LCWIP Network – Phase 2 Halton

Runcorn - Daresbury

Full Business Case

May 2022

1 The Strategic Case

Introduction

The Strategic Case reconfirms and updates the following sections as set out in the submitted Outline Business Case:

1.1 Executive Summary: A vision for active travel in the LCR
1.2 Local Cycling & Walking Infrastructure Plan (LCWIP) – A new approach
1.3 Problems, barriers and challenges addressed by the scheme
1.4 The potential for change
1.5 How the investment is targeted
1.6 LCWIP Network Phase 2
1.7 Constraints, inter-dependencies
1.8 Support for this investment
1.9 Impact of not securing this investment
1.10 How success will be realised

1.1 Executive Summary: A vision for active travel in the LCR

In 2019, the Mayor of the Liverpool City Region called for an 'active travel revolution' and announced plans for a 600km network of strategic cycling and walking routes. The Covid-19 pandemic has demonstrated the potential number of new cyclists if the right conditions are in place. Since 2020 there has been a surge in people cycling and walking for daily exercise and essential journeys. A Combined Authority survey conducted in May 2020 concluded that 6 in 10 people expected to walk and cycle more as lockdown measures eased.

Providing the conditions for people to get out of their cars and walk or cycle is one of the key ways that the LCRCA will help to enable people to travel safely, improve health and tackle the Climate Emergency. LCWIP routes represent a step-change in the quality of infrastructure, with the purpose of being used by everyday people who will cycle or walk if the right conditions are provided. The Walking and Cycling Index (2022) survey conducted by Sustrans/ LCR shows that 30% of people in the LCR do not cycle but would like to. The people that currently cycle (either regularly, occasionally or new/returning to cycling) is 32%.

The previous situation across the LCR was a network of local routes that were largely on-road cycle lanes as well as some off-road routes more suitable for leisure cycling than commuting. Despite previous interventions such as increases in the length of on-road cycle lanes, this was not enough to significantly increase the number of people making frequent cycling journeys. Essentially, the previous approach has not provided infrastructure that will make daily cycling a genuine transport choice for many people.

This is why a fundamental change in approach is needed, at a time when sustainable travel options are becoming essential for the people of the City Region to help keep their communities healthy and vibrant.

The benefits of active travel are significant, encompassing reduced emissions and subsequent improved local air quality and improved health including reduced risk of heart, stroke and respiratory issues and type 2 diabetes. It has also been shown that walking and cycling infrastructure measures can improve the economic viability to local areas by bringing people through the area who are more likely to stay and spend than people in cars.

The new active travel infrastructure approach means that roads are designed for people, not for cars. People take up a lot less space than cars so it is possible to move more people in a cycle lane than a traffic lane. Some sections of the routes are places where 'movement' is the main purpose of the road, and other sections have a 'place' function, such as high streets and local centres. The designs keep in mind these purposes so that the infrastructure is right for each section, which can consequently flourish with the new active travel provision.

This approach of a strategic cycling network for the City Region is set out in the LCRCA Transport Plan (2019). Transforming Cities Funding incorporates three themes, one of which specifies the high quality cycle network:

Theme 3: Intervening for health and wellbeing

- *This will be focused on decarbonising the transport network, reducing emissions and encouraging more healthy forms of travel. It will entail the development of a comprehensive programme of a network of high quality, cycleways linking key residential areas and employment areas and also measures that reduce emissions and pollution from motorised transport.*

The LCRCA Local Journeys Strategy sets out the rationale for increasing active travel journeys in the LCRCA and reducing the number of short car trips. The Local Cycling and Walking Infrastructure Plan (LCWIP) follows on from this by determining and demonstrating a delivery plan for the strategic network. The LCWIP (approved by the CA on 4th October 2019) sets out 31 proposed routes (600km) and prioritises some of the routes for delivery in the 10-year period to 2030. Merseytravel (the Executive body that provides professional, strategic and operational advice to the LCRCA) will work in partnership with all six local authorities in the region – Halton, Knowsley, Liverpool, St. Helens, Sefton and Wirral to develop and deliver the proposals.

This business case for LCWIP Network Phase 2 Runcorn to Daresbury has been prepared by Merseytravel (LTP Development team) and makes the case for the full-length strategic route of the LCWIP network. An overview of the route details can be found below in table 1.1 and is the focus of the Full Business Case.

Local Authority	LCWIP Route	Length of continuous route	Key Outputs	Cost	BCR
Halton	Runcorn to Daresbury	9.3km	• 6.2km segregated cycle way • 3.1km signed route (on existing infrastructure) • 3x toucan crossings/ junctions (Bridge Street, Busway/Warrington road/Sunnyside lane) • 1x upgrade of existing crossing on Irwell Lane to shared use crossing • 1 x Pegasus crossing (Newmoore lane) • 96 Metroactive signs • 30 lighting columns to be disconnected and removed • 50 new columns with LED luminaires will be installed	£5.9m	3.00

Costings May 2022	year 1 2022/23	Scheme Total
£5,898,614	£5,898,614	**£5,898,614**

Table 1.1: Overview of the LCWIP route detailed within this business case

The economic case demonstrates High Value for Money with a BCR of 3.00.

BCR	3.00
VfM Category	High

Table 1.2 Economic Assessment

Following the submission of the Outline Business Case work has continued on the detailed design and consultation of the Wirral and Halton routes in parallel. However, given feedback received during the Wirral consultation phase, there is an opportunity to accelerate the Halton scheme, whilst final design decisions are made for the Wirral scheme.

