton Enterprise Zone	Bus EW
	CW03	Cycle link Lostock Hall railway station to Lancashire Central	Active NS
	CW04	Cycle link Bamber Bridge railway station to Lancashire Central	Active NS
	CW05	Cycle 'super highway' link Warton Enterprise Zone to Preston city ce	Bus EW
	CW06	Cycle 'super highway' link Samlesbury Enterprise Zone to Preston cit	Bus EW
	CW07	Cycle 'super highway' link NW Preston to city centre	Active NS
	CW08	Cycle 'super highway' along Fishergate Hill in conjunction with BP04	Bus NE/SW
	CW09a/b	Replacement of Old Tram Bridge across River Ribble	Active NS
	CW10	Bike hire scheme at railway stations, including cycle facilities/storag	Network
	CW11	Upgrade cycle link between Capitol Centre Park & Ride and Ribble B	Active NS
	CW12	Cycle link Leyland Loop to Lancashire Business Park	Active NS
	CW13	Cycle link Buckshaw Village to Leyland	Active NS
	CW14	Cycle link Wesham to Preston city centre in conjunction with CW07	Bus EW
	CW15	Cycle 'super highway link' Bamber Bridge to Preston city centre	Active NS
	CW16	Cycle 'super highway' link Bamber Bridge to Samlesbury Enterprise Z	Bus EW
	CW17	Cycle 'super highway' link Leyland to Preston city centre	Active NS
	CW18	Cycle 'super highway' link Hutton/Penwortham to Preston	Bus NE/SW
	CW19	Cycle 'super highway' link Grimsargh to Preston city centre	Bus NE/SW
	CW20	Cycle 'super highway' link Broughton to Preston city centre	Active NS
	CW21	Cycle link Leyland railway station to Lancashire Central	Active NS
	CW22	Cycle 'super highway' link Lancashire Central to Bamber Bridge / Lost	Active NS
	CW23	Improved cycling / walking routes through Preston city centre betwe	Network
	TN01	SCOOT/MOVA upgrades and introduction of Aimsun Live	FMP
	TN02	Potential use of drone technology in network management	FMP
	TN03	Use of Bus Open Data for traffic management and bus priority	FMP
	TN04	Real time information in key locations and along bus priority corrido	FMP
	TN05	Inter-operable smart ticketing and contactless	Network
	TN06	E-ink bus stop information, integrated into shelters	FMP
	TN07	Installation of electric vehicle charging points and similar zero carbo	Network
	BP00	Transformation of Ringway	Bus EW
	BPP&R	Network of park and ride locations	Network

During development of the option designs, the prioritised options were combined, primarily through the combination of prioritised active travel and bus corridors into **Sustainable & Active Travel Corridors** (SATCs). This resulted in some components being split out into separate new options where the design evolution made this a better fit with the overall programme objectives.

During this development, options were strengthened to maximise their strategic impact on the core TCF objectives of driving modal shift, improving accessibility and increasing productivity, even where this would result in a lower value for money scheme than a more conservative approach.

2.8.3 Option Prioritisation

The option prioritisation exercise was subsequently undertaken on all of the options in the 'long list', using a **multi-criteria assessment tool** which is consistent with the principles of the DfT's EAST tool, but specifically updated to ensure alignment with TCF objectives.

This enabled each option in the long list to be individually assessed against:

a) the objectives of the Transforming Cities Fund; and

b) local objectives for the Preston City Region.

Appendix S.4 contains an extract from the option prioritisation tool, whilst also showing all of the options in the 'long list' and the results of the option prioritisation exercise.

The option assessment process was undertaken by a panel of Council Officers from a variety of backgrounds to ensure impartiality. The results were subsequently scrutinised in a separate challenge session to ensure accuracy and consistency.

The option prioritisation process resulted in the options being grouped into quartiles based on the score they achieved., with the options scoring in the highest quartile forming the basis for Draft SOBC options shortlist. The shortlist options were sorted into three funding packages as part of the development of the Draft SOBC as outlined in Table 2-8 below. In addition, the South Fylde Line Capacity Enhancements option was included in the shortlist on account of its significant potential strategic impact on expanding the labour market of the City Region.

Table 2-8: Options considered in funding scenarios at Draft SOBC stage in June 2019

Scenario	Description
High	Includes all options in the top scoring quartile (i.e. scoring 16 or above).
	Includes the Transformation of Ringway option (BP00) and the Network of P&R sites option (BPP&R). Consequently, the Ringway junction enhancements option (BP01) is **excluded**.
	Subject to further work, the South Fylde Line Capacity Enhancement option may also be **included** if shown to be deliverable .
Medium	Includes all options in the top scoring quartile (i.e. scoring 16 or above).
	Excludes the Transformation of Ringway option (BP00) and the Network of P&R sites option (BPP&R). Consequently, the Ringway junction enhancements option (BP01) is **included**.
	Subject to further work, the South Fylde Line Capacity Enhancement option may also be **included** if shown to be deliverable .
Low	Includes all options in the top scoring quartile (i.e. scoring 17 or above).
	Excludes the Transformation of Ringway option (BP00) and the Network of P&R sites option (BPP&R). Consequently, the Ringway junction enhancements option (BP01) is **included**.
	Excludes the South Fylde Line Capacity Enhancement option.

Shortlisted options were subjected to further development optioneering, including incorporating the options into Sustainable & Active Travel Corridors, with some shortlisted options being merged into a single corridor and other split across multiple corridors. As part of this exercise, some long-list options which previously did not make the shortlist were re-introduced where they showed a strong synergy with the prioritised elements of the corridors, filled in gaps or missing links and helped provide complete provision along the corridor. In addition, based on re-evaluation of the outcomes of the development, including re-evaluation of the feasibility and deliverability criteria, and feedback from the DfT on the Draft SOBC, a number of options were eliminated.

The option development process has focused on maximising the transformative strategic impact of the programme on transport, mode choice and accessibility in Preston, even where this would result in a lower value for money outcome than a less impactful option for those modes being specifically targeted by TCF investment.

This has included ensuring bus lanes extend as close to junctions as possible to maximise bus benefits, prioritising high-quality segregated and off-road cycle provision over on-road provision, and providing transformative walking and cycling CYCLOPS junctions and public realm changes that include the complete removal of traffic.

As mentioned by DfT during the co-development process, this is particularly important to note in consideration of the Preston TCF package in the Economic Case, and the transformative design principles for bus and active mode users that have been maintained.

At the conclusion of this development process, the remaining shortlisted options were re-subjected to the same option assessment and prioritisation process and their scores recalculated.

Newly available information from GPS bus tracking, shown in Figure 2-9, drew attention to the importance of Ringway and surrounding approaches into Preston City Centre in terms of bus delays and reliability in the city. Walking and cycling counts undertaken in September 2019 further highlighted the significant severance impact of Ringway on Active Travel patterns in and around the City Centre. This led to a re-evaluation of the overall significance of the BP00a Transforming Ringway and BP00b Ringway East - Key Corridors Gateway schemes and their inclusion in all funding packages.

This resulting scores were used to finalise the allocation of options into Low, Medium and High funding packages.

The result of this re-prioritisation is shown in **Appendix S.5.**

The following options which were originally shortlisted were eliminated during further scheme development between Draft SOBC and this Final SOBC submission;

- Network of Park & Ride locations (BPP&R) – there were not considered deliverable within TCF timeframes due to limited land availability.
- Bus operator grants (OB05a and OB05b) – this option did not sufficiently align with TCF objectives and eligibility requirements.
- City Centre Active Travel schemes (CW23) – the constituent parts of this option were split across a number of other options (BP01, ST01, ST03, ST05) to form more integrated corridors.
- South Fylde Line Enhancements (RW02) – further work through GRIP Stage 2 has shown that this scheme is unlikely to be deliverable within TCF timeframes. The analysis continues to show a strong rationale for the scheme and Lancashire County Council and its partners maintain their ambition to deliver this scheme in future through alternative opportunities that allow delivery beyond the TCF timeframes.

Figure 2-29 and **Figure 2-30** show plans illustrating the location of the shortlisted options and how they fit together to form a package of interventions which link to the identified growth areas (including housing and employment sites) that are critical for transforming cities success.

Consideration has also been given to the location of deprived areas to ensure the package of options will collectively have a truly transformative impact, especially for those most in need. Areas in red in the Figure below are output areas in the 20% most deprived areas nationally.

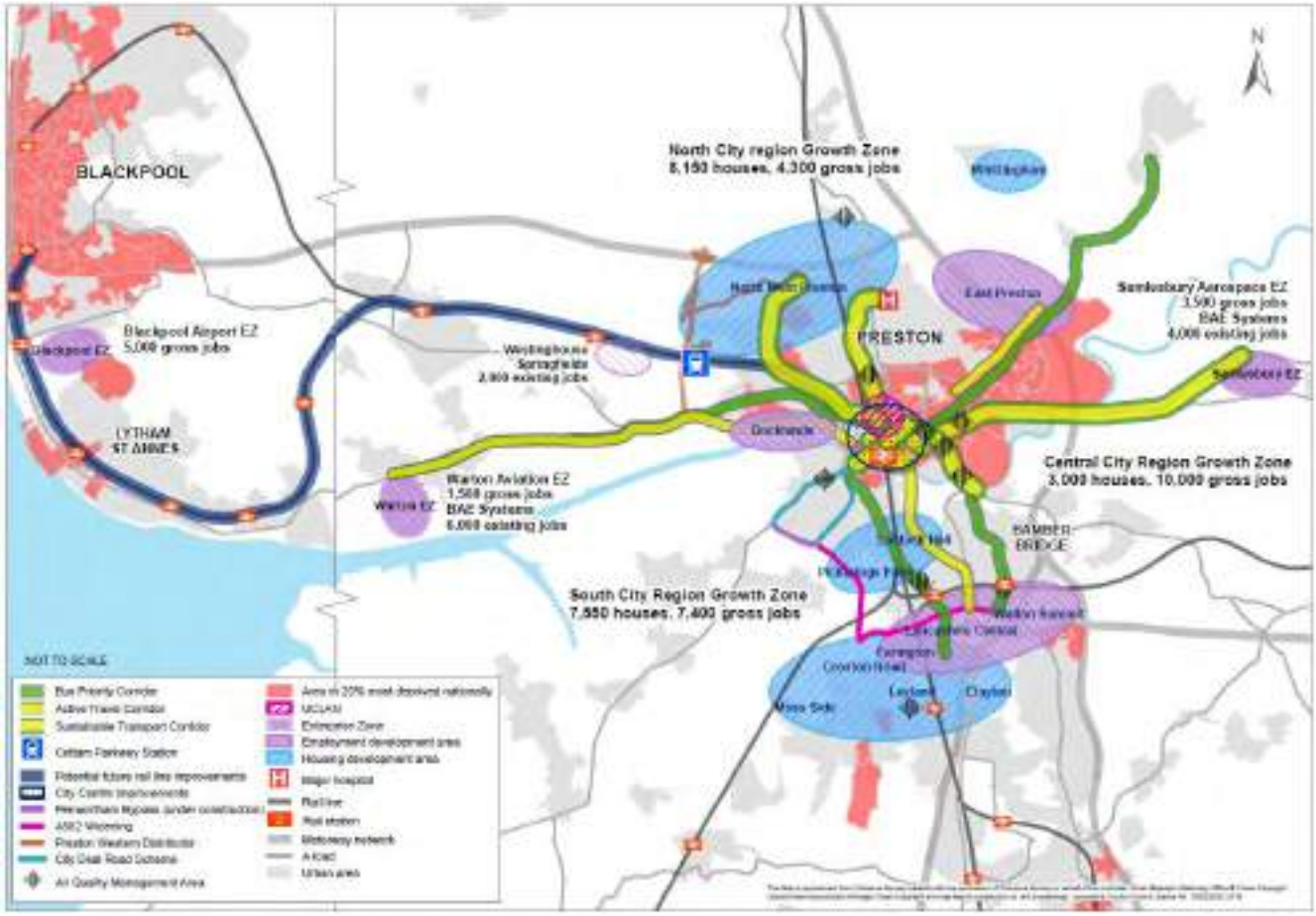


Figure 2-29: Plan of Options – wider area

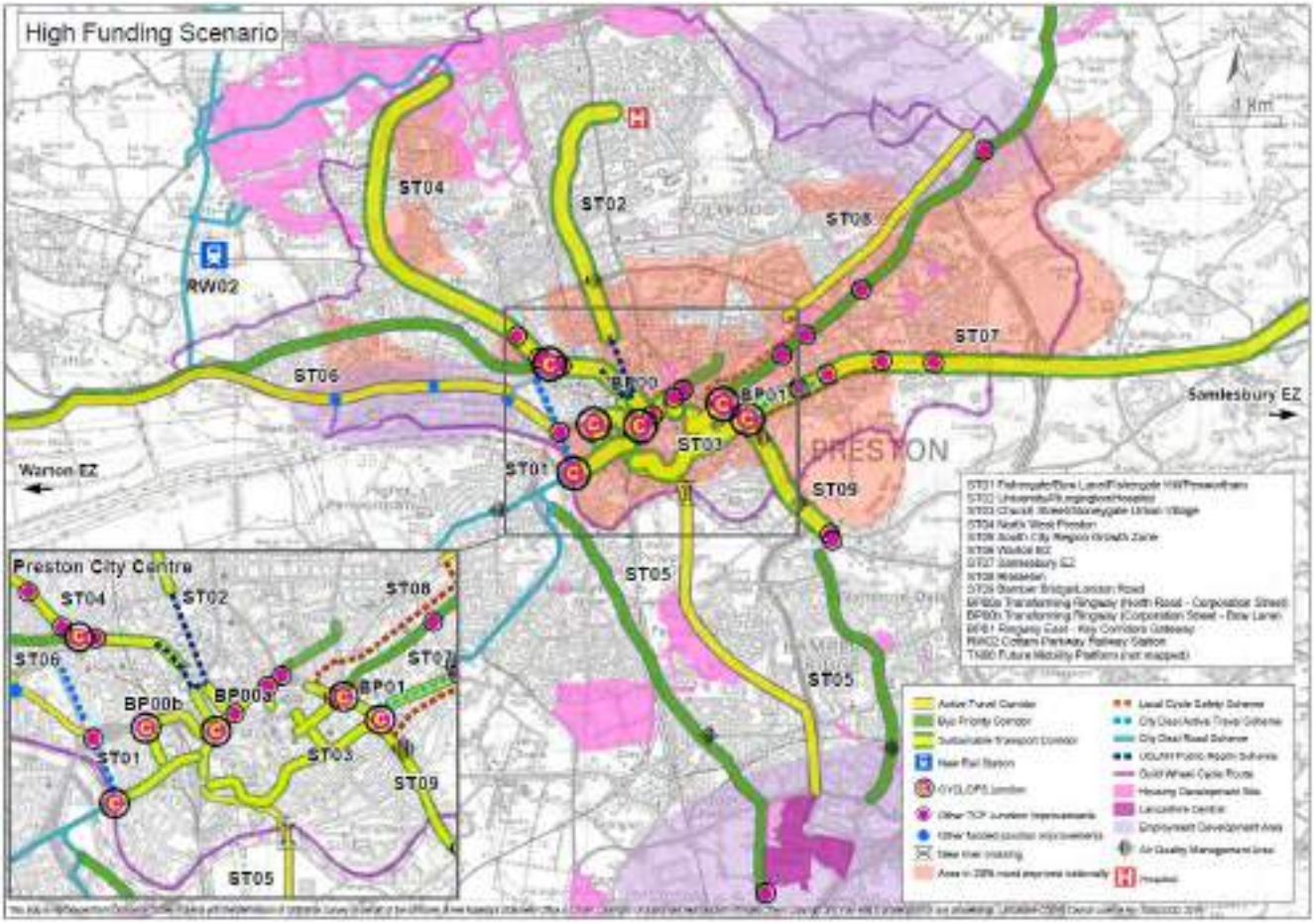


Figure 2-30: Plan of Options – Preston urban area

2.8.4 Options and Funding Scenarios

A high level overview of the TCF programme and the options selected for final inclusion in the programme is shown in the Transforming Preston City Region summary brochure included in Appendix S.1.

In response to the TCF guidance to make bids "*flexible enough to be scaled up or down"*, "low", "medium" and "high" funding scenarios have been created for the Preston TCF bid. Table 2-9 below outlines the key differences between the 3 (high / medium / low) funding scenarios. The corresponding impact on the funding requirement from TCF is set out in the Financial case.

Table 2-9: Funding Scenarios

Scenario	Description
High	Includes options from the top scoring quartile during the initial sifting and not subsequently eliminated in the subsequent post-development re-sifting.
Medium	Includes options from the top scoring quartile during the initial sifting and scoring 17 or above in the subsequent post-development re-sifting.
Low	Includes options from the top scoring quartile during the initial sifting and scoring 19 or above in the subsequent post-development re-sifting.

The shortlisted options have been grouped under the following headings (identified by their associated ref codes), which reflects the multi-modal nature of the bid:

- Sustainable and Active Travel Interventions (ST and BP)
- Rail (RW)
- Technology Interventions (TN)

The three funding scenarios; **low, medium** and **high**, are shown in Table 2-10 below.

Table 2-10: Options contained in Low, Medium and High Funding Scenarios

Ref	Option	Low	Medium	High
BP00a	Transforming Ringway (North Rd – Corporation St)	✓	✓	✓
BP01	Ringway East - Key Corridors Gateway	✓	✓	✓
BP00b	Transforming Ringway (Corporation St – Bow Ln)			✓
ST01	SATC Fishergate/Fishergate Hill/Penwortham	✓	✓	✓
ST02	SATC University/Plungington	✓	✓	✓
ST08	SATC Ribbleton	✓	✓	✓
ST04	SATC NW Preston		✓	✓
ST05	SATC South City Region Growth Zone		✓	✓
ST03	Church St/Stoneygate Urban Village			✓
ST06	SATC Warton EZ			✓
ST07	SATC Samlesbury EZ			✓
ST09	SATC Bamber Bridge/London Road			✓
RW02	Cottam Parkway Station		✓	✓
TN00	Future Mobility Platform	✓	✓	✓

Plan of Funding Scenarios

Figure 2-31, Figure 2-32 and Figure 2-33 show the schemes categorised by funding scenario. (High resolution versions included in Appendix S.6)

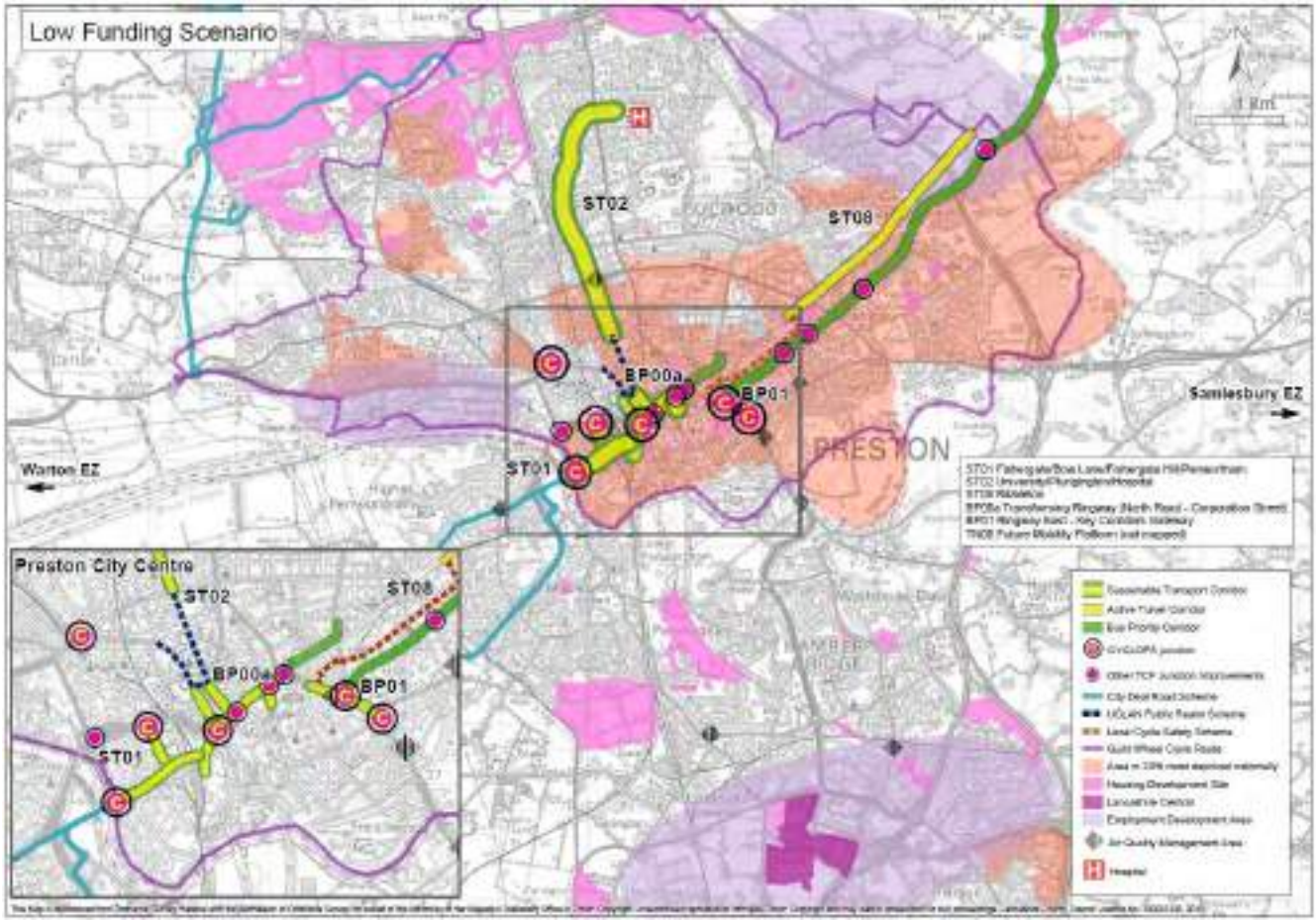


Figure 2-31: Map of options included in the Low funding scenario

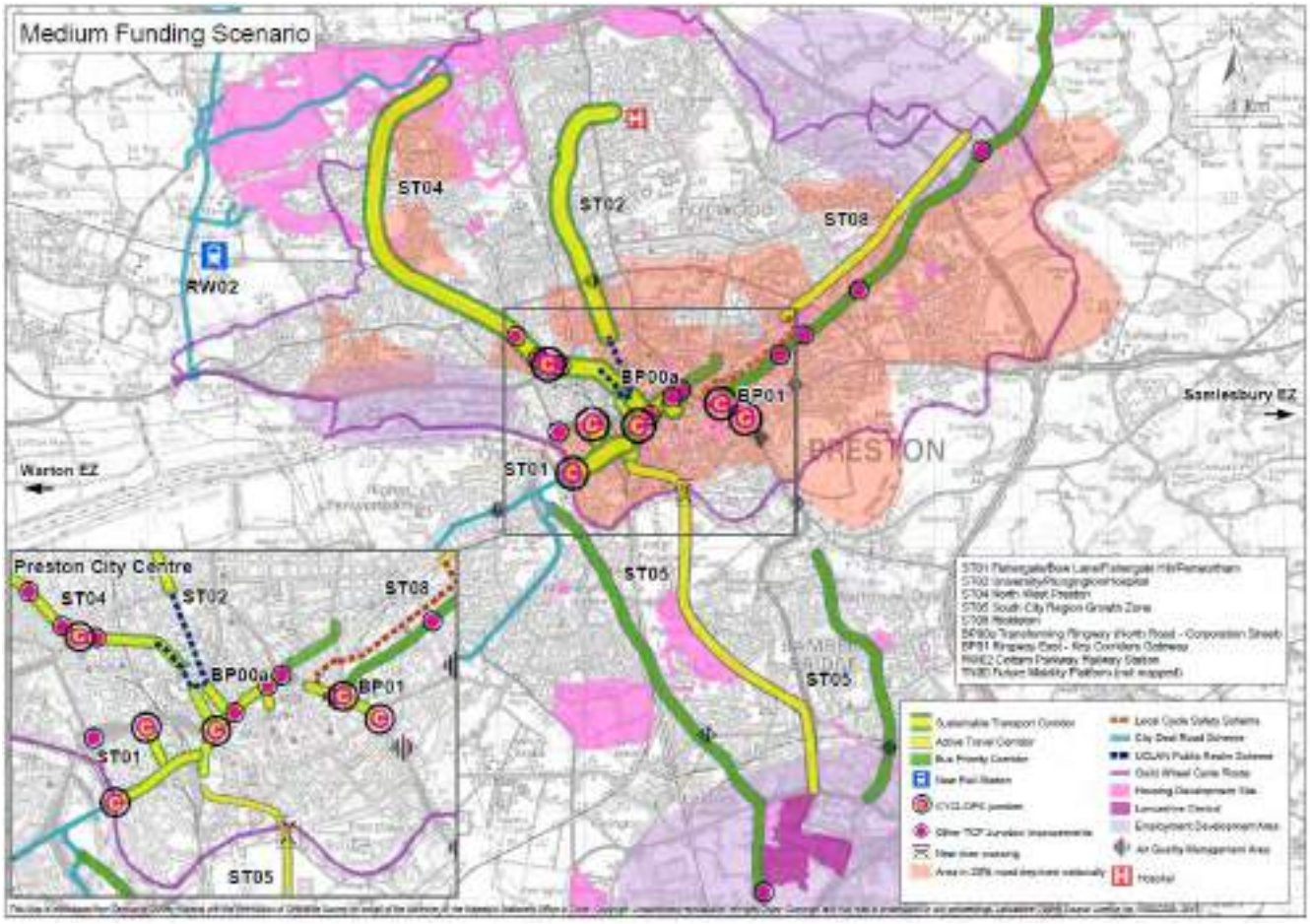


Figure 2-32: Map of options included in the Medium funding scenario

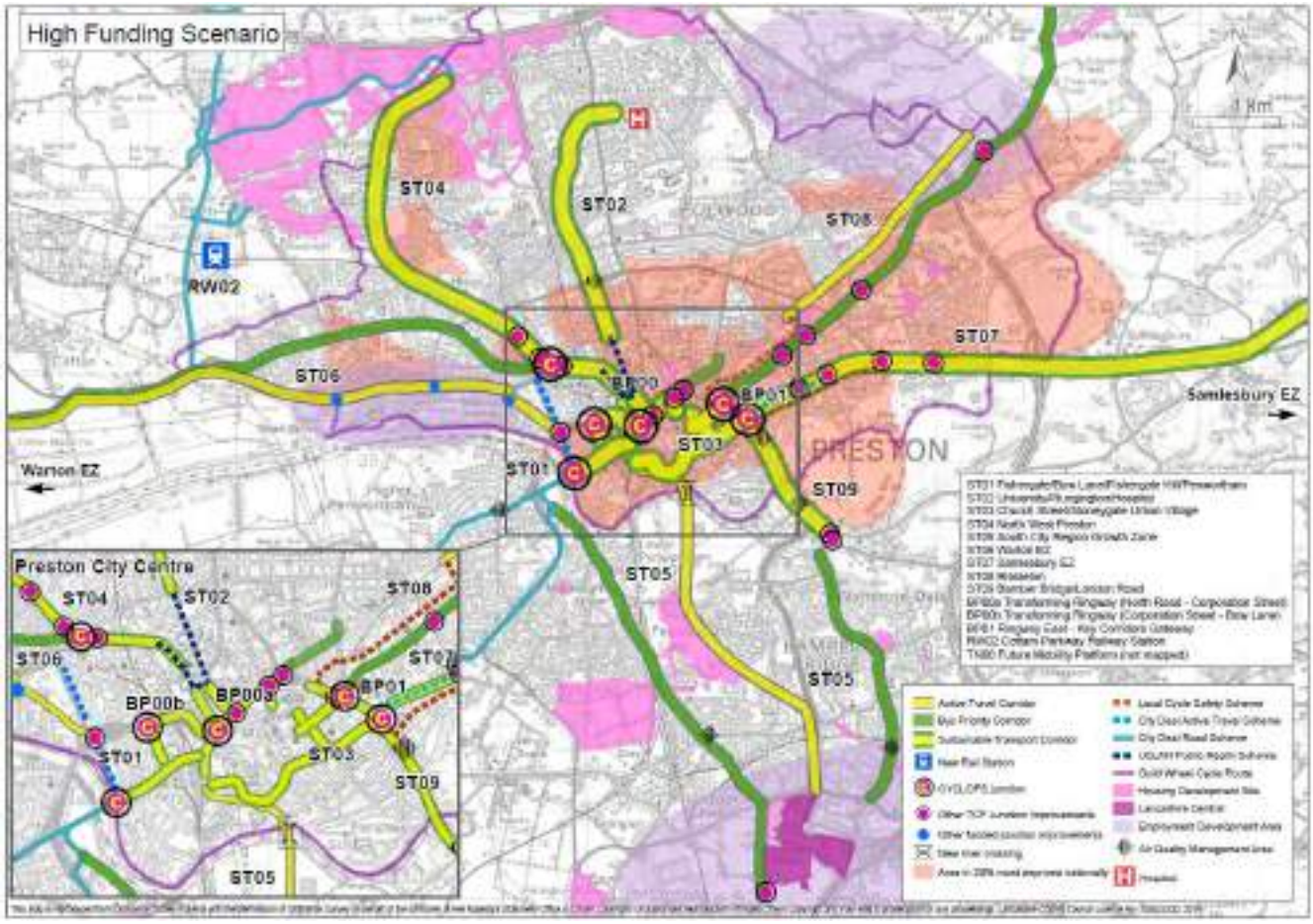


Figure 2-33: Map of options included in the High funding scenario

Option Summary

A summary of the interventions contained within each of the shortlisted option packages is outlined below.

Ref	Option	Description
BP00a	Transforming Ringway (North Rd – Corporation St)	Transformation of Preston City Centre by connecting Fishergate, Preston Train Station and Preston Bus Station with the new UCLAN campus through new public realm along Friargate and Corporation St, including closing Friargate to traffic, and a new public square, a new cycle hub and segregated cyclist facilities and new bus interchange facilities around the Friargate/Ringway junction to remove the severance created by the current 4/5 lane dual carriageway. A bus gate on Corporation St will remove traffic and improve north-south bus movements between UCLAN campus and the City Centre, with the option to additionally introduce bus lanes along Ringway in both directions to further improve access to Preston Bus station if supported by traffic modelling during further scheme design.
BP01	Ringway East - Key Corridors Gateway	Redesign and upgrades of key junctions on the eastern portion of Ringway, where SATCs ST03, ST07, ST08 and ST09 meet, to new CYCLOPS designs to improve cyclist flow and provide new high quality gateways for active travel users to the City Centre via Church St and Queen St, providing access to Fishergate, Friargate, Preston Station and the Cycle Hub from the East of the city.
BP00b	Transforming Ringway (Corporation St – Bow Ln)	Extension of Public Realm and Integrated Transport enhancements from Transforming Ringway/Friargate along the western portion of Ringway, including new crossings and segregated cycling provision, up to the junction of Bow Lane/Guild Way, to improve access to the City Centre and Preston Station Gateway area from the north-west.
ST01	SATC Fishergate/Fishergate Hill/Penwortham	The scheme involves introduction of new bus lanes on Fishergate Hill to remove congestion and improve bus journey times along this gateway, alongside new segregated cycle superhighways in both directions and a new CYCLOPS junction at the Fishergate Hill/Strand Rd/Penwortham Bridge junction to link these into the existing Guild Wheel cycle route and the Penwortham cycle superhighway being delivered through the City Deal. Complimentary improvements to the Bow Lane/Guild Way and Strand Rd/Guild Way junctions will direct existing traffic onto Guild Way and the A59 and away from the new CYCLOPS junction, freeing up capacity at Fishergate Hill to enable the bus and active travel improvements. The improved Bow Lane/Guild Way junction will also integrate CYCLOPS design elements to connect to the existing cycle route on Marsh Lane
ST02	SATC University/Plungington/ Hospital	Enhance the Plungington local shopping area with a bus gate at the north end restricting through traffic and public realm improvements. This will enable the area to act as a quietway and northern gateway to the UCLAN campus area and City Centre beyond (via Friargate). Additional traffic calming, lane widening, and formalisation of parking arrangements North of Plungington will improve bus access to this gateway from local schools, the Royal Preston Hospital and residential areas by discouraging traffic and enhancing the route quality for buses.
ST03	Church St/Stoneygate Urban Village	Transformation of access and public realm in the Stoneygate area (Church Street, Queen Street, Manchester Road) east of Fishergate and Friargate. Public realm enhancements and quiet street improvements will facilitate new development of Stoneygate as an “Urban Village” and improve the access to Fishergate, Friargate and the Bus Station for pedestrians. A new segregated cycle superhighway on Queen Street will link the new CYCLOPS junction included in BP01 with the cycle hub at Preston Rail Station, providing enhanced access to the cycle hub from areas served by the ST07 and ST09 corridors.

Ref	Option	Description
ST04	SATC NW Preston	New off-road cycle route connecting North West Preston Growth Area to the UCLAN campus and City Centre, comprising both segregated cycleway and shared footway, with an upgrade of the Fylde Rd/Water Ln/Aqueduct St junction to a CYCLOPS design with bus priority incorporated. Additionally, bus stops along Fylde Rd will be improved with build-outs, bus-lane bypasses for cyclists and new waiting facilities,
ST05	SATC South City Region Growth Zone	Upgrade and extension of Old Tram Rd footpath to new "Greenway" walking and cycling route between the Lancashire Central strategic employment site and Preston Rail Station cycle hub, adding connections to residential areas of Lostock Hall and Lower Penwortham. The "Greenway" route culminates with a new bridge to cross the River Ribble, which will replace the existing Old Tram Bridge that was closed to the public in February 2019 due to its deteriorating structural condition. The new bridge will create a new gateway into the City Centre and connect the Greenway route to the existing Guild Wheel cycle route and Avenham Park, and access to the City Centre, Preston Rail Station and cycle hub through the park.
ST06	SATC Warton EZ	This scheme will provide an off-road cycle superhighway between the Warton Enterprise Zone and the edge of Preston City Centre, integrating with the existing guild wheel route on A595 Riversway and connecting to the Fishergate Hill cycle lane provided by ST01 via both the Guild Wheel and the NPIF-funded Strand Rd improvement project. The cycle superhighway will comprise a mixture of shared footway and segregated cycleway along the A584 and A583, including a CYCLOPS junction at the A585 Riversway/Peddlers Way junction which will provide additional cycle access to the Docklands future growth area.
ST07	SATC Samlesbury EZ	The scheme will provide a bus priority and active travel corridor along the A59 New Hall Lane between the M6 and City Centre. Bus lanes will be provided westbound between Thirlmere Rd and Blackpool Rd and subsequently between Mosley St and London Rd, where they will seamlessly integrate into the bus bypass junction delivered by BP01 at the New Hall Ln/London Rd junction Cycling provision will include a new shared footway cycle superhighway from the A6/A59 to Blackpool Rd, where it will integrate with City Deal integrated transport and public realm improvements along New Hall Lane and the Fishwick Parade quietway scheme. The cycleway will connect these two schemes to the Guild Wheel on the west bank of the River Ribble, completing a continuous cycling route to London Rd and the CYCLOPS gateway to the City Centre provided by BP01

Ref	Option	Description
ST08	SATC Ribbleton	This scheme provides parallel active travel and bus priority corridors connecting the deprived communities in Ribbleton to the City Centre. The existing walking route on the old railway line will be upgraded to “Greenway” standard shared cycling and walking track, with existing barriers that prevent its use removed and new lighting and CCTV cameras. At the South West end the path will connect with a new quietway scheme at the West View Leisure Centre, which will provide connectivity to A59 Ringway where the scheme will interface with the Church St CYCLOPS junction provided by BP01 Bus provision will include bus lanes along Ribbleton lane in both SWB and NEB directions using existing carriageway widths and bus priority upgrades to existing signalised junctions. Additionally, a new bus gate at the A6 North Rd/A59 Ringway junction will enable buses to access Preston Bus Station from Meadow St, enabling buses om the A6063 to be diverted to this route to avoid congestion on Deepdale Rd
ST09	SATC Bamber Bridge/London Road	A new cycle superhighway consisting of a mix of segregated cycleways and shared footways will be provided from Victoria Rd in Walton-le-Dale, across the Wooton Bridge and up London Rd to connect to and access the City Centre via the Queen St CYCLOPS gateway.
RW02	Cottam Parkway Station	Cottam Parkway station is a new, modern two-platform station on the Fylde rail line to the east of the PWD. The station will have a car park with access from the PWD via the Cottam Link Road, a staffed booking / information office and footbridge to access both platforms. It would also be expected that the facility would be safe and secure, have suitable weather protection, a bus / rail interchange and high-quality pedestrian / cycle links to maximise sustainable access to the new facility and synergy with other TCF schemes and existing sustainable travel infrastructure.
TN00	Future Mobility Platform	The Future Mobility Platform is a next generation Urban Traffic Management and Control system that will take an unparalleled approach to the use of data and the application of data analytics and artificial intelligent techniques in the operation of the network. This will establish a Hosted Operations Centre (HOC) in the new Engineering Innovation Centre at the University of Central Lancashire where cloud based systems will be brought together to create a simulation and operational environment that will, using the latest predictive traffic models, improve the operation of the network. Complementing this on street the latest in cycle technologies with ‘Green Wave’ and advanced video detection will be deployed and using system driven optimisation the traffic signal asset will be used actively in delivering the outcomes with the ability to validate incidents using CCTV and in developing drone based response strategies.

The design approach and principles adopted for the different groupings of schemes are outlined in the following sections. Illustrative scheme drawings and engineering concept designs are included in Appendices S.8 and S.9, with a pro-forma outlining the rationale behind each scheme design provided with Appendix S.10.

2.8.5 Sustainable and Active Travel Corridors

The Sustainable and Active Travel Corridors (SATCs) contained in options ST01 – ST08, and the Ringway City Centre gateway schemes (BP00 and BP01) have been subject to an intensive period of option development in the period from June 2019 to November 2019 and have been developed to concept design level. The concept designs will be the subject of ongoing stakeholder engagement and public consultation to help further refine the designs and incorporate the feedback of user groups.

During the option development a range of design principles have been adopted and incorporated into the scheme designs. To determine the most appropriate design approach, the schemes have been assessed for their intended Movement and Place status in line with the Manual for Streets and using Transport for London's Street Types Matrix. This grading is shown in Figure 2-34 below. This has led to combinations of design elements deemed most appropriate for the intended use of each corridor.