Figure 1.3 Route Overview

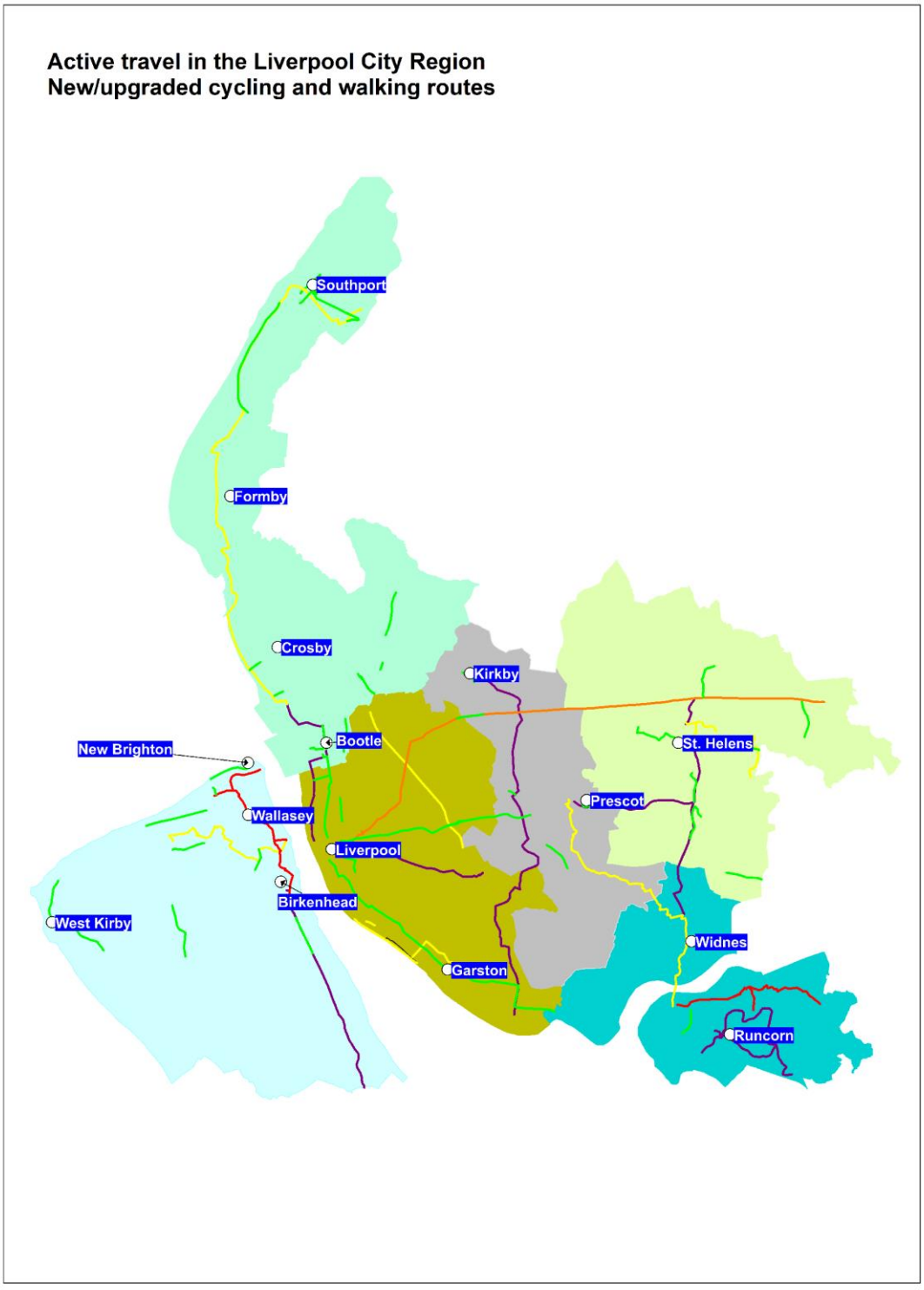


Figure 1.4 LCWIP 10-year routes proposed

LCWIP Phase 1 (yellow)

Currently in delivery utilising Transforming Cities Funding and ERDF Sustainable Urban Development Funding. Due for completion December 2022.

Scheme overview:

- Liverpool City Centre - Speke upgraded cycleway (6.8km upgraded cycleway)
- Seaforth – Southport (15km new and upgraded cycleway)
- Prescot – Runcorn (7.4km new and upgraded off-road cycleway)
- Liverpool Loop Line (6km upgraded cycleway)
- St Helens (6.3km new and upgraded cycleway)
- Leasowe – Seacombe Ferry Terminal (3.7km new cycleway)
- Runcorn Links (new and upgraded cycleway)

Emergency Active Travel Fund Tranche 1 and Active Travel Fund Tranche 2 (green)

Schemes delivered utilising Emergency Active Travel Fund Tranche 1 and schemes currently in delivery utilising Active Travel Fund Tranche 2, due for completion March 2022.

Tranche 1:

- Runcorn and Runcorn Hospital
- Hough Green and Greenoaks and (Town Centre Connectivity)
- Liverpool South Loop
- Liverpool North Loop
- Bootle Town Centre Links
- Kirkby Town Centre Links/ Cherry Field Drive
- Chester Lane
- Clockface Road
- New Chester Road
- Hoylake Road/ Fender Lane
- Southport Town Centre Links
- Cycle Hubs

Tranche 2:

- Runcorn Busway (Halton Lea - Murdishaw)
- St Helens Lea Green LCWIP links - 6.5km light segregation with wands
- Knowsley Schemes
- School Streets - Introducing 'School Street' restrictions to traffic at school start and finish times at 18 schools across the City Region.
- Liverpool Loop
- Wirral Schemes
- Liverpool University LCWIP
- Southport Town Centre

- Liverpool East Lancashire Road LCWIP

LCWIP Phase 2 Halton (red)

Focus of this Business Case

- Runcorn – Daresbury

LCWIP Phase 2a Wirral (red)

In design. FBC to be completed 2022/23.

- Birkenhead – New Brighton

LCWIP Phase 2b (orange)

- East Lancashire Road (Haydock to Liverpool)

LCWIP Phase 3 (purple)

- Liverpool City Centre to Childwall
- Knowsley Cycle Route (Kirkby to Speke)
- Birkenhead to Eastham
- Bootle to Liverpool City Centre
- St Helens to Widnes (including links with Lea Green)
- Runcorn Busway

Currently being prioritised for delivery through CRSTS.

1.2 Local Cycling & Walking Infrastructure Plan – A new approach

To facilitate improving the conditions for walking and cycling in the Liverpool City Region (LCR), the Combined Authority (CA) has developed a Local Cycling and Walking Infrastructure Plan (LCWIP) which sets out the long-term vision to get more people riding bikes and walking more often, particularly for shorter journeys under 5km. The LCWIP is a strategic approach to developing a cohesive network of high-quality active travel routes across the region. People need suitable routes to be able to walk and cycle for short journeys and as part of multi-modal journeys using public transport.

Through engagement with people across the region, the key message is that people want safer, protected routes where they can cycle and walk. The 2022 Walking and Cycling Index report for the LCR shows that 61% across the LCR support building more

cycle tracks physically separated from traffic and pedestrians even when this would mean less room for other road traffic.

It is this message that is at the heart of this plan; to build a network of routes that people will feel safer using and will get them to where they want to go using high quality infrastructure. This is how the Liverpool City Region can become somewhere that active travel is a genuine transport choice for everyday journeys. At the same time, by making communities more pleasant to walk and cycle in, we can help to create vibrant places for people to live, work and visit.

In March 2018 the *Liverpool City Region Combined Authority Local Journeys Strategy* (LJS) set out an approved vision for sustainable travel in the Region. The LCWIP is the supporting implementation plan and sets out the next steps of delivering our plan for a region-wide high-quality cycling and walking network through a programme of prioritised investment.

The LCWIP identifies 31 origin/ destination links, from which the streets and routes for cycleways will be defined. Walking networks also identify high demand walking locations to be reviewed for improvements. Some of the streets on these links will already have cycling and walking infrastructure that is fit for purpose and some will have existing infrastructure in need of an upgrade. Other locations will require entirely new infrastructure for the route.

Increasing levels of walking and cycling, as well as improving access to jobs, education and services, is widely recognised as being critical components in supporting the local economy, reducing carbon emissions and improving the health of our residents. This will help deliver on LCR aspirations for active travel choices, addressing air quality and reducing congestion through a co-ordinated approach to local journeys across the LCR.

The network of routes will be rolled out under MetroActive branding developed by the LCRCA and signage will be in line with the LCRCA Wayfinding Strategy that is currently in development.