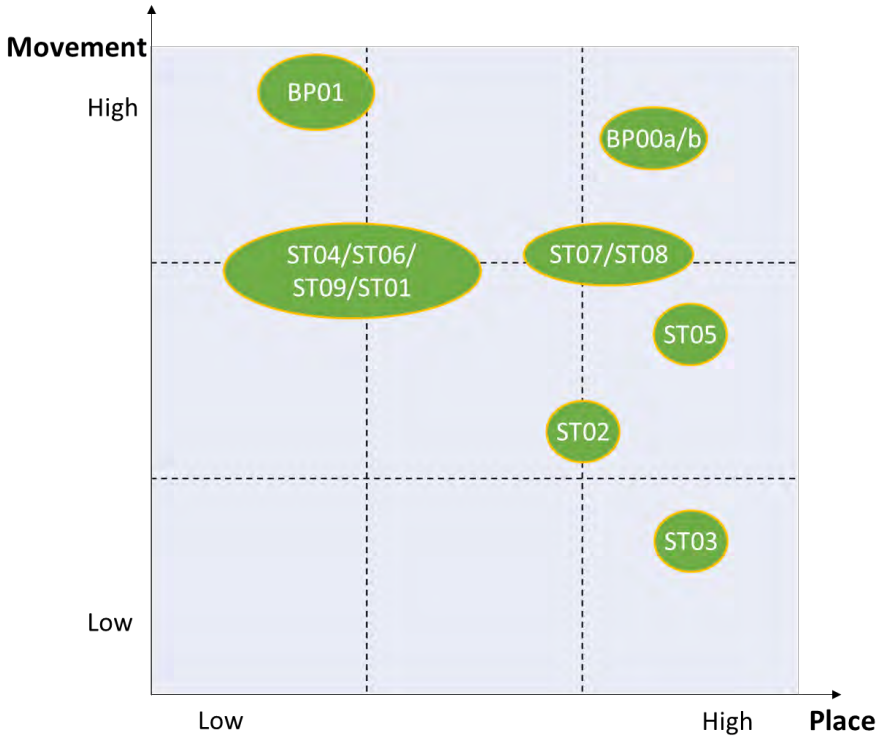


Figure 2-34: Mapping of Sustainable & Active Travel Corridor schemes to movement/place matrix

The design principles being adopted for the different schemes are shown in Table 2-11 below, split into measures designed to support bus priority, active travel and integrated transport.

Table 2-11: Design principles adopted for Sustainable & Active Travel Corridor options

Key
✓ – feature included
(✓) – potential for inclusion in design

		Bus Priority Measures			Active Travel Measures				Integrated Transport Measures					
Ref	Scheme	Bus Lanes	Bus Gates	Bus Priority junctions	Cycle Superhighway	New footway /crossings	Early Release / Cycle Gates	CYCLOPS junctions	Traffic Calming	Quiet Streets	Continuous Footway Crossings	Urban Realm Enhancements	Informal Streets	Pedestrian Priority
BP00a	Transforming Ringway (North Rd – Corporation St)	(✓)	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓
BP01	Ringway East - Key Corridors Gateway		✓	✓	✓	✓		✓						
BP00b	Transforming Ringway (Corporation St – Bow Ln)			✓	✓	✓		✓			✓	✓	✓	
ST01	STAC Fishergate/Fishergate Hill/Penwortham	✓	✓	✓	✓	✓	✓	✓			✓	✓		
ST02	STAC University/Plungington		✓	✓					✓			✓	✓	
ST03	Church St/Stoneygate Urban Village	✓	✓	✓	✓	✓				✓	✓	✓	✓	
ST04	STAC NW Preston			✓	✓	✓		✓						
ST05	STAC South City Region Growth Zone			✓	✓	✓✓						✓		
ST06	STAC Warton EZ			✓	✓	✓		✓						
ST07	STAC Samlesbury EZ	✓		✓	✓	✓			✓	✓	(✓)			
ST08	STAC Ribbleton	✓		✓	✓	✓			✓	✓		✓		
ST09	STAC Bamber Bridge/London Road	✓		✓	✓	✓	(✓)							

Bus Priority Design Principles

Depending on the level of bus traffic on each corridor, the existing and expected congestion, the access needs in the affected area, and the highway space available on both the corridor and alternative routes, three different approaches to bus priority have been combined;

Bus Lanes

On more heavily used bus corridors, bus lanes will be implemented. Bus lanes will be designed on the approaches to congested junctions, which will themselves be equipped with bus priority (described below), to enable buses to bypass queuing traffic on approaches to junctions. Bus lanes will be usable by all registered bus services, including school buses and coaches, as well as cycles and registered taxis. There is scope for this to in future include on-demand taxi services to provide **future mobility benefits** and **better adaption to future technology change**, provided that the level of their use does not hinder bus movement. Lane use will be enforced by ANPR cameras along the bus lanes.

A key principle adopted in the design of Bus lanes has been to maximise their strategic impact on bus travel times and modal shift. This includes extending bus lanes up to junction stop lines wherever possible, even where this results in greater impacts on road users than a more conservative approach.

Bus Gates

Bus gates will be used to create new **bus-only routes** through key junctions, either by restricting certain movements and arms to buses only or by creating new paths not open to general traffic. They will be used to remove through traffic from routes by requiring diversions while maintaining permeability for buses and cyclists and to create bus-only accesses to the City Centre, particularly around Preston Bus Station. This includes key junctions on Ringway and access to and from local centres in Plungington Rd and Meadow St. Bus gates will be usable by the same groups as bus lanes and will also be enforced by ANPR.

Bus Priority Junctions

Bus Priority Junctions will interface physical infrastructure enhancements with the new digital technologies introduced through the Future Mobility Platform. All existing signalised junctions in Preston City Centre and on Bus Priority Corridors will be upgraded with the ability to function with bus priority junctions, and new signalised junctions included in all schemes will have bus and detection priority capability incorporated as standard.

Bus priority junctions will both be capable of detecting approaching buses and calling the appropriate phase to allow the bus to pass and be connected at a server-to-server level to live bus location data within the **Future Mobility Platform.** This will enable network-wide signal optimisation to prioritise buses through the implementation of "Smart Priority" detection zones, identifying buses which are behind their schedule and prioritising the necessary phases at all signals along their route sequentially to maintain planned timings.

The bus priority system delivered through the Future Mobility Platform will deliver a best-in-class city-wide smart bus priority system.

Active Travel Design Principles

The walking and cycling schemes which have been proposed as part of the package of interventions are high quality 3rd generation designs, which are accessible and attractive to new and existing pedestrians and cyclists. The concepts have been designed to overcoming the common barriers which limit the uptake of walking and cycling.

This includes standards such as aiming for full **segregated provision** for cyclists and pedestrians, and making cyclists at least as important users of the highway network as vehicles. Likewise, it is important to ensure pedestrians are not squeezed by incorporating cyclists on footways especially in areas such as Preston City Centre in which there is high footfall.

Cycle Superhighways

A key feature of the TCF package is the provision of segregated **cycle superhighways** to provide protection from motorised vehicles whilst also ensuring pedestrians have their own specific space too on the footway. A hierarchy of design and provision level has been adopted based on the available highway space, levels of traffic and pedestrian use of the routes. Where sufficient space is available and traffic volumes are high the preference was for fully segregated cycle routes, either one or two-way, separated by the carriageway by a double kerb barrier and also segregated from the pedestrian footway.

Where this was not possible and pedestrian volumes are lower, the next preference was for shared footpath and cycleways, either with separate

designated spaces for pedestrians and cyclists or shared space across the entire footway. Where this was not possible or appropriate, the least favoured option was to provide on-carriageway cycle lanes, protected where possible with soft segregation measures such as wands and orcas. **It is currently not envisaged that this latter option will be used by any of the designed schemes outside the immediate vicinity of junctions**.

Where cycle superhighways interact with bus provision, the preference was where possible to provide **bus stop bypasses**. These involve a segregated cycle route passing behind the bus stop, with a pedestrian crossing of the cycle path from the main footway to the bus stop and waiting area. Materials choice, calming measures and design features have been selected to reduce cyclist speed and encourage cyclists to permit pedestrians to cross, including the use of zebra crossings where appropriate. Waiting facilities will be provided, including shelters, to allow bus passengers to cross the cycle path to wait before the bus arrives.

Corridors ST05 and ST08 include off-road greenway routes. These have been be designed as shared cyclist and pedestrian space, with wide corridors to allow easy passage of pedestrian and cyclist traffic in both directions while minimising conflict.

Cycle Superhighway schemes will incorporate GreenWave Technology through the **Future Mobility Platform**. This technology provides advance indication of upcoming signals to cyclists through pavement/cycleway mounted LEDs on the approach to junctions (including all **CYCLOPS** junctions). As the cyclist approaches the crossing the LED's will light up when the crossing is green and progressively switch off to indicate timing of the signal changes so allowing the cyclists to time their approach to the traffic signals more effectively. Video detection linked to the **Future Mobility Platform** will detect cyclists on approach to junctions and manage signal phasing to prioritise their passage and synchronise green waves between junctions.

CYCLOPS junctions

CYCLOPS (CYCLe Optimised Protected Signals) junctions are a new UK best practice in the design of junctions to protect cyclists and pedestrians developed by Transport for Greater Manchester. The key design element of CYCLOPS junctions is the inclusion of a fully segregated, signal-controlled external cycle orbital route around the junction. Pedestrians are also provided with more direct routes, increased waiting space and tactile facilities for the visually impaired.

CYCLOPs junctions are the preferred junction design approach across the TCF programme and are implemented on a number of corridors.

Where full CYCLOPs designs cannot be implemented due to constraints, efforts will still be made to implement the principles of CYCLOPs design into the junction designs.

Early Release and Cycle Gates

Early release measures and cycle gates aim to give cyclists an advantage or priority at signalised junctions by providing an additional signal to allow cyclists to cross the junction in advance of general traffic. This helps improve cyclist safety and the attractiveness of the route.

These features will only be included for less busy signalised junctions and where space to implement stronger segregation measures such as CYCLOPS junctions are limited.

New footways/crossings

A number of schemes involve the provision of new footways, shared cycleway and footways and controlled crossing points across roads and other barriers where none currently exist, particularly around junctions. These scheme elements are intended to reduce severance and improve pedestrian and cyclist safety by reducing conflict with traffic.

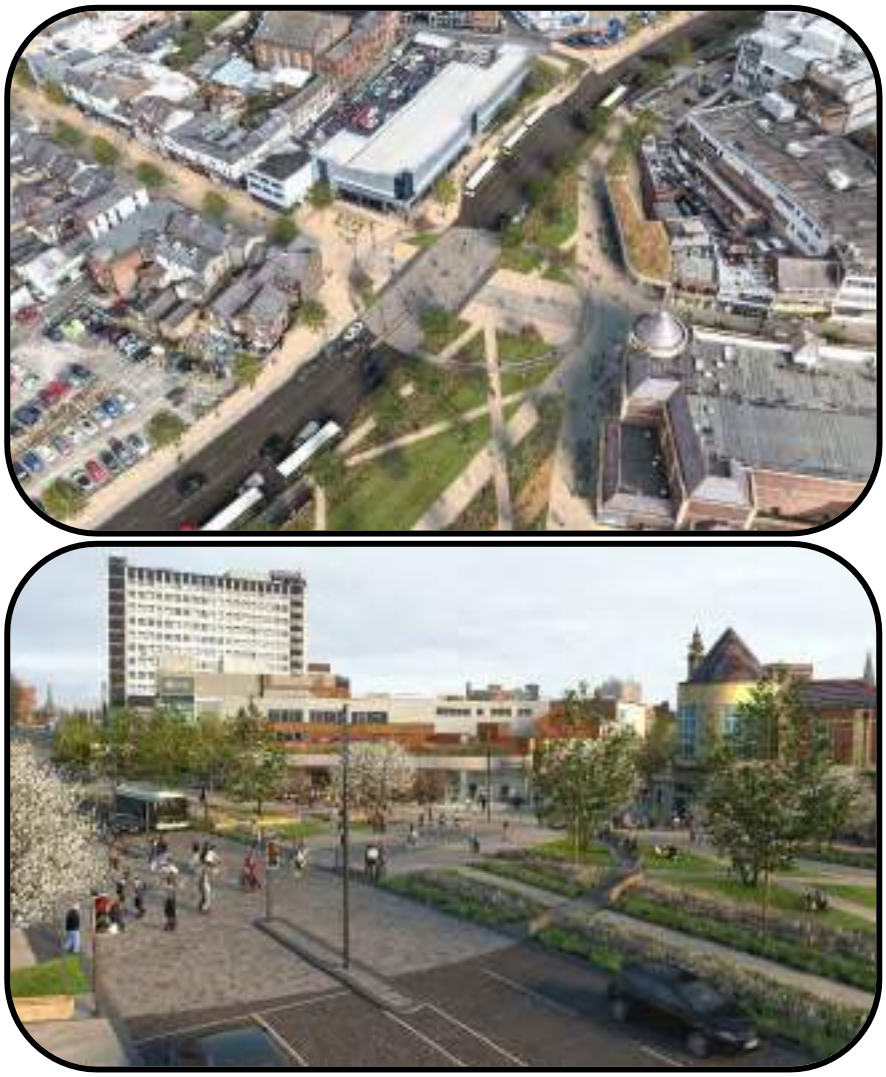
New Ribble Bridge

SATC South City Region Growth Zone (ST05) includes a new crossing of the River Ribble joining the proposed greenway into Avenham Park. This crossing will replace the Old Tram Bridge which was closed to the public in February 2019 due to safety concerns resulting from deterioration in its structural condition. The new bridge aims to provide a transformation in the attractiveness of this crossing point on the Ribble and Avenham park in general, as well as re-establish connectivity between the greenway and the City Centre.

Integrated City Centre Design Principles

Integrated transport enhancements feature as part of a number of schemes. These enhancements focus on improving the perceptions and attractiveness of the public realm, improving transitions between transport modes, making it a more pleasant environment for pedestrians and cyclists and aiming to improve footfall, increase dwell times for leisure, retail and enjoyment.

These also contribute to **reduced traffic levels** and associated **severance, noise and air pollution, encourage more active and healthy lifestyles, and improve quality of life.**



The leading example of these design principles is the new public square at the junction of Friargate and Ringway. This space aims to remove severance across Ringway and create a balanced transport environment, integrating the pedestrianised retail area of Friargate with segregated cycle provision, a cycle hub and bus interchanges and general traffic on Ringway. The design will increase the road space and design priority given to walkers and cyclists over private cars, as well as promote and better integrate bus and other public transport into the streetscape. Other schemes involving Public Realm Enhancements will focus on improving integrated transport in local centres such as Plungington and Stoneygate, providing better spaces for pedestrians to increase dwell times and enhancing the experience of users changing between walking, cycling and public transport.

Cycle Hubs

A new cycle hub will be provided at the new public square created at the intersection of Ringway and Friargate, with the existing cycle hubs at Preston Rail Station and Preston Bus Station expanded. Cycle hubs will provide secure covered cycle parking facilities with charging points for e-bikes, repair and maintenance services, cycle retail outlets and rental providers.

Traffic Calming

Traffic calming measures aim to reduce traffic volumes and speeds in residential areas and set the urban scene. They particularly feature on arterial route accesses to the urban area where rural roads enter a more constrained urban setting. These features include junctions designed to require traffic to slow down to navigate, and width restrictions, speed bumps and bus cushions to reduce speeds.

Quiet Streets

Quiet streets components aim to make residential and neighbourhood streets through which the SATCs pass more attractive for cyclists and pedestrians by creating low-speed, low traffic environments. This includes stronger traffic calming measures and carriageway narrowing, rationalisation of roadside parking to keep footways and cycle routes clear, stopping up of side road junctions while maintaining cyclist and pedestrian permeability, one-way systems for traffic with cyclist counterflows and the closure of through routes.

Public realm improvements to increase the attractiveness and make the area feel more residential may also be incorporated. Where Quiet Streets areas cross through routes, zebra, toucan and parallel walking and cycling crossings will be provided to reduce severance, with features to visually connect the two spaces.

The intended outcome of these schemes is to remove all but local residential traffic, reduce vehicle speeds and improve the environment and safety of residents, pedestrians and cyclists. Improving the environment for local residents is the highest priority on these schemes, and as such measures to moderate cyclist speeds may be used to prevent conflict with pedestrians. This will result in routes with lower speeds than segregated cycle superhighways while maintaining clear route signage and cycle connectivity.

Continuous Footway Crossings

Continuous footway crossings will be used where SATCs with cycle superhighway elements follow arterial routes into the city, particularly in residential areas or local centres as well as gateways into the City Centre, but with higher movement and lower place requirements than areas targeted for full public realm enhancements.

These crossing will connect the footway and cycleway across existing side roads with a constant material, and move back give way lines to behind the crossing points, to reduce severance and give priority the pedestrians and cyclists on the main route. These crossing will still permit vehicles to enter or exit the side roads, although where appropriate they may be coupled with complete stopping up of side roads.

Informal Streets

Informal streets bridge the gap between public realm enhancement and full pedestrian priority. These scheme elements will still allow for low volumes of traffic, including buses, on quieter and more limited routes. They will involve low kerbs, minimal signage, public realm enhancements and material choice to create a streetscape that encourages low traffic speeds, minimises severance and barriers for pedestrians, is attractive and business friendly and provides cycle-friendly environments.

The primary reference point for these schemes will be the **completed Fishergate scheme**, and design choice will ensure consistency of material palate and design features with that scheme to maintain a coherent public realm across the City Centre. Demarcation between carriageway and footway will be maintained to ensure safety and readability but minimised to create a feeling of a continuous space and encourage permissive crossing.

Pedestrian Priority

These schemes explore the idea of true shares surface, involving no kerbs, minimal signage and low or no traffic flow. The schemes are designed to have a positive effect on road safety, economic vitality and community cohesion. Emerging DfT design guidance will be incorporated into the design of these types of street.

Material palettes will be carefully selected to ensure the space is still readable and, while giving clear priority to pedestrians, does not cause unnecessary conflict or confusion. They will primarily be used on streets that are closed to motor vehicles except for service and at restricted hours but remain open to cyclists.

2.8.6 Cottam Parkway Railway Station

Cottam Parkway station is identified in the programme of measures set out in the Central Lancashire Highways and Transport Masterplan that collectively will support the scale of development set out in the approved Central Lancashire Core Strategy and will contribute to mitigating its impact on the transport network.

The scheme comprises a two-platform station with overbridge, booking office and car park east of the Preston Western Distributor, which is currently under construction. The line has recently been electrified and services are being improved through new and refurbished rolling stock with additional capacity. The proposed layout of the station is shown in Figure 2-35.

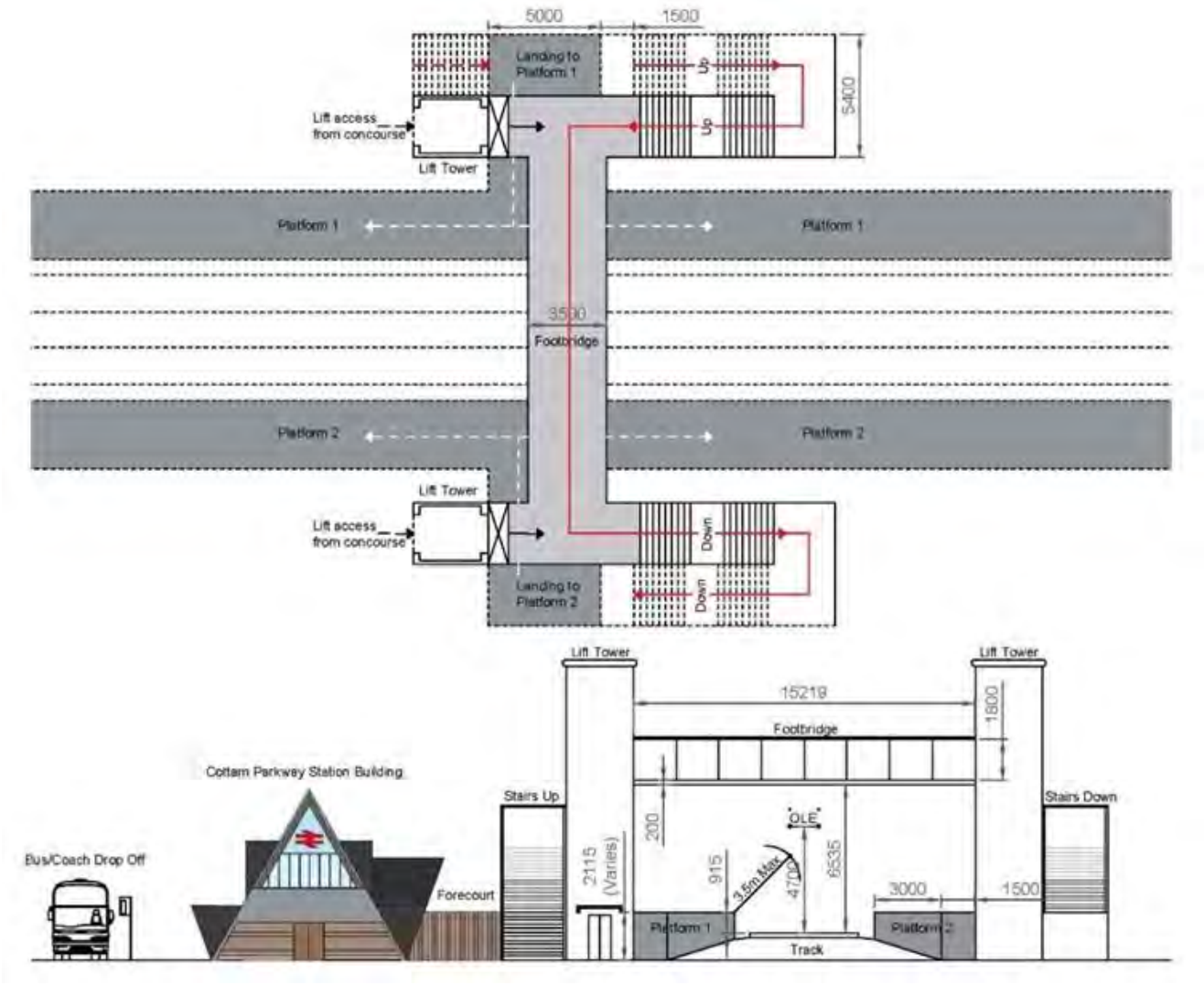


Figure 2-35: Plan, Elevation / Section of Station Building and Footbridge (not to Scale) (Source: GRIP 2 Report)

Three potential locations have been identified for the station at GRIP stage 2, as shown in Figure 2-36 below. Of these, location 2b has the least impact on signalling, while location 3 is most advantageous for highway access. A preferred option will be selected at GRIP Stage 3 in the new year.

Figure 2-36: Potential locations for Cottam Parkway Station

The key requirements for the new station are for access from the PWD road / Cottam Link Road, a staffed booking / information office and footbridge to access both platforms. It would also be expected that the facility would be safe and secure, have suitable weather protection and car park with ample space for the predicted demand. A bus / rail interchange and high-quality pedestrian / cycle links would be expected to maximise sustainable access to the new facility and synergy with other TCF schemes and existing sustainable travel infrastructure.

Three service options were assessed in the Cottam Parkway business case (Appendix S.11);

Option 1: Three trains per hour

- 1 tph Blackpool North – Manchester Airport;
- 1 tph Blackpool North – Manchester Piccadilly, and;
- 1 tph Blackpool North – York.

Option 2: Four trains per hour

- As option 1 plus additional 4 trains per day Blackpool North – London Euston.

Option 3: Four trains per hour

- As option 1 plus additional 1 tph Blackpool South – Colne.

The economic case for Cottam Parkway shows that Option 3 offers the highest value for money scheme

Analysis undertaken by LCC indicates the scheme is revenue positive from a franchising perspective. This analysis is contained within the Cottam Parkway Business Case. Network Rail and Northern Trains are supportive of the proposals, and Network Rail are prepared to fully engage as a delivery partner with LCC.

South Fylde Line Capacity Enhancement

Although the 'South Fylde Line Capacity Enhancement' option no longer forms part of the proposed TCF package, due to timescale concerns in meeting required TCF spending requirements, it remains a strategic priority for the region. This is due to the fact that:

- It has a large direct generalised journey time impact in going from a poor, unreliable service to a frequent 2tph scenario with improvement.
- It therefore has the greatest ability to agglomerate the labour market catchments of the City Region on an east-west axis, including Blackpool, St Anne's, Kirkham Lytham and other conurbations along the line with Preston at a City Region level. As a result, the scheme is expected to contribute strongly to the City Region's productivity, and the objective of improving access to work and delivering growth.

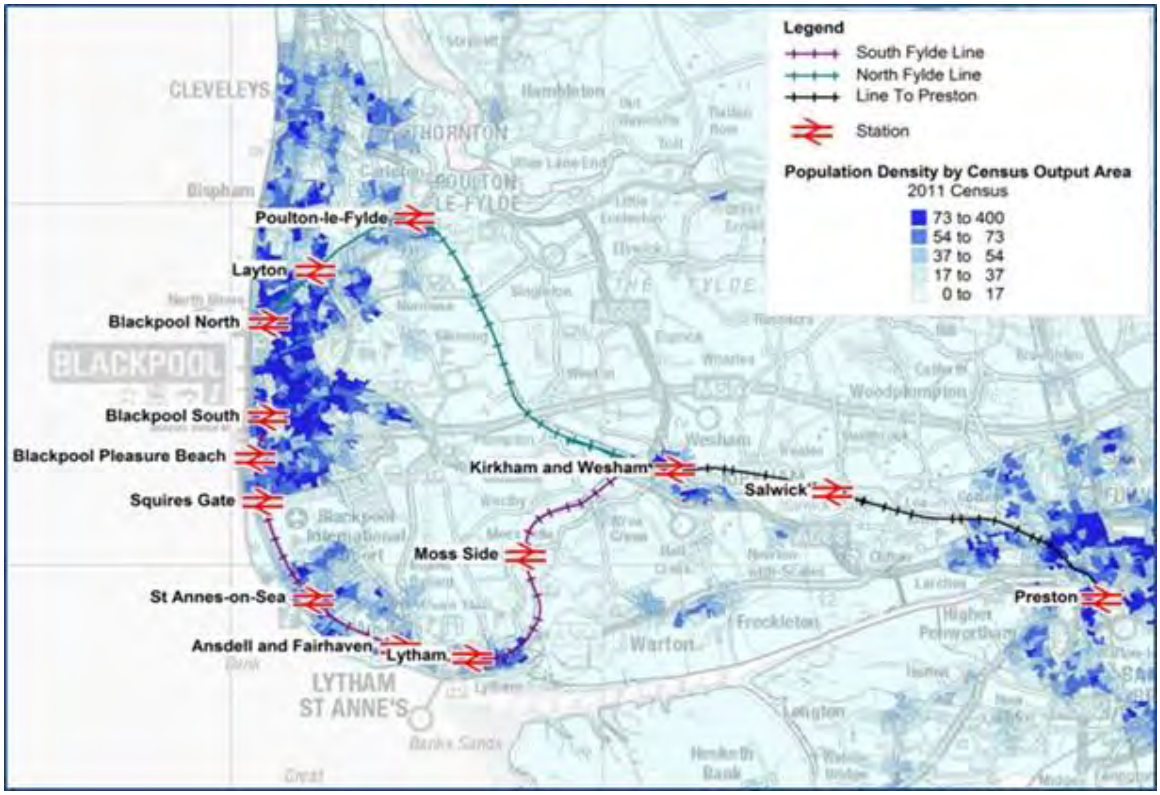


Figure 2-37: Population Density on the Fylde Peninsula that could be agglomerated with the Preston City Region

- It supports delivery of the Blackpool Enterprise Zone which is adjacent to the South Fylde line, and as a result, it helps support and provide sustainable access to a site with £278million net Gross Value Added to the national economy.
- There are strong labour supply and productivity benefits to the City Region, worth in excess of £33million of wider economic benefits, as noted in the Strategic Outline Business Case
- The transformational change in accessibility is strongly supported by other UK rail case studies that have improved the train frequency from 1 to 2 trains per hour (as recently introduced between Blackburn and Bolton),
- The scheme benefits some of the most deprived parts of Blackpool and the City Region; which represent some of the most deprived communities nationally.

Figure 2-38: Percentage Unemployed 2011 Census – South Fylde

- The scheme is shown to have a complementary impact on other options being promoted in the Preston TCF bid, with the potential to add additional calling points at Cottam Parkway, maximising benefits of that intervention in particular.
- Blackpool Council, LCC and Network Rail all continue to have a strong aspiration to deliver this scheme.

As part of the development of the TCF bid, a Strategic Outline Business Case for South Fylde Line Capacity Enhancements has been developed by LCC, Blackpool Council and project partners. This is included in Appendix S.12, and demonstrates a strong rationale for investment with a deliverable scheme option identified, to deliver 2 trains per hour and transform connectivity between Blackpool South, the Fylde Coast and Preston, agglomerating the City Region.

However, a number of significant timescale risks were identified in the work, specifically to meet the TCF spending requirements, which have led to the scheme not forming one part of the TCF packages. LCC and project partners will continue to develop the scheme as a regional priority.

2.8.7 Future Mobility Platform

The **Future Mobility Platform** will involve the implementation of new infrastructure, both physical and software, that will enhance the existing infrastructure and provide the opportunity to use the latest technologies in maximising the operational efficiency for all modes across the transportation network. The Future Mobility Platform will integrate existing and new intelligent transport systems across the City Region and will be built in line with The Gemini Principles[17] with the aim of creating a Digital Twin of Preston's transport network. Further details of the Future Mobility Platform are provided in a separate technical note (Appendix S.13)

The platform will also contribute to the Department for Business, Energy & Industrial Strategy's aspirations vision for the creation of a National Digital Twin through the provision of an open cloud-based common database.

The system will combine **proven system technologies** developed through the established Urban Traffic Management and Control initiative with a platform to support the development of a **Next Generation system**, including the development of Artificial Intelligence to enhance control and management of the City Region's transport network. A Hosted Operations Centre (HOC) in the Engineering Innovation Centre at the University of Central Lancashire (UCLan) will create a simulation and operational environment to maximise the opportunities from the new systems.

The systems will be deployed early and will support the programme of site upgrades and enhancements and this will enable a scalable rollout on site. The deployment of software will focus on cloud-based architectures and the development of a cloud-based database provisioned for the purpose of collating and translating all data sets received from end-asset infrastructure into a usable format to allow for more efficient collaboration between teams and industrial partners, allowing the system to be cost effective for implementation and maintenance purposes and ensuring the system can be upgraded and developed as required.

[17] The Gemini Principles, Centre for Digital Built Britain

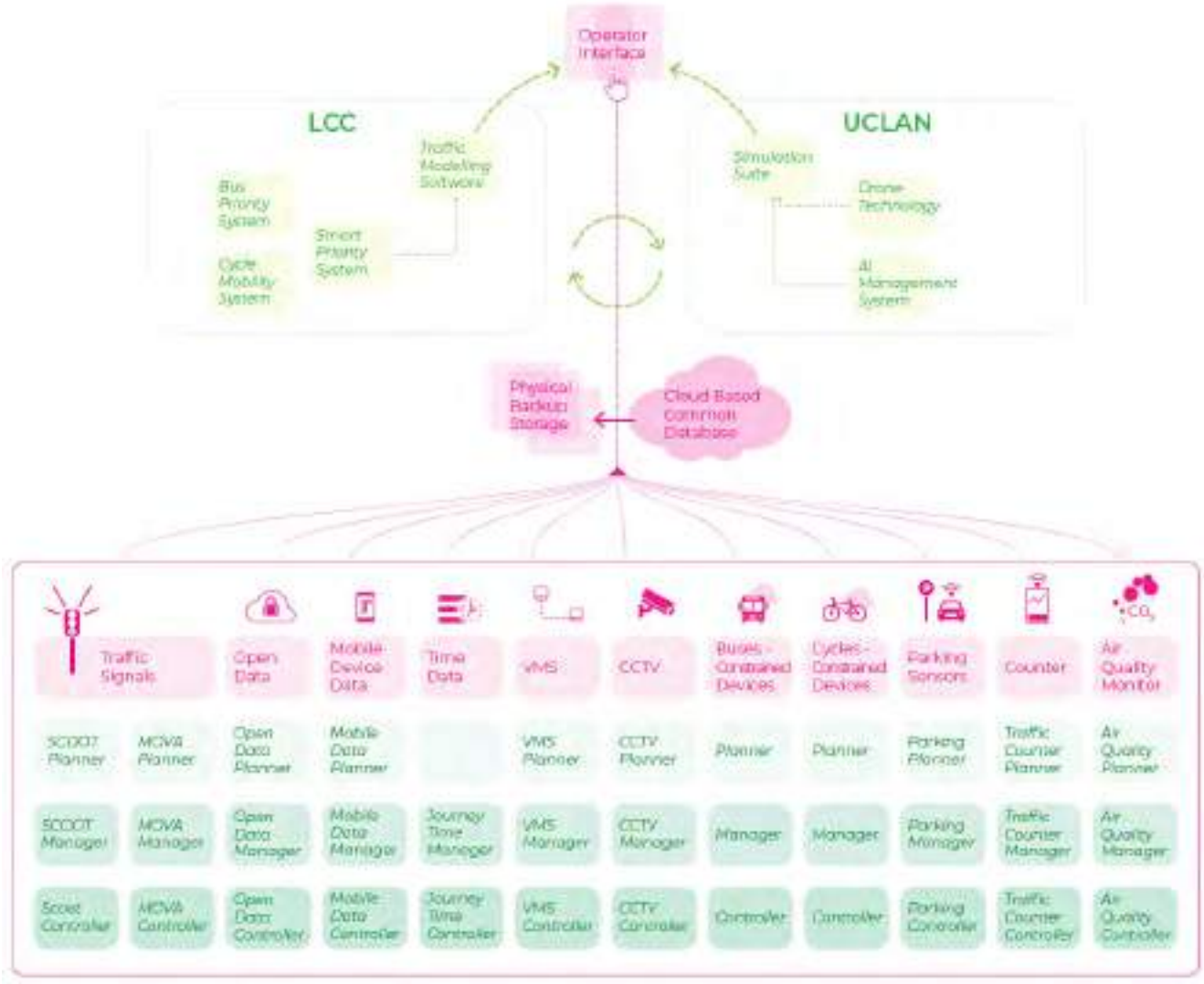


Figure 2-39: Structure of the Future Mobility Platform

The database has two integral components, the Traffic Modelling Software and the Simulation Suite as shown in Figure 2-39. The Traffic Modelling Software will use the data collated by the common database and other sources to analyse the network condition, assess pinch points and advise the most impactful and beneficial modification to optimise network performance. By integrating both data produced from on-street assets and open data made available through industrial partners such as the Transport Data Initiative, a holistic picture can be created, through data visualisation providing the optimal operation.

This will develop, test and de-risk intelligent control systems using artificial intelligence based approaches. With artificial intelligence and machine learning the potential to automate the control of traffic signals and deliver on walking, cycling and public transport priority and reliability will be enhanced. aiding mobility across Lancashire, and **supporting long-term benefits realisation,** and **more resilient adaptation to future city demands** of the schemes delivered.

Building upon current day technologies, the Future Mobility Platform will establish a next generation solution, that drives forward innovation and sets a unique opportunity for the adoption of Artificial Intelligence and Machine Learning in urban traffic management using an unparalleled use of data. This will be supported with the upgraded on street infrastructure alongside the next generation technology to provide a ‘ready now’ baseline architecture capable of transforming as the needs of the transportation sector change.

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2.9 Assessment of Success

2.9.1 Measuring Success

The TCF package represents a clear and unequivocal transformation in terms of access by sustainable modes within the City Region.

The success of the options will be measured against the Strategic Objectives set out in **Section 2.5** above, based on the monitoring metrics applied and the benchmark for success for each objective. These are set out in Table 2-12 below.

These metrics will form a core part of the Monitoring and Evaluation Strategy for the TCF programme described in the Management Case

Table 2-12: *Assessment of success*

Strategic Objective	Output / outcome monitoring	Benchmark for success
1. To provide new infrastructure to support sustainable transport service improvements across the prioritised corridors.	Transport service improvements within priority corridors, e.g.: • Shorter journey times; • Increased service frequency; • Improved reliability.	An increase in the use of sustainable mode share for commuting.
2. To support access to the City Region's key employment centres and commercial development sites.	New or higher capacity public transport connections to existing centres of economic activity as well as to large commercial development sites.	An increase in the public transport mode share for commuting. Above average public transport use at new sites.
3. To support the delivery of major residential sites.	Residential development sites where transport impacts are mitigated through TCF sustainable transport provision.	Increased residential density within TCF impact zones.
4. To deliver social and economic benefits to deprived communities.	High uptake of public transport services to commute to key employment centres, including out-of-town sites such as EZs.	Improved levels of inclusion within Preston's economy: lower unemployment; increased average earnings; greater workforce participation.
5. To improve the reliability and resilience of the public transport network, particularly within congested bus corridors.	Fewer and shorter delays with a narrower impact on Preston's transport system. Improved adherence to public transport timetables.	An increase in the public transport mode share for commuting.
6. To increase the use of low carbon options and improve air quality.	Higher public transport ridership and use of cycle/walking routes. Decreasing levels of air pollutants recorded within AQMAs.	A decrease in mode share for private cars and taxis. Observable environmental improvements.

2.10 Synergies and Complimentary Initiatives

Making Preston HS2 Ready

The creation of a new Central Business District, the Preston Station Gateway, centred around Preston Station is essential for preparing Preston and the Central Lancashire economy for the arrival of HS2. The new quarter will allow the City to retain and attract key business, headquarters and government agencies and department to realise growth opportunities that are intrinsically linked to the success of the City Centre, and has the potential to deliver 8,550 dwellings and 364,200m^2 commercial floorspace in the centre of the City Region

Preston's TCF programme is essential for delivering the emerging vision for Preston Station Gateway, creating sustainable access to/from and around the station prior to 2026, and realising the High Speed Rail opportunity for the City Region and UK as a whole.

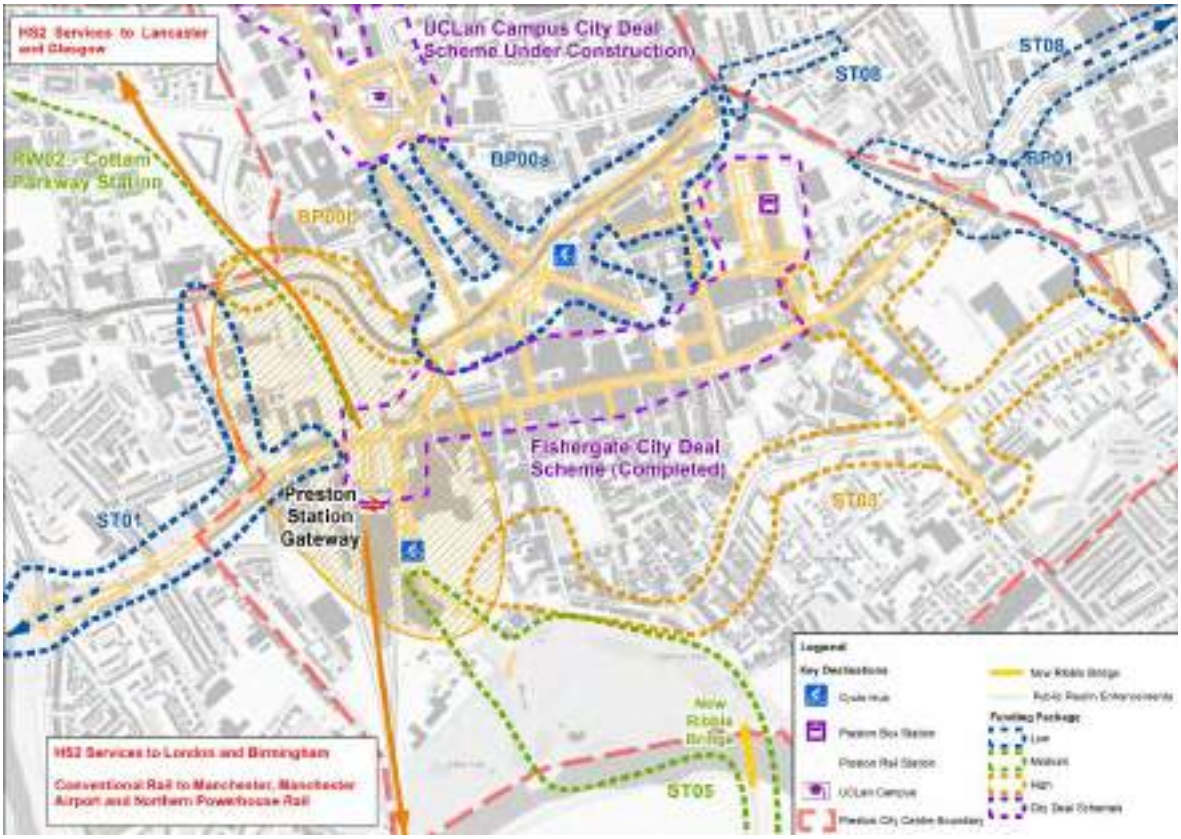


Figure 2-40: Preston Station Gateway and TCF interaction with the Strategic Rail Network

The arrival of HS2 services at Preston in 2026 is likely to require significant upgrade work at Preston station. During this period, the provision of Cottam Parkway as an alternative access to the rail network and will provide much needed network resilience during the time that Preston Station is operationally limited.

Building Bus Partnerships and Meeting the Ambitions of the Bus Services Act

Lancashire County Council and Bus Operators have been engaged in building stronger partnership and collaboration since August 2017 through the **Lancashire Area Public Transport Association** (LAPTA). As a result of this ongoing collaboration, a **Bus Punctuality Partnership** was formed for Preston operators in October 2018 and has become one of the key drivers of the Transforming Cities Fund programme.

The county council has an aspiration to further develop its partnership approach, with local bus operators, building on the recent work to develop its **Punctuality Plans**.

The investment that has already taken place within the City Centre and the refurbishment of the iconic bus station, along with the proposed investment on bus priority measures through the TCF will allow for further partnership development to take place.

In addition, bus operators in Preston have committed to make significant investments in their bus fleets alongside the TCF programme. Stagecoach has committed to investing in new buses for Preston's bus fleet, and Transdev has committed to investing £470,000 in replacing their Preston – Blackburn/Burnley Hotline service fleet. This investment is conditioned on the TCF investment, as the operating cost reductions and revenue increases generated by the TCF are essential in supporting this investment.

Initially LCC will continue to develop an informal partnership but will work closely with operators to deliver services improvements, ticketing developments that will make a real difference for passengers and support operators in their requirements to provide Bus Open Data to the DfT's specification, including routes and times, fares and AVL data which can be used for highway monitoring and the development of outputs for customers information apps and other emerging technologies.

As investment through Transforming Cities Funding is made, LCC and bus operators have committed to work towards developing a more formal partnership approach culminating in the establishment of an Advanced Quality Bus Partnership on key corridors to build on and protect the investment made by all partners and enable further service developments along these key routes in the City Region area.

Once this partnership is made, LCC will use the experience gained to extend this form of partnership to other parts of Lancashire where public transport improvements are being made through masterplan developments or other investment opportunities.

Enabling delivery of the wider ambitions of the Preston City Transport Plan

The 2019 Preston City Transport Plan represents an ambitious plan for the future of transport in Preston cover a 20 year period. The plan includes proposals far greater in scope and ambition than can be delivered in the TCF timeframes, however as a whole the plan is highly dependent on transforming access to and travel through the core of the City Centre.

The TCF will deliver the core of the PCTP's cycle and bus priority networks, as shown in Figure 2-41 and Figure 2-42, focusing on access to and movement within the City Centre.

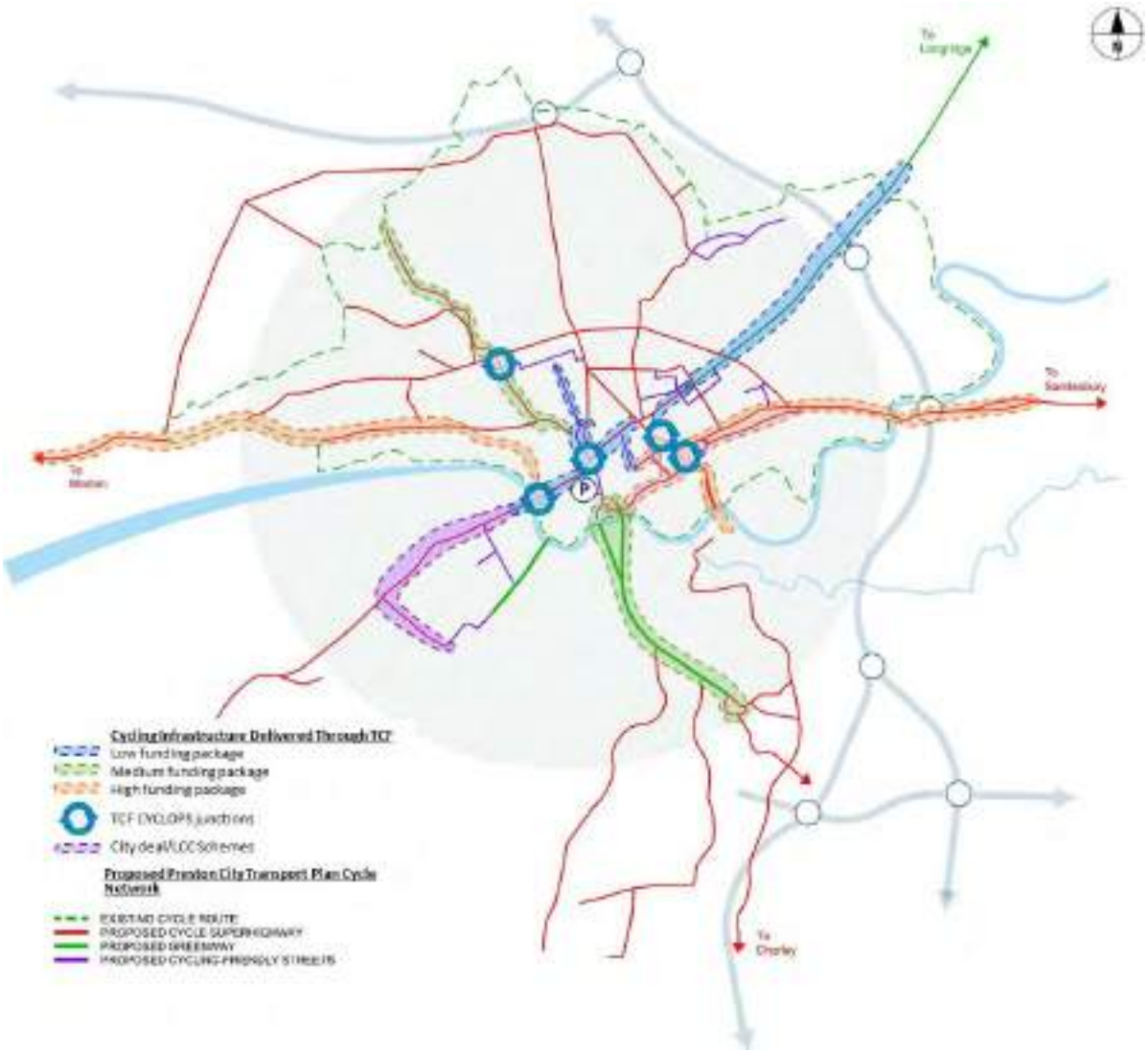


Figure 2-41: Preston City Transport Plan Cycling network showing sections delivered through Preston TCF Programme

In order for the aspirations in the PCTP to be deliverable, near term transformation of this core City Centre area is required. All later projects, including a full network of radial bus priority corridors, a ring of park and ride sites, new suburban rail stations, and even the possibility of a rapid transit system are dependent on this core area.

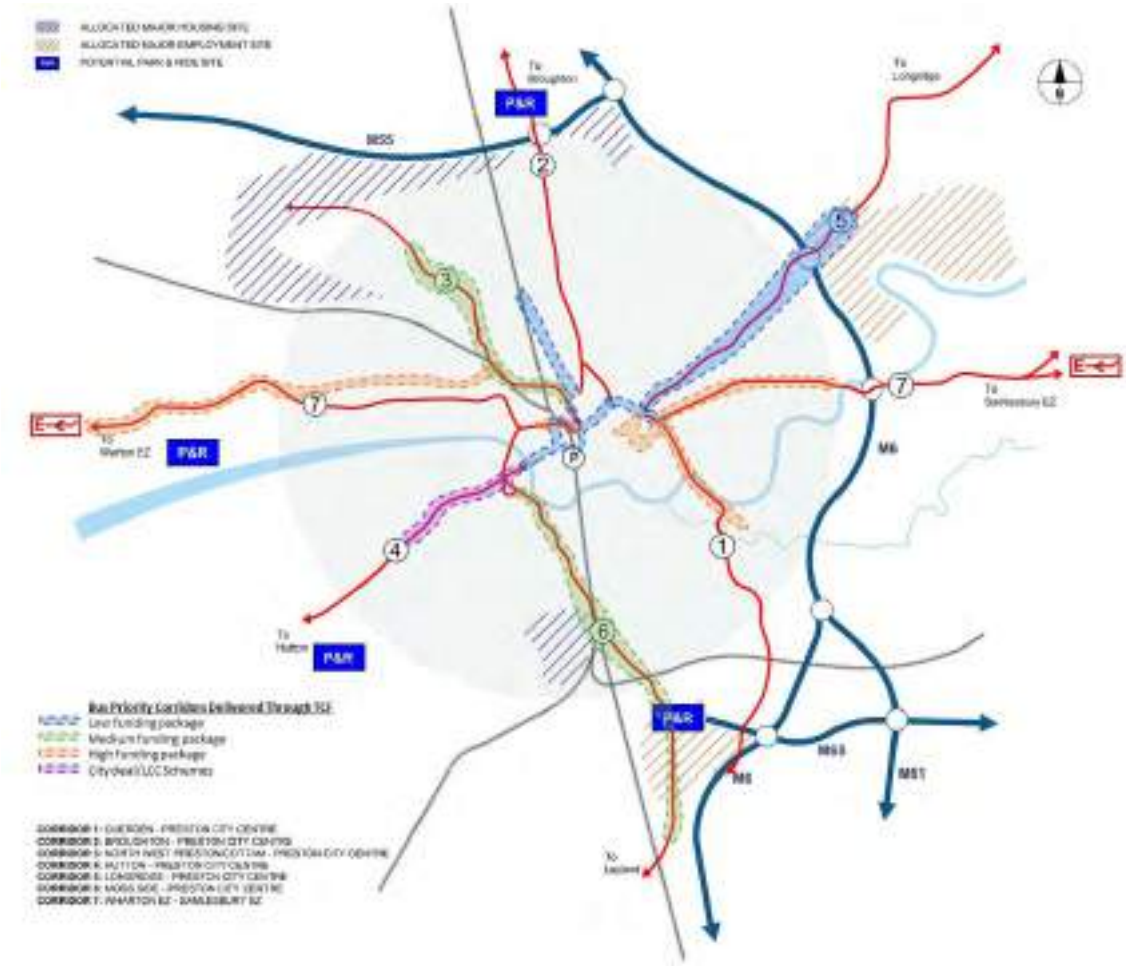


Figure 2-42: Preston City Transport Plan Bus Priority network showing sections delivered through Preston TCF Programme

The Transforming Cities Fund proposals, taken together, will deliver the necessary transformation of the core of Preston City Centre that will enable these further future projects.

City Centre Parking Review

As part of the Preston Transport Plan, Lancashire County Council and Preston City Council are undertaking a detailed review of **City Centre car parking** alongside the TCF programme.

This review will aim to **build on the modal shift created by TCF** by better managing car parking, transitioning to a "maximums" approach to car parking provision at development and reducing the overall number of trips made by car.

The review will also consider the potential for consolidation of surface car parking and **closure** of some car parks in the City Centre to reduce the amount of land used for parking and make it available for **alternative, higher value and more productive uses**.

TCF is essential to being able to maximise this opportunity by creating the initial modal shift away from private car and creating attractive alternatives to driving and parking in the City Centre.

Taken together, the TCF proposals will accelerate delivery of the PCTP's ambitious changes to the Preston City Region's transport network, building momentum behind the plan and improving the deliverability of other schemes within the programme.

2.11 Stakeholders & Stakeholder Engagement

The Preston Transforming Cities Fund Programme delivers on the strategies set out in the Central Lancashire Highways and Transport Masterplan (CLHTM, adopted March 2013) and subsequent Preston City Transport Plan (PCTP, published October 2019).

Extensive consultation was undertaken as part of the development of the CLHTM and prior to its adoption, and the new 2019 Preston City Transport Plan has been developed in close collaboration with all key stakeholders and partners across the City Region. These documents represent the established and agreed future strategy for transport in the Preston City Region and have the backing of all major stakeholder and partners.

As the TCF Programme projects are developed from concept stage to detailed design and full business case, further stakeholder and public engagement will be undertaken in the first part of 2020. This will be particularly important in respect to vulnerable groups such as those representing people with disabilities but will also include wider public consultation as a means to foster public understanding of and support for the programme. Similarly, LCC will undertake extensive engagement with the business community, particularly in Preston City Centre.

The Preston Transforming Cities Fund programme has been developed in close collaboration with key stakeholders in the programme, including Preston City Council, Blackpool Council, South Ribble Borough Council, South Fylde Borough Council, Lancashire Enterprise Partnership (LEP) Network Rail, Rotala Preston Bus , Transdev, Stagecoach, Northern, Arriva, the University of Central Lancashire, and the Department for Transport (DfT).

Close collaboration with the DfT throughout the co-development process has helped strengthen and develop the TCF programme focusing on interventions that will have the most transformational impact on public transport and sustainable and active travel use within Preston and the strongest impact on productivity and connecting deprived communities to skills and employment opportunities.

Lancashire County Council have held quarterly meetings with bus operators since August 2017 through the Lancashire Area Public Transport Association (LAPTA) to discuss operational issues being faced. An aspiration of both operators and the authority has been to develop Punctuality Partnerships and to develop options for areas of operational concern across Lancashire. A Punctuality Partnership was formed for Preston operators in October 2018 and came forward with some of their key issues which were then fed into the emerging Transforming Cities Fund discussions.

In May 2019, LAPTA operators were updated regarding the proposed TCF bid and invited to get involved in the early design stages with LCC colleagues. As extensive information from operators on their priorities for TCF already existed from the Punctuality Partnership, this informed the original option identification and prioritisation. A meeting was held at the end of August 2019 with operators to update them on TCF progress and give them an opportunity to comment on the plans and proposals being developed. These were then fed into the ongoing design process and an update was provided at a LAPTA meeting at the end of October and subsequent update meetings in mid-November prior to submission.

Much of the work to improve the operational reliability of the local bus network has been focussed on suggestions made by the operators, over a period of time, and they are in general very pleased with the progress that has been made in the TCF plans.

The operators are also supportive of other measures being developed for improved information provision, ticketing options and are happy to provide open data to the authority to assist in the ongoing highway management and bus priority proposals. It is proposed, as part of TCF, to further develop the Punctuality Partnership into a stronger partnership model to incorporate a wider range of activity, culminating in the establishment of an Advanced Quality Bus Partnership in Preston.

The engagement held to date with bus operators is outlined in Table 2-13 below.

Table 2-13: Meetings held to date with bus operators

Date	Stakeholders	Topic
02/08/2017	LCC Highways and Public Transport	Establishing bus punctuality partnerships
31/01/2018	LAPTA	LAPTA meeting including discussion on bus punctuality with all operators
09/05/2018	LAPTA	LAPTA meeting including discussion on bus punctuality with all operators
14/09/2018	All bus operator	Letter sent to all bus operators in the county requesting identification of punctuality and operational issues for consideration which have formed the basis of TCF issue identification
16/11/2018	LAPTA	LAPTA meeting including discussion on bus punctuality with all operators
16/04/2019	Stagecoach and Rotala Preston Bus	Inaugural Preston and South Ribble Bus punctuality partnership meeting. Principles of partnership and detailed discussion with bus operators on punctuality and operational issues
31/05/2019	LAPTA	LAPTA operators updated on TCF proposed bid and invited to get involved in the early design stages with LCC colleagues
05/19 to 08/19	Stagecoach and Rotala Preston Bus	LCC officers informed design team on operators and highways team comments and these were incorporated into the TCF proposals
30/08/2019	Stagecoach and Rotala Preston Bus	Latest, updated design proposals for TCF shared with bus operators and comments received. These comments fed into the designs relating to most interventions including Ringway, and the City Centre and corridor routes where pinch points and delays occur.
01/11/2019	LAPTA	LAPTA operators updated on latest TCF proposals
13/09/2019	Stagecoach	Plans and bid discussed on a one to one basis with Stagecoach including discussion regarding support for schemes and other complimentary activities including ticketing, information and partnership schemes.
14/09/2019	Transdev	Plans and bid discussed on a one to one basis with Transdev including discussion regarding support for schemes and other complimentary activities including ticketing, information and partnership schemes.
20/11/2019	Stagecoach	Confirmation of contributions and support

In addition, LCC and their consultants have held a number of meetings with Network Rail and Northern on an ongoing basis to inform the development of the TCF rail schemes, and both Network Rail and Northern Trains are supportive of the schemes. An outline of the meetings held is shown in Table 2-14 below.

Table 2-14: Meetings held to date by LCC and Jacobs with Network Rail and Northern

Date	Stakeholders	Topic
2015-2016	Network Rail (Simon Smith), Northern (Craig Harrop)	Steering Group meetings during development of original SOBC for Cottam Parkway
2017-2018	Network Rail	Network Rail commissioned by LCC to develop Cottam Parkway through GRIP stages 1 and 2
04/10/2018	Network Rail (Heather Pritchard, Business Development Manager)	Introduction meeting: explanation of Transforming Cities Fund Bid, level and frequency of communication agreed.
25/09/2019	Northern (Owain Roberts, Regional Stakeholder Manager – West)	Explanation of Transforming Cities Fund Bid schemes, with reference to Northern, and future open access operation
23/10/2019	Network Rail (Heather Pritchard, Business Development Manager)	Presentation of initial options, information transfer and consultation
08/10/2019	Northern (Owain Roberts, Regional Stakeholder Manager – West)	Presentation of initial options, information transfer and consultation
11/11/2019	Network Rail (Heather Pritchard, Business Development Manager & Jason Graham, Business Development Manager)	Final Presentation and consultation of preferred options and discussion of letter of support
13/11/2019	Northern (Owain Roberts, Regional Stakeholder Manager – West)	Final Presentation and consultation of preferred options and discussion of letter of support

The key stakeholders and partners have been engaged throughout the development of the Preston TCF programme and are fully supportive of LCC's proposals. Specific reoccurring areas of support from the above stakeholders include:

- Linking existing high-value Enterprise Zones (Lancashire County Council, Lancashire Enterprise Partnership, Blackburn with Darwen Council);
- Addressing existing congestion challenges (Lancashire County Council, Lancashire Enterprise Partnership, Preston Bus, Stagecoach, the Blackburn Bus Company);
- Improved connectivity on the South Fylde Rail Line (Blackpool Council, Blackburn with Darwen Council, Network Rail, Northern Rail
- Utilising technology to provide an improved passenger travel experience (Preston Bus, Stagecoach, the Blackburn Bus Company)

Letters of support have been received from all of the above stakeholders, in the majority of cases updated from letters sent as part of the draft submission on the basis of further, on-going co-development of the TCF proposals, and are included in **Appendix S.14**.

2.12 Delivery Constraints

During development of the TCF programme, delivery constraints have been investigated and considered to ensure the programme is robust and deliverable. Constraints and potential risks associated with contractual, planning and legal issues are considered in the programme Risk Register, which is described further in the

Management Case. LCC's approach to management of risk has ensured that these have been identified early in the development progress and will be tracked and mitigated throughout the delivery of the programme. LCC's experience with delivering projects in the area through the Preston City Deal has ensured that most constraints within the programme study area are already known and lessons learned from the City Deal are applied to the mitigation of these risks.

An **environmental constraints map** has been created to identify the key environmental constraints which may impact on scheme deliverability and that has help inform scheme designs through the development process. This is shown below and included as Appendix S.15.

While several environmental constraints have been identified in proximity to the TCF schemes, none of these are considered likely to impede the delivery of the programme.

Statutory Undertakers' infrastructure in the City Centre is already known about and allowances have been made in the costings and TCF programme by specialist design teams who are aware of local stats issues and to ensure suitable allowances have been made in scheme design, costings and timescales for delivery.

Land availability and assembly have also been considered for **all of the schemes**.

The majority of the schemes take place entirely within existing adopted highway and LCC or Network Rail land ownership. Some land purchase is required for Cottam Parkway Station, but this is considered negotiable. However, timescales for its delivery have included CPO **as a worst case**, drawing on LCC's recent experience with this process through the City Deal programme, and has been allowed for in the delivery programme.

An Equalities Impact Assessment has also been completed by the Council, and to ensure both appropriateness and deliverability of the package from the position of the Equalities Act 2010 too.

2.13 Policy Alignment and Business Strategy

As the final part of the Strategic Case, a review of the package of interventions against DfT's TCF guidance has been undertaken in order to evaluate whether the proposals are in accordance the objectives of the TCF.

It is also important to understand the policy context in which the proposals are made and how local and national policy aspirations can be supported through the delivery of well thought-out improvements to the transport network. A policy review has therefore been undertaken of pertinent local, national and sub-national policy documents to establish the 'Strategic Fit' of the proposed scheme.

2.13.1 TCF Guidance

As part of Tranche 2 of the Transforming Cities Fund, the DfT has invited all shortlisted City Regions to develop their plans into a package of proposals which will subsequently be scrutinised against the TCF assessment criteria with funding awarded to those proposals which demonstrate the greatest value for money.

The package of interventions has been derived on the basis that this will collectively create transformational change through a long-term shift towards sustainable travel modes and thereby relieve pressure on the existing highway network, and improve air quality and public health. The package of interventions identified are considered deliverable within the specified TCF timeframe, and the outcomes from the Appraisal Summary Table demonstrate that the interventions will continue to benefit the City Region long after the TCF investment is delivered.

Further, the full package of interventions improves links across the wider network, through improvements within Preston City Centre, and improving the quality of connections to destinations which are further afield such as Blackpool. The TCF corridors extend through existing and future development areas, and therefore have potential to attract additional funding through developer contributions and future funding opportunities, as has been demonstrated through recent developer contributions as part of the City Deal.

2.13.2 National, Sub-Regional and Local Policy

A review of key local, sub-regional and national policies has been undertaken to demonstrate how the proposed TCF intervention package aligns with priorities from a national to a local scale. As demonstrated below and in Appendix S.16 , the TCF package of schemes are closely aligned with the outcomes sought by pertinent national, sub-regional and local policy documents. This clearly demonstrates that the package of interventions is strongly supported by relevant policies.

The local, sub-regional and national policies that have been reviewed are set out in Table 2-15 below, along with the modes the documents are relevant for and a RAG rating for the policy alignment with the proposed package of interventions. Appendix S.16 further details each of these policies and outlines the relevance for the TCF package of interventions.

Table 2-15 Alignment with National, Sub-Regional and Local Policy

Policy	Relevant for Modes	TCF Alignment with Policy (RAG)
National Policy		
National Planning Policy Framework (NPPF) (February 2019)	All modes	
A better deal for bus users, DfT, September 2019	Bus	
DfT Cycling and Walking Investment Strategy (CWIS), 2017	Walking Cycling	
Transport Investment Strategy, July 2017	All modes	
Industrial Strategy White Paper, 2017	All modes	
Housing White Paper, 2017	All modes	
DfT Clean Air Strategy, 2019	All modes	
Future of mobility: urban strategy, March 2019	All modes	
The Bus Services Act 2017	Bus	
Sub-Regional Policy		
TfN Strategic Transport Plan (2018)	All modes	
Central Pennines Strategic Development Corridor (SDC) Strategic Programme Outline Case (SPOC)	All modes	
TfN, draft Long Term Rail Strategy, January 2018	Rail	
TfN, The Potential of Northern Powerhouse Rail (NPR), September 2019	Rail	
Local Policy		
Lancashire County Council Local Transport Plan 2011-2021	All modes	
Central Lancashire Highways and Transport Masterplan (CLHTM) (March, 2013)	All modes	
Central Lancashire Core Strategy (July 2012)	All modes	
Lancashire Strategic Economic Plan (SEP), 2014	All modes	
Preston, South Ribble and Lancashire City Deal, 2013	All modes	
Lancashire Growth Deal Implementation Plan, 2018	All modes	
Preston City Centre Plan (June 2016)	All modes	
Preston City Transport Plan (PCTP), October 2019	All modes	
Central Lancashire Local Plan (CLLP)	All modes	

2.14 Summary

Both public transport usage and walking and cycling levels are low in Preston City Region, and are ripe for transformation. The principal economic corridors, and core areas of sizeable future growth of the City Region are poorly served, and both the rail and bus networks provide a very limited offer to commuters due to low service frequencies. A lack of dedicated provision for walking and cycling on key corridors dissuades users from choosing active travel options.

The consequence of this sub-optimal arrangement is that labour markets are less efficient than they otherwise would be, and some participants, especially from more deprived neighbourhoods, are excluded by virtue of travel times and horizons.

Given significant and increasing road congestion and air pollution in Preston City Centre – the hub of the City Region's transport network and the area with greatest potential for future economic growth – there is a real need for a more sustainable and integrated transport system that will enable more people to get in and out of the centre without using their cars. Without action, current trends will lead to unacceptable health and environmental impacts and a City-Region-wide drag on output growth.

The current public transport system does not offer the convenience, nor achieve even close to car-borne journey times, even on point-to-point journeys. The current active travel network is unattractive with significant gaps in provision, particularly on radial corridors, and leaves users sharing road space with heavy levels of road traffic. The interdependence of the various transport modes, however, has meant that additional cars on the roads has further worsened the condition of public transport (particularly bus options) and the attractiveness of walking and cycling. The severity of congestion on the A59 Ringway, in particular, hinders the operation of the bus network across the whole city and creates significant severance between the City Centre and the rest of the urban area.

Improving this situation will require interventions that will help underpin the City Region's growth potential. This will mean improving connections between businesses and workers, supporting the development of new commercial and residential sites, and improving access to work for the City Region's deprived communities.

A package of interventions has been devised, which, based upon TCF guidance, is based around a number of key corridors where potential exists to deliver transformational change. Delivery of the proposed options has the potential to unlock significant new employment and housing potential (31,700 jobs and 18,700 homes for the next 15 years) and significantly widen the labour market of key growth areas in the City Region. The package of options, taken together, would radically transform travel opportunities, and consequently travel patterns, within and around Preston, improving productivity and reducing emissions by minimising car travel within Preston.

The TCF package will fundamentally transform the transport network in Preston City Region. Sustainable and Active Travel Corridors including high-quality bus priority corridors, cycle superhighways and new CYCLOPS junction designs, and a new Ribble Crossing to replace the closed Old Tram Bridge. New public realm enhancements will increase dwell times and economic activity in the city centre and connect the new UCLan campus to the city centre by bridging the "grey scar" of Ringway with a new civic square. A new Cottam Parkway Station will provide an alternative access point to the rail network service key development sites to the West of Preston and the Fylde peninsula. A city-wide Future Mobility Platform will deliver best-in-class city-wide bus priority and active travel mobility and provide a platform for future integration of innovative digital technologies to better manager Preston's transport network.

The TCF programme will help kickstart the wider ambitions of the Preston City Transport Plan by providing the core of the PCTP bus and cycle networks around the city centre and key corridors, and will help make Preston ready for the arrival of HS2 by providing connectivity to the forthcoming Preston Station Gateway.

The TCF package has the support of key stakeholders, partners and local bus operators. Bus operators have committed to deliver over £7million in investment in Preston's bus fleet alongside the TCF programme. Furthermore, the TCF package is strongly aligned with national, sub-national and local policy.

ECONOMIC CASE

3. Economic Case

3.1 Introduction

The Economic Case assesses the impact of the various packages included in the overall Preston TCF bid, and the resulting value for money, to fulfil HM Treasury's requirements for appraisal and demonstrate value for money in the use of taxpayers' money.

In line with HM Treasury's appraisal requirements, the impacts considered are not limited to those directly impacting on the measured economy, nor to those which can be monetised.

The economic, environmental, social and distributional impacts of the Preston TCF bid are all examined, using qualitative, quantitative and monetised information. In assessing value for money, all of these are consolidated to determine the extent to which a proposal's benefits outweigh its costs, and in the overall Value for Money Statement.

Scheme costs adjusted for use in cost benefit analysis are discussed in 3.2

Wherever possible, the impact across the various modes were monetised, in line with the over-arching principles required in the assessment of the various TCF schemes, and aligned with both WebTAG and supplementary Local Value for Money Assessment criteria produced by the Department for accountable bodies. The elements that were monetised are shown in Table 3-1 below.

Benefits for which more developed appraisal techniques apply are labelled as 'established monetised benefits', and are included in an **Initial Benefit to Cost Ratio (BCR).** Benefits for which appraisal techniques are less well developed are listed as 'emerging monetised benefits'. These are included along with the established monetised benefits in an **Adjusted BCR**.

Details about the methodology and results from the monetised benefit appraisal are provided section 3.3 and 3.4.

In addition, assessment was undertaken for impacts which cannot be monetised. These are discussed in section 3.7 and 3.8.

Finally, the costs, monetised benefits and non-monetised benefits are all considered together, to inform an overall value for money conclusion provided in section 3.9.

Table 3-1: Summary of monetised benefits assessed

Mode	'Established Monetised Benefits' Appraised	'Emerging Monetised Benefits' Appraised
Bus	Journey time savings User charges Modal shift benefits (journey time benefits to new users, reduced congestion, environmental benefits, increase in operator revenues)	Bus reliability
Cycling & Walking	User Benefits Business Benefits Health Benefits	
Rail	Demand and Revenue (MOIRA and Station Choice Models) User benefits Non-User (congestion etc)	
Highway Impacts	Journey Time Disbenefits through TCF roadspace reallocation	
Urban realm		Assessment of journey quality benefits relating to pedestrian and cycling environment
Wider Economic benefits		Labour Supply Impact

3.2 Scheme Costs

3.2.1 Overview

To understand the value for money of the Transforming Cities Packages, the benefits of the schemes (both monetised and non-monetised) are compared against the total cost. It is therefore important to fully understand the costs of the schemes.

The Financial Case chapter of this Business Case describes the build-up of the investment costs in detail. These costs include allowances for inflation and account for risk based on a Quantified Risk Assessment (QRA). They were also benchmarked against similar schemes previously delivered by Lancashire County Council. Costs are also included to allow for Monitoring and Evaluation of the schemes after opening.

However, before these costs can be used in the cost-benefit analysis contained in this Economic Case chapter, certain adjustments must be made:

- In line with TCF guidance, costs were converted to 2010 prices (the standard DfT price base year for appraisal), to ensure costs can be directly compared against the scheme benefits
- Adjustment to market prices, by multiplying by the DfT standard factor of 1.19
- Inclusion of an additional Optimism Bias allowance, to account for the observed tendency for scheme promoters to be overly optimistic about scheme costs. Note that these are applied in the economic case only.
- As well as the initial investment costs, the impact on future operational and maintenance costs are also considered.
- The impact of the schemes on future revenue (e.g. from rail ticket sales). This may either partially offset initial investment costs if there is an increase in revenue to the rail franchise, or represent an additional ongoing cost liability if there is a decrease compared to existing revenue predictions
- All costs are summed over the full appraisal period, and discounted to 2010 (the standard DfT present value year, and in line with TCF guidance)
- Consideration is also given to 'Do Minimum' costs, i.e. costs which would otherwise be required, but would be avoided if no TCF investment is made

The final costs used for comparison against benefits in the value for money assessment are known as the Present Value of Costs (PVC). These are provided in section 3.2.4.

3.2.2 Adjustment for Optimism Bias

Optimism bias is the demonstrated tendency for appraisers to be overly optimistic about project costs and timescales. To guard against this, adjustments should be made to scheme costs used in the economic case's value for money assessments. DfT guidance states that, at SOBC stage, an optimism bias adjustment of 44% is appropriate for the majority of bus, highway, walking and cycling schemes. Higher optimism bias rates should be applied to rail schemes and those including fixed links such as bridges.

In the development of this Business Case, the rates of optimism bias adjustments to be applied were discussed with DfT. While it was considered necessary to ensure the costs are suitably robust and adjusted for risk and optimism bias, this was balanced against the need to avoid the double counting of these elements. It was therefore agreed to apply Optimism Bias to costs which exclude QRA costs. This aligns with guidance in TAG Unit A1.2, which states that optimism bias adjustments should only be made in the economic case, whereas the values produced in a QRA are more appropriate in establishing contingencies within the financial case.

This is further justified by the fact that additional risk and contingency is already included in the base costs even before QRA costs are added. For example, the majority of schemes include a contingency of 15% as standard, plus an additional 15% contingency to account for the fact that the schemes are city and city centre based and therefore may be subject to restricted working hours and more involved traffic management costs based on experience of delivering similar schemes previously. Once the full range of risks and contingency adjustments present in the financial case costs were considered, appropriate levels of optimism bias adjustments were chosen as outlined in the table below.

Table 3-2: Optimism Bias assumptions

Scheme	Rate of OB applied	Justification
RW02 (Cottam Parkway)	64%	In line with TAG guidance for a rail scheme at SOBC stage.
ST05 (South City Region Growth zone)	44-66%	This scheme includes the introduction of a new bridge for use by pedestrians and cyclists, as well as other more standard cost elements. The scheme cost was therefore split prior to the addition of Optimism Bias. 66% OB was then applied to the bridge cost element (in line with DfT optimism bias guidance for a fixed link at SOBC stage), with 44% applied to the remaining elements.
All other schemes (excluding technology scheme outlined below)	44%	In line with TAG guidance for a scheme at SOBC stage. As noted above, the base costs to which this Optimism Bias was applied already include significant levels of contingency costs.
TN00 (Future Mobility platform)	44%	This scheme is generally based around signal engineering, of which Lancashire County Council have experience and risks are well understood. For this reason, the optimism bias recommended in TAG for a general road scheme was used, rather than the recommended rate for an IT project

Sensitivity tests around the impact that higher or lower scheme costs would have on the value for money of the TCF schemes are included in section 3.6.

3.2.3 Changes in Revenue, Operating and Maintenance Costs

Changes in Revenue

For the Cottam Parkway rail scheme, increases in ticket revenue are considered to partially offset the capital costs of the scheme.

The overall increase in revenue of £13.7m (2010 prices, discounted to 2010) is therefore subtracted from the final Present Value of Costs, as agreed with DfT through co-development. The impact on the final PVC is shown in Table 3-3. Bus operator revenues generated by passenger increases are not treated in the same way. Instead these are recorded as benefits to the private sector and included within TEE tables.

Changes in Operating and Maintenance Costs

As well as the capital costs of building the schemes, the impact they have on future operating, maintenance and renewal costs over and above the existing situation should be considered.

As discussed in the financial case, the Future Mobility scheme package (TN00) is expected to have future operational costs of £0.125m per year (2019 prices). This is due to ongoing IT costs and signal maintenance. These costs are also therefore considered within the economic case. In line with other elements of the economic case, these costs were therefore:

- converted to 2010 market prices
- summed over a 20 year appraisal period – the same appraisal period used to assess the scheme's impact on the highway network
- discounted to 2010
- No allowance for cost rises above background inflation were included

This results in a present value cost of £1.3m for its operational costs. This are added to the overall Present Value Cost of the TCF schemes shown in Table 3-3.

A DfT requirement as part of any TCF investment is that Monitoring and Evaluation should be undertaken following the scheme's opening to assess their performance. As per of the financial case, these costs have been allowed for as a cost of £0.3m in the low funding package, £0.425m in the medium package, and £0.5m in the high funding package. These costs were assumed to fall equally over the first five years after scheme opening, with inflation applied in line with background inflation. The costs were then converted to 2010 market prices and discounted to 2010 for use in the economic case. This results in a present value cost of £0.17m in the low funding package, £0.24m in the medium package, and £0.29m in the high package.

No further operational or maintenance costs are included in the economic case for other schemes. As discussed below, it is considered that an overall reduction in these costs is likely, but due to uncertainty around the real size of the impact they have not been included in monetary terms.

- Schemes which involve signal replacements would reduce the need to replace existing signals when they reach end-of-life anyway. They are also likely to use more energy efficient systems reducing operational costs.
- Similarly, schemes which involve upgrading highway carriageways would delay the need for significant maintenance that would otherwise be required on those roads (the 'maintenance holiday' effect). As there is generally no increase in total carriageway area to maintain, this would result in an overall cost decrease in present value terms – as maintenance costs are pushed further into the future, the effects of discounting are more significant.
- Maintenance and inspection costs on the new bridge are likely to be broadly offset by the fact that similar costs are currently required on the existing decommissioned bridge, and these costs would continue into the future.
- There are likely to be maintenance benefits from urban realm improvement schemes. A lower amount of maintenance would be required in early years compared to the existing situation as the scheme is newly built (the maintenance holiday effect). Also, use of the latest technology is likely to reduce some ongoing costs, e.g. through the use of more energy efficient LED lamps.