METROACTIVE

Figure 1.5 MetroActive branding

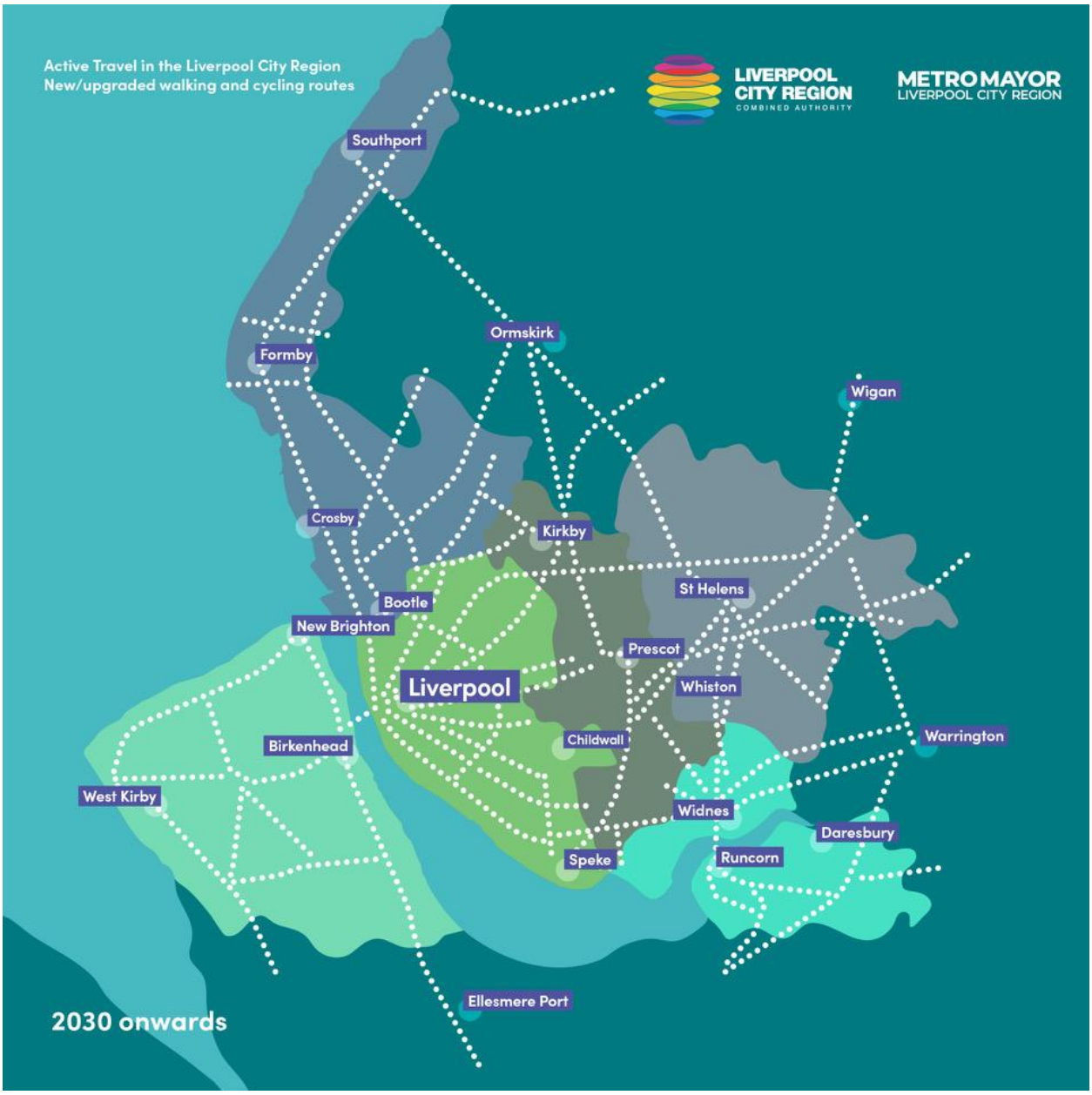


Figure 1.6 LCWIP Proposed Network – 31 Routes (600km)

1.3 Challenges and opportunities addressed by the scheme

A resilient City Region supports a strong and vigorously competitive economy at the same time as addressing Climate Change and Air Quality. This scheme will form part of a City Region of opportunity where all sections of the community can access jobs, training, education and leisure activities. The diagram below represents sustainability encompassing benefits that are environmental, economic as well as the health and social benefits.

Environmental	Economic	Health & Social
• Reduced air pollution • Reduced road space use • Low carbon footprint • Low noise pollution	• Savings for NHS • Improved urban environments • Increased retail sales • Increased mobility of nation's poorest	• Enable physical activity in daily lifestyle • Socially inclusive forms of travel • Reduced emissions

Figure 1.6: The Three Components of Sustainability

1.3.1 A City Region for the future

Devolution has enabled the LCR to take greater control over transport, skills, infrastructure, business support, innovation planning and housing. These powers mean that we can help to make this City Region a great place to live, work, access education and visit.

Active travel addresses so many aspects of making the City Region a better place and provides the following benefits:

- Improved air quality through reduced car usage and emissions
- Improved health of people walking and cycling
- Improved economic viability for local businesses
- 'Placemaking' designing places for people rather than cars
- Low cost transport
- Accessible transport

In a Bike Life Survey of cycling attitudes undertaken in 2022 in the LCR, 53% of people said that they either do not cycle but would like to, are new or returning to cycling or occasionally cycle. These are the potential base of users for the high quality infrastructure, in addition to 9% of people that reported in the survey that they already

cycle regularly. This makes a total proportion of 62% of people that may cycle new routes.

When asked which measures would help you to start cycling or cycle more, 65% of respondents said they would be helped to cycle by cycle tracks along roads which are physically separated from traffic and pedestrians. Furthermore, 68% said that they would helped by more traffic free cycle routes away from roads e.g. through parks or waterways.

1.3.2 Why use protected cycle infrastructure?

All over the world, cities are investing in cycle infrastructure where people on bikes have a protected space that is separate from motorised traffic. Protected cycle lanes use kerbs or light segregation using bollards or planters or separators such as ‘armadillo’ or ‘orca’ rubber fixings. Why are cities such as London and New York introducing protected cycling infrastructure?

- Safety and the perception of safety, is the main reason given by people for why they don’t cycle or do not cycle more
- These barriers relate to the perception of road conditions being unsafe for cycling and that there is a lack of specific infrastructure to protect cyclists
- Protected cycle infrastructure breaks down these barriers – providing separation from other road users in time and space on both links and at junctions.
- In London, since opening, sections of the Cycle Superhighway network corridors are moving 5% more people per hour than they did without protected cycle lanes
- Evidence from New York suggests that were protected cycle lanes have been introduced, on average, crashes with injuries have been reduced by 17%

1.3.3 Protected cycle infrastructure examples

Separated cycleway, Cardiff (Wales Online)

Separated cycleway, Park Lane, Liverpool

Waltham Forest Mini Holland

Tiger Crossing, Bexley

1.3.4 Infrastructure Proposed

An example of the infrastructure that is proposed to be included along the Runcorn to Daresbury corridor is detailed below.

A **separated two-way cycle track with footpath adjacent to carriageway**. This uses a hard kerb line to separate cyclists from vehicles (rubber cycle lane defenders can also be used). Pedestrians are separated from cyclists using a slightly raised footway.

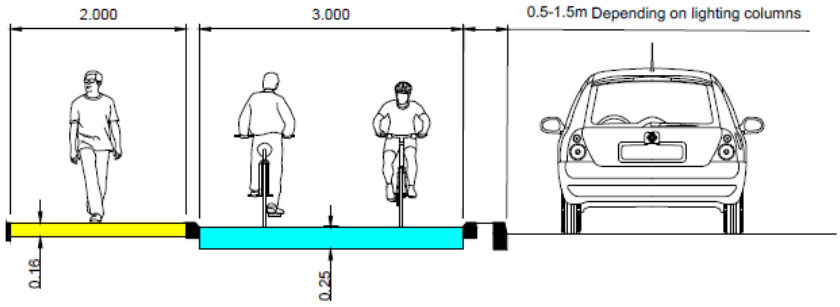


Figure 1.7 Cross section of separated cycle lane

1.3.5 Benefits of the LCWIP Network

Figure 1.8 shows the benefits of a strategic separated cycling and walking network and these are further detailed in the sections below.

Figure 1.8 Benefits of strategic cycling network

1.3.6 Air Quality

Research from Sustrans shows that around 80% of NOx emissions in areas where the UK is exceeding NO_2 limits are due to transport. In London it has been found that 45% of particulate matter is caused by tyre and brake wear. Therefore a move to electric vehicles will not solve this issue- it is fewer cars not just cleaner cars that are needed.

The negative health impacts of poor air quality have become well documented, and are known to impact particularly on children and the elderly. The Liverpool City Region has particular pockets of air quality hotspots which have illegal and harmful concentrations of nitrogen dioxide (NO2).

In November 2019, the CA has approved an Initial Air Quality Action Plan for the LCRCA, which recommends as an action the progression of the LCWIP strategic walking and cycling network (Fig 1.5).