The overall effect that changes on revenue, operating and maintenance costs will have on the final PVC is shown in Table 3-3.

3.2.4 Do Minimum Costs

The economic case should also consider costs that would be incurred if the scheme is not built, but would be avoided if the scheme was built. These are labelled as Do Minimum costs.

The effect of ongoing maintenance and operating costs that would occur without the scheme have already been implicitly considered in the section above: only costs which would be over and above the Do Minimum costs have been included in the economic case.

However, one additional significant Do Minimum cost has been identified, which must be considered in the economic case. Scheme ST05 involves replacing a pedestrian bridge which is currently closed to all users due to safety reasons. It has been assumed that, if the TCF scheme is not built, this bridge would have to be demolished anyway. A cost of demolishing this as a standalone project (as opposed to as part of an ongoing bridge replacement project at the same site) was estimated. This cost is £1.12m (in nominal prices including risk, inflation and optimism bias). This cost was converted to 2010 market prices and discounted in line with all other costs. The present value of costs for this £0.86m.

3.2.5 Final Present Value of Costs

As discussed above, the costs presented below are based on those in the financial case, but have been adjusted for the purposes of economic appraisal.

The costs in the table below should therefore only be used within the context of a value for money assessment, and not for the purpose of funding decisions.

The scheme costs are provided for individual scheme. However, because the expected Monitoring and Evaluation costs have not yet been derived at an individual scheme basis, these are provided at a funding package level to ensure they are accounted for.

Table 3-3: Present Value Costs per scheme (£m)

Scheme	Inflation-adjusted investment costs from financial case, with QRA removed (nominal prices)	Investment cost adjusted for optimism bias, in 2010 market prices discounted to 2010	Impact on revenue, operating and maintenance costs (2010 market prices discounted to 2010)	Do Minimum costs (2010 market prices discounted to 2010)	Final Present Value Cost (PVC)
RW01	16.2	20.8	-13.7		7.0
BP00a	23.9	25.0	0.0		25.0
BP00b	3.5	3.7	0.0		3.7
BP01	12.8	13.5	0.0		13.5
ST01	8.4	8.8	0.0		8.8
ST02	1.7	1.8	0.0		1.8
ST03	11.4	12.0	0.0		12.0
ST04	12.1	12.7	0.0		12.7
ST05	17.0	19.7	0.0	-0.9	18.8
ST06	20.2	21.2	0.0		21.2
ST07	5.1	5.4	0.0		5.4
ST08	9.0	9.5	0.0		9.5
ST09	5.0	5.2	0.0		5.2
TN00	5.7	5.8	1.3		7.1
Monitoring & Evaluation	0.3 (Low), 0.4 (medium), 0.5 (high)	0.2 (Low), 0.2 (medium), 0.3 (high)	0		0.2 (Low), 0.3 (medium), 0.3 (high)

3.3 Monetised Benefit Assessment: Methodologies

This section of the report discusses the methodologies used to establish the monetised benefits of the TCF packages. Given the different appraisal techniques used for different modes, the report goes through each mode in turn.

The methodologies used have been developed and agreed with DfT during co-development, taking on board comments they provided throughout the appraisal development process. They align with the principles set out in TAG guidance.

This section of the report provides a summary of the methodologies used, which are generally backed up by more detailed methodology notes appended to this report. These appended technical notes are:

- Bus Appraisal Methodology Note;
- Cycling and Walking Appraisal Note;
- Highway Model Technical Note; and,
- Wider Economics Benefits Note.

3.3.1 Bus Schemes

The appraisal of the bus-related impact of the TCF schemes was undertaken using an in-house tool developed specifically for strategic level bus appraisals. The tool has been developed in line with the principles set out in TAG, while including local parameters relevant to bus journeys in Preston. The methodology of the tool and the parameters used to inform it were discussed in detail with DfT as part of their development for the TCF appraisal. A summary of the bus appraisal methodology is provided below. Further details are provided in a Bus Appraisal Methodology Note appended to this economic case.

3.3.1.1 Impact on Existing Bus User Journey Times

Estimate of journey time savings

To understand the potential benefits of introducing bus priority measures, the first step is to understand the existing level of delays along in the proposed scheme locations.

Observed journey time data was extracted using GPS tracking data provided by the bus operators. Data was extracted for bus services that travel along each of the proposed TCF improvement corridors. Observed stop-to-stop journey times were extracted for every individual bus service across a day, for a period of 2 weeks in October 2019.

From this, average hourly journey times between each stop were calculated (separately for each direction) for each hour that the buses were operational.

The next step was to estimate the journey time savings provided by the scheme. It was assumed that, for each stop-to-stop section that TCF interventions are designed to improve, the bus journey time between those stops would match the current lowest valid observed hourly journey time between those stops (once services with unrealistically low journey times were removed). In effect, this removes the additional delay between certain stops that currently exists in peak hours compared to off-peak hours.

This approach estimated journey time savings for each TCF intervention, for each weekday hour between 0700 and 1900. No estimate was made of any benefits on weekends or bank holidays – these are therefore excluded from the economic appraisal.

Estimates of bus passenger demand

Bus passenger demand data was estimated using passenger counts commissioned as part of the TCF appraisal. Manual roadside counts were undertaken in October 2019, counting the number of services per hour and estimating the level of bus occupancy. Counts were undertaken for a single day at each location. These provided the total number of passengers for each hour in the day, separately for each location where TCF interventions are proposed.

Consideration was given to using patronage data from bus operators. However, due to the incomplete nature of this data (it was not available for all services), and the fact that it only records passengers boarding and not alighting, it was not possible to derive accurate passenger data from this for each required location.

Further discussion of the surveys, and the reason why the chosen approach was considered the most effective, are provided in the appended bus appraisal methodology note in Appendix E.3.

Estimate of economic benefits

Time savings were converted to economic benefits by multiplying the estimated time savings by the number of passengers. These were then multiplied by appropriate values of time from the DfT's TAG databook. Daily benefits were multiplied by 253 weekdays per year to derive annual benefits.

Benefits were then summed over a 20 year appraisal period, and discounted to the DfT's standard present value year of 2010. Although lower than a standard appraisal period for bus schemes, a 20 year period was chosen to ensure consistency with other elements of the appraisal such as walking & cycling improvements. Given that some of the bus improvements are provided by improvements to traffic signals, this strengthed the case to assume a shorter appraisal period. A sensitivity test based on a 30 year appraisal period was also undertaken.

3.3.1.2 Benefits to New Bus Users

When bus journey times improve, this will result in more people switching to use the bus. This is a key objective of the TCF schemes. The number of new bus users were calculated using an elasticity-based model, which predicts the amount of people switching to buses based on the size of the bus journey time savings.

This predicted number of new users was used to estimate the economic impact due to:

- Journey time savings for these new bus users, based on Rule of Half calculations as described in TAG
- The monetary cost impact to these users, taking into account the cost of a bus fare they must pay, compared to any cost of parking, fares or vehicle operating costs they had to pay previously
- The impact of the new bus users on bus operator revenues

Full details of the elasticity-based model used and the calculation of the associated economic impacts are provided in the appended technical note in Appendix E.3.

3.3.1.3 Non-bus user benefits from a reduction in car trips

As bus journey times improve and some people are predicted to start using the bus instead of driving, this leads to a reduction in total car use. The economic benefits of this have therefore been estimated, in terms of changes in congestion, safety, greenhouse gases, noise, air quality, and changes in indirect tax revenue from fuel consumption.

These benefits were estimated based on the Marginal External Cost method described in TAG Unit A5-4. Based on the diversion factors provided in this TAG unit, it was forecast that 42% of new bus users would previously have used the car.

Full details of the assessment are provided in the appended technical note in Appendix E.11B.

3.3.1.4 Bus reliability benefits

Bus reliability benefits have also been calculated based on estimating the change in the variability of lateness.

Calculating standard deviation in lateness

The existing variability of bus lateness was based on the same bus operator stop-to-stop GPS tracking data used to inform the journey time analysis described above. For a specific bus service running through a route that is improved by a TCF scheme, the lateness of every single service over a four week window was extracted. Lateness was defined as the arrival lateness at the service's final destination.

Considering every single service's lateness, the standard deviation of lateness was calculated for each hour between 0700-1900, in line with the approach set out in TAG Unit A1.3, Appendix C, Table 1. This provided a 'without scheme' standard deviation of lateness per hour.

To estimate the standard deviation of lateness, the same data was used. However, the GPS journey time data was adjusted, so that the stop-to-stop sections affected by the TCF interventions (see the journey time saving section above for further details) would not add any additional lateness to the services. This was done by setting journey times between those stops to match the timetabled journey times. The standard deviation of lateness was therefore re-calculated for this 'with scheme' scenario.

Calculating economic benefits

The change in standard deviation of lateness was monetised used the approach outlined in TAG Unit A1.3. This recommends the use of a 'value of reliability', applied in the same way as the values of times described above. The value of reliability is established by multiplying values of time by a 'reliability ratio'. A reliability ratio of 1.4 was used, in line with TAG recommendation for all public transport modes.

The benefits per passenger were multiplied by the same passenger demand data per route described above.

As with the journey time savings, benefits were expanded to a full year by multiplying by 253 weekdays (i.e. weekend and BH benefits are excluded), then summed over a 20 year appraisal period.

For some interventions, no suitable bus operator data was available, given the more detailed data requirements for reliability calculations compared to the journey time savings. For these interventions, reliability benefits were estimated based on the relationship between journey time savings and reliability benefits calculated for other interventions. This was considered appropriate, given the generally similar nature of interventions and similar size of existing congestion and journey time savings across interventions.

The reliability benefits will be included in the overall adjusted BCRs produced for each funding scenario package.

3.3.2 Walking & Cycling Schemes

This section of the report summarises the methodology used to appraise the cycling and walking. As agreed with DfT, the methodology will follow the steps outlined below:

- Estimation of current cycling and walking demand on the identified corridors
- Estimation of the impact of the proposed interventions on the cycling and walking demand
- Benefits estimation using the Active Modes Appraisal Toolkit (AMAT).

The full methodology is reported in the Methodology Note appended to this report (Appendix E.5). An additional collision impact assessment has been conducted to include a specific situation along the Ringway corridor (chapter 1.3 of the Methodology note).

3.3.2.1 Estimation of current demand

Walking and cycling counts were commissioned and undertaken on the key movement corridors across the TCF study area. All walking and cycling trips were recorded in 15 minutes intervals, between the times of 07:00 – 19:00 from Monday 16th September until Sunday 22nd September 2019. Data was collected via high mast video units. The weather conditions were dry and clear for the majority of the recording time.

Additional pedestrian counts have been collected at 15 different sites, mainly in the city centre of Preston, on Tuesday 1st of October 2019 between 07.00 and 19.00. The location of the counts and the data related to the counts is reported in Appendix E of the Methodology Note (E.5).

The count locations were chosen along the strategic corridors which were identified during the option identification and prioritisation process (as described in the Strategic Case). The average daily flow recorded during the week has been used in the Do Minimum scenario on the respective routes.

As the flows reported above were collected in September/October 2019 a factor has been determined to calculate the average daily flows across the year. The resulting daily demand has been annualised using the AMAT (365 days) for the estimation of the benefits. Historical local walking and cycling traffic counts have been collected from LCC to determine this factor, details on this data is reported in Appendix A of the Methodology Note (E.5).

Corridor ST07 (Samlesbury EZ) was added to the TCF package subsequent to the commissioning of count surveys. As a result, the appraisal of this corridor for cycling has been conducted utilising PCT flow data and applying factors as detailed in Chapter 1.1.2 of the Methodology Note (E.5).

In consideration of planned housing development sites and the additional demand which this will generate on the cycling network, additional demand was estimated. The methodology takes into consideration the number of new dwellings and the distance of the new developments to the proposed corridors. Further details are reported in Chapter 1.1.1 of the Methodology Note (E.5).

3.3.2.2 Estimation of post-intervention demand

To estimate the post-intervention demand uplift in walking and cycling levels, desktop research was undertaken of walking and cycling schemes locally and across the UK where pre and post intervention data was available. A particular focus was given to identify local uplifts in Lancashire and the North West, as conditions and general behavioural patterns can be considered to have greater similarities to the contexts in which the proposed corridors are located.

As such, a library of schemes and observed uplifts has been created noting the source and context. From this library, applicable uplift figures have been identified from each category of infrastructure as summarised in Table 3-4. Some intervention types are used on different corridors and therefore they are reported in more than one row. More details on the sources used and on the justifications are reported in chapter 1.2 of the Methodology Note (E.5).

It is important to note that on the corridor BP01 no walking assessment has been carried out, as no significant increase in number of pedestrians is predicted. No walking assessment was also conducted on corridor ST06. This is because only a small portion of the entire corridor length is within urban area while the majority of the intervention is going to impact long cycling trips between Freckleton/Warton area and Preston City centre.

On the corridor BP00b no cycling assessment has been carried out, to not double count the impacts already assessed for the BP00a corridor. This is because we assumed the same cyclists to use both the corridors BP00a and BP00b. The type of impacts which are proportionate to the trip length are included into the Journey Ambience impacts (estimated within the AMAT but excluded in the C&W final figures) and are already covered by the urban realm impact assessment done for the BP00a corridor, reported elsewhere in this report.

Table 3-4: Uplift figures related to each intervention type and corridor

Infrastructure type	TCF Corridors	Benchmark Uplift
Segregated cycle tracks with protection applied at signalised junctions	ST01, ST03, ST04, ST06, ST07, ST09, BP00	117%
Traffic calming / quiet routes	ST02, ST03	18%
General improvements to surfacing, lighting and attractiveness of cycle route	ST05, ST08	33%
Remodelled major junction	BP01	8%
General walking route improvements	ST01, ST02, ST04, ST05, ST08, ST09,	25%
Walking: public realm improvements and pedestrianisation	ST03, BP00	27%

River Ribble Crossing case

The methodology used to estimate the cycling and walking impacts of the closure of the Avenham Viaduct bridge on the River Ribble is summarised below. Further details are reported in chapter 1.3 of the Methodology Note (E.5).

The Avenham Viaduct Bridge (AVB) and the Old Tram Road Bridge (OTRB) are located on the east side of the River Ribble railway bridge. The OTRB, which is not viable for motorised vehicles, is now closed due to safety concerns noted in the Principal Bridge Inspection Report[1], in order to safeguard the public. A proposed replacement bridge is part of the TCF package which will deliver a high standard connection across the Ribble River. The current pedestrian/cyclist diversion for the OTRB, following its closure, is AVB, which is privately owned. Currently, there is an agreement in place for the permissive use of the viaduct as a cycleway and footpath for 20 years. The agreement was signed in 2010 and expires in 2030 with each party then having the ability to terminate the agreement.

For the purpose of this economic assessment, it has been assumed the viaduct closes in 2030 as a walking and cycling link, with the end of the permissive use agreement and on the basis that the present owner does not have a sufficient budget to maintain the structure.

The estimated number of cyclists that will decide not to reroute upon the bridge closing has been estimated to be 21.6%. This is based on analysis on NTS data reported in the PCT Manual[2] in which the trips elasticity to the distance has been estimated, in particular related to an increase in a 1 mile trip. These users would distribute to other modes or will cancel their trips using the diversion factors reported in the TAG databook (Table A5.4.7).

Given the assumptions reported above, the economic assessment would be based on the following scenarios:

- Do Minimum (2023 to 2030): AVB “Open” and existing OTRB “Closed”.
- Do Minimum (2031 to 2042): AVB “Closed” and existing OTRB “Closed”.
- Do Something (2023 to 2030): AVB “Open” and new proposed OTRB “Open”.
- Do Something (2031 to 2042): AVB “Closed” and new proposed OTRB “Open”.

[1] Old Tram Bridge (no. 9096), Principal Bridge Inspection Report, LCC Design and Construction, February 2019
[2] PCT Manual, Pag 8

The assessment of the bridge has been undertaken within the corridor in which the bridge construction is included and following the same methodology used for the other corridors other than the assumptions described above.

3.3.2.3 Benefit estimation

The monetary impacts estimated are the following:

- Active Mode benefits due to increased cycling and walking activity
- Bespoke accident benefit estimation on Ringway corridor

Active Mode Appraisal methodology

The monetary impacts of the increase of number of people cycling and walking has been calculated using the May 2018 version of the DfT Active Mode Appraisal Toolkit (AMAT), as recommended in TCF appraisal guidance.

This tool estimates economic benefits as a result of investing in walking and cycling schemes in line with WebTAG guidance.

By using the toolkit, the following benefits have been quantified:

- User Benefits - estimated journey time savings and journey ambience uplift;
- Business Benefits - reduction in absenteeism;
- Health Benefits - economic benefits of preventing early mortality through cycle exercise;
- Marginal External Cost Savings – reduction in the number of car trips of 5km due to mode switch to cycling; and
- Wider Economic Benefit - use of the contribution each commuting cyclist contributes to the economy. Note that this relates to productivity benefits, rather than the labour supply impact captured in the 'wider economic benefits' reported elsewhere in this report.

It is important to note that AMAT estimates the benefits assuming that the totality of the cyclists are above 16 years old, which has an impact on the total benefit estimation because part of the benefits include reduced absenteeism (which only relates to adult population) and also the factors used for the estimation of the reduced risk of premature death are different.

The economic benefits of the cycling improvements have been appraised over a 20-year period as the core scenario, although sensitivity tests are also provided.

In accordance with the latest TAG guidance, the 10% annual decay factor for walking/cycling appraisal has been removed.

Bespoke accident benefit estimation on Ringway

A bespoke methodology has been used to assess additional accident impacts on the Ringway Corridor (BP00). Further details are reported in chapter 1.4 of the Methodology Note (E.5).

The use of a bespoke estimation of the cycling and walking collision impacts has been considered necessary as the AMAT includes only the effect of reducing vehicle kilometres on road safety but does not consider the direct

benefit of increased safety associated with specific interventions. Furthermore, from analysis of the collisions record we have identified that the majority of the collisions could have been avoided if segregation or better quality intersection design was provided.

To estimate the baseline safety scenario, collision data split by severity between 2014 and 2018 has been analysed. Cycling and walking collisions that occurred within areas in which proposed interventions could have improved the safety of the cyclists and pedestrians have been identified. The data used for this analysis has been gathered using the STATS 19 database.

To estimate the monetary impacts of the change in cycling and walking collisions the DfT Road Safety Impacts Tool has been used. The percentage collision reduction used has been taken from a similar scheme in Preston, Fishergate, which is in close proximity to the proposed corridor and where similar interventions (with a lower standard of security for cyclists and pedestrians) have been carried over.

The data used are related to the period 2008-2012 (pre-intervention) and 2016-2017 (post-intervention).

3.3.2.4 Sensitivity tests

Two sensitivity tests have been carried out.

The first has been carried out, based on a request from DfT, in order to estimate the impact of considering an increase in cycling and walking flows only during weekdays. Therefore, an annualisation factor of 253 days has been inputted into the AMAT. This approach would consider a zero impact, in terms of demand uplift, of the proposed interventions during the weekends. It is important to highlight that the proposed corridors serve a wide range of trip purposes to attractors in the city centre which operate during the weekend, which according to local surveys result in comparable flows during the weekend compared to weekdays.

Likewise, the schemes from which percentage uplifts have been taken have a range of trip attractors including retail, leisure, transport interchanges and employment which operate during the weekend. Based on this we believe the sensitivity test which exclude uplift during the weekend represents an underestimation of the actual impacts.

Further details on this is reported in chapter 1.5 of the Methodology Note in Appendix E.5.

An additional sensitivity test was also undertaken by increasing the appraisal period from 20 years to 30 years, as is reported in the Sensitivity test section of the Economic Case.

3.3.3 Rail Schemes

The key modelling approach for the Cottam Parkway rail scheme is listed in the table below. The approach was based on the rail Passenger Demand Forecasting Handbook (PDFHv6) and DfT Rail Appraisal Guidance (TAG Unit 5.3, May 2018).

Table 3-5: Key Rail Schemes Methodologies

Cottam Parkway Station Appraisal
MOIRA – Negative net rail demand and revenue cause by increased journey time for stopping at the new station (for existing passengers) using a cautious assumption of 3 minutes delay.
Trip Rate Model – calibrated on existing local station data and applied to estimate Cottam do-minimum trips and Cottam Parkway generated trips from the catchment area, given connections to the Preston Western Distributor, and M55

Cottam Parkway Station Appraisal
Station Choice Model 'switchers' – Rail trips attracted to Cottam Parkway from existing stations from locations outside the trip rate model catchment area.
Station Choice Model New – Generated trips from outside the catchment area using Cottam Parkway.
Off peak frequency adjustment – PDFH GJT/Elasticity
Marginal External (Congestion) Costs approach to Non-User benefits estimation based on increase rail miles.
Option Value based on households change from bus to rail

The economic appraisal links the user and non-user benefits with the scheme costs and assesses the value for money over an appraisal period of 60 years. The appraisal has been undertaken in accordance with WebTAG Guidance on Rail Appraisal. Key assumptions include the use of:

- 2010 price base and 2010 prices, inflating / deflating values using GDP Deflator Factors;
- Optimism Bias of 64% is applied to the Capital Costs and 1.6% is applied to the station operating costs – both reflect the stage of scheme development as (GRIP 2) prescribed by WebTAG;
- Costs and benefits discounted over 60 years of operation from 2023 to a 2010 base assuming a discount rate of 3.5% for 30 years from the appraisal year (2019) and 3.0% for the remaining years;
- Application of demand growth of 1.08% per annum to 2023 and 1.26% to 2038 based on DfT EDGE data for Preston. Demand is capped in 2038, 20 years after scheme opening in accordance with appraisal guidance;
- Capital costs are assumed spread over two years (2021 and 2022). Operations are assumed to start in 2023.
- Housing growth assumed in accordance with the approved Local Plan to 2033, with sites adjacent to Cottam having planning permission and houses are now being delivered;
- Assuming value of time growth in accordance with appraisal guidance (WebTAG Databook May 2019 V1.12);
- Interpolation of the growth in external costs of car use (non-user benefits) between the forecasts for 2010 and 2026 and between 2026 and 2036, with only value of time growth thereafter;
- Application of market price adjustment factor of 19% to costs and revenues (benefits are in market prices);
- Car parking at the new station is assumed to be free.
- No change to parking pricing at existing stations has been assumed (this is a conservative assumption as the car park charge at Preston station increased by £2 per day in 2015/16).
- Revenue is assumed to grow at 1% higher than inflation to 2021 and a fares elasticity of 0.4 is applied, and;
- Benefits are ramped up assuming 80% year 1, 90% year 2 and 95% year 3, based on standard industry assumptions.

Two service scenarios were assessed for Cottam Parkway based on the results of a timetable assessment.

Option 1 includes three trains per hour in the peak (Blackpool North – Manchester Airport, Blackpool North – York, Blackpool North – Hazel Grove via Manchester and Stockport). In the interpeak the Airport and York trains will call.

In Option 2 the Blackpool North – London Euston stations call. For Options 1 the trip rate models and station choice model were applied. For option two the demand, revenue and benefits were assessed based on the incremental impact of the direct London trains on Blackpool North using MOIRA. Blackpool North stops were removed from the service and the impacts calculated and applied as growth to Option 1.

Capital costs were based on a GRIP 2 report for Cottam Parkway. Additional land and inflation costs were applied to the original Network Rail costs for the appraisal of Cottam Parkway, as detailed in the Financial Case, together with a further uplift of £1.5m for design and preparation works associated with the scheme following review, to ensure a robust cost estimate.

Capital costs for Cottam Parkway include the station platforms, building and footbridge plus bus interchange, car park and access road including canal bridge.

Operating costs were estimated using a regional service model and agreed with Northern Rail.

An additional scheme to improve the South Fylde line has been developed by Lancashire County Council, and is discussed within the strategic case. However, this scheme is not included within any of the proposed funding packages, so is not reported within this economic case. Nonetheless, the Strategic Outline Business Case developed for this scheme is appended to this business case in Appendix E.8.

3.3.4 Impact on Highway Users

3.3.4.1 Overview

Some of the proposed interventions will reallocated roadspace to sustainable modes, in line with TCF objectives, and as noted in the Strategic Case. For example, through the removal of general traffic lanes to provide bus lanes, or through alteration of signal timings to give priority to other road users over cars.

The potential negative impact that the TCF interventions may have on highway users therefore forms an important part of the overall economic assessment. The methodology used to estimate these disbenefits is provided below.

3.3.4.2 Modelling Approach

The impacts of the proposed scheme on highway users are based on the differences between forecasts of the without-scheme and with-scheme scenarios. These forecasts have been developed within the Central Lancashire Highway Transport Model (CLHTM).

The CLHTM SATURN highway assignment model was developed for a base year of 2014, validated to 2013 traffic counts, based on the latest WebTAG values of time. Greater detail on the CLHTM can be found in the Local Model Validation Report, and the Traffic Forecasting Report which were signed off by the DfT as part of the Preston Western Distributor Full Business Case. (Appendix E.12 and E.13)

3.3.4.3 Model Scope

The modelled area for CLHTM network is broken into three distinct areas. These are the area of detailed modelling where the granularity within the network and demand matrices is at its greatest and where all the Preston TCF interventions are located, the rest of the fully modelled area where the level of detail is not as great, but capacity restraint is still modelled, and the external area (rest of Britain) where the level of detail is at its lowest.

The two tiers of the fully modelled area are illustrated in Figure 1.

Figure 1: CLHTM Modelled Area

The following time periods have been modelled:

- Morning (AM) weekday peak hour between 08:00 and 09:00;
- An inter-peak weekday hour representing an average hour between 10:00 and 16:00; and
- Evening (PM) weekday peak hour between 17:00 and 18:00.

The model used for forecasting splits the travel demand into different vehicle categories and different journey purposes. The model represents three separate user classes for cars (commuting, business and other), as well as LGVs and HGVs.

3.3.4.4 Forecasting

The transport model provides estimates for two forecast years: the opening year (2022), and 15 years after opening, known as the design year (2037).

The impacts of the scheme have been assessed over a 20-year period after the scheme opens, so that the appraisal period aligns with those used to appraise the non-highway impacts of walking and cycling, and bus based user benefits appraisals.

In addition, a further sensitivity test was carried out with a 30-year appraisal period; again to ensure alignment and consistency with the appraisal periods of other interventions when also tested for sensitivities.

Future traffic growth for the development of forecast scenarios was based on planning data from the relevant planning authorities together with national data from NTEM v7.2 for cars and RTF15 for LGV and HGV traffic. In line with TAG Unit M-4, future developments in the vicinity of the scheme were modelled explicitly rather than as part of growth factors extracted from NTEM. Full details of the forecasting approach are provided in Appendix E.13.

Forecast model networks for the Do Minimum (no TCF interventions) were produced. This includes committed highway interventions in Central Lancashire and specifically the City Deal schemes (i.e. Preston Western Distributor, Penwortham Bypass, A582 dualling).

Do Something forecast networks were produced to assess the effect of the TCF schemes, as described in section 3.3.4.6 below.

3.3.4.5 Model Fitness for Purpose

Given that the CLHTM model was built with City Deal schemes in mind rather than supporting the TCF proposal, a number of changes to the centre of Preston network were required to improve the model fitness for purpose. This included reduction in car capacity at a number of links and junctions surrounding Fishergate following the changes implemented in recent years.

A light touch fitness for purpose test has been undertaken by comparing the 2022 Do Minimum traffic flows on key roads in central Preston against 2019 traffic counts. The conclusion of the test was that the model generally performed well against the observed data. Modelled traffic more accurately reflected observed traffic counts in the PM peak compared to the AM peak and Interpeak particularly around the Ringway.

It should be noted that the CLHTM model is currently undergoing recalibration to 2019 data and will be available to support further stages and more detailed assessment of TCF interventions beyond the SOBC stage.

The existing model has several limitations in the context of TCF appraisal but has been agreed as proportionate to this stage of the scheme development. The model limitations include:

- Some of the zones and links within central Preston are simplified within the CLHTM, thus the re-routing options available to drivers because of these schemes may be more limited than in reality. As a result, this could exacerbate the levels of delays and disbenefits seen.
- Due to the absence of an integrated public transport model to account for the likely modal shift resulting from the interventions, an elastic assignment was carried out for the do-something scenarios to replicate variable demand response. The “own-cost” elasticity model assumes that the demand for travel between two points is purely a function of the change in costs on that mode between the two places, and whilst accounting for variable demand responses, does these in relatively simple terms.

3.3.4.6 Creating TCF Do Something Model Scenarios

Table 3-6 displays the scheme Network changes modelled for each intervention.

Table 3-6: Funding packages modelled within SATURN

Reference	Option	Change
BP00	Transforming Ringway	• Pedestrianisation of Friargate • Bus gate Corporation Street • Market St South Bound Closure

Reference	Option	Change
		• Ringway movement onto Lawson St only possible for those using Tenterfield St
BP01	Ringway East	• Cyclops Junction on Ring Way at Church St junction, with two-way movement possible on Church St between Ring Way and 23 Church Street • Cyclops Junction on Ring Way at Queen St turned into 4 arm junction with new link from New Hall Lane. • Existing New Hall Lane coded as Bus Lane in both directions between Ring Way and St Mary's St
ST01	SATC Fishergate/Fishergate Hill/Penwortham	• Cyclops Junction where Fishergate Hill meets Liverpool Road • Bus lane alongside normal lane of traffic on Liverpool Road in South West direction between cyclops junction and Penwortham Triangle • 1 lane North East Bound for normal traffic and 1 Lane South West Bound for bus lane on Fishergate Hill • Extra exit lane at north of Bow Lane • Additional lane from Strand Road to Guild Way, and additional lane along Guild Way to where Strand Road enters Guild Way
ST05	SATC South City Region Growth Zone	• Signalised Junction at Stanifield Lane/Lydiate Lane junction
ST08	SATC Ribbleton	• A6 North Rd/A59 Ringway junction modified so buses can exit meadow street and get across junction to North Rd (south arm) to access bus station. Buses from A6063 Deepdale Rd re-routed this way. This results in access from North Rd into Meadow St being closed, so Meadow St becomes one-way WB between St Ignatius Square and North Rd • New bus lane on Ribbleton Ln SWB between Skeffington Ed and just past Ribbleton St (ends before Ribbleton Ln junction) • New Bus Lane on Ribbleton Ln SWB from just south of Woodlands Ave junction to just north of Blackpool Rd junction • New bus lane on Ribbleton Ln NEB from Cecillia St to halfway between Dickson Ave and Blackpool Rd junction
ST02	SATC University/Plungington	• Bus gate Plungington Road below Ripon St
ST03	Church St/Stoneygate Urban Village	• Bus gate on Manchester Road just south of Queen Street
ST04	SATC NW Preston	• Reopened access to Aqueduct street from Tulketh Brow/Water Lane Junction
ST07	SATC Samlesbury EZ	• Bus Lanes on New Hall Lane WB direction between Thirlmere Rd and Beaconsfield Av alongside existing lane • New bus lane on New Hall Ln between Lex St (Moseley St) and Witton St (ties straight into BP01 junction changes at ringway) removes a lane of traffic
ST09	SATC Bamber Bridge/London Road	• Bus lane alongside existing lanes in North Bound direction between Grove Road and Frenchwood Avenue
TN00	Future Mobility Platform	• Increase to signalised junction capacity of 5% to 7.5%

In addition, the Future Mobility Platform scheme has also been coded into the do something traffic models. This intervention was incorporated by increasing the capacities of relevant signalised junctions by either 5% or 7.5% within the centre of Preston in the do-something scenarios.

3.3.4.7 Economic Impact on Highway Users

To monetise the impact of the scheme on highway users, TUBA version 1.9.13 was used.

The annualization factors used for this study were previously derived as part of the PWD and A582 Business Cases and were signed off by DfT. The annualization factors were as follows:

- AM – 506
- IP – 1518
- PM – 506

3.3.5 Urban Realm Assessment

Through co-development, DfT confirmed that urban realm benefits should be considered for the Transforming Ringway schemes – BP00a and BP00b. They were assessed for these schemes given the scale of change expected in public realm terms. Smaller benefits may also be noted on other schemes, but it was not considered proportionate to assess at this stage.

To assess the public realm improvements, Transport for London's Ambience Benefits Calculator (ABC) tool has been used. The ABC tool has been developed to assign a monetised value to a series of attributes usually present in schemes focusing on providing an improved journey quality for walkers and cyclist and overall townscape benefits.

Assessments of the baseline situation and of the Do Something scenario were undertaken using photography of the existing situation, concept design drawings and assumptions used for the cost estimates of the scheme.

The ABC tool returns values based in London values and are presented in resource cost unit of account. In order to align to the national appraisal guidelines set out by the DfT, the monetised values have been reduced by 32%, using the difference between London values of time and national values of time as a proxy. Those values were then uplifted applying the 19% indirect tax adjustment factor to convert to market prices.

The annual values were discounted following the guidelines set out in TAG Unit A1.1. Benefits were calculated over a 20 year appraisal period, with an additional sensitivity test being carried out over a 30 year appraisal period.

An additional sensitivity test to understand the impact of excluding weekends and bank holidays from pedestrian and cycling demand.

3.3.6 Wider Economic Benefits

3.3.6.1 Overview

GENECON have been appointed to assess wider economic benefits associated with the TCF pacakges. The assessment focuses only the 'Level 2' benefits outlined in TAG Unit A2.1 (connectivity based impacts). Level 3 benefits (based on land use changes) have been excluded.

Benefits from unlocked depenedent developments have been excluded from the assessment. However, the TCF packages would help Preston to grow significantly, especially in terms of growth which supports

sustainable travel around key growth areas in the City Region. This is discussed in more detail in the strategic case, but not included within the economic case.

3.3.6.2 Impact on the Labour Market

The delivery of new commercial development across Preston City Region over the coming years will significantly increase the overall jobs capacity of the City Region by around 10% on existing levels and this agglomeration will in turn bring significant opportunities for improving the overall performance of the City Region's labour market.

Although economic activity rates in the City Region are relatively high when compared to wider North West and national (England) averages, there are also significantly higher levels of unemployment locally, owing largely to pockets of acute deprivation.

The TCF scheme itself has ultimately been designed to improve connectivity between new housing and commercial opportunities coming forward through local planning and some of the most disadvantaged communities locally.

Evidence has highlighted the inherent links between unemployment, deprivation and transport poverty and in improving connectivity and providing better and more sustainable access to emerging employment opportunities, the TCF scheme has an important role in helping to address some of the City Region most persistent socio-economic challenges. In this regard, the TCF scheme will serve to encourage labour re/entrants, particularly among some of the City Regions hardest to reach groups.

In light of the above and in line with TAG principles, GENECON has completed analysis of 'Level 2' national-scale Labour Supply Impacts to assess the potential role of the scheme in helping to induce higher levels of workforce participation across the City Region.

Scenario modelling of the potential welfare-related effects of labour force entrants encouraged into work by each of the TCF infrastructure items has been undertaken and in practice, this has required an understanding of:

(a) the capacity and location of new commercial site opportunities being progressed locally to support new employment opportunities;
(b) an understanding of current spatial patterns of unemployment, deprivation and transport poverty locally; and,
(c) an understanding of a likely spatial reach and scale of impacts that could be observed among each of the TCF infrastructure items.

Having established the likely extent and scale of impacts across each of the infrastructure items, this evidence has then been mapped against current spatial patterns of unemployment in the City Region (at LSOA level) and this scenario modelling has enabled overall 'Central Case' estimates for the effects of each TCF item on labour supply to be understood. The Central Case results for each item have then been combined to estimate the overall effects on labour supply that could be achieved.

For context, wider modelling of development site opportunities (also included in the WEBs report) has identified capacities for around 45,675 gross FTE jobs across the new commercial development, or around 38,065 gross FTE jobs when including a small allowance (20%) for underoccupancy and the majority of these new employment opportunities are expected to largely be delivered over the next 10-20 years.

There are currently around 13,100 working-age residents who are in unemployment across the 278 LSOAs included within the overall defined TCF Area of Influence and the delivery of new rail, bus, cycleway and technology improvements will ultimately only help to improve access to forthcoming employment opportunities and encourage behavioural change

A full description of the scenarios developed for each TCF item is included in Appendix E.2, Preston TCF Scheme Assessment of Wider Economic Benefits report (GENECON, November 2019).

It is considered that in any scenario the TCF scheme will help to induce workforce re/entrants over the first three years, broadly in line with the roll out of infrastructure items and that the benefits of improved workforce participation will persist for 10 years.

Population change, net migration and changes to future retirement ages will ultimately mean that the overall size of the City Region workforce will grow in future years. Assumptions regarding future changes in unemployment that may occur have not been included within the projections, partly because the TCF scheme is designed to redress current imbalances in performance and because in all likelihood, the areas which show the highest levels of employment deprivation locally have consistently underperformed for decades now and without interventions such as the TCF scheme, it is highly likely that this position would remain unchanged.

3.3.6.3 Estimating the Economic Benefits from Labour Supply Impacts

As described above, the impact that the TCF investment will have on the labour supply market has been estimated.

Application of an annual GDP per job estimate for Preston City Region (ONS data in 2010 prices) to the Central Case has enabled estimates of cumulative GDP returns among labour market entrants over the first 10 years.

In line with HM Treasury Green Book principles (and associated WebTAG guidance), 40% of the GDP generated can be claimed either as a result of increased tax returns (local or national) or as an avoidance cost in welfare benefit payments.

The central case estimates of welfare benefits in present value terms have been included within the overall adjusted BCRs for each funding package.

Accepting that there are inevitable uncertainties in the results of this modelling, upper and lower range estimates of +/-25% have been included alongside the Central Case estimate.

3.3.7 Package Effects

The benefits that each scheme is expected to generate are presented individually in the section 3.1 of this Economic Case. However, it should be noted that the BCR and VfM assessment has only been undertaken at the low / medium / high funding package level due to the fact it is only possible to calculate some of the benefits / disbenefits at a package level (e.g. highway disbenefits).

Care was taken to avoid the effect of double-couning benefits between modes, and to ensure all relevant interactions between the modes were taken into account. This was discussed extensively with DfT during co-development, and is discussed in the methodology notes appended to this report.

3.4 Monetised Benefit Assessment: Results

This section of the report describes the monetised benefits that have been calculated for each package and set of interventions, based on the methodologies described above. Given the different assessment methods used for different types of impact, the results are presented separately for each mode to add transparency to the results obtained under each assessment, prior to presentation of overall packages, ensuring no double counting of benefits, as detailed in the previous section

The table below provides a summary of the monetised benefits that are able to be calculated at an individual scheme level.

The following sections of the Economic Case then provide more detail on the breakdown of the benefits by mode.

Table 3.7: Summary of benefits per intervention

	Benefits (£m) for 20 Year Appraisal Period (2010 prices, discounted to 2010)						
	Bus User Benefits	**Bus Reliability**	**Cycling / Walking**	**Rail**	**Urban Realm**	**WEBs**	**Total**
RW02				46.8		32.79	**79.59**
BP01	2.68	1.29	0.21			5.05	**9.24**
ST09	0.76	0.33	3.87			3.51	**8.46**
BP00a	2.57	1.00	20.05		15.35	1.60	**40.55**
BP00b			1.67		8.47		**10.14**
ST06	0.30	0.17	3.40			7.30	**11.17**
ST07	2.00	0.72	3.67			12.26	**18.65**
ST01	0.88	0.37	5.62			3.10	**9.97**
ST02	1.97	0.61	4.47			8.73	**15.78**
ST03	1.64	0.72	14.17			2.84	**19.37**
ST08	1.56	0.51	0.32			14.12	**16.51**
ST04	1.19	0.48	5.14			13.76	**20.58**
ST05	0.29	0.14	2.67			8.30	**11.40**
TN00						15.91	**15.91**

3.4.1 Bus

Impact on journey times for existing users

Through the introduction of bus lanes, bus gates and other junction improvements designed to prioritise buses over car users, the TCF schemes are predicted to provide significant journey times to existing users.

A summary of the forecast time savings in 2023 (averaged over both directions) is provided in Table 3.8 below. The average number of existing bus passengers who are expected to benefit from this time saving is also included.

It shows that bus benefits of up to around 90 seconds are provided by individual schemes. It should be noted that these values averaged over both directions. Several schemes include bus lanes which generally only provide savings in one direction. Also, the time savings predicted for 2023 would increase further into the appraisal period as congestion in the without scheme scenario grows.

Table 3.8: Summary of bus journey time savings to existing users

2023							
Funding Scenario	Intervention	JT Saving (secs)			Existing Passengers per hour		
		AM	IP	PM	AM	IP	PM
Low	BP00a	32	41	76	161	329	266
	BP01	5	32	47	335	427	532
	ST01	13	10	13	248	533	295
	ST02	27	28	32	86	187	105
	ST08	42	41	66	114	120	136
Medium	All Low Scenario Schemes, plus						
	ST04	16	17	30	37	163	163
	ST05	10	7	14	79	103	72
High	All Low and Medium Scenario Schemes, plus						
	ST03	32	49	34	351	336	312
	ST06	7	10	25	10	120	81
	ST07	27	33	41	84	73	130
	ST09	26	90	40	157	524	520

The economic benefits arising from journey time savings to existing bus users are valued at **£7.8m** in the low funding scenario package of schemes, **£9.0m** in the medium funding package, and **£12.7m** in the high funding package.

Table 3.9 shows how these journey time saving benefits are split between different journey purposes. The highest benefits are provided to commuting and other non-business users. This reflects the type of journeys are predominantly used for in Preston.

Table 3.9: Bus journey time savings to existing users

	Low Funding Scenario	Medium Funding Scenario	High Funding Scenario
Commuting	£3.2m	£3.7m	£5.2m
Business	£1.5m	£1.7m	£2.4m
Other	£3.2m	£3.7m	£5.1m
Total	**£7.8m**	**£9.0m**	**£12.7m**

Benefits from other users switching to bus

The journey time savings outlined above result in new users switching towards bus use from other modes. The number of new users was estimated using an elasticity-based demand model approach as described in the methodology section above.

The predicted number of new bus users across all interventions is **1,331 users per day** in 2023, rising to **1,847 users per day** by 2038. This represents around a 2-3% increase in bus patronage on the proposed intervention corridors.

This supports well the objectives of the TCF interventions, by encouraging modal shift towards more sustainable modes. The resultant economic benefits of this are outlined below. Around half of these are calculated as switching to bus due to the time savings offered by the specific interventions listed above. The benefits for these users, the increase in revenue to bus operators, and the indirect benefits to other users from the resulting reduction in car use, are listed in Table 3.10 below, for each funding scenario package.

Table 3.10: Benefits due to modal shift to bus (2010 prices discounted to 2010)

	Low Funding Scenario	Medium Funding Scenario	High Funding Scenario
Journey time savings	£0.07m	£0.08m	£0.13m
User charge impact (cost of bus fare vs other costs such as parking charges)	£0.14m	£0.16m	£0.24m
Decongestion benefit to other road users	£0.49m	£0.58m	£0.85m
Bus operator revenue increase	£1.06m	£1.24m	£1.82m
Noise	£0.01m	£0.01m	£0.01m
Air Quality	£0.00m	£0.00m	£0.00m
Greenhouse gases	£0.01m	£0.01m	£0.02m
Accidents	£0.08m	£0.09m	£0.14m
Indirect tax revenue	-£0.03m	-£0.04m	-£0.05m
Total benefit due to modal shift to bus	**£1.82m**	**£2.13m**	**£3.15m**

In addition to the benefits listed in the table above, some of the predicted new bus users shift to bus due to an increase in car journey times, as calculated in the elastic demand model described in the highway user methodology section. As these benefits cannot be attributed directly to individual schemes, they are not

included in the table above. Instead, they are presented in section 3.4.4 ('impact on highway users'), where they partially offset the additional congestion costs incurred to highway users.

Reliability benefits to existing users

As described in the methodology, benefits have been calculated for existing bus users based on the fact that their journey time would be more reliable with the proposed interventions in place.

The benefits were calculated based on reducing the standard deviation of bus lateness, as derived using real-time observed GPS journey time data from bus operators.

Table 3.11 below shows the calculated reliability benefits for each funding scenario package. The reliability benefits are around half of the standard journey time saving benefits, which is supported by empirical data in the Preston Transport Plan, highlighting the reliability of buses, as well as journey times, as particular issues needing to be improved in the City to transform the bus offer for residents

Table 3.11: Reliability benefits to existing users

	Low Funding Scenario	Medium Funding Scenario	High Funding Scenario
All Users	£3.4m	£4.4m	£6.3m

Sensitivity Tests

Sensitivity tests have been undertaken, based on an appraisal period of 30 years rather than 20 years. Results for these tests are report in section 3.6.

3.4.2 Walking & Cycling

3.4.2.1 Summary of results

As mentioned in the methodology section the AMAT (May 2018 version) has been used to estimate the following benefits associated with the introduction of the Preston Sustainable Active Travel corridors, which are described below:

- Noise: correlated with reduced vehicle kilometers
- Local Air Quality: correlated to the reduced vehicle kilometers which have an impact on the reduction on the amount of pollutants emitted
- Greenhouse Gases: correlated with reduced vehicle kilometers
- Journey Quality: improved experience due to cycle lanes, showers, reduced crowding and similar
- Physical Activity: reduced risk of premature death and absenteeism impacts
- Accidents: this reflects the effect of reducing vehicle kilometers on road safety. It is not the direct benefit of increased cycle safety. It also includes a bespoke accident assessment on Ringway as described in the methodology section above.
- Congestion benefit: due to reduced vehicle kilometers on reduces congestions for road users
- Indirect Taxation: reduced vehicle kilometers reduce tax revenue e.g. fuel duty
- Broad Transport Budget: the reduced vehicle km reduces future maintenance.

It is estimated that the interventions would increase the number of cycle trips by around 1,200 per day, which represents an increase of 78% along the proposed intervention corridors.

The number of pedestrian trips would increase by around 4,100 per day – an increase of 27% along the proposed intervention corridors.

Overall, these result in a total of **£30.7m** benefit in the low funding scenario package, **£38.5m** in the medium funding package, and **£65.3m** in the high funding package.

A summary of the monetised benefits by individual intervention is provided in Table 3-12.

Table 3-12 Summary of monetised impacts split by corridor (£000)

Scheme	Noise	Local Air Quality	Greenhouse Gases	Journey Quality	Physical Activity	Accidents	Economic Efficiency			Indirect Taxation	Impact on road maintenance	Total PVB
							Commuting	Other	Business			
ST01	1.6	-0.1	4.1	869	4,648	23.7	18.0	62.1	4.5	-15.0	-0.8	**5,616**
ST02	0.9	-0.1	2.3	642	3,775	13.0	9.9	34.1	2.5	-8.3	-0.4	**4,471**
ST03	3.1	-0.2	8.2	1,536	12,433	47.1	35.8	123.2	8.9	-29.8	-1.6	**14,166**
ST04	1.3	-0.1	3.4	1,860	3,204	19.2	14.6	50.2	3.6	-12.2	-0.6	**5,144**
ST05	1.1	-0.1	2.8	196	2,412	16.3	12.2	42.1	3.0	-11.5	-0.5	**2,674**
ST06	0.7	0.0	1.8	1,987	1,373	10.2	7.7	26.5	1.9	-6.4	-0.3	**3,402**
ST07	1.0	-0.1	2.6	1,075	2,536	14.9	11.3	38.8	2.8	-9.4	-0.5	**3,673**
ST08	0.1	0.0	0.3	35	282	1.4	1.1	3.7	0.3	-0.9	0.0	**323**
ST09	1.4	-0.1	3.6	363	3,416	20.9	15.9	54.6	3.9	-13.2	-0.7	**3,866**
BP00a	3.5	-0.2	9.1	-*	14,357	5,524**	39.5	136.1	9.8	-33.0	-1.7	**20,046**
BP00b	0.4	0.0	0.9	-*	1,651	5.4	4.1	14.0	1.0	-3.4	-0.2	**1,673**
BP01	0.1	0.0	0.2	65	146	1.1	0.8	2.8	0.2	-0.7	-0.04	**215**
Total	**15.0**	**-0.9**	**39.3**	**8,626**	**50,233**	**5,697.9**	**170.9**	**588.3**	**42.4**	**-143.8**	**-7.5**	**65,269**

** Journey quality impacts for schemes BP00a and BP00b are reported in the 'Urban Realm' section of the economic case*
*** Accident impacts includes also the bespoke accident appraisal for scheme BP00a as described in the appended methodology note*

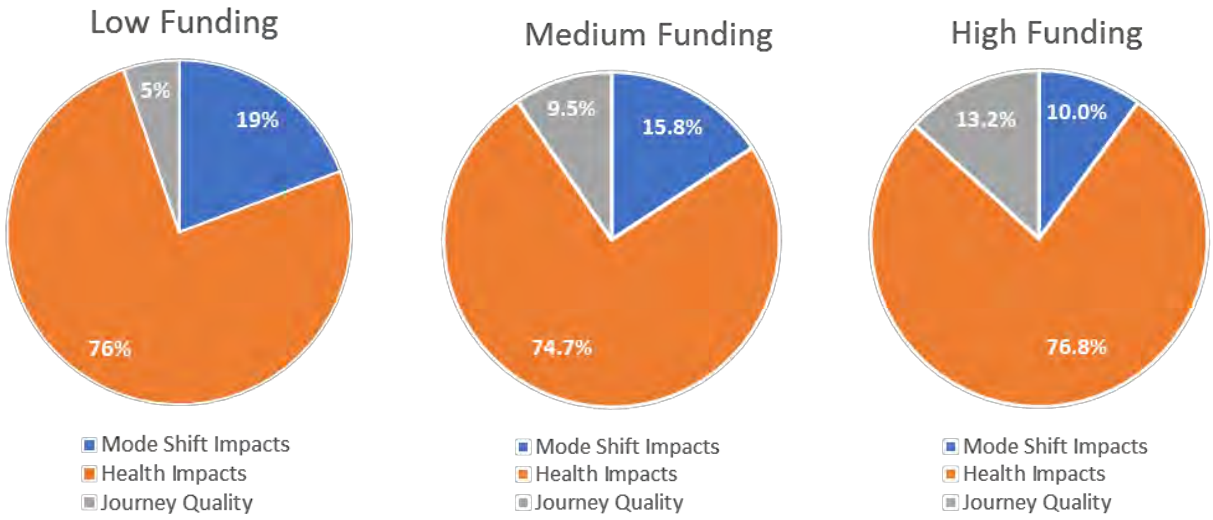
As shown in Figure 3-2, the majority of the monetary benefits derive from health impacts.

In the low funding scenario the mode shift impacts are higher in percentage than in the medium and high funding scenario, this is due to the inclusion in the high funding scenario of interventions which impact in particular on journey quality.

It is also important to note that the journey quality monetary benefits are for the BP00a corridor are not including in this figure as they have been estimated within the urban realm assessment reported elsewhere in this report.

Therefore, as the corridor BP00a is included within the low funding scenario, the overall impact of the journey quality results would be higher in percentage terms than what is shown in the charts below.

Figure 3-2 Proportion of different sources of benefits arising from walking & cycling interventions



3.4.2.2 Sensitivity tests

Results of the sensitivity tests described in section 3.3.2.4 are reported below.

Table 3.13: Walking and Cycling appraisal sensitivity tests (2010 prices, discounted to 2010)

	Low Funding Scenario	Medium Funding Scenario	High Funding Scenario
Lower annualisation factor sensitivity test	£11.0m	£15.3m	£48.9m
30 year appraisal period sensitivity test	£19.9m	£30.2m	£92.2m

The results for the sensitivity test using weekday-only annualisation factors to derive walking & cycling benefits (i.e. excluding benefits from weekends and bank holidays) show that, as expected, there is a reduction in benefit of 25%, which is comparable to the reduction in number of days in which the uplift has been applied (2 days divided by 7 days, equal to 28% reduction).

A sensitivity test was also undertaken using an appraisal period of 30 years instead of 20 years resulted in an increase in walking & cycling benefits from £65.3m to £92.2m. This represents an increase in benefits of 41%,

due to the additional appraisal years and to the background growth rate in trips[3]. This sensitivity test was used to inform a wider sensitivity test for the TCF packages ofa 30 year appraisal period reported in section 3.6 of this report.

3.4.3 Rail

Rail Scheme Benefits & VfM Assessment

Table 3.14 below summarises the economic appraisal findings for the Cottam Parkway rail scheme. Note that a full economic assessment of this scheme is provided in its Strategic Outline Business Case appended to this report as APPENDIX E.8.

Table 3.14: Cottam Parkway economic benefits (20210 prices, discounted to 2010)

	Present Value of Benefits
Cottam Parkway Option 1	£46.8m
Cottam Parkway Option 2	£51.9m

There is a strong economic case for the provision of a new station at Cottam Parkway to serve the North West Preston growth area, and wider Fylde coast peninsula.

Option 1 includes 3 trains per hour in the peak (Blackpool North – Manchester Airport, Blackpool North – York, Blackpool North – Hazel Grove via Manchester and Stockport) In the interpeak the Airport and York trains will call. In Option 2 the Blackpool North – London Euston stations call (assessed from the incremental impact on Blackpool North in MOIRA).

It should be noted that the PVC is lowered by the transfer of £13.7m revenue (2010 prices discounted to 2010) to the franchise (and broad transport budget), as described in the cost section of this report.

For the purpose of the overall package level economic assessment, the benefits from Option 1 were used, although their remains potential for overall benefits to be higher, related to option 2 as part of the next GRIP stage

3.4.4 Impact on Highway Users

Direct Impact on Highway Users

The introduction of the TCF schemes is expected to result in an overall disbenefitto car users, due to the re-allocation of some general traffic lanes to bus or cycle users, the introduction of CYCLOPS style cyling improvements at a number of key junctions in the City Centre, and the reconfiguration of signal timings and detection in favour of buses / cyclists.

As described in section 3.3.3, traffic modelling scenarios were run to assess the impact of the TCF interventions on highway users.

[3] Growth rate of 0.75%. National Travel Survey Data 2006-2016

These traffic model assessments include both the effect of the proposed Future Mobility technology scheme, and the predicted decrease in car demand with the TCF schemes in place. Economic disbenefits were calculated using the Df''s TUBA software.

Based on the package of schemes in the low funding scenario, highway disbenefits of **-£50.4m** are expected, in the medium funding scenario **-£49.4m** disbenefits, and in the high growth scenario **-£52.1m.**

These disbenefits are calculated over a core 20 year appraisal period. This was chosen to be consistent with the bus, walking and cycling appraisals, as these interventions are the primary source of disbenefits observed by car users. Sensitivity tests using a 30 year appraisal period were also undertaken, to inform overall sensitivity tests where bus, walking and cycling appraisal periods were also extended to 30 years.

These disbenefits are primarily driven by increases in travel times, but also include the impact on vehicle operating costs, greenhouse gas emissions and indirect tax revenues due to changes in fuel consumption.

From performing a sector to sector analysis of the TUBA results the following was found with the patterns similar across the packages:

- A large proportion of the disbenefits accrue to highway users travelling between the south of Preston and Preston city centre. This is logical considering the reductions in capacity at junctions between the south of Preston and Preston city centre in schemes such as BP01 and ST01, combined with the lack of available rerouting options due to the small number of roads crossing the River Ribble.

- Due to the Future Mobility scheme in the centre of Preston creating increased capacity at signalised central Preston Junctions, the levels of disbenefits for journeys between zones in central Preston was lower.

Although there are significant disbenefits to car users, the option designs could be refined during scheme development to optimise the highway impacts. At this stage however, the schemes have been designed to maximise the bus, walking and cycling impacts of the schemes, which is the primary objective of TCF as well as the local vision for Preston.

Indirect Impacts due to Impact on Highway Users

As journey times to to car users increase, users are predicted to switch away from highway use towards other modes as a result. As described in the methodology section, the reduction in car trips is expected to result in improvements in noise and air quality.

Of these users switching away from car, some users would use the bus instead. This would results in benefits in terms of journey time benefits and user charges, increases in bus operator revenues, and environmental benefits from reduced car use. This results in £3.8m in the low funding scenario, £4.1m in the medium funding scenario, and £4.4m in the high funding scenario.

The effect of roadworks delays during construction have not been in the assessment of benefits at this stage. However, as discussed in the cost section of this economic case, additional contingencies have been included in the scheme costs to account for the fact that city centre construction works would be undertaken during night times wherever possible.

Summary of overall highway impact

A summary of the total highway-related impact is provided below.

Table 3.15: Summary of overall highway-related disbenefits (2010 prices, discounted to 2010)

	Low Funding Scenario	Medium Funding Scenario	High Funding Scenario
Direct impact on highway users	-£50.4m	-£53.5m	-£56.5m
Impact from reduced car use	£3.9m	£4.1m	£4.4m
Overall highway related disbenefits	-£46.5m	-£49.4m	-£52.1m

Although these highway benefits are significant, as discussed in the strategic case the TCF option development process has focussed on maximising the transformative strategic impact of the programme on transport, mode choice and accessibility in Preston. It focussed on this aim even where this results in a lower value for money outcome compared to a less impactful option in terms of bus, walking and cycling users.

This has included ensuring bus lanes extend as close to junctions as possible to maximise bus benefits, prioritising high-quality segregated and off-road cycle provision over on-road provision, and providing transformative walking and cycling CYCLOPS junctions and public realm changes that include the complete removal of traffic.

As mentioned by DfT during the co-development process, this is particularly important to note in consideration of the Preston TCF package in the Economic Case, and the transformative design principles for bus and active mode users that have been maintained in design development

3.4.5 Urban Realm Improvements

Estimates of the urban realm benefits were prepared based on the concept design stage drawings, supported by landcape drawings provided by Planit-ie, and their respective cost estimate derived by Jacobs.

The Ringway scheme in particular introduces significantly improved public realm, along with greening of the streetscapes, improved walking, crossings, pavements and imporved interlinkages with other recently improved Preston streets.

The methodology used has only been applied to the City centre Ringway scheme, to be conservative, and the assessment is provided in more detail in section 3.3.5

Results of the assessment for each scheme are provided below.

Table 3.16: Urban realm benefits (2010 prices, discounted to 2010)

		Discounted (20 years)
BP00a	Walking	£15.2m
	Cycling	£0.1m
	Total	**£15.4m**
BP00b	Walking	£8.5m
	Cycling	£0.02m
	Total	**£8.5m**
Total	Walking	£23.7m

	Cycling	£0.1m
	Total	**£23.8m**

These results are included within the adjusted Benefit to Cost Ratio for each funding package.

Sensitivity tests around the results above have also been undertaken. The sensitivity tests undertaken are identical as those for the walking & cycling benefits described earlier in this report: reducing the annualisation factors so that only weekdays are included in the assessment, and varying the appraisal period from 20 to 30 years.

Table 3.17: Urban realm appraisal sensitivity tests

	Total urban realm benefits across both schemes, over appraisal period
Lower annualisation factor sensitivity test	£18.0m
30 year appraisal period sensitivity test	£33.2m

3.4.6 Wider Economic Benefits

As described in the methodology section of this economic case, wider economic benefits have been assessed for reach of the scheme, and relate primarily to labour supply and productivity impacts of the schemes

No dependent development has been explicitly assessed or valued, although the TCF packages support the continued growth of Preston and its City Region across a range of development sites (unlocked by significant highways schemes now under construction as part of the City Deal), through improvements to sustainable and active travel modes

The impact on labour supply has been assessed in line with the principles set out in TAG, to estimate the welfare-based benefits in present value terms. These benefits are presented alongside other calculated benefits within the value for money assessment, and will form part of the overall Benefit to Cost Ratios.

The results of this Labour Supply Impacts assessment are reported below. In this report, the benefits are reported at a funding package level. Full details of the impact for each scheme are provided in the appended Wider Economic Benefits technical note.

Labour Supply Impacts for inclusion in Benefit Cost Ratio

Overall, the Central Case position is that the TCF scheme could encourage between 400 and 1,065 individuals into employment, which represents around 4% to 8% of the 13,110 residents currently unemployed across the TCF Area of Impact respectively.

In reality, ease of connectivity to new jobs capacity delivered on commercial development sites is likely to also be a key determinant in inducing labour supply over and above the influence of the TCF scheme, but of the 38,000+

gross FTE jobs that could be supported on new commercial sites over the next 10-20 years, the total induced employees in the Central Case across all schemes would represent around 1 in 36 of the FTE jobs.

Application of an annual GDP per job estimate for Preston City Region (ONS data in 2010 prices) to the Central Case has enabled estimates of cumulative GDP returns among labour market entrants over the first 10 years to be derived, totalling in 2010 prices between £205m in cumulative GDP (£121m PV) in the Low Funding Option estimate, rising to £548m (£323m PV) in the High Funding Option estimate.

In line with HM Treasury Green Book principles (and associated TAG guidance), 40% of the GDP generated can be claimed as a welfare benefit for inclusion in cost benefit analysis, either as a result of increased tax returns (local or national) or as an avoidance cost in welfare benefit payments.

On this basis at current levels a total of between £82m and £219m of gross GDP welfare impacts (£49m - £129m PV) could be accrued through the first 10 years of participation in the labour force depending on the Funding Option delivered.

The tables below show the summary of labour supply impact assumptions and results. These 'Level 2' welfare impacts are reported in 2010 terms, reflecting adjustments between price bases and the appraisal periods.

Table 3.18: Summary of Wider Economic Benefits

Preston TCF – 'Central Case' Labour Supply Impacts by 2040 (2010 Prices and base year)			
	Low Funding Scenario	Medium Funding Scenario	High Funding Scenario
Number of workforce re/entrants	400 FTEs	851 FTEs	1,065 FTEs
Annual GDP per job	£51,446 per job (2010 Prices)		
Total GDP Impact over first 10 years	£205.8m	£437.8m	£547.9m
Present Value Benefits of GDP Impact over 10 years (2010 prices, discounted to 2010)	£121.4m	£258.3m	£323.2m
Welfare contribution	40%		
Net Welfare Impact over 10 years	£82.3m	£175.1m	£219.2m
Present Value Benefits of Welfare Impact over 10 years (2010 prices, discounted to 2010)	£48.5m	£103.4m	£129.3m

Accepting that there are inevitable uncertainties surrounding the scale of impacts that could be observed through improved connectivity via more sustainable modes on labour supply, upper and lower range estimates have been developed alongside the Central Case. The results of these adjustments, in 2010 terms are provided in the table below.

Table 3.19: Wider Economic Benefits Sensitivity Tests

Preston TCF Sensitivities – Net Welfare Impact Ranges over 10 years, 2010 Analysis				
		Lower Range (-25%)	Central Case	Upper Range (+25%)
High Funding Option	Net LSI	£164.4m	£219.2m	£274.0m
	PVB	£96.9m	£129.3m	£161.6m
Medium Funding Option	Net LSI	£131.3m	£175.1m	£218.9m
	PVB	£77.5m	£103.4m	£129.3m
Low Funding Option	Net LSI	£61.7m	£82.3m	£102.9m
	PVB	£36.4m	£48.5m	£60.6m

The central case Present Value Benefits of Welfare Impact will be included within the adjusted Benefit to Cost Ratio derived for each funding option.

3.5 Summary of Monetised Impacts (Package Level Assessment)

The results in section 3.1 describe the benefits of the TCF schemes calculated across different modes. Where possible, these results were provided for each of the individual interventions that make up the overall TCF scheme.

The table below presents the overall combined Present Value of Benefits across all modes, for the proposed packages of schemes in each funding scenario. These have been split into 'established monetised benefits' and 'emerging monetised benefits' as described in the introduction to this economic case.

It also presents the Present Value of Costs for each package, and provides overall initial and adjusted Benefit to Cost Ratios.

Table 3.20: Summary of Monetised Benefits

		Funding Scenario		
		Low	**Med**	**High**
Benefits (£m, 2010 prices, discounted to 2010)				
Established benefits	Bus User Benefits	9.7	11.1	15.8
	Cycling / Walking	30.7	38.5	65.3
	Rail	0.0	46.8	46.8
	Highway disbenefits	-46.2	-48.9	-51.6
Emerging benefits	Urban Realm	15.3	15.3	23.8
	Wider Economic Benefits	49	103	129
	Bus Reliability	3.8	4.4	6.3
Initial PVB (excluding reliability, urban realm and wider economic benefits)		-5.8	47.5	76.3
Adjusted PVB		**58.0**	**166.2**	**229.4**
Present Value of Costs (PVC)		65.8	104.4	152.1
Initial Benefit to Cost Ratio (excluding reliability, urban realm and wider economic benefits)		-0.1	0.5	0.5
Adjusted Benefit to Cost Ratio		0.9	1.6	1.5

The results show that, in the low funding package of schemes, the initial BCR is -0.1, reflecting the fact the benefits are slightly negative when urban realm, wider economic benefits and reliability are excluded. This increases to 0.9 for the adjusted BCR when those benefits are included. This suggests the package offers poor value for money, based on DfT guidance as discussed in section 3.9.

These fairly low BCRs reflect the fact that the key issues in terms of bus delays and changing mode shift relate to Preston City Centre and the approaches to it. To solve these issues and achieve the required modal shift, an initial reallocation of roadspace is required away from cars towards buses, cycling and walking. The resultant highway disbenefits offset a significant amount of the benefits in the low growth funding package.

However, the low funding package offers a comparatively smaller scale of transformation in terms of the number of corridors improved in active mode and bus terms. The overall position is an adjusted BCR of 0.9, although individual scheme options perform well when highway impacts are isolated from the assessment.

In the medium funding package, a significantly stronger adjusted BCR of 1.6 is achieved. This is a result of increased bus, walking and cycling benefits, and rail benefits associated with the introduction of Cottam Parkway. This package provides a more integrated set of alternatives, linking to more of the growth sites around the city.

The BCR of the high funding package is similar to the medium package, as final corridors around the city are transformed. There is a significant increase in walking and cycling, bus and urban realm benefits associated with completing the full Ringway scheme and completing the final sustainable and active mode corridors across the city.

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3.6 Sensitivity Tests

A series of sensitivity tests have been undertaken to understand how some of the parameters and assumptions used within the appraisal influence the economic case of the schemes.

The results of these sensitivity tests have been described for indidivudal assessment previously but are combined across packages in the tables below..

30 year appraisal period

The core assessment described above uses a 20 year appraisal period to be consistent across bus, walking and cycling anf highway (where roadspace reallocation occurs), except for a 60 year appraisal for rail, and 10 years for wider economic benefits).

A sensitivity test was undertaken to increase the bus, walking and cycling sensitivity tests, which used a 20 year appraisal period to use a 30 year appraisal instead.

Table 3.21: Sensitivity Test - 30 year appraisal period

	Low Funding Scenario	Medium Funding Scenario	High Funding Scenario
Adjusted Present Value of Benefits	£58.2m	£169.1m	£247.7m
Benefit to Cost Ratio	0.9	1.6	1.6

Switching value tests around costs

Based on the monetised benefit to cost ratios described in section 3.5 above, 'switching values' tests have been undertaken to understand what change in costs would be required to change the value for money (VfM) category that the BCR lies within.

A summary of the change in costs required to move each BCR to a higher or lower category is provided below.

Table 3.22: Sensitivity Test - switching value tests

	Low Funding Scenario	Medium Funding Scenario	High Funding Scenario
Core BCR and VfM category this lies within	0.9 (Poor VfM)	1.6 (Medium VfM)	1.5 (Medium VfM)
Change required to move to higher VfM category	PVC decrease of £26m (44%)	PVC decrease of £19m (12%)	PVC decrease of £34m (15%)
Change required to move to lower VfM category	PVC increase of £5m (7%)	PVC increase of £10m (10%)	PVC increase of £6m (4%)

This shows that at the medium and high funding levels, only a relatively cost decreases (or increases in benefits) are required to achieve a high value for money adjusted BCR of 2.

3.7 Non-Monetised Impacts and Appraisal Summary Table

As well as the monetised benefits described in this report so far, there are also likely to be significant benefits or disbenefits which cannot be monetised. The assessment of these is described below.

3.7.1 Significant Non-Monetised Impacts

Key impacts on number of travellers using sustainable travel modes

As part of the economic assessments outlined above, the number of people switching to walking, cycling and bus use – and away from private car – was estimated. These calculations predicted that, by 2038, the TCF schemes would result in:

- Up to **1,800 new bus users per day**
- **Over 3,000 fewer private car trips per day**
- **Over 6,000 more walking and cycling trips per day**

The scheme is also expected to support the entry or re-entry of **up to 1,000 workers** into the local labour market.

These impacts show that the proposed interventions would meet the strategic aims of the TCF to transform active and sustainable travel in the City Region, as well as meeting the local vision for Preston.

Journey Quality

Significant journey quality impacts would be delivered by the TCF schemes.

As noted in the Strategic Case, the proposed cycling interventions would provide a much higher quality journey environment, and reduced fear of potential accidents through the introduction of quietways or dedicated cycle infrastructure. Improvements to the urban environment would be provided through urban realm improvements. For bus users, reduced frustration from delayed and unreliable journeys would be significant, while improved facilities would offer benefits through the provision of new bus shelters.

Options and Non Use Values

The TCF schemes will provide a transformational improvement of walking and cycling facilities, and improved accessibility to the rail network through a new station at Cottam Parkway. Significantly upgraded bus services will potentially reduce the risk of the eventual removal or reduction of bus services due to increasing congestion and falling patronage.

This will result in option value and non use value benefits, for people who may not yet anticipate using these services, but do value the fact that they exist. For example, a car-owner would value the knowledge that they could access Preston city centre reliably and easily by bus, rail or cycling if for whatever reason their car was unavailable.

Access to Services

The TCF schemes would provide greatly improved access into and around Preston City Centre (especially for those living close to Cottam Parkway station) for non-car owners.

Regeneration

As discussed in the Strategic Case, significant local growth in housing and jobs is underway in Preston City Region. Taking into account displacement, leakage and multiplier effects, it is estimated that the full delivery of identified sites could result in over £6bn present value of benefits in terms of increased GVA at a UK level by 2040, rising to £10bn at the Lancashire level. Clearly this would represent a step-change in the City Regions contribution to the UK economy and at capacity around £1.5bn in additional GVA could be generated locally each year, a 12% increase on the area's current £12bn annual contribution.

Given the levels of growth, there are significant opportunities for addressing some of the City Region's long standing persistent socio-economic challenges, including tackling unemployment among some of the most deprived and hard-to-reach communities through TCF investment

These communities suffer from acute transport poverty and there is widespread consensus across national transport appraisal that the effects of improved connectivity, including via more sustainable modes, has significant potential to induce workforce re/entrants. This is considered to be particularly true in areas where there are structural challenges in the labour market, such as those apparent in Preston City Region.

It is therefore considered that in enabling improved access to forthcoming employment opportunities, the TCF scheme can play an important role in helping to address some of the persistent and most pressing challenges facing the City Region.

3.7.2 Summary of Non-Monetised Impacts

A summary of the non-monetised impacts of the scheme is provided below. These will be taken in to account when determining the overall value for money of the schemes.

A high level assessment of environmental impacts was undertaken based on the constraints map provided in the strategic case. This showed that there are generally no environmental constraints that would significantly affect delivery of the schemes. As there is a shift towards active modes and buses, there are generally positive social and environmental benefits associated with mode shift away from car.

Table 3.23 Non-Monetised Assessment Summary

	Impact
Regeneration	Moderate beneficial
Environmental - Landscape	Neutral
Environmental - Townscape	Likely to be moderately beneficial
Environmental - Historic Environment	Not assessed at this stage
Environmental - Biodiversity	Neutral
Environmental - Water Environment	Neutral
Social - Journey quality	Moderate Beneficial
Social - Security	Slight Beneficial
Social – Access to Services	Moderate Beneficial
Social - Affordability	Slight Beneficial
Social - Severance	Moderate Beneficial

3.7.3 Appraisal Summary Table

An Appraisal Summary Table has been produced for each TCF funding scenario package, summarising the monetised and non-monetised scheme impacts. These are backed by TAG worksheets, where applicable at the current stage. The Appraisal Summary Tables are provided in Appendix E.1.

3.8 Distributional Impact Appraisal

3.8.1 Introduction

The assessment of Distributional Impacts (DIs) allows analysts to examine the potential impacts of a transport intervention across different social groups. Beneficial and/or adverse DIs of the transport intervention should be considered, as well as the different social groups which will potentially be affected.

As the options within the TCF scheme have been designed to improve connectivity between some disadvantaged communities and new commercial opportunities, they are likely to provide benefits to various social groups who live, work or travel in the areas affected by the scheme.

A high level assessment of the likely Distributional Impacts for each relevant impact is provided below. A full detailed assessment has not been undertaken at this stage. However, the high-level assessment acts as a screening process, and results in a recommendation on which impacts should be taken forward for further DI assessment as the schemes develop.

3.8.2 High level assessment by type of impact

User Benefits

The introduction of bus priority and an active travel corridor along the A59 New Hall Lane (ST07) is likely to improve bus services for a range of social groups including carers, people on low income, people without access to a car and BME communities, as identified in the Strategic Case, as journey times will be improved.

This option is therefore likely to help communities access work by providing inclusive travel as well as reducing severance. Other options likely to provide user benefits include BP01 as it redesigns and upgrades key junctions on the eastern portion of Ringway which likely to improve journey times for some social groups by improving cyclist flow and providing a high quality gateway for active travel users to Preston's City Centre.

Other schemes which introduce new bus lanes and bus priority corridors, for example ST01 and ST08, are likely to improve user benefits by improving journey times for social groups accessing the city centre and employment areas. Additionally, the Cottam Parkway rail scheme which will provide a new modern two-platform station on the Fylde rail line in Cottam, improving user benefits, security and accessibility. This would be achieved through the inclusion of a safe and secure facility which will provide a bus/rail interchange as well as high-quality pedestrian and cycle links for social groups such as people on low incomes, people without access to a car, older people, people with a disability, carers and BME communities.

Reduced Noise

It is likely that options which include improvements such as quietways and quiet street improvements, such as ST02, ST03, ST07 and ST08, will improve noise pollution along transport corridors which will benefit all social groups. For instance, ST02 will include a bus gate to the north of Plungington local shopping area, which will restrict through traffic, therefore reducing the number of vehicles using this route and its associated noise. ST03 aims to implement quiet street improvements to facilitate new development of Stoneygate as an "Urban Village" and improve the access to Fishergate, Friargate and the Bus Station for pedestrians, with both ST07 and ST08 aiming to implement new quietway schemes to reduce the impact of noise.

Improved Air Quality

Options that improve active travel access, such as ST06, which will provide an off-road superhighway between Warton Enterprise and the edge of Preston City Centre, are likely to benefit social groups such as people on low

incomes, people without access to a car, carers and BME communities by providing access to employment can be accessed by other modes of travel other than cars which will also improve air quality in the area.

Reduced Accidents

Options that include public realm, for instance BP00a which will incorporate public realm along Friargate and Corporation Street, may benefit groups such as children, older people, people with a disability, Black and Minority Ethnic (BME) Communities as well as carers. This is due to a decrease in traffic using these routes which is likely to reduce potential accidents, as well as reducing severance.

Increased Security

As ST08 will upgrade an old railway line to a “Greenway” standard which will remove existing barriers and provide new lighting and CCTV cameras, this option will help improve the perception of security to many social groups such as children, older people, people with a disability, carers, BME communities as well as people who are on low incomes and people without access to a car.

Reduced Severance

Options which include public realm enhancements such as ST03, as well as implementing quiet street improvements, to improve access to Fishergate, Frairgate and the bus station will help improve pedestrian and cycling movement by removing barriers. This will provide benefits to social groups such as children, older people, people with a disability, carers, BME communities as well as people who are on low incomes and people without access to a car, as identified in the Strategic Case. Further to this, ST03 will provide a new segregated superhighway to link Preston Railway Station with the CYCLOPS junction which will reduce severance for some social groups such as carers, BME communities as well as people who are on low incomes and people without access to a car.

Accessibility

Options that include improvements to new waiting facilities, such as option ST04 which also include improving bus stops along Fylde Road and bus-lane bypasses for cyclists, are likely to improve accessibility for all social groups.

3.8.3 Recommendation for further work

As the schemes progress beyond, further detailed Distributional Impact assessment in line with TAG guidance will be undertaken across all the impacts described above. There are clearly significant non-monetised distributional impacts of the scheme, which are important considerations in the overall value for money of the scheme, benefitting some of the most disadvantaged communities.

3.9 Package Level Value for Money Statements

The Value for Money assessment of each funding package (low / medium / high) has been undertaken based upon a combination of the economic, environmental, social and distributional impacts of the proposed schemes and is based on qualitative, quantitative and monetised information.

WebTAG guidance recommends Benefit Cost Ratio (BCR) metrics to define the Value for Money category of a scheme. The categories include:

- **Poor VfM** if BCR is below 1.0;
- **Low VfM** if the BCR is between 1.0 and 1.5;
- **Medium VfM** if the BCR is between 1.5 and 2;
- **High VfM** if the BCR is between 2.0 and 4.0; and
- **Very High VfM** if the BCR is greater than 4.0.

A summary of the overall monetised costs and benefits for each funding package is provided in Table 3.24.