The Liverpool City Council area is a ‘mandated’ city, required to assess a range of options in response to prevailing poor air quality. It is presently working through a detailed study and longlist of options against which to secure compliance, including a Clean Air Zone (CAZ). If measures restricting car usage are to be introduced to the LCR, then it is essential for there to be viable alternatives to enable people deterred from their cars to make those journeys in a sustainable way. Research suggests that as well as good public transport, people want active travel options. In the 2020/2021 large scale ‘LCR Listens’ engagement exercise which canvassed the views of over 7,000 LCR residents, the key points on general satisfaction with the transport network centred around:

- Equal access across the whole City Region and outside of it
- Increasing congestion concerns
- Connected walking and cycling routes are increasingly important
- Lack of current routes means increasing danger for cyclists
- Pricing – particularly for buses is a concern
- Environmental / air quality concerns – pollution is a significant issue

Without intervention, car ownership rates are expected to continue to rise, as demonstrated in Figure 1.7. The LCWIP Network will provide an active travel alternative to help to stem the rise in the number of trips taken by private car. Figure 1.8 below shows the LCWIP routes proposed for the first 10 years transposed onto a plan of emissions across the LCR.

Boosting active travel (walking and cycling) levels, especially for short trips

- We will commission and support the delivery of a radical and comprehensive programme of walking and cycling upgrades within the next 4 years, linked to the Transforming Cities Funding programme and the development of a Local Cycling and Walking Investment Plan (LCWIP). The focus will be on a network of dedicated cycle routes, which are separated from traffic, to encourage the switch from cars to bikes for short journeys.

- We will investigate measures to boost investment

Figure 1.9 Extract from LCRCA Initial Air Quality Action Plan (November 2019)

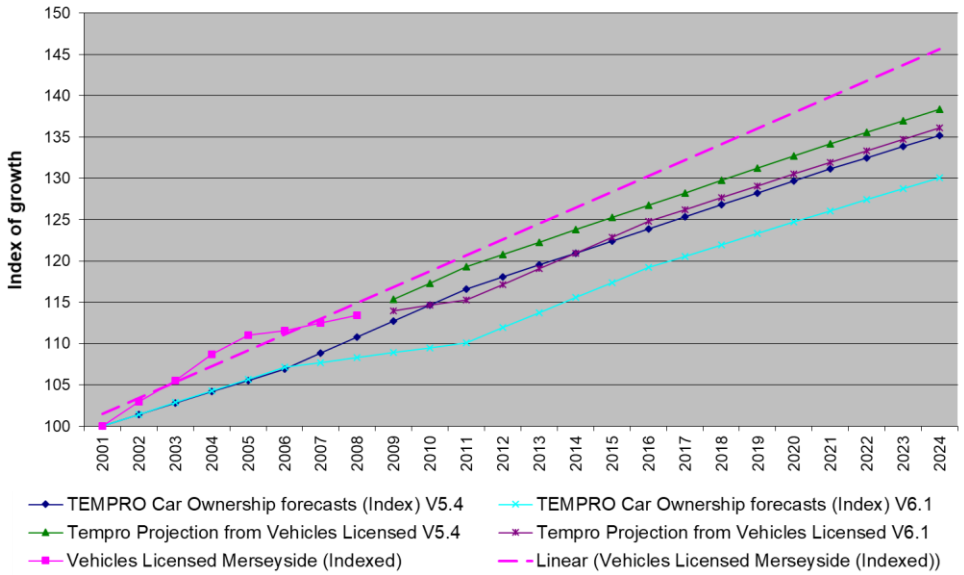


Figure 1.10 TEMPRO car ownership expected growth without intervention

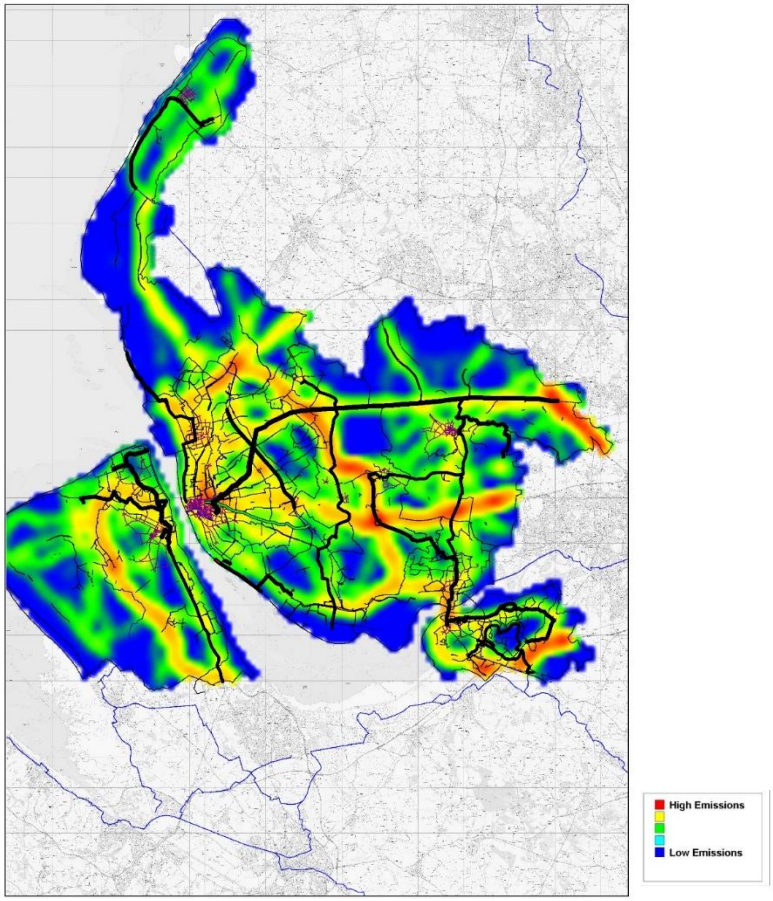


Figure 1.11 LCR Emissions with LCWIP Network (10 year plan routes)

1.3.7 Health and Physical Activity

Regular walking and cycling can significantly reduce people's risk from heart disease, type 2 diabetes, obesity and other long term health problems (Cycling and Walking for individual and population health benefits (Public Health England, 2018). Physical activity can make a huge contribution to maintaining health and wellbeing and is recognised as an important element of a healthy lifestyle, reducing the risk of ill health and premature death. For this reason, physical activity has been identified for public health in terms of preventative health initiatives and is a key component of the Transforming Cities Fund under Theme 3, which aims to encourage healthy travel amongst LCR residents and visitors. Physical activity levels in the UK are declining. The LCWIP Network offers an opportunity to address this and provide a way in which people can get fit at the same time as undertaking their daily commute.

The health problems associated with sedentary lifestyles and lack of physical activity have a consequence on local economies due to ill health and on increased costs to businesses as a result of increased levels of sickness and associated absenteeism. On health outcomes, the LCR performs below the UK with 33% of the productivity gap

between the City Region and rest of England due to ill health. The LCWIP programme of investment will help to increase levels of physical activity thus making for a healthier more active workforce.

The LCR has some of the worst levels of health inequality in the UK. Amongst all 38 LEPs, the city region is ranked as the most deprived. In the most recent indices of deprivation, 34% of LSOAs (Lower Super Output Areas) within the City region are in the 10% most deprived nationally. There are high levels of long-term sickness and significantly higher proportions of workless households than the national average. Of all the economically inactive residents in the LCR, 29% are deemed to be long-term sick which is significantly higher than the Great Britain average of 22.9% (Source: ONS annual population survey, April 2018 – March 2019). Figure 1.9 illustrates the areas in which health issues are most acute.