Table 3.24 Monetised Assessment Summary (all costs in 2010 price, discounted to 2010)

	Funding Scenario		
	Low	Medium	High
Total Present Value of Benefits	£58.0m	£166.2m	£229.4m
Present Value of Costs	£65.8m	£104.4m	£152.1m
Initial Benefit to Cost Ratio (excluding reliability, wider economic benefits and urban realm benefits)	-0.1	0.5	0.5
Adjusted Benefit Cost Ratio (inclusive of all identified benefits)	**0.9**	**1.6**	**1.5**

There are also several impacts which were not possible to be robustly monetised, but should still form part of the overall value for money assessment. The most significant non-monetised impacts would come from:

- Benefits from improved **journey quality**
- Benefits from increased **option and non-use values**
- Benefits increased **accessibility** for non-car owners
- **Regeneration** benefits by supporting the reduction of unemployment in some of the most deprived communitiies
- Clear positive **distributional impacts**, with the scheme benefitting some of the most disadvantaged communities

An overall Value for Money category has been assigned to each of the three funding package options. These take into account the BCR, the clear non-monetised benefits across all funding pacakges which further support the BCR obtained, and the extent to which each package would support the desired transformational impact that TCF investment would have on Preston. The various sensitivity tests were also taken into account. The overall Value for Money categories are shown in Table 3.25

Table 3.25 Overall Value for Money conclusions

	Funding Scenario		
	Low	Medium	High
VfM Assessment Category	Low value for money	Medium value for money	Medium value for money

As discussed in section 3.5, the low funding package represents low value for money, as the initial allocation of roadspace to achieve bus, walking and cycling modal shift results in disbenefits to highway users. As more corridors are improved in the medium and high funding scenarios, a more integrated set of alternatives for active and sustainable modes are delivered, linking to more growth sites across the city. There is therefore a significant increase in walking, cycling, bus and urban realm benefits, resulting in higher value for money packages.

FINANCIAL CASE

4. Financial Case

4.1 Introduction

The Financial Case concentrates on the affordability of the proposal, its funding arrangements and technical accounting issues (value for money is scrutinised in the Economic Case).

The Financial Case for the Preston City Region Transforming Cities Strategic Outline Business Case is discussed under the following headings:

- Methodology and Assumptions;
- Whole Life Costs;
- Estimating Uncertainty;
- Independent Verification of cost estimates;
- Capital Cost Estimates;

- Funding Arrangements and Approval;
- Capital Expenditure Profile;
- Additional Third Party Investments

4.2 Methodology and Assumptions

The scheme cost estimates presented in this document have been prepared by a combination of Lancashire County Council's Highways Design Team, drawing on the experience of their in-house Infrastructure Delivery Team with the tender and outturn costs of similar schemes that have recently been undertaken by Lancashire County Council, with support from Jacobs.

Jacobs have led the costing of the Transforming Ringway scheme, given the wide range of benefits (and therefore of cost types in its delivery), along with independent costing of the ST05 package, including Old Tram Bridge. This is given Jacobs significant understanding of the bridge, it's structural survey, and extensive experience in delivering and costing similar structures, including appropriate structural and sub-surface risks.

Senior planning and engineering officers at LCC have prepared these cost estimates to guide the development of the proposed TCF programme. These officers have been supported in an independent manner by Jacobs and their Major projects and QS teams, in terms of ensuring all relevant and required cost categories have been considered, and that all required aspects of costs have been considered at this stage.

The costs for Cottam Parkway have been developed Network Rail, as part of an independent GRIP 2 costing exercise, and report. However, costs, and required cost categorised to deliver Cottam Parkway station have been independently reviewed by Jacobs, with a number of specific cost items also noted on review, and added into the overall cost for the scheme for TCF submission.

It is fully understood by the Council that costs submitted at this stage need to be suitably robust, and have been developed using the combined strengths and reviews of both organisations to ensure ongoing deliverability of the packages within these cost envelopes.

The development of the base scheme costs for different types of schemes and approach to inflation are outlined in the following sections.

Scheme cost estimates and cost reports for highway-based schemes can be found in **Appendix F.1.**

Scheme cost estimates associated with Cottam Parkway can be found in the Cottam Parkway SOBC, which can be found within Appendices to the Strategic Case. Scheme cost estimates associated with TN00 Future Mobility Platform can be found in the Future Mobility Platform Report, which can be found within Appendices to the Strategic Case.

4.2.1 Sustainable & Active Travel Corridor Base Costs

The Base costs of Sustainable & Active Travel schemes has been derived including the following components;

- Line item approach, as shown in Table 4-1, based on LCC and Jacobs' experience with the outturn costs of these line items on similar projects in Lancashire and elsewhere in the North of England, and the conceptual design scheme extents, including the following components;
    - Preparatory costs associated with the scheme design and outline business case development;
    - Land acquisition (where not already within LCC control);

- Construction preliminaries;
- Ecology surveys and mitigation
- Supervision;
- Stats diversions and statutory undertakings, based on LCC's detailed knowledge of stats in the Preston area and precise knowledge of the specific stats within the boundary of each scheme and the maximum possible diversions needed;
- Construction costs; and,
- Traffic Management costs.

- A 20% **design contingency** added onto these to account for under-measure and potential minor changes to scheme extent and works as the scheme develops through consultation and detailed design, based on LCC's past experience with potential cost escalation through this process; plus,
- A 15% **traffic management** contingency to account for the likely restricted working hours and higher traffic management costs associated with works on live carriageway within the traffic sensitive areas of Preston City Centre, based on LCC's past experience with the additional costs incurred on city centre and edge of city centre schemes.

The inclusion of these two elements of contingency as part of the base cost derivations represents the greatest likely extent of cost increases due to design evolution and traffic sensitivity, based on LCC's recent experience, and ensure that the resultant base costs are robust.

The line item costs are based on recent outturn costs of similar bus, walking and cycling and urban realm schemes delivered by LCC set out in the Management Case, including the recent **Fishergate public realm** transformation.

As BP00 Transforming Ringway, ST05 South City Region Growth Zone, and Cottam Parkway rail station are key schemes in the programme, these have been costed (or reviewed in the case of Cottam Parkway) by the Jacobs Engineering independently of the design team.

The costs have been prepared in 2019/20 prices, and inflation and risk added on top of these costs in line with WebTAG unit A1.2 guidance. The methodologies for adding inflation and risk to the base costs are outlined in sections 4.2.4 and 4.4.

Table 4-1: Extract of ST07 Samlesbury cost estimate showing the line items included in the base costs

ST07 Samlesbury Estimated Capital Expenditure - Base Year 2019/20	
Estimate Compiled By: James Baron	
Date: Oct 2019	
Direct Works Costs	
Series	Total
Series 100- Preliminaries	£823,315
Series 200- Site Clearance	£34,142
Series 300- Fencing	£11,558
Series 500- Drainage	£44,744
Series 600- Earthworks	£341,218
Series 700- Pavement	£539,594
Series 1100- Kerbs/Footway	£428,330
Series 1200- Signing/Lining	£45,721
Series 1300- Street Lighting	£750,200
Total Direct Works Costs exclu Contingencies	£3,018,822
Contingencies @ 20%	£603,764
Total Direct Works Costs	**£3,622,586**
Indirect Works Costs	
Item	Total
Ecology survey & mitigation measures (Brockoles Brow)	£10,000
Land acquisition (Brockoles Brow)	£100,000
No entry / throttling scheme (Adelaide Street)	£30,000
Statutory Undertakers Diversions	£50,000
Traffic Signals Equipment & modifications	£100,000
Bus route improvements (shelters, paving, clearways)	£275,130
Bus lane enforcement cameras (x2)	£100,000
Cycle count totem	£15,000
Total Indirect Works Costs exclu Contingencies	£680,130
Contingencies @ 20%	£136,026
Total Indirect Works Costs	**£816,156**
Surveys & Investigations	
Item	Total
Ecology Surveys & Licence	£3,000
Topographical Survey	£3,000
Drainage Surveys	£3,000
Ground Investigations & Reports inc. Cores	£3,000
Total Surveys & Investigations exclu Contingencies	£12,000
Contingencies @ 20%	£2,400
Total Surveys & Investigations	**£14,400**
Design & Site Supervision	
Item	Total
Concept Design/Feasibility Stage	£66,797
Detailed Design Development Stage	£222,657
Contract & Tender Procurement	£89,063
Project Management	£66,797
Site Supervision	£222,657
Total Design & Site Supervision	**£667,971**
Total Estimated Capital Expenditure	
Item	Total
Total Direct Works Costs	£3,622,586
Total Indirect Works Costs	£816,156
Total Surveys & Investigations	£14,400
Total Design & Site Supervision	£667,971
Total Works, Design & Investigation	**£5,121,113**

4.2.2 Cottam Parkway Rail Station Base Costs

The base costs for the Cottam Parkway rail station have been derived from GRIP 2 cost estimates for the preferred options for each scheme. The GRIP 2 cost estimates were prepared by Network Rail, and have been

independently checked by Jacobs. This identified two gaps in the GRIP2 cost estimate for Land costs and inflation to outturn costs, which were added by Jacobs along with a further contingency around design and project management. The estimated capital costs are shown in Table 4-2. GRIP 2 base costs for Cottam Parkway were prepared in Q4 2018 prices

Costs include all required works for delivery of the scheme, not just to the station, but also car park and access road; along with planning, final design and scheme preliminaries; themselves costed off recent tender prices and returns from PWD.

Table 4-2: Estimated Capital Cost for Cottam Parkway Station

Element	Cost Q4 2018
Direct Construction Works	
• Railway Control Systems	£270k
• Train Power Systems	£145k
• Electric Power and Plant	£20k
• Permanent Way	£45k
• Operational Telecommunications Systems	£205k
• Buildings and Property	£1,650k
• Civil Engineering	£5,250k
• Enabling Works	£660k
Direct Construction Works Cost	**£8,245k**
Indirect Construction Works	
• Main Contractors Preliminaries	£2,500k
• Main Contractors Overheads and Profit	£1,400k
Indirect Construction Works Cost	**£3,900k**
Construction Cost	**£12,145k**
Design, Project Management and Other works	
• Design	£990k
• Project Management	£990k
• Other Project Costs	£345k
Design, Project Management and Other Works Cost	**£2,325k**
Base Cost Estimate	**£14,470k**
Risk Allowance P80 (40%)	£5,800k
Land Cost Estimate	£250k
Additional Design and Project Management	£1,500k
Inflation to 2023	£2,422k
Anticipated Final Cost	**£24,442k**

4.2.3 Future Mobility Platform Base Costs

Cost estimates for delivery of the component systems which make up the Future Mobility Platform have been developed by Jacobs' specialist Urban Traffic Management and Signals teams, who possess substantial experience in the realm of traffic signals, traffic modelling & management and installation of varying on street infrastructure. These are shown in Table 4-3. Outturn and tender costs from similar systems Jacobs have been involved in delivering were used to construct the cost estimates, and for the external aspects and software, including the Simulation suite and Hosted Operations Centre to be implemented within UCLan, early engagement was undertaken with potential suppliers to inform the cost estimates based on the level of deployment required.

Table 4-3: Estimated Capital Cost of Future Mobility Platform

System	Base Cost (£000s)
Traffic signal and local controller upgrades	£180.0
Installation of Common Database	£350.0
UCLan Simulation Suite and Hosted Operations Centre development	£4,040.0
Installation of traffic modelling software	£880.0
Installation of air quality sensors and data acquisition	£91.2
Installation of bus mobility systems and data acquisition	£175.0
TOTAL COST	**£5,716.2**

The base costs of the component systems were then scrutinised and subjected to inflation across the delivery timeframe of 3 years and a determined level of risk attributed on a case by case basis.

4.2.4 Out-Turn Price Adjustment (Inflation)

Inflation will mean that the actual amount of money to be spent on the scheme will differ from the 2019/20 estimates, even when including additional risk. In order to determine the outturn costs of the schemes, an allowance for inflation to the point of expenditure has been calculated and added to the base costs for each future year. Outturn costs have been calculated based on the following assumptions;

- For all LCC highway works (Sustainable & Active Travel Corridor schemes), 2%pa nominal inflation has been applied for design costs and 5%pa nominal inflation for all construction-phase costs;
- For Cottam Parkway Station, inflation to outturn costs was estimated as 11% uplift; and,
- For the Future Mobility Platform, inflation has been calculated in accordance with the Consumer Price Index (CPI)

4.3 Whole Life Costs

Although the funding bid is for a contribution towards the capital costs only of delivering the scheme, the business case must also consider its whole-life costs. These include the costs of maintaining the highway and rail facilities and associated infrastructure, the costs of licensing, maintaining and operating the component systems of the Future Mobility Platform, and the longer term costs of infrastructure renewal. Maintenance costs of the different components of the TCF package are outlined in the following sections.

In addition to ongoing costs, the schemes are anticipated to generate income as outlined in section 4.3.2, which will enable some of the ongoing scheme costs to be offset and generate additional revenue for both central government and private sector providers.

4.3.1 Operating and Maintenance Costs

Sustainable & Active Travel Corridors

The Preston TCF programme schemes do not involve creation of any significant new highway assets, as most schemes take place entirely within the existing highway boundary and instead reallocate existing highway space to new modes. As such, although maintenance costs have been estimated for the schemes as if they were new, there are already ongoing operating and maintenance costs for these parts of the highway network which will be offset and as such the programme is not expected to result in a significant net increase in LCC's highway operations and maintenance expenditure. In addition, there are potential areas where investment will create efficiencies, as outlined in Section 4.3.3, that may lead to long-term savings in operations and maintenance costs.

Any net change in highway operating and maintenance costs will be paid for by Lancashire County Council, and a commitment to the future costs of maintaining the road and assets is included in the S151 officer letter supporting the scheme.

Cottam Parkway Station

The station operator Northern Railways provided the station operating costs based on the costs for Buckshaw Parkway station and the Network Rail Long Term Charge (LTC) for that station. These are shown in Table 4-4.

Table 4-4: Station Operating Costs (£2016/17 prices) – Data provided by Network Rail

Element	£ per annum
Staff	£47,676
Maintenance and Cleaning	£56,415
Utilities and Communications	£34,296
Network Rail LTC	£62,027
Total	**£200,414**

It is assumed that these costs will be covered by the Northern Rail franchise holder from the net additional fares income generated by the station, which is estimated at between £1.0 and £1.2m per annum, through an increase in the franchise's LTC.

By the time the station opens and in accordance with the electrification Blackpool North line and franchise plans, the Blackpool North and Blackpool South services will be new build DMUs and EMUs with air conditioning. These will replace existing 142/150/153/156 units. The capacity of the trains will be increased between 4% and 150% and, as the scheme only involves adding additional stops to existing services without an increase in distance travelled, it is assumed that there are no rolling stock implications or associated costs, nor costs associated with processing the generated revenue. Train capacity analysis supports this assumption.

Future Mobility Platform

Annual operating costs for the future mobility platform have been identified based on software licensing fees for the different systems, maintenance cost estimates from LCC's extensive recent experience with systems maintenance, and staffing costs based on the resource requirements of the operations centre. These are shown in Table 4-5.

Table 4-5: Future Mobility Platform annual operating costs

System	Annual Maintenance Cost	Notes
Common Database	£15,000	License fee only as cloud based
Traffic Modelling Software	£15,000	License fee and maintenance costs
UCLan Hosted Operations Centre	£50,000	Based on one operative and internal system costs
Traffic Signal Maintenance	£18,000	3% of total traffic signal installation cost
Bus Mobility & Cycle Mobility Maintenance	£17,500	3% of total traffic signal installation cost
IoT Sensor Maintenance	£10,000	Based on information provided by IoT providers
Total Annual Operational Costs	**£125,500**	

The operating costs for the Future Mobility Platform will be paid for by Lancashire County Council, and a commitment to the future costs of maintaining the road and assets is included in the S151 officer letter supporting the scheme. The Future Mobility Platform will represent a significant asset and ongoing work developing the business strategy will seek to identify potential revenue streams that could be generated by the platform and used to offset its operating costs.

4.3.2 Income Generation

Cottam Parkway is estimated to generate net additional fares income of between £1.0m and £1.2m per annum (depending on the final timetable option secured). This compared with annual operating costs of £0.2m for the station will result in a return of between 5 and 8 times the annual costs. This will result in a direct transfer of revenue to central government and the broad transport budget of £0.8 - £1.0m per annum through decreased subsidy of the Northern Rail franchise.

No car parking revenue is assumed for Cottam Parkway, as it is assumed that to support the ambition for park-and-ride use parking at the station will be free of charge. It is assumed that any loss of parking revenue at Preston Station will be short term as there is assumed to be suppressed demand for parking as the current car parking is well used. In addition, it is expected that there will be increased demand for use of Preston Station when HS2 phase 2 is operating.

In addition, enforcement of bus priority and access restrictions on the Sustainable and Active Travel Corridors by LCC, which will be monitored by CCTV and ANPR cameras to automatically detect violations, will generate a certain level of revenue for LCC through fines issued for non-compliance. While bus priority measures will be designed to ensure restrictions are clearly visible and signed, and therefore the number of violations minimised, some non-compliance will still occur and result in revenue. While the level of revenue has not yet been estimated, LCC's previous experience within Preston indicates that these are generally higher than the operating costs of the enforcement systems. All enforcement revenue will be ringfenced for offsetting operating costs and re-investment into the transport network.

The Future Mobility Platform will represent a significant asset and ongoing work developing the business strategy will seek to identify potential revenue streams that could be generated by the platform and used to offset its operating costs.

Additional revenue is also forecast for bus operators, which will accrue to private sector providers for commercial services and underpin the operators' commitments outlined in Section 4.9, and to LCC for tendered services in the form of reduced subsidy. This is outlined in the economic case.

4.3.3 Efficiencies

Although the TCF programme will create new ongoing costs of new assets and systems, the investment delivered will also result in the potential for significant efficiencies and reductions in ongoing costs through the retirement and replacement of old assets and investment reducing the need for ongoing maintenance of existing infrastructure. These have the potential to lower the overall operational costs associated with the scheme and may potentially lead to a net positive impact on LCC's budget. A number of significant efficiencies that will be delivered through the programme are outlined below;

- **Signals and street lighting** – the TCF programme will involve the investment in and replacement a number of signalised junctions and replacement of street lighting. This will involve the removal of older, less efficient signals and lighting and their replacement with modern energy-efficient models. This has the potential to significantly reduce the electricity operating costs associated with these systems. In addition, many of the signals being replaced or upgraded by the TCF investment are nearing their end of life.

- **Highway maintenance holiday** – most of the TCF schemes take place fully within existing highway boundaries which LCC is responsible for maintaining on an ongoing basis. As a result of TCF programme investment, assets on a number of corridors will be renewed such that a maintenance holiday will be created in which they will not require ongoing maintenance. As the new highway maintenance costs are likely to be similar to the maintenance costs of the existing assets, this will result in a net reduction in maintenance costs expected to offset any additional maintenance of street furniture.

- **Old Tram Bridge** – the existing Old Tram Bridge structure is in a deteriorating state and has been permanently closed to the public due to structural faults. Despite it being unviable to repair the existing structure to re-open it to the public, LCC is responsible for significant ongoing maintenance costs to prevent the structure from collapse and causing potential damage to the downstream Avenham Viaduct Bridge and West Coast Main Line rail bridge. The replacement of this bridge with the new Ribble crossing through TCF investment will also involve the deconstruction of the existing structure, and as the maintenance costs of the new bridge are anticipated to be significantly less than maintaining the old failing structure, this will result in a moderate saving.

4.3.4 Monitoring and Evaluation Costs

A Monitoring and Evaluation Strategy for the TCF programme has been created as part of the Management Case.

To fund monitoring and evaluation activities, an allowance has been made by LCC within the programme costs. The allowance for the different funding levels is as follows;

- Low Package- £300k
- Medium package- £425k
- High Package- £500k.

Monitoring and evaluation costs will be spent over a five year period from 2022/23 and are included in the 2022/23 funding ask for each package.

4.4 Estimating Uncertainty

The estimate of the scheme cost at its current stage of delivery includes an allowance for risk and uncertainty. There are multiple elements that could affect the final cost, and for this reason, the scheme cost estimate includes allowances for both estimating uncertainty and events-driven uncertainty, or risk[1].

An allowance for estimating uncertainty is included alongside the base costs for each element of the scheme, based on experience with similar schemes at this stage of development.

The treatment of risk, and the calculation of quantified risk – the Quantified Risk Assessment (QRA) - is described below.

4.4.1 Managing Risk

The Treasury Green Book states that "*effective risk management helps the achievement of wider aims, such as effective change management, the efficient use of resources, better project management, minimising waste and fraud, and supporting innovation*".

The process of managing and reviewing a wide range of project risks, and ensuring an appropriate transfer of risk to the contractor, is described more fully in the Management and Commercial Cases.

A four stage risk management process has been followed, as illustrated in Figure 4-1 below.

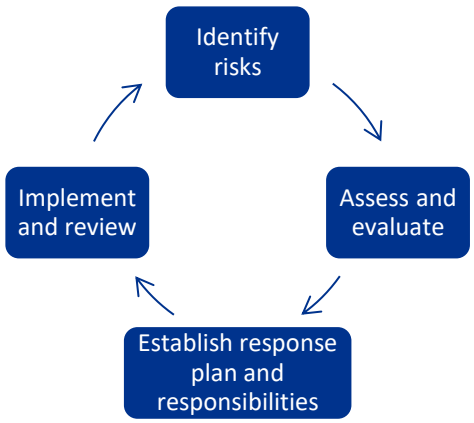

Figure 4-1: The four stage risk management process

4.4.2 Identifying Risks

Risks have been identified through the development of a full and detailed risk register for each scheme's development, planning and construction. Key, specific risks for the development of the TCF programme have been included in this section, with the individual scheme QRAs shown in **Appendix F.2** and the full Risk Registers shown in **Appendix C.2**.

The Risk Registers cover both design and construction, and cover risks under the following categories:

- Compliance
- Financial

[1] Risk allowance is a factor applied to project costs to act as a contingency for unforeseen circumstances.

- Operational
- Reputational
- Strategic

Headline financial risks identified for the TCF programme are shown in Table 4-6 below.

Table 4-6: Major Financial Risks to TCF Programme

Risk	Mitigation
Price increases escalate due to Economic forces such as Brexit/geopolitics	Project cost estimates have built in estimates for contingencies and inflation and this has also been costed in as a key risk in the QRA. In choosing the most appropriate procurement methodology on each project the county council will favour that which protects best against price increases. Project costs and forecasts will be kept under regular review to identify potential overspends as soon as possible so that these can be managed across the programme either through value engineering or reallocation of spending.
Ground conditions require major changes to projects resulting in cost increases, inability to meet scheme timescales	Undertake surveys and incorporate findings into design
Scale/cost of stat utilities and services costs underestimated	Accurate cost forecasting, building in generous allowances for stats and other contingencies and OB
Consultation results in large scale changes to design(s)	Design based on experience of a wealth of similar schemes and incorporates lessons learned
Detailed design reveals major engineering challenges	Contingencies built in where possible
Third Party fees (eg. supervision / possession) exceed estimate/ budget allowance	Identify works likely to require NR supervision within the programme and consult and schedule out with NR in advance of construction to ensure costs captured. Monitoring of site supervision Co-ordination of activities to make efficient use of supervisors' time and minimise time on site
Safety Audits raise significant design changes needed	Experienced design team, professionally qualified, following up to date & relevant design standards. Consultation with vulnerable groups built in to designs. Lessons learned form very similar schemes incorporated.
Traffic management requirements delays/prevents optimum delivery timetable	Early engagement with Streetworks and TRO teams to ensure adequate allowances in delivery programme for this activity. 15% contingency has been allowed for traffic management in high traffic areas in both scheme costs and delivery programme.

The impact of these has been rated using a risk score matrix combining probability and impact factors and are shown within the Risk Register in **Appendix C.2**.

4.4.3 Quantified Risk

TAG Unit A1.2 requires that all project related risks that may impact on the scheme costs should be identified and quantified in a Quantified Risk Assessment (QRA), in order to produce a risk-adjusted cost estimate. This has been undertaken for the TCF programme based upon the individual scheme risk registers, and probability and impact factors.

LCC have an established risk management process, outlined in the Management Case, that was used to develop the project Risk Register. The project team identified the risks and impacts, with potential costs, associated with the project. These were further evaluated for the likelihood of occurrence resulting in a risk rating measure between 'high' and 'low'. Mitigation measures identified were reviewed by the project team to give a revised risk rating with a residual cost impact on the project.

The established process used by the project team working in collaboration, provides a realistic assessment of risks at this stage in the scheme's development. The risk profile naturally alters as project scope, design details, and constraints change over time. The Risk Register will require periodic review, and will be continually updated as the scheme develops to incorporate any new, mitigated, or revised risks, as also detailed in the Management Case.

The likelihood of each outcome occurring has been based on experience of past experience on similar schemes. As recognised in WebTAG Unit A1.2 §3.2.14, defining the likelihood of each outcome occurring is not an exact science.

For each risk, the minimum and maximum likely impacts have been monetised, using empirical evidence, LCC's previous experience on similar projects, or common sense approximations as appropriate. These have been derived pre- and post-risk mitigation; the post-mitigation impacts have been used for the QRA assessment, which are the residual risks following mitigation actions.

Cost risk and uncertainty has been subjected to Monte Carlo analysis which is then used to produce a P_{80} overall risk value which has been added to the cost of each scheme, following WebTAG Unit A1.2 guidance. This is included in the Capital Cost Estimates in Section 4.6.

4.5 Independent Verification of cost estimates

At the present stage, on account of the large number and diversity of schemes in the Preston Transforming Cities Fund programme and the early stage of development of many of the schemes, independent verification of scheme costs has not yet been undertaken for all schemes.

However, to ensure the scheme costs presented in this case are robust, the following measures have been taken;

- Recent out-turn costs of similar schemes delivered by LCC have been used as the primary source of cost information.
- Jacobs has undertaken an independent check of NR's costing for Cottam Parkway, (and South Fylde) with updates made included in the TCF submission
- Jacobs has supported LCC in the costings development, to ensure that all categories of costs have been considered in the designs, fully inclusive of preparation and design costs, preliminaries, supervision, construction, traffic management and monitoring and evaluation post scheme development.
- Jacobs has costed the largest infrastructure items, including the BP00a/b Transforming Ringway scheme and ST05 New Ribble Bridge independently, with support from LCC design teams for Ringway.

- Inflation, Quantified risk and local contributions and profiles have all been defined according to guidance.

As schemes are further developed and move through the Assurance Framework and governance arrangements set out in the Management Case, independent surveyor's verification to scheme costs will be required

4.6 Capital Cost Estimates

Capital cost estimates for each of the schemes within the TCF package have been calculated in line with the methodology outlined in section 4.2. These are presented, grouped into the three funding levels outlined in the Strategic Case, in the table below. Base costs (in 2019/20 prices), risk allowance from QRA and Inflation to outturn prices are presented separately, as well as the combined outturn cost of each funding scenario.

Funding Scenarios

	Ref	Option	Base Cost	Inflation	QRA
Low	TN00	Future Mobility Platform	£5.72m	£0.74m	£0.26m
	BP00a	Transforming Ringway (North Rd to Corporation St)	£23.89m	£6.81m	£3.66m
	BP01	Ringway East - Key Corridors Gateway	£12.81m	£2.73m	£1.14m
	ST01	SATC Fishergate/Fishergate Hill/Penwortham	£8.42m	£1.99m	£1.24m
	ST02	SATC University/Plungington	£1.67m	£0.36m	£0.19m
	ST08	SATC Ribbleton	£8.97m	£1.94m	£0.60m
	Subtotal		**£61.48m**	**£14.57m**	**£7.09m**
	Low Funding Scenario Monitoring and Evaluation		**£0.3m**		
	Low Funding Scenario Total		**£83.45m**		
Medium	All Low Scenario Schemes, plus				
	ST04	SATC NW Preston	£12.10m	£2.89m	£1.03m
	ST05	SATC South City Region Growth Zone	£22.27m	£2.14m	£2.48m
	RW02	Cottam Parkway Station	£18.64m	£5.80m	£2.42m
	Subtotal		**£50.59m**	**£10.83m**	**£5.94m**
	Medium Funding Scenario Monitoring and Evaluation		**£0.43m**		
	Medium Funding Scenario Total		**£150.92,**		
High	All Low and Medium Scenario Schemes, plus				
	BP00b	Transforming Ringway (Corporation St – Bow Ln)	£3.53m	£1.01m	£0.54m
	ST03	Church St/Stoneygate Urban Village	£11.41m	£2.73m	£0.80m
	ST06	SATC Warton EZ	£20.18m	£4.77m	£1.52m
	ST07	SATC Samlesbury EZ	£5.12m	£1.22m	£0.62m
	ST09	SATC Bamber Bridge/London Road	£5.02m	£1.11m	£0.88m
	Subtotal		**£45.26m**	**£10.85m**	**£4.37m**
	High Funding Scenario Monitoring and Evaluation		**£0.50m**		
	High Funding Scenario Total		**£211.48m**		

4.7 Funding Arrangements and Approval

Table 4-7 below sets out the proposed funding arrangements for the Preston TCF bid, for each funding scenario. The prudent treatment of the programme level costs and risks has been carried forward in order to understand the maximum anticipated level of funding required in each funding scenario.

The local contribution is predominantly made up of funding from the County Council's Capital Programme; the remainder is planning obligations. Lancashire County Council's S151 officer's letter confirming commitment to this local contribution is included in **Appendix F.3.**

Table 4-7: Funding Arrangements

Funding level	Total cost	TCF grant		Local contribution (inc. CIL/s106)	
High *Transformational*	£211.5m	£182.0m	86.1%	£29.5m	13.9%
Medium *City Region impact*	£150.9m	£123.8m	82.0%	£27.2m	18.0%
Low *City Centre focus*	£83.5m	£74.8m	89.6%	£8.7m	10.4%

4.8 Capital Expenditure Profile

TCF capital is available over five years between 2018/19 and 2022/23. Table 4-8 below sets out an indicative expenditure profile for the programme. The programme level expenditure profile is built up from individual project expenditure profiles shown in **Appendix F.4**. Spend in 2023/23 is on Cottam Parkway only based on the presented project programme and is entirely funded through local contribution.

Lancashire County Council will continue to undertake identified time-critical development and design work for the TCF programme "at risk" from November 2019 onwards prior to DfT funding decision, and will underwrite this work.

Table 4-8: Expenditure Profile

Scenario		2019/20	2020/21	2021/22	2022/23	2023/24	Total	% total
High	Requested DfT funding	£0.0m	£68.5m	£62.4m	£51.0m	£0.0m	£182.0m	86.1%
	LA contribution	£0.0m	£6.5m	£5.9m	£4.8m	£11.3m	£28.5m	13.5%
	Third Party contribution	£0.0m	£0.4m	£0.3m	£0.3m	£0.0m	£1.0m	0.4%
	Total	**£0.0m**	**£75.4m**	**£68.6m**	**£56.1m**	**£11.3m**	**£211.5m**	**100.0%**
Medium	Requested DfT funding	£0.0m	£37.0m	£46.7m	£40.1m	£0.0m	£123.8m	82.0%
	LA contribution	£0.0m	£4.5m	£5.6m	£4.8m	£11.3m	£26.2m	17.4%
	Third Party contribution	£0.0m	£0.3m	£0.3m	£0.3m	£0.0m	£0.9m	0.6%
	Total	**£0.0m**	**£41.7m**	**£52.6m**	**£45.3m**	**£11.3m**	**£150.9m**	**100.0%**
Low	Requested DfT funding	£0.0m	£21.5m	£32.0m	£21.3m	£0.0m	£74.8m	89.6%
	LA contribution	£0.0m	£2.4m	£3.6m	£2.4m	£0.0m	£8.4m	10.0%
	Third Party contribution	£0.0m	£0.1m	£0.2m	£0.1m	£0.0m	£0.4m	0.4%
	Total	**£0.0m**	**£24.0m**	**£35.7m**	**£23.8m**	**£0.0m**	**£83.5m**	**100.0%**

4.9 Additional Third Party Investments

In addition to the direct investment in new infrastructure through the TCF programme, LCC's partners in the Lancashire Area Public Transport Association (LAPTA) will be making additional investments to support improved public service provision in the City Region. While these investments will not directly contribute to the delivery of the schemes, they will result in complimentary improvements to user experience and public transport provision and will support the TCF objectives. LCC's partners have indicated that these investments are contingent on DfT funding for the TCF programme as the increased revenues and operating cost savings resulting from the TCF programme are essential for supporting investments and generating the necessary returns.

- **Stagecoach has committed to investing in new buses for Preston's bus fleet**. They will also invest in and work towards multi-operator ticketing and price capping and joint marketing with other operators.

- **Transdev has committed to investing £470,000 in replacing their Preston – Blackburn/Burnley Hotline service fleet** with seven modern double-decker buses with as-new refurbishment to Euro 5 emissions

4.10 Summary

This Financial Case presents cost estimates for each option contained within the Preston TCF bid. A detailed breakdown of costs for each option is provided, including design and preparatory costs, preliminaries, ecology surveys and mitigation, construction and supervision, statutory undertakers' diversions, land acquisition and traffic management. In addition, the final capital costs include allowance for inflation based on the delivery programme and a risk allowance derived from a Quantitative Risk Assessment. It is expected that risks will reduce through the next stages of preliminary/detailed design and scheme consultation as identified mitigation measures are implemented.

The financial case also presents consideration of the whole life costs of the TCF schemes, including ongoing operating and maintenance costs, potential income generation and efficiencies, and monitoring and evaluation costs for the programme.

The funding arrangements for the programme, including confirmation of local and third party contributions, and capital expenditure profiles are presented. Additional complimentary third party investments by operators are also presented.

Work has been undertaken for the final SOBC to develop the schemes and reach more accurate and precise cost estimates that have been subject to a QRA process. The allowance for risk & contingencies is expected to reduce as the scheme cost estimates develop.

LCC will continue to forward fund continued work on the schemes ahead of DfT decision making on TCF, so that scheme development continues, and to support deliverability of all schemes within the TCF programme timescales.

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COMMERCIAL CASE

5. Commercial Case

5.1 Introduction

The commercial case provides evidence on the commercial viability of the proposals and the procurement strategy that will be used to engage the market. It presents evidence on risk allocation and transfer, contract timescales and implementation timescales as well as details of the capability and skills of the team delivering the project and any personnel implications arising from the proposal.

The commercial case for the Preston City Region Transforming Cities bid, is be discussed under the following headings:

- Output Based Specification
- Procurement strategy and Sourcing Options
- Contract Strategy and pricing framework
- Risk Allocation and Transfer Approach
- Contract Management Approach

5.2 Output Based Specification & Certainty of Outputs to be Procured

The Commercial Case is based on strategic outcomes and outputs, against which alternative procurement and contractual options are assessed.

Fundamentally, the approach and its management by LCC has been developed to secure best value through the procurement process and ensuring a strong, fair and open competition, in line with best practice for managing public money.

Due to the key differences between the nature of the Sustainable and Active Travel Corridor (SATC) interventions, Cottam Parkway Station and the Future Mobility Platform, that different procurement approaches will be identified and adopted as most appropriate for the different schemes. Lancashire County Council (LCC) will lead delivery and procurement of the SATCs and Future Mobility Platform based on their extensive experience with similar schemes, while Network Rail will lead on delivery and procurement for Cottam Parkway using their extensive experience of delivery for rail projects and their existing, industry standard procurement frameworks for delivery.

Despite these differences, the commercial case for all schemes is based on the same essential requirements, namely the need to;

- Deliver the transformational impacts envisaged for the programme as outlined in the Strategic Case;
- Deliver the programme within the available funding;
- Ensure stakeholders' acceptance and support;
- Ensure Best Value is delivered; and,
- Ensure that appropriate quality is delivered.

As part of their approach to delivering Best Value, LCC will seek to embed social value and community involvement at the heart of their specification, in order to ensure that interventions translate into a transformational change within the communities of Central Lancashire. In addition, the commercial approach will encourage the implementation of both best practice and innovative solutions to achieve the desired outcomes.

The delivery of the programme will be achieved by engaging with suitable contractors and delivery partners at an early stage in the planning and delivery, mobilising their appropriate strengths by:

- Using the contractor's experience and input in reviewing the construction estimates;
- Obtaining the contractor's experience and input into the design and construction programme to ensure these are robust and achievable;
- Using and building upon partners' in-house knowledge and experience by engaging through consultation with all stakeholders;
- Engaging the contractor in the design process to confirm and improve buildability, integrate best practice and innovative approaches and ensure value for money through value engineering solutions; and,
- Incentivising a 'right first time' approach that is measured by key performance indicators agreed with the contractor.

This will make to use of competitive and multi-provider framework that LCC have to support scheme development and delivery, and those of NR in terms of scheme development through GRIP 3 and 4.These will be used in collaborative partnership with LCC to maximise the availability of resource across both LCC and partner delivery teams to ensure accelerated programme delivery. A constructability report has been produced for the Cottam Parkway Scheme has been produced and is provided in **Appendix C.1.**

As is typical for a Strategic Outline Case, the commercial case will be developed further as the programme and individual schemes within the programme progress through the Assurance Framework, as set out in the Management Case.

5.3 Procurement strategy and Sourcing Options

5.3.1 Overarching Delivery and Procurement Strategy

As Highways Authority for the area, Lancashire County Council lead the delivery of all elements of the strategic transport infrastructure under TCF, with the exception of rail, which it will work in partnership with Network Rail.

Aside from Cottam Parkway Station, schemes are deliverable within existing highway boundaries or land ownership and will not require Planning Permission or Land Assembly. Preston City Council are the Planning Authority for the district where Cottam Parkway Station will be delivered, and Lancashire County Council will work with them to ensure appropriate planning procedures are followed for this scheme. Network Rail is responsible for the management of the strategic rail infrastructure and will lead the delivery of the rail element of the programme.

The Strategic Transport Infrastructure will be split into thematic elements for the delivery. These thematic elements will be based on the intervention types of each option identified in the Strategic Case (Sustainable & Active Travel Corridors, Cottam Parkway Station, and the Future Mobility Platform).

Each element will be managed and developed by a separate Infrastructure Design and Delivery Teams resourced by Lancashire County Council and supported by partnership working with external engineering consultants.

The Infrastructure Project Management Teams will develop a detailed procurement strategy for each element of strategic transport infrastructure which will feed in to an overall delivery plan for the programme as a whole. Each team will have access to technical, financial and legal expertise to support this process. The teams will also have devolved accountability for their scheme's risk register and risk and issues log. The LCC Procurement Strategy can be found in **Appendix C.2.**

The component infrastructure works that make up the Preston TCF programme will be procured in compliance with the Lancashire County Council Procurement Strategy, and national public sector procurement regulations. **Lancashire County Council and Network Rail have already existing, competitive multi-provider**

frameworks which have previously been used for delivery of similar schemes and comply with all OJEU requirements.