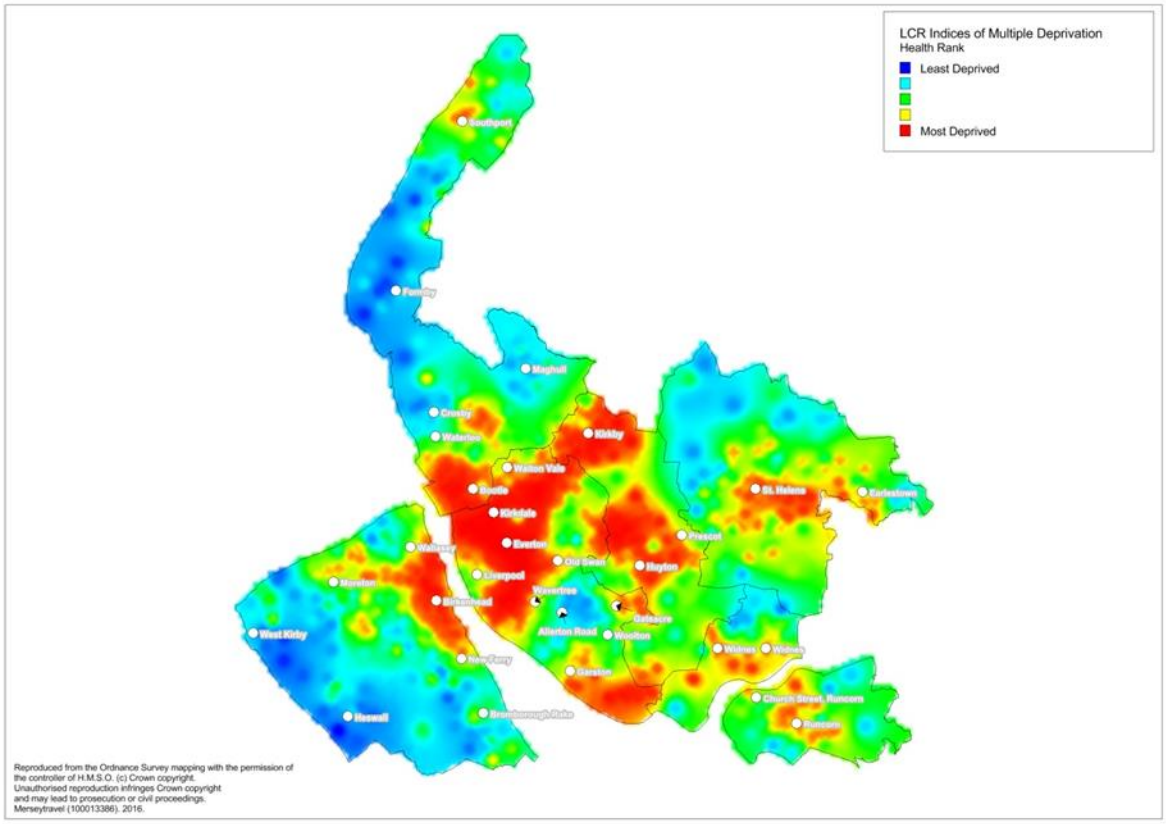


Figure 1.12 LCR IMD Health and Disability Rank 2015

1.3.8 Social Factors

Poor air quality can have a disproportionate effect on people in disadvantaged communities. People in these areas will often make least contribution to poor air quality due to low car usage, but these areas will commonly suffer high levels of pollution where they have major roads running through the area. Figure 1.9 illustrates the

distribution of deprivation in the City Region using the Indices of Multiple Deprivation 2015. Evidence suggests that people who live in the most deprived areas are more likely to have low levels of car ownership, higher unemployment, low educational achievement and poor levels of health. A lack of affordable, accessible and available transport is a barrier which prevents many people who live in deprived communities from enjoying the opportunities and life chances many others take for granted.

Since 2000 the number of people in employment in the LCR has risen by 12% whilst economic activity (Gross Value Added) has increased by over a third and now stands at £32bn. These are substantial changes, but there are opportunities to improve further. On measures of both job creation and economic growth the LCR has underperformed compared to the wider UK economy – over the same period, employment increased by 15% across the UK as a whole and GVA by just under 40%.

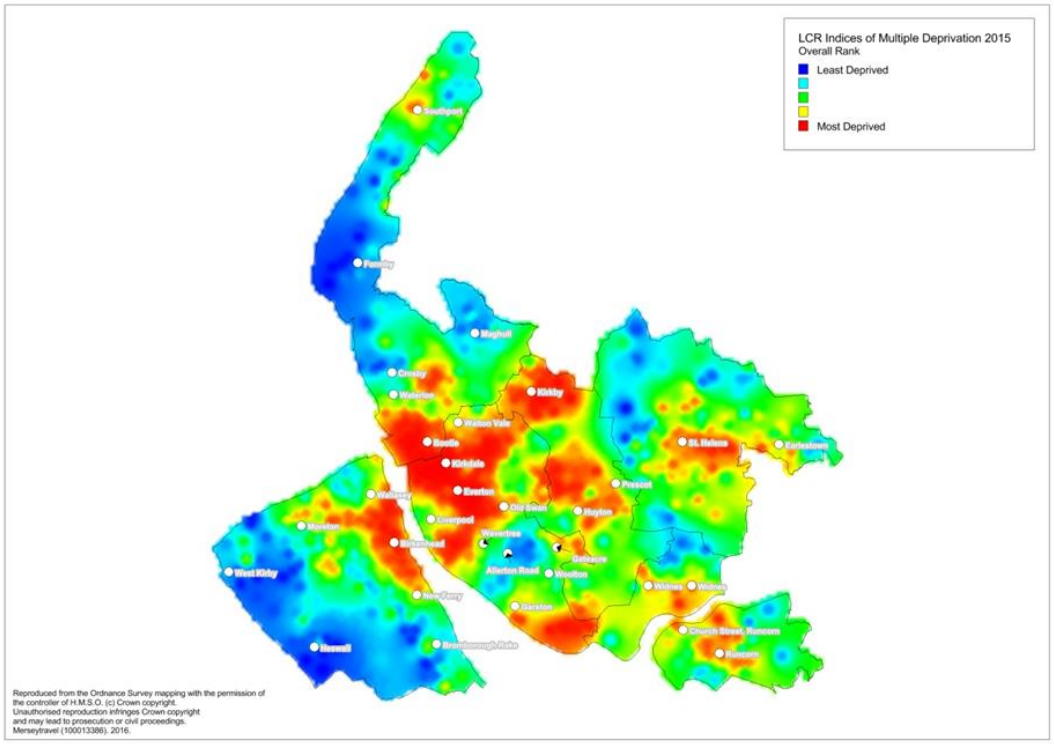


Figure 1.13 LCR Levels of Overall Deprivation 2015

In Figure 1.13 it can be seen that the areas around the Runcorn area are highlighted as red / yellow due to high levels of social deprivation. Access to key employment sites by public transport has improved in many areas over the last few years; however many new opportunities are associated with shift working, often extending beyond the operational hours of the public transport network. Thus providing realistic alternative by improving cycling and walking can open up real economic opportunities and benefits. By providing viable low cost transport option, the strategic cycle network supports people getting into employment. The Liverpool City Region is the most disadvantaged of the 38 LEP areas in England and Wales, with over a third of the LCR Lower Level Super Output Areas (LSOAs) in the top 10% most deprived areas in the UK. More than a third

of LCR residents are currently classified as 'disadvantaged', with pockets of acute deprivation in South Sefton, North and Central Liverpool, East Wirral, South Liverpool, Kirkby, St Helens/Lea Green, Widnes and Runcorn. Car ownership levels across the LCR are much lower than the national average and this presents an opportunity for increasing the number of journeys in these areas that are made by walking or cycling.

Although continuing to fall, unemployment rates in the City Region are still significantly higher than the regional and national average (Figure 1.11) and a high number of people in the region are classified as 'inactive' which significantly impacts on productivity.

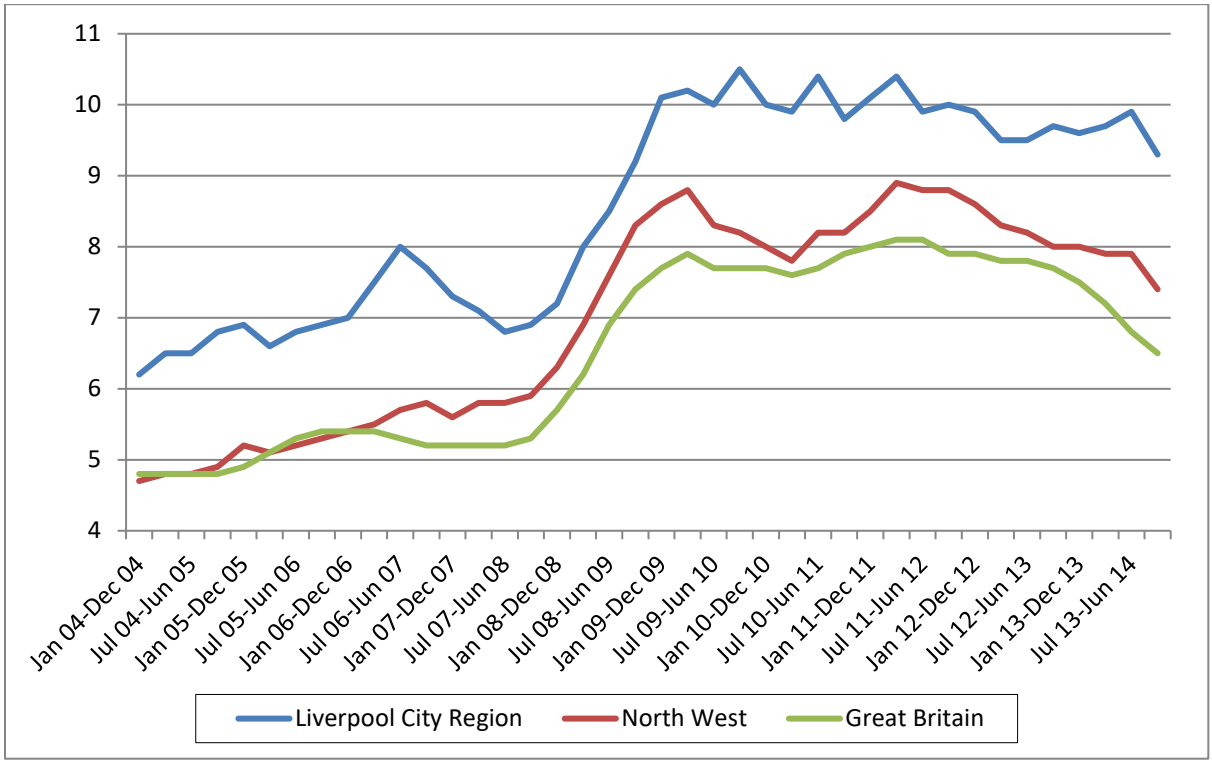


Figure 1.14 Comparison of unemployment in the City Region

1.3.9 Local Economy Boost

Making areas more pleasant places to be is shown to have a beneficial economic effect on local businesses. For well-designed projects, sales can increase by **30 per cent** or more when footfall is boosted (The Pedestrian Pound, Living Streets 2018). In New York City research found businesses on streets with separated bike lanes grew more quickly than those without (The Economic Benefits of Sustainable Streets, NYC DoT 2013). The reason being that people on foot or bike are likely to visits the local shops as they pass and that by improving the public realm increases the number of people drawn to visit the location.

1.3.10 Person Focused Streets

Cycling and walking can transport high volumes of people in a relatively small amount of space since the volume of space taken up by a person walking or on a bike is significantly smaller than the footprint area of a car. Especially when car occupancy is low (such as during commuter periods), a large proportion of road space is allocated to empty passenger seats. Active travel can therefore play a growing role in allowing the LCR to expand and continue to function efficiently. The traditional method of transport modelling has worked on the 'predict and provide' methodology of estimating likely increases of car usage and allocating addition road space accordingly. However, that approach has been shown to have the effect of induced demand. A new approach of 'decide and provide' can help to improve sustainable transport usage and its resulting benefits by providing space for sustainable modes.

The characteristics of the urban realm can influence different ways of moving, creating a strong link between transport and the quality of urban space. An increase in cycling and walking can help to make public spaces more welcoming and provide opportunities for social interaction. Having more people using the space works as a catalyst to increase active usage even further.

It is recognised that some locations are about 'place' such as high streets and local district centres and other places are more utilised as 'movement' locations such as stretches without shops. Designs can take account of this functionality to ensure that the active travel provision is right to fit with the location and increase ability to use these forms in an appropriate and fitting way to the locality.

1.3.11 Accessible Travel

A sustainable transport network should encompass high quality cycling and walking routes, as an integral component alongside public transport. Sustainable transport needs to facilitate easy access between key destinations, provides modal choice and improve journey time reliability. This ambition can only be achieved through the provision of a variety of travel options. The needs of residents vary widely, but a range of travel modes available means that it is more likely there can be sustainable mode to meet the needs of each individual in the City Region. An example of how the designs will be accessible is that infrastructure design will allow entry/exit points in the kerbing to enable users that cannot lift the cycle to access the separated routes easily.

Walking and cycling are low cost, healthy travel choices. In recent years active travel infrastructure improvements have been delivered through LSTF and STEP programmes, particularly in some of the City Region's most disadvantaged communities. Nevertheless, there remain a number of gaps in the existing infrastructure that prevent more residents from taking up walking and cycling.

This is why the LCWIP proposals focus on a step-change in cycling infrastructure for the region with the introduction of cycle lanes that are physically separated from vehicles along with public realm improvements and safe crossing facilities.

This will make active travel a more attractive option for a broad range of travellers, including people that currently have lower propensity to cycle, including women (Figures from 2012 show the percentage of women cyclists in the UK is just 28% (Pucher and Buehler, 2012)). Where active travel is not an athletic pursuit, but built into everyday activities, women are more likely to achieve physical activity parity with men (Urban Transport Group: The Case for Active Travel 2016).

Linking with public transport is also an important factor in providing a sustainable transport network. The two LCWIP routes will provide access to other transport modes in the following ways:

- **Bus and rail infrastructure**

The LCWIP programme will improve access to key parts of the public transport network, by providing separated cycle infrastructure linking to the following rail stations:

- Runcorn (West Coast Mainline)

- **Cycle Parking and Requirements**

There is an aspiration to develop a consistent approach to cycle storage across the LCR to support the LCWIP network i.e. to provide guidance on a hierarchy of provision and appropriate provision in different locations. This work has not yet been developed and to some extent will now be guided by DfT Cycle Infrastructure Design LTN1/20 which provides significant guidance on cycle storage and appropriate provision and quantity. With this recent DfT guidance now in place the LCR can ensure that future development of an LCR approach will incorporate DfT guidance.
Cycle parking is required at various different locations and appropriate provision and quantity will be different for these different locations e.g.;

- Residences
- Interchanges with other modes
- Short stay destinations e.g. shops / places of interest
- Long-stay destinations e.g. places of work /town centres / schools

It is recognised that cycle parking should be an integral element of any cycle network and knowledge of the availability of secure cycle parking at the end of your trip could be an influence on whether the trip is undertaken.
For future LCWIP routes the LCR will now be in a position using LTN 1/20 to assess the appropriate need/ requirement of cycle storage and incorporate these aspirations into designs.