The following sections outline the procurement approach for both design and delivery that will be adopted for the different types of infrastructure.

5.3.2 Sustainable & Active Travel Corridor Projects

Design

The scheme development and design will generally be undertaken by either the Council's in-house Highway and Engineering Projects design team, the Council's private sector design partner or consultants engaged through the new Professional Services Framework Contract.

This will ensure that there are sufficient resources (volume and skills) available to deliver the quantum and type of schemes in the programme.

This procurement strategy has successfully delivered a range of highway and transportation schemes in Lancashire over recent years. The contracts will seek the employment of apprenticeships to support the growth of the economy.

Early and informal engagement with private sector suppliers has already begun to ensure sufficient resources are available to deliver the programme on time.

Council officers and contractor design staff would be co-located under this method of working to create a collaborative working environment. This integrated arrangement will drive project quality and best value and minimise any potential for lost time in the programme.

Delivery

The preferred option for the majority, if not all, of the construction works planned for the public highway would be a direct award to Lancashire County Council's 'in house' Highways Operations team. This team comprises a diverse range of construction operatives, including specialists in paving, surfacing, drainage, landscaping, road markings, street lighting, signing and electricals. The team is further divided into a number of gangs of operatives with the required skills required for the type of work involved in a specific project or intervention. The number of gangs required will be determined by the scale of each particular scheme but the core workforce will comprise of LCC operatives. As and when required these teams will be supplemented by sub-contractor operatives who they have previously engaged with.

Advice received on other similar schemes from Lancashire County Council Legal Services and Procurement Services has stated that from a procurement perspective there is no reason why the County Council cannot carry out the highway works 'in house'. However, in doing so if the County Council is required to engage with a third party for the delivery of any services or works or the provision of goods then such engagement will be in accordance with the County Council's Procurement Rules and the Public Contracts Regulations 2015. These can be found in **Appendix C.3**.

Significant elements of all construction works delivered through the Lancashire County Council Highways Operations will in any case be subject to the competitive tendering processes, regarding the engagement of third parties for the delivery of any services or works or the provision of goods.

These processes are fully compliant with the County Council's Procurement Rules and the Public Contracts Regulations 2015 and specifically relate to:

- All materials
- All contractors
- All hired plant

For example, a review of previous projects delivered by LCC Highway Operations has shown that:

- Fishergate 2A 87% of construction work costs were subject to competitive tendering;
- Fishergate 2B 76% was subject to competitive tendering;
- Samlesbury Enterprise Zone Phase 1 Infrastructure Works (Spine Road from the A59 to the A666, utilities and site segregation) 87% of construction work costs were subject to competitive tendering.

This evidence demonstrates that for all major projects where the County Council's Highways Operations are responsible for direct delivery, a significant proportion of the project cost is, in fact, subject to competitive tender. Savings on estimates achieved through this competitive tendering process are retained within the delivery programme. This would not ordinarily be the case for schemes that had been procured externally as a total scheme and represents one of the key benefits for retaining the work 'in house'.

Additional benefits accrue from the time saving achieved by avoiding an external procurement process, which will be crucial given the timescales of the fund.

The internal delivery approach also gives us a much greater level of flexibility in managing the delivery programme. This will be very important across a multi-scheme programme interventions taking place in numerous traffic sensitive areas throughout the city region and often running concurrently in order to achieve the challenging fund timescales.

Experience on previous programmes, and the recent City Deal delivery programme across Preston, has taught the county council that any amendment to delivery programmes, at the client's request, inevitably results in escalating costs and claims from an external contractor, as they will invariably cost for the fact that they are being asked to move away from their optimum delivery programme.

This is *not* the case with an internal delivery approach as by working with the LCC Highways Operations Team delays and associated costs can be mitigated as there are no contractual issues to be addressed and no claims made against the project. Adopting partnership approach, where LCC Highways Operations Team lead delivery and subcontract to private sector suppliers, has proven effective in the delivery of recent City Deal schemes, as it generally results in a more co-operative and flexible approach to the sharing and management of risk.

Utilising this approach, there would still be costs associated with a delay but these would be restricted to the actual direct costs of changing the delivery programme away from the original optimum programme developed to deliver the engineering solution in the most efficient way. In addition, in the event of a delay on one intervention, it is often possible to work with the in-house delivery team to move the workforce and equipment to other programmed works in the area whereas when working with an external contractor this would immediately attract significant weekly claims for preliminaries and overheads.

Lancashire County Council have delivered multiple major highways and infrastructure schemes along with sustainable travel projects in recent years. This project experience includes;

- Fishergate public realm phases 2 and 3 (£6m);
- Penwortham Bypass (£20m);
- Heysham to M6 Link Road (£150m);
- Preston Guild Wheel (£2.1m);
- East Lancashire Cycleway (£7.2m);
- Broughton Bypass and Bus Corridor (£2m);
- Preston City Centre Improvements (£6.6m); and,

- Preston Bus Station refurbishment (£20m).

At present, Lancashire County Council are developing and delivering the Preston Western Distributor Road (£150m) utilising the large multi-disciplinary team that has learned lessons from the delivery of previous major highways schemes. The Preston Western Distributor Road moved into its construction phase in Autumn 2019.

This has freed up a range of capacity within LCC to move expertise onto other schemes and support TCF delivery, including: project managers; highway design engineers; structural design engineers; commercial specialists; spatial planners; environmental planners; transport planners; technical support.

The TCF Project Team have developed a resource plan for the Preston TCF Programme in conjunction with the delivery plan, in order to identify where 'in house' resources will be under strain, as there remain a number of large programmes in development and delivery across the council, as well as 'business as usual' activities in maintaining the highway network, in order that appropriate resources can be reallocated or procured externally in order to ensure delivery within the funding timescales.

5.3.3 New Ribble Foot/Cycle Bridge

The new foot and cycle bridge over the River Ribble, which is needed in order to deliver the sustainable and active travel corridor from the economic development site at Lancashire Central to the city centre (scheme reference number ST05), will require an external tender in order to procure specialist bridge contractors, as these skills are not available 'in house'.

As the new structure requires particular specialist knowledge and has specific potential risks, as accounted for within the Financial Case, outline design will be completed through a combined team working with LCC's framework consultants with Jacobs and/or Atkins. Early Contractor Involvement will be used to engage contractors and specialist design support at the earliest stage, to reduce risks as early as possible in the programme.

For detailed design there are a number of models depending on time constraints and the level of control required. All the options will rely on outsourcing design work to a greater or lesser extent and the detailed structural design will almost certainly be external either through framework consultants or through a design and build contract with the ECI contractor. Landscape design would be carried out either 'in house' or in partnership with Preston City parks department to make sure that the works do not adversely affect the grade 2* listing of the park.

The main construction works for the bridge would all be by specialist contractors through external contract using an NEC3 construction contract. LCC may choose to undertake clearance and enabling works separately, as well as land reinstatement via a specialist landscape contractor. This is based on past experience where general, non-specialist contractors did not undertake these elements to the required standard.

5.3.4 Cottam Parkway Rail Station

The main options for procurement of the rail interventions are either for Network Rail to deliver the whole of the project on behalf of Lancashire County Council or for Lancashire County Council to directly deliver the project, with Network Rail providing asset protection services.

From GRIP 3, the stage now reached, Lancashire County Council intends to procure Network Rail through the Asset Protection Agreement to design and deliver the works given specialist rail works in and around the railway network. LCC will oversee and work with Network Rail to ensure value for money is achieved. This is thought to be the most effective mechanism to deliver the new infrastructure required while maintaining the safe and efficient operation of the rail network.

Network Rail will tender commissions for GRIP Stages 3-6 through their existing Control Period 6 procurements arrangements and supplier contracts. These frameworks give Network Rail the option to competitively tender discrete projects to ensure the framework maintains its competitiveness. **LCC have already appointed a Project Manager for Cottam Parkway, who will integrate and co-ordinate LCC and NE activity to ensure the overall delivery of the project.**

The preference for delivery of access road for Cottam Parkway station is for it to be delivered by LCC's "in house" Highways Operations team either as a discrete project or as an extension to the ongoing construction works of the Preston Western Distributor and Cottam Link Road, both of which have recently been procured through competitive tender processes. This has the advantage of enabling an acceleration of the delivery programme, and allowing Network Rail to focus on the delivery of the rail station, while maintaining competitiveness as outlined in previous sections.

5.3.5 Future Mobility Platform

In establishing the work to be deliver this specialist platform, an assessment has been completed of the inputs required from staffing to develop the design to implementation and through the ongoing development of new technologies and systems.

LCC has committed to providing staff resources and is able to supplement this through the established Professional Services Contract with Jacobs and Atkins which will give access to all the specialist ITS, UTMC and traffic signals resources to support and maintain the project. In addition, the county council and UCLan have had advanced talks to establish the level of resources that UCLan will require in the establishment of a new Hosted Operations Centre (HOC), system development and integration and through the funding period and in future operations.

It is anticipated that the works associated with technology will require minor civils e.g. removal and replacement of equipment and installation of new equipment. This work will be arranged through the existing LCC maintenance organisation or as a part of the works conducted and procured through the delivery of other schemes in the programme.

For the technology and supporting systems the Traffic Management Technology Framework 2 (TMTF2) will be one of the key routes to market and is an established contract through Crown Commercial Services (CCS) and offers several lots, with established suppliers, to deliver the FMP components. Bespoke Tendering will be used where TMTF2 does not cover equipment or service provision, and for the traffic model.

In using TMTF2 LCC will establish specifications and carry out supplier workshops to ensure opportunities for innovation through the FMP are identified and risks to delivery and future operation are minimised.

Where it may be a requirement for LCC system integration it is anticipated that BT Lancashire Services (BTLS) will be used through the existing framework agreement.

5.3.6 Management of Bus Operator Investments

Alongside the delivery of capital investment on the bus network, a number of commitments are also outlined from the bus operators towards the step change in the public transport offer across the Preston City Region. Heads of Terms are currently being developed to ensure the bus operators deliver their commitments to ensure the full benefits are realised. The appendices to the strategic case contain letters of support from the bus operators, Stagecoach, Transdev and First bus, to ensure these are delivered as part of the commercial and contract management of the TCF programme.

5.4 Contract Strategy and pricing framework

Where externally contracted (excepting rail schemes), the form of contract used will be the Engineering and Construction Contract (ECC), part of the New Engineering Contract (NEC) family of contract documents, which is the standard form of construction contract in the UK and widespread in use across Europe. The county council has adopted the ECC as standard for this type of contract. The form of the contracts is not yet developed at this stage and may vary between interventions to maximise value of each individual scheme in the programme.

There are six main payment options within the ECC:

A. *Priced contract with Activity Schedule*

B. *Priced contract with Bill of Quantities*

C. *Target contract with Activity Schedule*

D. *Target contract with Bill of Quantities*

E. *Cost reimbursable contract*

F. *Management contract*

The NEC/ECC is published in the form of a set of core clauses with a range of main and secondary option clauses enabling scheme specific contracts to be produced depending on individual requirements. The choice of option is a balance between risk, apportionment of risk and certainty of cost. The contract options legally define the responsibilities and duties of Employers (who commission work) and Contractors (who carry out work) in the Works Information.

In line with the overall procurement strategy and risk management strategy, where works are to be procured externally the Infrastructure Project Management Team for the thematic area will select a main payment option and form of contract in line with the overall contract strategy which best balances cost and risk transfer as appropriate to each individual project's characteristics and risk register.

5.4.1 Payment Mechanism

Payment timings will be adopted in accordance with the contract and LCC procedures which are designed to ensure fair and prompt payment to maximise the value from the contract through minimising financing and construction costs. The contract will ensure prompt and fair payment mechanisms are applied throughout the supply chain.

5.5 Risk Allocation and Transfer Approach

At the project level, risks will be managed by the TCF Project Board. However, the Commercial Case describes how Lancashire County Council's delivery and procurement strategy will seek to place risk with the party best placed to manage or mitigate that risk, or manage the consequences should they transpire.

A strategic aim and objective of LCC's management of the TCF programme and contracts is that risk is appropriately proportioned through the careful management of relationships within, and throughout the TCF projects.

The indicative allocation of risks resulting from the contractual and procurement arrangements is summarised in Table 5-1 below. At this stage, ticks have been provided to indicate where each risk type rests: with the public sector (the Council / Government Treasury) or the private sector (the consultants and contractors), or whether these risks are shared between the two. At future stages these will be converted into percentages.

The Project Delivery Teams for each scheme will be required to produce a priced risk register. This has already been developed to inform the QRA, and will be updated regularly as the schemes progress through the Assurance Framework through to tendering. Potential issues having been identified will be allocated a risk owner and appropriate resolutions sought to mitigate or eliminate the risk where possible.

Programme-level risks are included in the Risk Register (**Appendix C.4**), which is supplemented by scheme-specific Qualitative Risk Assessments which include individual scheme risks and associated cost estimates. Risks have been, and will continue to be, assigned to the party best able to mitigate and manage them.

Table 5-1: Risk Allocation and Transfer

Risk Category	Public	Private	Shared
Design Risk			✓
Construction Risk			✓
Transition and Implementation Risk			✓
Operating Risk	✓		
Termination Risks			✓
Financing Risks	✓		
Legislative Risks	✓		

5.5.1 Sustainable & Active Travel Corridors

The use of Lancashire County Council's "in-house" delivery team for the majority of the TCF programme projects will help manage risks to the programme, as it will allow for resource to be dynamically shifted and reassigned to different projects within the programme without the risk of claims being made against the project. This will expose LCC to a higher proportion of design and construction risk, however LCC's Highways Operations team are well placed to manage these risks through their extensive experience with similar projects in the Preston area and through their existing procurement frameworks and processes.

To offset this, Early Contractor Involvement will be used, in conjunction with NEC3 suite of contracts with pain-gain risk transfer mechanisms, on the higher risk elements of the programme such as the new Ribble Crossing. Risk transfer will also be achieved through the external tendering through LCC's existing procurement frameworks.

5.5.2 Rail

For rail improvements contained within the programme, Network Rail's GRIP process governs how risks associated with the station design and construction are identified, mitigated or removed, and re-evaluated at each GRIP stage. The process is robust, well documented and calls for a Quantified Risk Assessment at GRIP 3 which is then re-assessed and updated at each subsequent stage. Part of this assessment is to assign risks to relevant owners for action. This process and assessment will be integrated into LCC's overall approach to the assessment and mitigation of programme risks.

The contracts will specify ownership of risk based on who is best placed to manage the risk and specific parties' responsibilities should cost overruns materialise, depending on the reason for the overrun.

5.6 Contract Management Approach

The County Council has experienced, and dedicated contract management capacity to deliver effective contract management, and as utilised in a range of local, previous projects identified in section 6.2.4 of the Management Case, and listed as previous examples above.

This capacity will be available as the infrastructure delivery moves forward and can be supplemented if necessary by the County Council's framework consultants.

The contracts at this stage are not yet developed but critical to this project will be delivery timescales. It is therefore anticipated that key contractual clauses will reflect this within the Contract Data of the NEC contracts used. Which NEC contract option to use will be identified on a scheme by scheme basis taking into account the nature and scope of works, levels of risk, and position within the delivery time period. In all cases the county council will seek to minimise the level of risk falling on the public purse.

Contract negotiations and ongoing contract management will be supported by the county council's legal team and quantity surveying support either 'in house' or via framework consultancy support.

MANAGEMENT CASE

6. Management Case

6.1 Introduction

The Management Case assesses whether a proposal is deliverable. It tests the project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance.

There should be a clear and agreed understanding of what needs to be done, why, when and how, with measures in place to identify and manage any risks. The Management Case sets out a plan to ensure that the benefits set out in the Economic Case are realised and includes measures to assess and evaluate this.

The Management Case for the Preston City Region Transforming Cities Fund is discussed under the following headings:

- *Governance*
- *Assurance*
- *Delivery Programme*
- *Risk Management*
- *Evidence of Successful Project Delivery*
- *Communications and Stakeholder Management*
- *Monitoring and Evaluation*
- *Conclusion*

6.2 Governance

6.2.1 High Level and Steering Governance

In view of the close and complementary relationship with the substantial transport and road building interventions delivered and under construction as part of the Preston, South Ribble and Lancashire City Deal, delivery of the Preston City Region TCF Programme will be encompassed within the overall accountabilities of the City Deal governance arrangements.

Management of the TCF fund arrangements will sit outside the City Deal in order to ensure that responsibility for the TCF fund under the funding agreement put in place with the DfT - including related matters of project assurance, monitoring and evaluation - is carried out independently and under separate governance. This model draws close parallels with long-standing arrangements established for Lancashire's Growth Deal with government.

The City Deal has been in place since 2013 and has evolved in its structure since its inception, picking up on lessons learned to create an effective, efficient structure, honed on project delivery. There has been a range of projects delivered by the City Deal, from concept through development stage and construction. The arrangements that steer funding and delivery of the City Deal infrastructure programme has evolved and continually improved over the near six years of the Deal and has proven to be an effective and rigorous governance model displaying:

- successful delivery of a variety of significant scale and complex scheme, to challenging timescales;
- management of a multifaceted programme of highway, public transport, cycling and walking, urban realm and green space, public art, education provision;
- operating a mixed economy in the delivery of schemes utilising the County Council's Highways Operations Service and tendered works with external contractors allowing flexibility in resource utilisation;

- working to a dynamic funding model drawing together (and cash-flowing) private sector and local and national public funding sources;

- close partnership and funding arrangements across different tiers of local government and government agencies.

The proposed governance for the Preston City Region TCF is demonstrated by the chart provided at **Appendix M.1**. This explains how the infrastructure programme will be managed. The composition of the boards and teams is presented below and illustrates the distribution of responsibility across the Deal members.

The structure draws on current practice that has successfully governed the delivery of an infrastructure programme comprising comparable interventions supporting sustainable transport, active travel and urban realm schemes, alongside substantial new road building projects in the form of the Broughton Bypass, Penwortham Bypass, Preston Western Distributor and A582 South Ribble Western Distributor.

Within this structure, a new **TCF Management Board** will be established in order to provide separate independent governance and accountability locally for the financial management of the Preston City Region TCF Fund, and related matters of project assurance, monitoring and evaluation. The TCF Management Board will make recommendations to the County Council's Cabinet Member for Highways and Transport for approval to award TCF funding to projects progressed through satisfactory business case assurance.

Phil Green will be the Senior Responsible Officer and Programme Director for the Transforming Cities Fund Programme. His responsibility covers decisions affecting delivery.

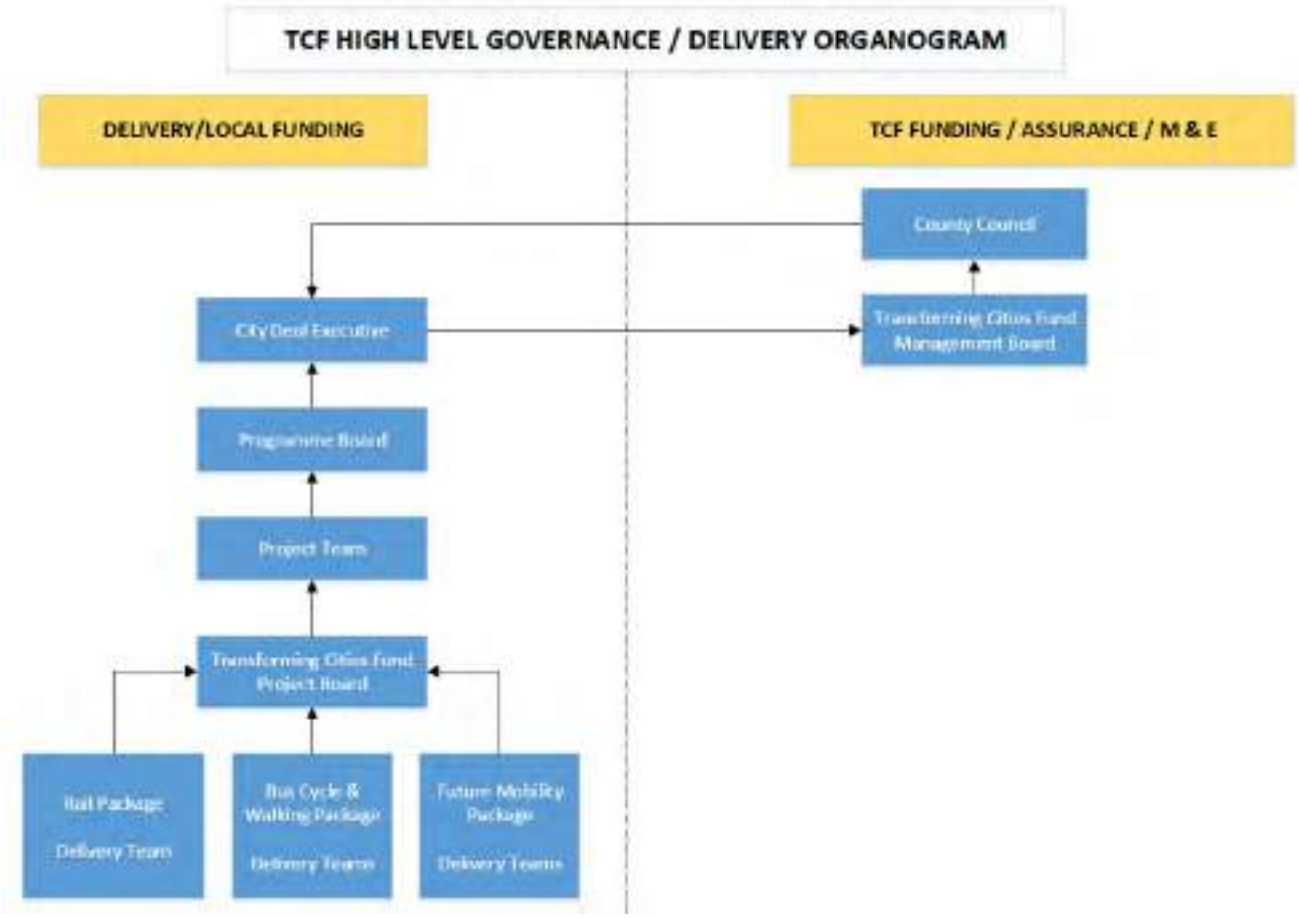
Stephen Young will Chair the TCF Management Board with responsibility covering TCF Fund decisions.

Andrew Barrow will be the Programme Manager, with responsibility for owning and updating the Delivery Programme, Risk Register and Communication strategy and overall leadership of the Project Managers and Project Teams

These individuals have accumulated a considerable breadth and depth of knowledge and experience working in the public sector of project delivery, procurement, contract and financial management of construction schemes of scale, including through their roles in the delivery of the City Deal Infrastructure Programme.

The roles and responsibilities and terms of reference relevant to the TCF infrastructure programme of the City Deal Strategic and Operational Governance framework, together with the newly formed Transforming Cities Fund Management Board are detailed below.

Figure 6-1: High Level Governance / Delivery Organogram



CITY DEAL – STRATEGIC AND OPERATIONAL GOVERNANCE

Body	Function	Terms of Reference	Role of constituent members attending	Core Membership	Frequency
Executive	Acts as the overarching authority for delivery of the Programme	The City Deal Executive's primary responsibility is to seek to ensure the delivery of the programmed infrastructure, and to take key strategic decisions in this regard. Relevant to the TCF infrastructure programme, the City Deal Executive shall: (i) In each year, approve an annual Infrastructure Delivery Plan. (ii) In each year, approve an annual Communications and Marketing Plan, and receive regular progress reports on the implementation of the same. (iii) Receive, on a regular basis, all appropriate monitoring and financial information in relation to the infrastructure programme. The City Deal Executive will employ no staff, hold no assets, nor enter into any contractual arrangements. All delivery and operational matters will continue to rest with the partners.	Represents and takes decision on behalf the individual partner authority. Ensures that resources are made available from within their own authority to support the management and delivery of the programme. Empowers the Senior Responsible Owner / Programme Director to oversee the delivery of the programme.	Jim Carter, Chair, nominee of Lancashire Enterprise Partnership (LEP) County Councillor Geoff Driver CBE, Leader, Lancashire County Council (LCC) Councillor Paul Foster, Leader, South Ribble Borough Council (SRBC) Councillor Matthew Brown, Leader, Preston City Council (PCC) Mark Rawstron, nominee of Lancashire Enterprise Partnership (LEP) <u>Observers</u> Angie Ridgwell, Chief Executive and Director of Resources (LCC) Adrian Phillips, Chief Executive (PCC))	Quarterly

Body	Function	Terms of Reference	Role of constituent members attending	Core Membership	Frequency
				Gary Hall, Interim Chief Executive (SRBC)	
Programme Board	Has strategic overview of the partner organisations and decides on the strategic direction of the programme. Provides Executive level commitment to the programme Has responsibility for the investment made in the programme. Establishes and demonstrates the values and behaviours of the Partnership and vision for the programme. Engages and briefs political Leaders, providing final clearance of reports for the Executive Board and advises on programme level risks and issues identified by the project team.	Relevant to the TCF infrastructure programme, the Programme Board is responsible for: (i) Directing, advising and supporting the Senior Responsible Owner / Programme Director. (ii) Authorising reports for submission to the Executive. (iii) Engaging and briefing the political Leaders on the Executive (iv) Engaging with senior Government officials to ensure the programme remains relevant nationally and is informed by, but can also influence, future Government policy making. (v) Resolving strategic issues that require input or agreement from very senior stakeholders to ensure the progress of the Programme. (vi) Articulating any future direction of the Programme, its vision and objectives, for authorisation by the Executive.	To represent individual partner organisations and advise on any issues that might affect the successful delivery of the programme. To provide leadership and direction in relation to the programme, to managers within their own authorities. To provide continued commitment and endorsement in support of the programme, for example, in reiterating the programme vision and objectives at executive or senior communications events.	Angie Ridgwell, Chief Executive and Director of Resources (LCC) Adrian Phillips, Chief Executive (PCC)) Gary Hall, Interim Chief Executive (SRBC) Jo Ainsworth, Finance Specialist Advisor (LCC) Laura Sales, Director, Legal and Democratic Services (LCC)	Quarterly
Project Team	Ensures that the programme delivers within the agreed boundaries: including cost, organisational impact and pace.	Relevant to the TCF infrastructure programme, the Project Team is responsible for: i. Providing support to the SRO / Programme Director in ensuring the	Senior officers from each partner authority will : Represent their partner organisation at all meetings of the project	Phil Green, Chair and SRO / Programme Director (LCC Director of Growth, Environment and Planning)	Monthly

Body	Function	Terms of Reference	Role of constituent members attending	Core Membership	Frequency
	Empowered by the programme board to take decisions regarding the day to day delivery of the programme including the management of risks and issues. Resolves strategic issues between projects or issues of direction that require input and agreement from all partners. Maintains focus on the development, maintenance and achievement of the delivery plan and reporting of project performance and deal outputs. Directs the work of the Programme Managers.	effective day to day delivery of the programme. ii. Ensuring that the programme delivers on time and within agreed cost boundaries, and that the funding model remains in balance at all times. iii. Ensuring the effective identification, management and responses to risks and issues affecting the programme. iv. Monitor and manage performance of the Infrastructure Delivery Plan. v. Overseeing marketing and communications activity, directing the workplan and supporting strategic events. vi. Overseeing the preparation and submission of an annual Infrastructure Delivery Plan. vii. Keep abreast and advise Programme Board of changes in national policy that could have implications on the infrastructure programme. viii. Support the development of processes and procedures that are transparent and effective in order to promote effective communication between partners. ix. Consider, amend and approve reports for submission to the Programme Board/ Executive.	team and actively participate in taking decisions that affect the direction of the programme which may or may not impact on their own organisation. Commit resources to support the delivery of the programme as required. Brief their own Chief Executive or Senior officers on all matters relating to the Programme that could affect the partner organisation. Inform the Programme Manager immediately if they identify any risk or issue that could jeopardise achievement of the Programme Plan but which cannot be managed within their part of the organisation alone. Ensure that key messages and information is effectively communicated within their own partner	Chris Hayward, Director of Development (PCC) Jonathan Noad, Director of Planning and Property (SRBC) Marcus Hudson, Planning and Delivery Manager (LCC) Nicola Elsworth, Head of Public Sector Land (Homes England) Gary Pearse, Head of Estates (LCC) Mel Ormesher, Head of Asset Management (LCC) Jo Ainsworth, Finance Specialist Advisor Julia Johnson, Legal Specialist Advisor	

Body	Function	Terms of Reference	Role of constituent members attending	Core Membership	Frequency
		x. Commission research and respond to strategic development opportunities as they emerge. xi. Oversee the production of and review the following: a) Quarterly performance dashboards – live infrastructure schemes b) Quarterly programme issues and risk log – oversight and ownership of this c) Quarterly finance reports d) 6 monthly monitoring report of outputs e) Annual skills and employment performance report	organisation and that all relevant officers are briefed accordingly on all matters that could affect the successful delivery of the programme.		
Transforming Cities Fund Management Board	Provides financial direction and accountability, manages the independent assurance process, and monitoring and evaluation reporting to DfT.	The Transforming Cities Fund Management Board's primary responsibility is to ensure the implementation of the Preston City Region's TCF and to make strategic recommendations to the County Council in this regard. The remit of the TCF Management Board is to: xii. To commission independent assurance of applicant projects for funding approval. xiii. To make project funding recommendations on the Preston TCF Programme for formal approval by the County Council's Cabinet Member of Highways and Transport. xiv. To ensure that all significant project financial risks and issues are identified, responded to and escalated where these might affect the funding of the	Provide scrutiny and challenge to projects ensuring that project plans are robust and costs are managed effectively. Advise and support Project managers to effective financial management in order to successfully deliver projects.	Stephen Young, Chair, Executive Director, Growth, Environment, Transport and Community Services (LCC) Neil Kissock, Director of Financial Resources (LCC) Dave Colbert, Transport Planning Specialist Adviser (LCC) Michael Ahern, Chief Operating Officer,	Quarterly

Body	Function	Terms of Reference	Role of constituent members attending	Core Membership	Frequency
		project or impact on the wider TCF programme. xv. Implement and monitor the Transforming Cities Fund in accordance with the Funding Agreement with DfT, Assurance Framework and Monitoring and Evaluation Framework. xvi. Ensure that the Monitoring and Evaluation Framework is updated according to operational need, and annually as a minimum. xvii. Oversee the work of the TCF Programme Management Sub Group / Monitoring and Evaluation Sub Group, receive quarterly reports from the same and approve the submission of regular monitoring reports to DfT as required. xviii. Ensure that any conditions attached to local Transforming Cities Fund funding agreements are discharged appropriately. xix. Refer to the County Council's Cabinet Member for Highways and Transport any issues arising if project sponsors are unable to comply with the local Transforming Cities Funding principles agreed by the County Council. xx. Make recommendations to the County Council's Cabinet Member for Highways and Transport on any proposed material changes to funding profiles, including		University of Central Lancashire (UCLan) John Crellin, Head of City Development (PCC) Neil Anderson, Assistant Director of Projects and Development (SRBC) <u>Observers</u> Phil Green, Senior Responsible Officer Nominee, Department for Transport Network Rail – Jason Graham Stagecoach – Rob Jones TransDev – Alex Hornby Rotala – John Asquith	

Body	Function	Terms of Reference	Role of constituent members attending	Core Membership	Frequency
		redirecting significant resources in year and between projects. xxi. Make recommendations to the County Council's Cabinet Member for Highways and Transport (who in turn may need to seek approval from Government) on any proposed material changes to project funding in the event of non-delivery, and / or the withdrawal of grant offer.			

6.2.2 Delivery Structure

Underpinning the high level and steering governance set out above, is a project management structure developed to ensure effective and timely development and implementation of the TCF infrastructure programme, under the direction of a TCF Project Board supported by dedicated programme and project management resources.

As local transport and highway authority for the Preston City Region, Lancashire County Council will be leading the delivery of all elements of the TCF infrastructure programme. Preston City and South Ribble Borough Councils are local partners to the City Deal, and are relevant planning authorities for the districts where the interventions will be delivered and local public and private (developer) contributions are secured / will be sought. Network Rail is responsible for the management of the strategic rail infrastructure and will need to be closely involved with the delivery of the rail elements of the programme.

TCF Project Board

A TCF Project Board will be established to provide detailed technical project direction and scrutiny on all interventions under the TCF infrastructure programme. The board will commence its inaugural meeting in January 2020.

The Project Board will meet on a monthly basis and will be chaired by **Phil Green**, Chair and **Senior Responsible Officer** / Programme Director (LCC Director of Growth, Environment and Planning), attended by representatives of senior users/senior suppliers to the programme, which includes the bus operators and Network Rail.

Members will provide advice, scrutiny and challenge to projects, through business case and development stages, and then into works delivery and post-completion monitoring and evaluation stages, ensuring project plans, cost plans, risk and issues logs and contractor relations are robust and costs are managed effectively.

The Project Board will be responsible for:

(i) Overseeing the allocation of resources and project management processes towards the successful delivery of the TCF infrastructure programme.

(ii) Supporting project managers in the production of business cases, project plans, including identifying milestones and approving quarterly monitoring and progress reports.

(iii) Agreeing to the submission of scheme proposals for Executive approval, including the submission of business cases through assurance framework arrangements and Management Board approval.

(iv) Ensuring all significant project risks and issues are identified, responded to and escalated where these might affect the delivery of the project or impact on the wider programme.

(v) Reporting to Corporate Management Teams of both authorities regarding the programme and escalating decisions where appropriate;

(vi) Authorising required resources i.e. personnel and finance;

(vii) Authorising Delivery Partners' project plans;

(viii) Monitoring progress against the plans;

(ix) Authorising any necessary revisions to key milestones;

(x) Assisting in problem solving, (e.g. budgeting, resourcing, providing clarity for the objectives);

(xi) Risk management of the wider political dimensions of the project;

(xii) Representing the communities affected by the scheme by providing regular opportunities for engagement and input;

(xiii) Ensuring the project delivers the outputs proposed in the business case.

The TCF Project Board will be supported in its duties by a dedicated TCF Programme Management Team. This recognises the importance of sufficient internal capacity with the requisite skills and expertise necessary to deliver a programme of the scale and significance of TCF. The County Council will make separate revenue provision for this staffing resource for the duration of the TCF activity including the carrying out of post-completion monitoring and evaluation tasks.

This team of experienced project managers, under the direction of **Andrew Barrow, TCF Programme Manager**, will co-ordinate and manage the work of the various infrastructure teams across the programme and will be the interface between these teams and the Project Board.

The Programme Management Team will be responsible for the day to day maintenance of the Programme Plan, monitoring progress against budget, maintaining the risk register and escalating issues or formal change requests to the relevant tier of governance via the TCF Project Board. The Programme Management Team will also be responsible for commissioning the business case assurance consultants and providing secretariat support to the TCF Management Board.

The Project Teams (listed below) will be closely integrated within their overlapping operating areas. The Programme Management Team will be made up of the senior officers appointed to lead the Project Teams in addition to the Programme and Project Managers for the Programme as a whole. The Group is also able to call upon a variety of technical specialists from transport planning, transport modelling, town planning, highway engineering, urban design, public transport, development management, estate surveying, legal functions, as necessary, along with officers from the partner district councils, UCLan, transport providers/users, and senior supplier representatives.

The Programme Management Team will regularly monitor and evaluate the progress of the projects against agreed delivery programmes, reporting up to the TCF Project Board and the TCF Management Board. Any adjustments to delivery schedules or requests for additional resources to help deliver individual projects will be brought to the Project Board's notice, and escalated upwards to the Programme Board as necessary, via a formal change management process.

Effective resourcing, planning and management of TCF projects will be crucial to ensuring spending and delivery is achieved by March 2023.

To mitigate the chances of delayed delivery, each infrastructure project will be resourced appropriately during the design and planning stages. Further to this, the NEC3 Engineering and Construction Contract group will be used with appropriate clauses to mitigate against delayed delivery and/or the financial consequences for the project for any works tendered out to external contractors.

Resourcing and management of the TCF infrastructure programme will be apportioned across three principal project areas. Design and delivery teams working within these project 'packages' will resourced by the TCF partners under the direction of the Project Board including support as necessary from external engineering consultants, Jacobs and Atkins, utilising the County Council's Framework arrangement. Procedures will be put in place to ensure that separation of duties remains in place between consultants providing business case development support and those undertaking project assurance.

All project teams will develop and thereafter work to a detailed project plan which will feed in to an overall delivery programme which shall be monitored and managed and regularly reported to the Project Board. Each team will have access to technical, financial and legal expertise to support this process. The teams will also have devolved accountability for their scheme's risk register and risk and issues log. Teams will work under project 'packages' structured as follows:

Rail Infrastructure Package

The Rail Infrastructure Package will deliver the rail elements of the programme in partnership with Network Rail and relevant rail service operators. As noted in the Commercial Case, Lancashire County Council intends to procure Network Rail to design and deliver the Cottam Parkway Station given the inherent risk involved in works in and around the railway network.

This is generally regarded to be the most effective mechanism to deliver the new infrastructure required while maintaining the safe and efficient operation of the rail network. **LCC already has a designated Project Manager in place for Cottam Parkway Station and oversight of Network Rail delivery. LCC has established a programme and has resource in place to deliver the connecting road access to the station through a task extension to the Preston Western Distributor, which is already under construction. This enables Network Rail to focus resources on delivery of the rail station.**

Sustainable & Active Travel Corridors Infrastructure Package

Teams engaged in this package will be managing delivery of the bus priority and cycling and walking improvement schemes identified within the programme. They will work closely with relevant bus operators, and national and local cycling & walking organisations to ensure that new infrastructure is integrated into existing networks in the most effective manner and meets the needs of end users.

Lancashire County Council intends to establish Advanced Quality Bus Partnerships with bus operators, in the first instance with Stagecoach and Rotala Preston Bus, identifying this mechanism as the most effective means of ensuring the improved transport outcomes required to improve the passenger experience, reduce journey times and make best use of the improved infrastructure once delivered.

The success of the bus priority schemes will be dependent on both Lancashire County Council and the bus operators understanding and delivering against their responsibilities. **The bus operators are supportive of this approach, as outlined in their letters of support for the TCF programme as a whole, and are represented on the Project Board as a result.**

The purpose of the Advanced Quality Partnership is to establish the responsibilities of Lancashire County Council and the bus operators, binding them to a legal agreement that requires both parties to meet the terms set out in the contract. In the case of the bus interventions within the TCF infrastructure programme, Lancashire County Council will be responsible for the delivery and maintenance of infrastructure improvements such as new bus hubs, bus lanes, bus stops and enhanced traffic signals. The operators will face standard of service obligations which will encompass: regularity of service; ticketing; and on-board experience (Wi-Fi and driver standards / training). The contract will also stipulate review and monitoring processes and detail the enforcement and appeals process should obligations not be met.