1.4 The Potential for Change

1.4.1 Propensity for cycling uptake

A well-functioning transport network is essential for the economic growth of the City Region. It provides for the efficient movement of people and goods, supporting accessibility both within the Region and more widely across the country and helping to draw in inward investment. The investment in the LCWIP Network will enable thousands of people every day who rely on our transport network to access employment and training and essential services such as hospitals and schools.

Sustainable transport that facilitates easy access between key destinations, increases modal choice, improved levels of health and well-being and providing safe affordable travel are all key to supporting growth and unlocking our economic potential.

The potential target market for sustainable local journeys in the LCR is huge. The vast majority of journeys are short journeys: 66% of all trips are less than 5km in length. But, around 50% of these are undertaken by car, despite the fact that many of these trips are easily within comfortable walking or cycling distance for most mobile individuals. Over the last few years only 2% of these journeys are cycled and around 30% walked, and these figures have remained static for five years (LCR Household Travel Survey 2018 and 2013). The option to walk some of these short journeys is available to all mobile individuals, so there is certainly scope to increase the percentage further as a core component of a healthy, low carbon and inclusive transport network.

The Propensity to Cycle Tool (PCT) was funded by the Department for Transport (DfT) and has been developed to assist transport planners and policy makers to prioritise investments and interventions to promote cycling. It looks at where cycling is currently common and through a series of scenarios models which areas have the greatest potential to grow cycling.

For cycling, analysis of the PCT also shows that the opportunity for change is evident. The PCT shows that many of the LCRs neighbourhoods are relatively flat and close to major employment destinations, yet currently still only have very low numbers of people cycling.

The ‘Government Target’ scenario, which assumes a doubling of cycling levels between 2013 and 2025, in the PCT highlights the potential for more cycling in the LCR and indicates that full implementation of the Government’s Cycling and Walking Infrastructure Strategy would deliver more change in the LCR than it would on average anywhere else nationally. The evidence base for the LCWIP identifies the potential for more walking and cycling trips within the LCR and the proposals for a network of protected high quality cycle routes are planned to help to turn this potential into real trips.

1.4.2 Economic benefits to be delivered through the scheme

	Core Scenario Outputs
Baseline Cycle: current trips	573
Cycle trips with scheme (per day)	1026
Baseline Walking: current trips	0
Walking trips with scheme (per day)	0
Scheme cost (£m)	5.899
Optimism bias	20%
Maintenance costs (£000 per year)	10
Congestion benefit (£000)	1498.13
Infrastructure (£000)	4.25
Accident (£000)	130.63
Local Air Quality (£000)	23.51
Noise (£000)	8.71
Greenhouse gases reduction (£000)	64.51
Reduced risk of premature death (£000)	4465.26
Absenteeism (£000)	533.38
Journey ambience (£000)	5907.96
Indirect taxation (£000)	-70.50
Investment costs (£000)	4114.59
Operating costs (£000)	80.85
Private Contributions	0.00
PVB (£000)	12561.58
PVC (£000)	4191.19
BCR	**3.00**

Table 1.15: Economic benefits (Core Scenario)

1.5 How the Investment is Targeted

1.5.1 LCWIP Route Prioritisation Methodology

This section presents the methodology used in the development of the LCR LCWIP to better understand the potential to increase travel by cycle in the LCR, in terms of what type of trips, places and people offer the best opportunities and therefore where our investment should be targeted.

All trips have an origin and destination and identifying demand for a planned cycle network should be evidence led and start by mapping the main origin and destination points across the Liverpool City Region.

The key trip generators identified through the Local Journeys Strategy are;

- Liverpool City Centre
- Town and District Centres
- Out of town leisure destinations
- Growing employment and mixed-use locations
- Stable residential communities
- New housing developments
- Educational facilities
- Healthcare

These strategic locations attract a significant number of trips and as such they could have the potential to attract a sizeable number of future cycling trips.

Linking cycling and walking routes to public transport nodes is also important, to support multi-modal active travel for the start or end of a longer public transport journey (the ‘last-mile’ connection).

The information and tools listed below are from a number of national and local sources and have been used to identify existing patterns of walking and cycling and potential new journeys and information that will be used to inform scheme designs. Engagement with people forms an important basis for the development of the LCWIP. Understanding existing patterns and barriers can help to optimise the suitability of the proposed network for uptake of walking and cycling:

- Engagement with active travel forums, local groups and the general public including LCR survey
- Propensity to Cycle Tool (PCT) – using Census 2011 cycling figures and future estimates derived from scenarios including the Government Target scenario for cycling propensity to double by 2025, as well as more optimistic scenarios such as ‘Go Dutch’ replicating the high uptake experienced in the Netherlands

- Walking Networks – mapping of high demand walking locations developed by University College London and Living Streets in conjunction with DfT
- Route Selection Tool (RST) – a DfT tool that uses a range of criteria to assess existing provision and potential improvements for a cycling route
- Walking Route Audit Tool (WRAT) - a DfT tool that uses a range of criteria to assess existing provision and potential improvements for a walking route.
- Walking Audit Methodology for Liverpool City Region (developed with WSP) – A tool similar to the WRAT (above) developed for the LCR
- Active Mode Appraisal Tool (AMAT) – developed by DfT to appraise interventions based on WebTAG guidance
- Mapping - existing cycling infrastructure, origin and destinations (key trip generators), Walking Networks, Public Rights of Way, other modes including the Key Route Network of strategic roads
- Land use mapping – showing e.g. significant new developments and Local Plan designated sites
- Public transport mapping – bus, rail and ferry potential links
- Public transport proposals – e.g. proposals for improved access at rail stations
- Liverpool City Region (LCR) Household Travel Survey 2018 (and 2013) - Survey of travel choices information from sample of households across the Region
- Modal Choice into LCR Centres 2018 (district centre cordon counts) –counts and analysis of modes of transport (including walking and cycling) as people enter 8 LCR Centres – Birkenhead, Bootle, Huyton, Liverpool, Runcorn, Southport, St Helens and Widnes.
- Merseyside Cycle Monitoring Report 2017/18 - automatic and manual cycle count data indicating existing cycling levels
- Merseyside Cycle and Short Trips Evidence Study 2010 – The study was commissioned to identify the location of short journeys (under 5 miles) that would be most suitable to be targeted as new cycling trips. The study also set out to identify the location of population types that would be more likely to be interested in cycling. Together this provided valuable information to help prioritise investment in local cycle infrastructure and promotion.
- A Step Change in Cycling in Liverpool Final Report 2009 – To secure a shared vision where cycling is a key element in the success of the LCR
- Intervention case studies - data from previous walking and cycling schemes in the LCR and examples from other locations
- Transport and land use policies and programmes - for the LCR and each of the six Local Authorities including scheme proposals
- LCRCA Active Travel Steering Group - the knowledge and experience that the steering group members and their colleagues have across their own local authority areas

- National Travel Survey - travel survey data
- Road safety collision data STATS19 / Crashmap/ Collideoscope/ MAST - including those involving people walking or cycling
- Flood risk data – to identify locations of historic or potential flooding
- Speed limit information – impacts suitability for route selection and type
- Footway condition data – indicates condition of footway surfaces
- Carriageway condition data – indicates condition of road surfaces
- National Highways & Transport Survey – survey of public attitudes to transport issues

Using the tools and information sources listed above the LCRCA Active Travel Steering Group has identified 31 origin-destination links across the LCR (shown in Fig 1.3, p7). The 31 routes along with existing cycling and walking infrastructure within the LCR will create an extensive network. The routes that will be utilised for those links will be further defined through the design process, as each corridor is developed to outline design, then detailed design. Some of the roads on these links will already have cycling and walking infrastructure that is fit for purpose and some will have existing infrastructure in need of improvement. Other locations or sections of the routes will require entirely new infrastructure.