Future Mobility Package

Teams of co-located, multi-disciplinary specialists will manage design and on-street delivery and set up of the package of technical innovations comprising the Future Mobility Platform to ensure effective, efficient deployment of the system into operational use.

6.2.3 Forward Delivery Structure

The feasibility, design, project management, legal and land entry and acquisition aspects will be delivered primarily with in-house Highway and Engineering Projects design team, which give the added benefit of local knowledge, and ensure suitable community engagement and involvement through the design process. These will be supplemented by, the Council's private sector design partner or consultants engaged through the new Professional Services Framework Contract where there is a need for specialist input which is not available in-house or for additional resources.

A dedicated design office is in place, offering multi-disciplinary expertise – planning, transport modelling, roads and structures engineering design – for central Lancashire highway and transport scheme development and supervision. Council officers and contractor design staff would be co-located at this design office to create a collaborative working environment. This integrated arrangement will drive project quality and best value and minimise any potential for lost time in the programme.

For projects requiring particular specialist knowledge and with specific potential risks, including the new Ribble crossing, Early Contractor Involvement will be used to engage contractors and specialist design support at the earliest stage, to reduce risks as early as possible in the programme.

Lancashire County Council's framework consultants, Jacobs and Atkins, were appointed following a competitive tendering process to a two-supplier arrangement. Both firms have an international reputation in the Engineering Consultancy sector and work for a broad range of public and private clients.

Lancashire County Council have a dedicated Operations Team in place, supplemented by sub-contractor operatives with whom they have previous experience, offering capacity for works delivery in Preston City Region. This team has extensive experience in the recent delivery of similar schemes through the City Deal, and capacity to deliver the TCF programme being feed up by the impending completion of a number of City Deal schemes. The component infrastructure works that make up the Preston TCF programme will be delivered primarily by this team where appropriate and possible, or procured in compliance with the Lancashire County Council Procurement Strategy, national public sector procurement regulations and the OJEU framework.

This procurement strategy has successfully delivered a range of highway and transportation schemes in Lancashire over recent years. The contracts will seek the employment of apprenticeships to support the growth of the economy.

Early and informal engagement with private sector suppliers has already begun to ensure sufficient resources are available to deliver the programme on time.

6.2.4 Partnerships for Delivery

Lancashire County Council has recently established a local pilot Bus Punctuality Partnership in Preston between LCC's Public Transport team and Highways team and bus operators Stagecoach and Preston Bus, which involves the regular sharing of data and information on operational issues to help identify potential highways improvements to aid bus punctuality. The partnership has been used as a communications channel to allow bus operator experience to inform the design of the TCF schemes and will be used as a channel for stakeholder engagement and consultation with the bus operators going forwards.

Given the positive experience with the Bus Punctuality Partnership Lancashire County Council intends to expand this approach for the TCF programme by establishing Advanced Quality Bus Partnerships, primarily with Stagecoach and Preston Bus, having identified this mechanism as the most effective means of ensuring the improved transport outcomes required to improve the passenger experience, reduce journey times and make best use of the improved infrastructure once delivered. The success of the bus priority schemes will be dependent on both Lancashire County Council and the bus operators understanding and delivering against their responsibilities.

The purpose of the Advanced Quality Partnership is to establish the responsibilities of Lancashire County Council and the bus operators, binding them to a legal agreement that requires both parties to meet the terms set out in the contract. In the case of the bus interventions within the Preston TCF programme, Lancashire County Council will be responsible for the delivery and maintenance of infrastructure improvements such as the new bus hubs, bus lanes, bus stops and enhanced traffic signals. The operators will face standard of service obligations. This will consider: regularity of service, ticketing, on board experience (Wi-Fi and driver standards / training) and data sharing and interoperability of systems with the Future Mobility Platform. The contract will also include sections outlining the review and monitoring process and detailing the enforcement and appeals process should obligations not be met.

6.3 Evidence of Successful Project Delivery

The Preston City Region TCF partners have a strong track record of project delivery under similar governance arrangements through the City Deal, and local management capability and levels of resource able to be deployed onto TCF from City Deal projects which are approaching completion.

Recent major transport and sustainable & active travel projects demonstrating successful delivery include:

- Heysham to M6 Link Road, a £130m scheme, completed in 2017
- Broughton Bypass, a £32m relief road, completed in 2017
- Broughton Sustainable Transport Corridor, a £2m scheme incorporating segregated cycle track, carriageway narrowing, bus stop improvements, urban realm enhancement, pedestrian improvements, completed in July 2019
- Penwortham Bypass, a £20m relief road with associated off-carriageway walking and cycling provision, due to open on 2 December 2019
- A582 dualling, junction and cycle way improvements, a £21m investment, delivered between 2014 and 2018, to be complemented by a full dualling along the South Ribble Western Distributor, a circa. £70m estimated scheme, to be completed by March 2024
- Preston Bus Station refurbishment, £20m improvements, internal elements completed June 2018, creation of new public square outside under way and due to complete December 2019
- East Lancashire Cycleway, a £7.2m scheme, due for completion March 2020
- Fishergate Improvements phases 2 and 3, a £6m scheme incorporating footway improvements, carriageway narrowing, bus stop improvements, urban realm enhancements, due for completion December 2019
- University Campus Adelphi Square, a £30.5m scheme, delivering reconfigured road space, urban realm enhancements, new public space, and cycle and foot way provision, due to be completed in 2021
- Winckley Square public square enhancement, a £1.2m scheme, delivering green public space enhancements and cycle and footway improvements, completed in 2017
- Bamber Bridge Public Realm Improvements, £3.3m scheme incorporating new footway, cycle way, bus stop enhancements, completed in 2019
- New Hall Lane Public Realm Improvements, £3.1m scheme incorporating new footway, cycle way, bus stop enhancements, completed in 2018

- Guild Wheel, £2.2m scheme comprising 22 miles of new and improved cycle and footway across Preston urban area, completed in 2012

Broughton Bypass is the first of the four schemes delivered through the City Deal Infrastructure Delivery Programme. Penwortham Bypass is the second of the City Deal Schemes to reach the construction stage and is directly under the governance structure of the City Deal and by the dedicated Design Office and Operations Team. It has been designed from concept and taken through the planning process. The land was assembled by agreement without recourse to CPO. The scheme is currently on programme and on budget for completion in January 2020.

The improvements to the A582, City Centre, Bamber Bridge and New Hall Lane improvements are early wins by the dedicated Operations Team. These works entail local and strategic network improvements, ranging from sustainable/active travel and public realm enhancements similar to the TCF proposals, to interventions to ease strategic network congestion and facilitate access to housing sites and business opportunities in Preston and South Ribble as a precursor to the full dualling of the A582 from Cuerden to Preston. This has been achieved under the current City Deal governance.

As these schemes are completed in the near future, capacity will be freed up to deliver the TCF proposals. The team in place has a significant level of recent and relevant design and delivery experience to ensure delivery programmes are achievable within the TCF timeframes and scheme costings are accurate to recent out-turn costs. The lessons learnt from delivery of the above projects both external and within the Design and Operations teams are shared across the wider delivery structure to ensure the widespread learning for other projects, such as Preston City Region TCF.

6.4 Assurance

6.4.1 TCF Assurance Framework

As the Accountable Body, Lancashire County Council will incorporate TCF project assurance arrangements into established arrangements carried out in line with DfT requirements, modelled on the Transport for Lancashire Assurance Framework approved by DfT.

The officer with overall responsibility for business case assurance and for making recommendations to the Cabinet Member for Highways and Transport is Stephen Young, LCC Executive Director of Growth, Environment, Transport & Community Services.

In order to secure the required expertise for business case assurance, TCF project assurance arrangements will utilise an established consultant with appropriate technical experience of this type of work.

The consultant appointed to undertake independent assurance of business cases will provide a formal report on each submitted TCF Programme transport scheme business case to the TCF Management Board, specifying the outcome of their assessment against a standard set of criteria. The consultant will also make a recommendation to the Board as to whether it should grant Funding Approval.

6.4.2 Approval Process

The TCF Management Board will require business case submissions to comply with the Department for Transport's Transport Business Cases guidance (January 2013). The Board will apply a proportionate approach to transport business case development as set out in Table 6-1 below;

Table 6-1: TCF Assurance Submission Requirements

Category	Submission Requirements
Package or individual scheme where cost is less than £5m	Submit Strategic Outline Business Case Independent assessment and assurance Investment Decision Point: Funding Approval
Package of schemes where no single scheme cost is greater than £5m and overall package cost does not exceed £10m	Submit Strategic Outline Business Case Independent assessment and assurance Investment Decision Point: Funding Approval
Individual scheme where cost is greater than £5m and exercise of statutory powers is required	Submit Outline Business Case Independent assessment and Investment Decision Point: Conditional Approval Develop and submit Full Business Case Independent assessment and assurance Investment Decision Point: Funding Approval
Package of schemes where one or more individual schemes cost more than £5m or the total package cost exceeds £10m but exercise of statutory powers is not required	Submit Full Business Case Independent assessment and assurance Investment Decision Point: Funding Approval
Package of schemes where one or more individual schemes cost more than £5m or the total package cost exceeds £10m and exercise of statutory powers is required	Submit Outline Business Case Independent assessment and Investment Decision Point: Conditional Approval Develop and submit Full Business Case Independent assessment and assurance Investment Decision Point: Funding Approval

Conditional Approval: Conditional Approval is intended to provide the expectation of funding necessary for the promoting authority to apply for any statutory powers that may be required such as highways orders, planning consents, compulsory purchase orders etc. The TCF Management Board will only grant Conditional Approval on the basis that there will be no material changes to the scheme's scope, cost, design, expected benefits and value for money. The granting of Conditional Approval may be subject to a limited number of conditions.

Funding Approval: indicates the TCF Management Board's acceptance of a Strategic Outline or Full Business Case, whichever is relevant. It occurs once procurement has taken place and a preferred bidder and final price obtained and once granted, enables the scheme promoter to commence construction and draw down grant funds. All necessary statutory powers must be in place and any necessary conditions specified at Conditional Approval (where relevant) satisfied.

The TCF Management Board will only approve funding for schemes that can deliver value for money on an individual basis. In exceptional cases, the Board will consider a scheme with a Benefit to Cost Ratio of less than 1. Such schemes must demonstrate a strong fit with TCF strategic objectives and deliver significant wider economic benefits in accordance with the Department for Transport's Wider Economic Impacts Appraisal (TAG Unit A2.1 May 2018), to the satisfaction of the independent assurer.

6.4.3 Major Schemes

The Preston City Region TCF Programme SOBC does not presently contain any major schemes with a value in excess of £40m and so no provisions are needed at this stage to refer retained schemes to the DfT.

6.4.4 Monthly Update to Project Board

Monthly update reports will be provided by the Preston City Region TCF Programme Manager, Andrew Barrow, to the Preston City Region TCF Project Board and the TCF Management Board in the evolved governance structure and will continue through the delivery of the scheme. The reports will cover scheme design, CPO Process (if appropriate), Funding, Land and Planning. When funding is secured and contracts are let, the reports will also cover adherence to programme and budget, issues and decisions made within the tolerances granted and exceptions.

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6.5 Delivery Programme

6.5.1 LCC scheme delivery programme

The delivery programme for the Transforming Cities Fund programme is shown in Figure 6-2, with key milestones shown in Table 6-2, and has been developed and will be owned by the **Programme Manager, Andrew Barrow**, who is accountable to the Programme Board. **The delivery programme is robust and achievable due to a significant volume of experienced resource and contractors coming available with the completion of City Deal programme schemes**, having been informed by early engagement with LCC's Highways Operations team, potential suppliers and Network Rail. The programme will be reviewed and updated as necessary prior to formal progress meetings.

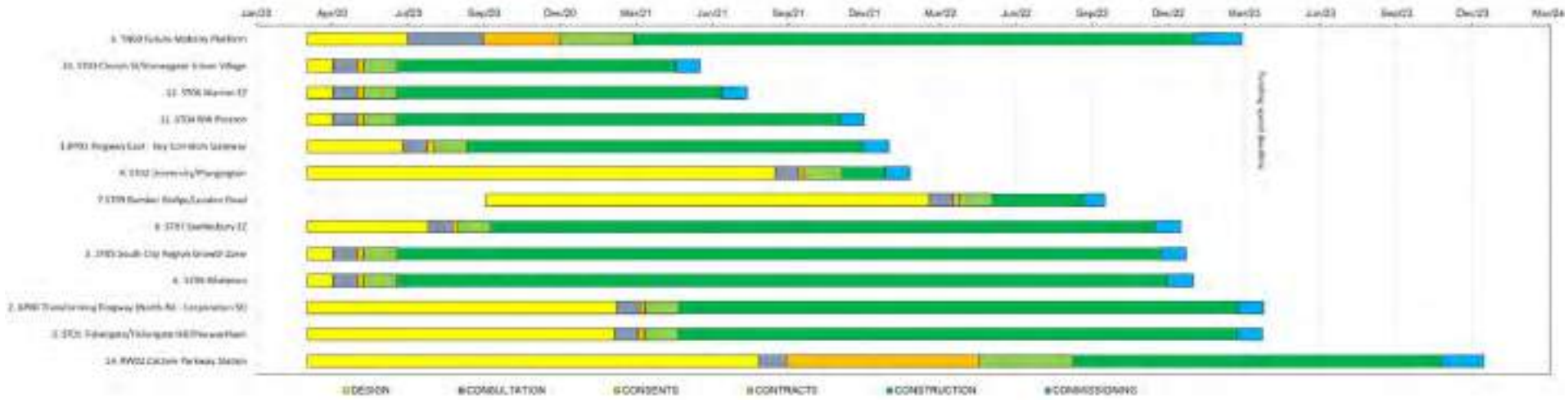

Figure 6-2: High Level Programme for Preston Transforming Cities Fund Programme

The Key Milestones for the TCF Programme are shown in **Table 6-2.**. Changes to the project programme that could impact upon key milestones within the development and delivery of the scheme are communicated to the Project Board.

Table 6-2: TCF Programme Scheme Key Milestones

Stage End Dates	Design	Consultation	Consents	Contracts	Construction	Commissioning
BP00a/b Transforming Ringway	07/03/21	06/04/21	13/04/21	23/05/21	24/03/23	25/04/23
BP01 Ringway East - Key Corridors Gateway	25/06/20	25/07/20	03/08/20	13/09/20	31/12/21	01/02/22
ST01 Fishergate/Fishergate Hill/Penwortham	05/03/21	04/04/21	12/04/21	23/05/21	24/03/23	25/04/23
ST02 University/Plungington	13/09/21	13/10/21	19/10/21	05/12/21	28/01/22	26/02/22
ST03 Church St/Stoneygate Urban Village	02/04/20	02/05/20	11/05/20	21/06/20	21/05/21	20/06/21
ST04 NW Preston	02/04/20	02/05/20	11/05/20	21/06/20	03/12/21	02/01/22
ST05 South City Region Growth Zone	02/04/20	02/05/20	11/05/20	21/06/20	23/12/22	23/01/23
ST06 Warton EZ	02/04/20	02/05/20	11/05/20	21/06/20	16/07/21	15/08/21
ST07 Samlesbury EZ	25/07/20	24/08/20	31/08/20	11/10/20	16/12/22	16/01/23
ST08 Ribbleton	02/04/20	02/05/20	11/05/20	21/06/20	30/12/22	01/02/23
ST09 Bamber Bridge/London Road	17/03/22	16/04/22	23/04/22	05/06/22	23/09/22	20/10/22
RW02 Cottam Parkway Station	25/08/21	28/09/21	18/05/22	08/09/22	24/11/23	15/01/24
TN00 Future Mobility Platform	30/06/20	30/09/20	31/12/20	31/03/21	02/02/23	31/03/23

As the Preston City Region TCF Programme and its constituent schemes progress through the approval and current procurement processes the delivery programme will be developed further in terms of the works breakdown and deliverables over the detailed design, statutory procedures and construction period.

The proposed delivery programme is included in **Appendix F.4**.

6.5.2 Network Rail delivery programme

Network Rail's delivery programme for Cottam Parkway has been developed through developed through the initial design and constructability assessments. The GRIP 2 Report (**Appendix M.2**) includes an assessment of the delivery programme for each option which has been reviewed by Jacobs. This review concluded that the programme could be delivered within TCF timescales. This current delivery programme is shown in **Appendix F.4** and reflected in Table 6-2 above, and shows construction completion in November 2023 (end of GRIP 6) ahead of a January 2024 opening, **with all TCF monies being spent on the scheme by March 2023** and all activities beyond this date being funded from local contribution.

This is subject to agreement with the DfT, and if required **there is scope to accelerate the programme to have the scheme completed by March 2023**. This will involve LCC providing the access road to the station directly in advance of the GRIP process through an extension to the works already tendered for the Preston Western Distributor, which is already under construction. **To enable this, environmental surveys on site and design of the access road are already being progressed by LCC at risk.**

Although it is anticipated that land can be acquired through negotiation without resorting to Compulsory Purchase Orders, **the programme allows for Compulsory Purchase** in addition to planning and other consents as a worst case building on LCC's recent experience of having successfully gone through the CPO process for several previous City Deal Schemes. LCC have begun identifying land owners, most of whom are already known through the CPO process successfully completed for the Preston Western Distributor. **Network Rail are due to start GRIP 3 in early 2020, and work on planning and CPO will continue ahead of this and the DfT's funding announcement to ensure that the delivery programme can be met.**

6.6 Risk Management

6.6.1 Risk Management Strategy

Risks associated with delivery of the Preston TCF programme will be owned and proactively managed according to Lancashire County Council's corporate approach to risk. This requires risk registers to be produced and maintained for individual schemes once approved. In addition, a programme risk register has been created to manage the overarching risks which affect all or most of the proposed schemes or pertain to the combined effects of all the schemes on the city region as a whole, especially the highway network.

The council adheres to the principles forwarded in the International Risk Management Standard (ISO:31000). Under the ISO 31000 standard the definition of "risk" is no longer "chance or probability of loss", but "the effect of uncertainty on objectives" ... thus causing the word "risk" to refer to positive possibilities (opportunities) as well as negative ones (risks).

As part of the risk management process in the council, these risks and opportunities are formalised and recorded on service risk and opportunity registers and a corporate risk and opportunities register. The corporate risk and opportunity register is also now referenced in committee reports and in quarterly quality of service reports/highlight reports that go to management team and cabinet and are used to hold cabinet members and directors to account by the leader and chief executive.

6.6.2 The Management of Risk

Lancashire County Council is committed to the management of risk, and represents the identification, assessment, and prioritisation of risks, followed by the application of resources to minimise, monitor and control those risks in order to protect assets and minimise losses and liabilities.

Lancashire County Council is clear that the responsibility for managing risk belongs to everyone and that there needs to be an appropriate level of understanding of the nature of risk by all stakeholders.

The Council's risk management approach offers a long term commitment, inherent to good governance practices and fully supported by the members, management and officers of the council.

The code of corporate governance (attached as **Appendix M.3**) describes how the council will meet the requirements of the core principles of corporate governance, including managing risks and performance. Principle 6 deals with 'Managing risks and performance through robust internal control and strong public financial management'.

The risk appetite statement attached as **Appendix M.4** explains how the Corporate Management Team (CMT) sets and monitors the risk appetite for the council.

The TCF Project Board, reporting into the City Deal Executive, will be responsible for governance and risk associated with the delivery of the Preston City Region TCF scheme. It will be responsible for managing and overseeing the risk management strategy and where appropriate agreeing and undertaking actions to mitigate key risks.

The Programme Manager is responsible for maintaining and updating a Programme Risk Register and planning for mitigating any risks which do not require escalation. Individual Project Managers/Scheme Promoters will be responsible for the same at project level. Key risks which cannot be managed or mitigated at Programme Board level will be escalated to the City Deal Executive as per the Programme and City Deal programme governance structures outlined earlier in this chapter.

6.6.3 Preston TCF Programme Risk Register

A Programme Risk Register has been prepared and is attached as Appendix C.4 The Programme Risk register is owned by the Programme Manager and will be a live document which is updated regularly. It is based on industry knowledge and experience from other schemes which have been constructed. The Programme Risk register will be supported by individual detailed risk registers covering the individual schemes as they are developed further. Risk owners are in the process of being assigned. Opportunities are looked at on a dynamic basis throughout design and delivery phases and will be particularly relevant with regards to planning programme delivery with Highways Operations colleagues, where significant savings in cost and time may be able to be achieved.

A separate Quantified Risk Assessment (QRA) has been undertaken for each scheme in order to determine the amount of risk to be applied to the base costs. The QRA includes all types of risk which could affect the cost of the scheme such as legislative, planning, political decisions, land acquisition issues, operational and maintenance, financial, design etc.

The detail regarding risk values and probability and impact on the scheme cost is provided in the Financial Case.

The Programme Risk Register assesses all identified risks for probability and impact both before and after suggested mitigation measures. The mitigated scores will be kept under review and proactively managed throughout the programme as schemes progress through detailed design and consultation and into delivery. As the detailed arrangements for each scheme become more defined it is expected that risk levels will reduce and mitigation options become clear. By the same token, further risks or opportunities may be identified and these will be added to the risk register at the appropriate level (i.e. project or programme) and managed accordingly.

Table 6-3 below summarises the key operational/programme risks currently and how these are being managed.

Table 6-3: Key programme risks from Risk Register and management approach

Risk	Management
Supply chain disruption due to lack of trade agreements post Brexit	Where possible advanced purchases of materials and continuity of supply via contracting
Delay to funding approvals reduces delivery time available within TCF timescales	At Programme level project delivery timetables are based on funding decision by the end of 19/20 and an immediate start thereafter. However, LCC have identified time critical development and design work which will continue 'at risk' from November 2019 onwards in order to ensure deliverability by March 2023. Any such activity will be underwritten by Lancashire County Council.
Delays in TRO process & CPO /land acquisition for Cottam Parkway preventing delivery within TCF timescales	Early planning/mapping of TRO/CPO requirements against TCF timescales and building into delivery, working at risk if necessary. CPO embedded in delivery programme for Cottam Parkway as worst case but not anticipated to be required based on recent LCC experiences with .
Failure to gain agreement from Canal & Rivers Trust to crossing of canal for station access at Cottam Parkway	The Scheme Promoter has already contacted CRT to have initial discussions about preferred options and to engage them in the process of developing proposals further in order to maximise likelihood of 'buy in'.
Ground conditions require major changes to projects resulting in cost increases, inability to meet scheme timescales	Undertake geological surveys at earliest possible opportunity (at risk if necessary) and incorporate findings into design Applicable only to Cottam Parkway and new Ribble crossing Ground conditions around Cottam Parkway already known from surveys undertaken as part of Preston Western Distributor delivery
Traffic management requirements delays/prevents optimum delivery timetable	Early engagement with Streetworks and TRO teams to ensure adequate allowances in delivery programme for this activity. Some schemes less sensitive and can be programmed in between those needing extensive arrangements. 15% contingency has been allowed for traffic management in high traffic areas in both scheme costs and delivery programme.
Programme conflicts with other schemes on the highway network eg. Other LCC schemes, Utility works, private works (eg s278)	Early engagement with operations team to identify competing priorities. Early engagement with utility companies to identify planned works and potential clashes. Programme level planning.

6.7 Communications and Stakeholder Management

6.7.1 Communications Strategy

a) City Deal Communications and Marketing Strategy

LCC have developed a communications strategy for the TCF Programme and individual schemes which defines and sets out the principles, objectives and approach for the engagement with stakeholders and consultation with interested parties. The Communications Strategy sets out to ensure an inclusive approach during the ongoing dialogue throughout the scheme development and construction process. The TCF programme communications will be framed within the wider communications strategy for the City Deal. The Communications and Marketing Strategy has been developed to:

- *Ensure a consistent approach to all external communications activities;*
- *Effectively engage with appropriate stakeholder groups; and*
- *Raise the profile of the area, and its impact on the Lancashire economy, on a local, regional and national level.*

The proposed overarching approach and activities are intended to establish foundations for successful communication of the implementation phase and have been directly influenced by the schedule of work programmed and published.

The Communication Strategy for the scheme has been developed and will be expanded in future in accordance with the Lancashire's Equalities obligations under the Equality Act 2010 and the associated Public Sector Equality Duty (Section 149 of this Act) which places emphasis on maintaining an ongoing dialogue with interested parties using appropriate communications channels to ensure an inclusive approach.

The Council's Equality, Cohesion and Integration Strategy commits LCC to make sure that anyone who accesses services will be treated fairly and without discrimination and ensuring that discrimination on the grounds of any of the protected characteristics is avoided.

In developing communication and engagement strategies for schemes promoted by LCC, the Council seeks to:

> Identify all key stakeholders; both individuals and groups to enable effective engagement with each stakeholder group through the life of the project;

> Understand and 'map' the interest and influence of each of the stakeholders;

> Identify the different channels of communication that will be used to successfully engage with stakeholder groups to seek their views on the proposed scheme. The strategy will identify how these channels will be used, when they will be used, and what information will be provided and by whom while also underpinning future activities such as planning and communications with landowners.

An Equalities Impact Assessment is provided in **Appendix M.5**.

b) Approach

A partnership approach to communications activity during the lifetime of the City Deal requires a close working relationship on communications between the constituent TCF local partners with input from the LEP, government departments and other partners where appropriate, reflecting the arrangements for delivering the programme overall. These activities will be reviewed annually throughout the lifetime of the programme.

In keeping with best practice communications and value for money principles, the overall approach will have a clear focus on achieving measurable results. Detailed proactive planning ensures that objectives and targets are

set and regularly measured against. Updates and reports against these objectives are provided back to the Project Board, Programme Board and Executive.

A specific Preston City Region TCF Communications Strategy has been developed for each project stage by the Programme Manager with the help of the constituent partners' Communications Teams and this will be made available to the Independent Assurance Team in advance of the funding decision.

The Communications Strategy is included at **Appendix M.6.**

c) Audiences and Stakeholder Mapping

Communications key audience groups have been identified for the TCF scheme and consist of:

- Business and business groups - both existing and future;
- Residents and wider public;
- Councillors;
- Campaign groups;
- Statutory groups;
- Government - at local and central level;
- Developers, house-builders and land owners;
- Investors;
- Partners, e.g. Lancashire Enterprise Partnership, Network Rail, Highways England, bus and rail operators, cycling and walking representatives, other councils, UCLan, business groups, and media.

Stakeholders and audience groups have been mapped on an interest/influence matrix, shown in Figure 6-3, to inform the approach to stakeholder management for the overall TCF programme. Each element of the overall programme will have different target audiences, and stakeholder maps for different schemes will be developed by the project team using the programme level mapping as guidance.

Influence \ Interest	Low	High
High	**Keep them satisfied** Rest of Government - at local and central level; Local Members of Parliament Elected Members of Local Authorities	**Manage closely** Statutory groups; Partners; Lancashire Enterprise Partnership Local Authorities Network Rail Bus Operators UCLan The Department for Transport
Low	**Keep an eye on** Residents and wider public; Campaign groups; Interest groups;	**Keep them informed** Business and business groups - both existing and future; Developers, house-builders and land owners; Cycling groups; Interest groups;

Figure 6-3:TCF Programme Stakeholder Map

d) Engagement Channels

The communication strategy for this scheme will encourage an open and honest approach to engender trust in LCC from the local resident and business community as well as key statutory and non-statutory stakeholders. A wide variety of channels for communication will be employed to ensure equality of opportunity to make views known and to afford the appropriate weight to the consideration of the views from all individuals and groups.

These channels will include:

> Stakeholder events as required

> Social Media (Facebook, Twitter, YouTube etc.) utilising a range of engaging content including;

- Images;
- Link posts;
- video/animations;
- stories;
- slideshows;
- Twitter moments for specific campaigns or live events;
- Twitter cards.

> Traditional Media (TV, Radio, Newspapers, Blog sites)

> LCC and Partner Organisation Websites (Invest in Lancashire, Lancashire County Council, Preston City Council, South Ribble Borough Council, Fylde District Council and the Lancashire Enterprise Partnership)

> Newsletters

The engagement channels will ensure that:

> All stakeholders are informed of the project objectives, current progress and key issues.

- Communications are reviewed to ensure the right messages are communicated through the correct channels in a timely way.
- Feedback is captured, recorded and appropriate responses given in a timely manner.
- Any design changes made in response to comments are captured i.e. “you said, we did” manner to demonstrate how consultation feedback has influenced modifications to the scheme.

Lancashire County Council and its partners have a strong track record of successful stakeholder and public engagement using these communications channels developed through the successful delivery of the City Deal, and this experience and best practice forms the basis of the communications strategy for the TCF Programme.

6.7.2 Summary of Consultation to Date

The Preston Transforming Cities Fund Programme delivers on the strategies set out in the Central Lancashire Highways and Transport Masterplan (adopted 2013), the Central Lancashire Core Strategy (adopted 2013) and Preston, South Ribble and Fylde Local Plans (adopted in 2015, 2015 and 2018 respectively).

Most aspects of the Preston TCF programme have already gone through widespread consultation and publicity through the process of the adoption of these policies.

A detailed summary of the consultation undertaken to date for all TCF programme schemes is provided in **Appendix M.7**.

Further extensive consultation and collaboration with stakeholders has taken place as part of the preparation of the Preston City Transport Plan (published November 2019), which represents the newly agreed strategy for the future of transport in the Preston City Region.

All key local and national stakeholders and partners were consulted as part of the preparation of this document, and the strategy has broad support from across stakeholder groups and the business community.

6.7.3 Future Consultation Programme

As the TCF Programme projects are developed from concept stage to detailed design and full business case, **extensive stakeholder and public engagement will be undertaken in early 2020**.

This will be particularly important in respect to vulnerable groups such as those representing people with disabilities but will also include wider public consultation, whether as a statutory requirement for planning or traffic regulation orders or as a means to foster public understanding of and support for the programme and the changes in behaviour it will require of them.

Similarly, LCC will undertake extensive engagement with the business community, particularly in Preston City Centre.

The bus operators have already been heavily involved in the design of the programme and its constituent bus priority schemes and this work will continue as LCC develop the partnership arrangements with them as detailed elsewhere.

The planning application and the traffic regulation order processes have a statutory consultation process in which representations and objections can be made. In due process the local planning and/or highway authorities will have due regard to the validity of the representations and objections.

6.8 Monitoring and Evaluation Strategy

This section outlines the approach that is to be taken in the preparation of Monitoring and Evaluation Plans for schemes within the TCF programme. While Monitoring and Evaluation Plans for the individual TCF schemes have not been developed yet, an overarching TCF programme-level Monitoring and Evaluation Strategy (**Appendix M.8**) has been created setting out how the inputs, outputs and outcomes of schemes within the TCF programme are to be monitored.

Lancashire County Council and its Partners have successfully procured and delivered schemes of various sizes and complexity for which they have prepared detailed Monitoring and Evaluation Plans, based on the DfT guidelines and Lancashire Enterprise Partnership's Monitoring and Evaluation Framework, submitted with the Full Business Case.

The TCF partners have a track record of successfully conducting monitoring and evaluation developed through the delivery of schemes of various sizes and complexity under the Lancashire Growth Deal and Preston and Central Lancashire City Deal. LCC and its partners have prepared the detailed Monitoring and Evaluation Plans for these schemes based on the DfT guidelines and Lancashire Enterprise Partnership's Monitoring and Evaluation Framework, as well as following those plans through to scheme completion and post-opening evaluation. This includes the schemes outlined in section 6.3.

Most recently, the scheme promoter completed the one-year after opening report for the A683 Bay Gateway (Heysham to M6 Link) which demonstrated that all the scheme's objectives were successfully achieved, and demonstrated best practice in monitoring and evaluation through its use of internal and external stakeholder workshops to obtain and record feedback and lessons learned from the scheme's delivery, which is now being fed into the development of future schemes including the TCF programme.

Costs for Monitoring and Evaluation activities have been included in the overall programme costs in the financial case to ensure that robust funding is in place for carrying out the monitoring and evaluation plans. Importantly, LCC and its partners are already routinely collecting comprehensive data in and around the Preston City Region, and that forms an important starting point for Monitoring & Evaluation.

The purpose of the Monitoring and Evaluation Strategy is to set out a framework under which individual scheme Monitoring and Evaluation Plans will be created for the schemes contained within the TCF programme as they are further developed and advance through the TCF Assurance Framework stages. The Monitoring and Evaluation Strategy also sets out programme-level logic mapping, as shown in Figure 6-4, and a programme-level overview of Inputs, Outputs/Outcomes, and monitoring metrics.

The Monitoring and Evaluation Strategy of the TCF programme follows the principles laid out in the LEP's Monitoring and Evaluation Framework (LEP M&E Framework) and sets out how these principles will be applied on the programme and to individual scheme Monitoring and Evaluation Plans. It also sets out the broad monitoring and evaluation requirements for the different schemes comprising the TCF programme, including the LEP M&E Framework metrics which different types of schemes will need to consider when developing the individual scheme Monitoring and Evaluation Plans.

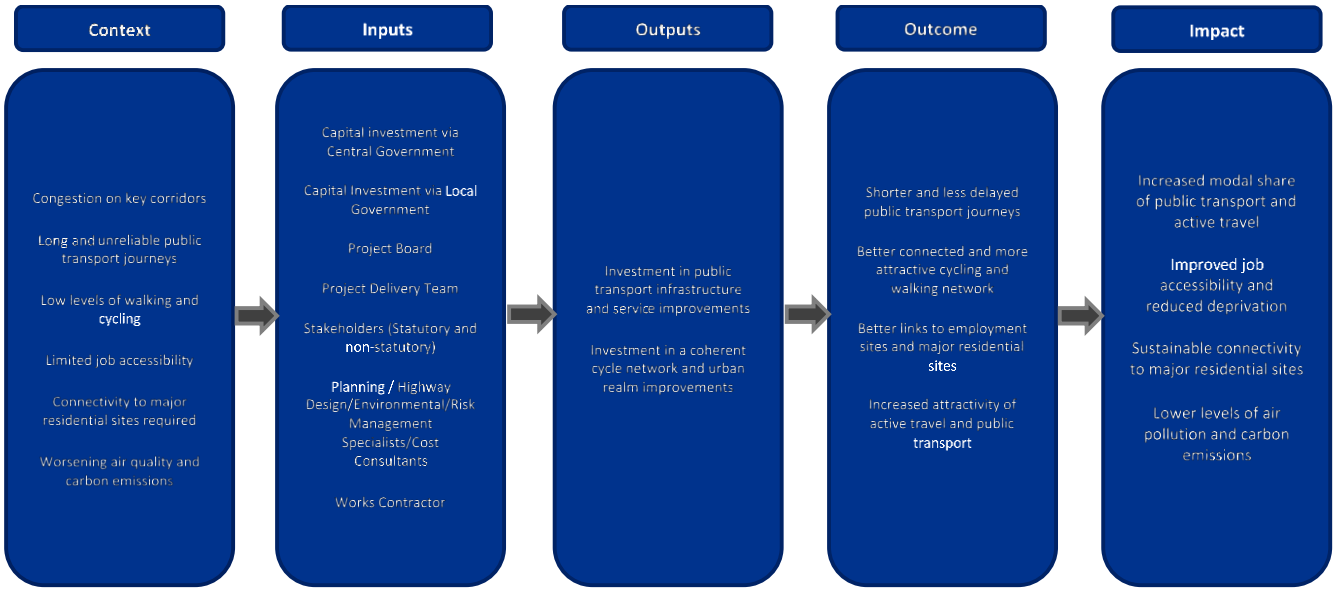

Figure 6-4: Logic Map for the Preston TCF Programme

The Monitoring and Evaluation Strategy sets out the anticipated metrics which will be monitored for the different types of schemes within the TCF programme, but is not intended to set out the methods by which data supporting the monitoring of the different metrices will be collected, as this will be unique and specific to each scheme and as such will be considered during the development of individual scheme M&E Plans.

The Strategy also sets out the requirements for the creation of one-year and five-year after reports, and the dissemination of information to Government, the TCF Management Board and City Deal Executive, and internal LCC stakeholders and partner authorities.

In addition, Benefits Realisation Plans will be developed for TCF programme schemes to ensure scheme outputs and realised, alongside effective monitoring and evaluation of scheme delivery and impacts.

The LEP M&E Framework is a live document which is revised on an annual basis. The recommendations of the TCF Monitoring and Evaluation Strategy for the metrics and monitoring approach to the TCF programme schemes will be incorporated into the next revision of the M&E Framework.

6.9 Conclusion

The Management Case for the Preston City Region TCF Programme demonstrates that robust project governance and assurance frameworks have been established.

The structure draws on current practice that has successfully governed the delivery of the Preston and Central Lancashire City Deal infrastructure programme comprising comparable interventions supporting sustainable transport, active travel and urban realm schemes. The City Deal has been in place since 2013 and has evolved in its structure since its inception, picking up on lessons learned to create an effective, efficient structure, honed on project delivery

Key individual have been identified for the governance of the programme, with Phil Green as Senior Responsible Officer, Stephen Young as Chair of the TCF Management Board and Andrew Barrow as the Programme Manager. These individuals have significant experience in these roles from the delivery of the City Deal Infrastructure Programme.

A detailed scheme delivery programme has been produced and will be owned by the Programme Manager. The delivery programme is robust and achievable within TCF timeframes. LCC will continue and underwrite development work on time-critical elements of the programme “at risk” prior to DfT funding decision to ensure that the programme can be maintained. LCC already has a designated Project Manager in place for Cottam Parkway Station and oversight of Network Rail delivery. A risk register has been developed and ‘risk owners’ will be allocated to each risk, with the Programme Manager owning and updating the overall risk register.

Lancashire County Council has successfully delivered a number of major similar schemes recently through the Preston City Deal utilising similar governance and management processes, and has a proven record in delivering them on time and within budget. The forthcoming completion of City Deal schemes creates emerging capacity to deliver the TCF programme.

As Lancashire County Council is a County Council authority and also the Highway Authority for Preston, decision making and accountability is fully integrated in the project management to make critical decisions on final scheme designs effectively and in a timely manner to support programme delivery.

A communications strategy for the Programme has been developed which defines and sets out the principles, objectives and approach for the engagement with stakeholders and consultation with interested parties and includes identification and mapping of key stakeholders. Most aspects of the Preston TCF programme have already gone through widespread consultation and publicity through the adoption of Local Plans and the Central Lancashire Highways and Transport Masterplan and development of the Preston City Transport Plan, and stakeholder and public engagement will continue through the development stage.

A Monitoring and Evaluation Strategy has been produced in line with Lancashire LEP Growth Deal Monitoring and Evaluation guidance to support the development of individual Monitoring and Evaluation Plans for schemes within the TCF programme.

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