The LCR LCWIP is a strategic approach, with a focus on consistency of high standard, safer routes to cycle and walk right across the City Region. Engagement activities undertaken thus far have indicated that people across the region want safer, protected cycleways. The LCR Steering group is working to the London Cycling Design Standards (LCDS), which has been agreed by each of the authorities in the LCR to be used as guidance for cycling measures. Separated cycleways, advocated in the guidance will be perfect for some locations, but in others will not be suitable due to the constraints or conditions of the road location, therefore a range of measures will be utilised, to introduce the most site specifically appropriate measures. Below is a non-exhaustive list of the type of measures being considered for LCRCA LCWIP routes;

- Protected cycleways separated with kerbs
- Protected cycleways separated with posts or ‘armadillos’
- Off-road cycleways on footway
- Signalised junction improvements such as single phasing
- Toucan crossings
- Tiger crossings (parallel crossing for people on cycles and on foot)
- Signage/ wayfinding for cycling and walking
- Lighting improvements
- Cycle parking
- Cycle storage hubs
- Two stage right turn
- Advance filtered left turn

The following principles are used in the LCDS guidance to help design high quality environments, and these will be utilised in the LCR along with the more detailed guidance on infrastructure design.

- Safe cycling and walking environments that are safe to use and feel safe
- Accessible streets to support all people walking and cycling
- Comfortable riding and walking surfaces that are fit for purpose, smooth, well-constructed and maintained
- Direct and easy to use routes that meet users' needs
- Coherent street layouts that are legible, consistent, joined-up and inclusive
- Adaptable roads designed to accommodate all users' needs

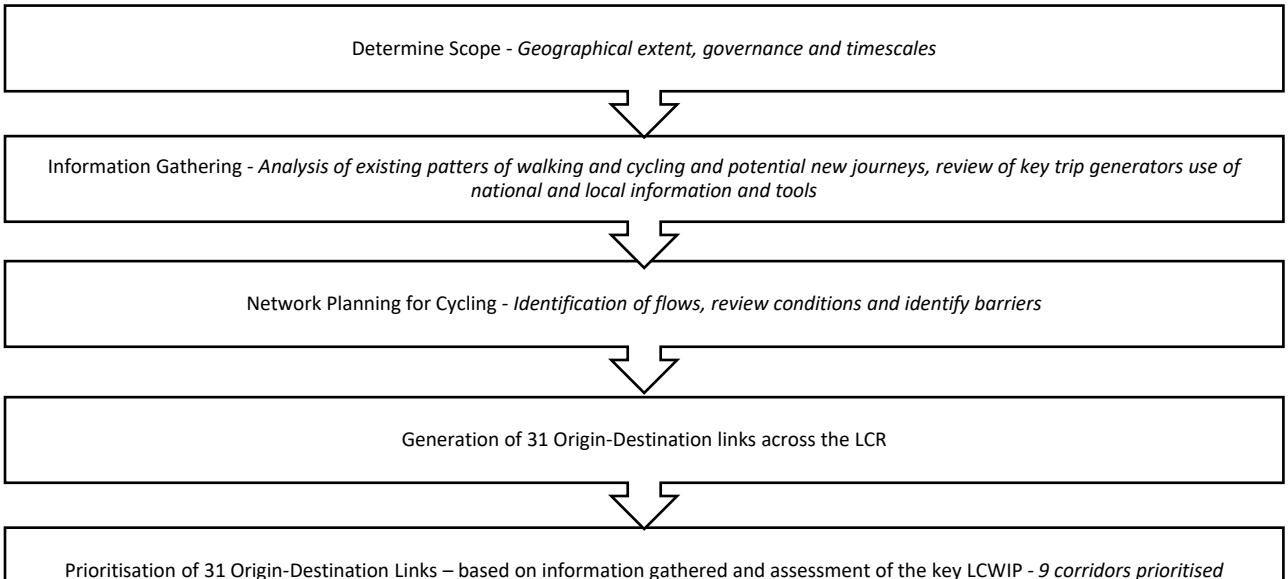
The LCR will use the same design standards to ensure consistency in the visual impact and quality of the measures. Other guidance will be applied in addition to LCDS including Wheels for Wellbeing inclusive cycling guide (2019).

Site visits are undertaken in the development of routes and include audit of existing provision as well as potential for improvements. The Route Selection Tool provided by DfT is used to make comparison between existing environment and the potential improved quality infrastructure that could be introduced in the location.

In developing the LCWIP Network interventions, it was vital that the aims of the National Cycling and Walking Investment Strategy and Local Cycling and Walking Infrastructure Plan (LCWIP) was taken into account along with the Strategic Policy Context within the LCR Local Journey's Strategy and the LCR ambitions for Transforming Cities Funding.

Following the publication of the DfT Local Cycling and Walking Infrastructure Plan in April 2017 work began to define and develop a Strategic Cycling Network for the LCR which will deliver our vision to get more people riding bikes and walking more often, particularly for shorter journeys under 5km.

A summary of the Options Assessment Process is shown in Figure 1.14 below, with further detail provided in appendix A:



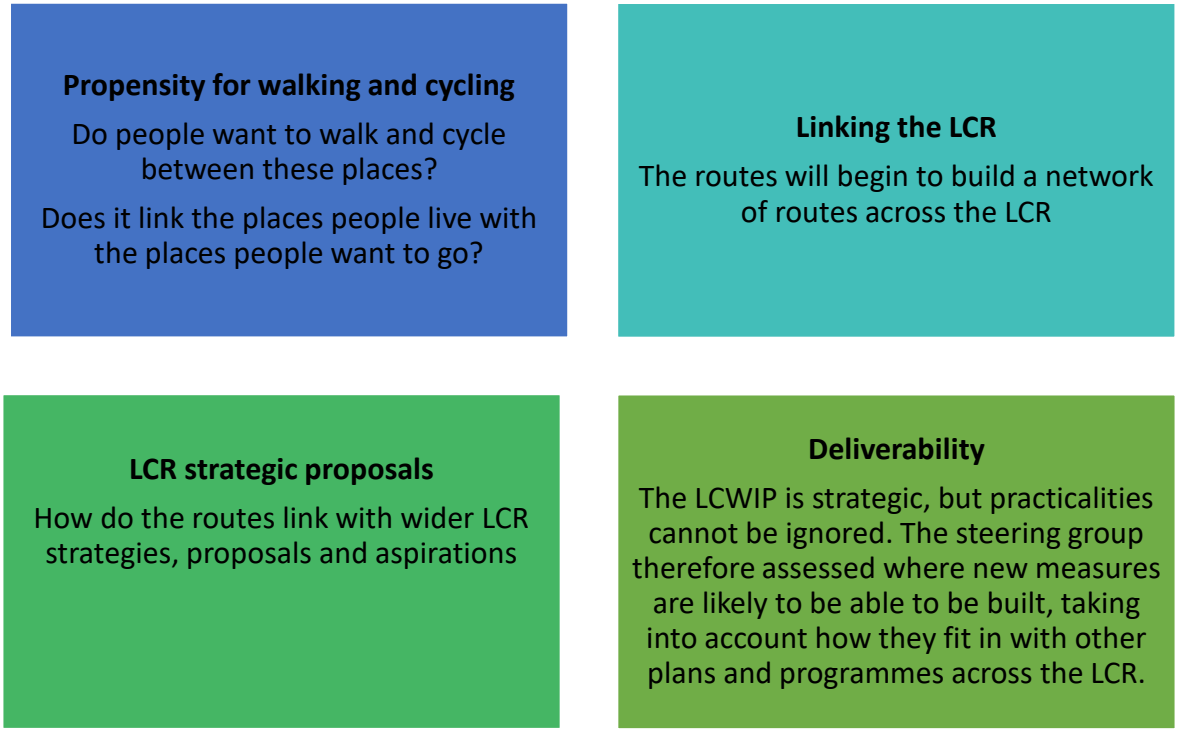


Figure 1.16 Considerations for routes

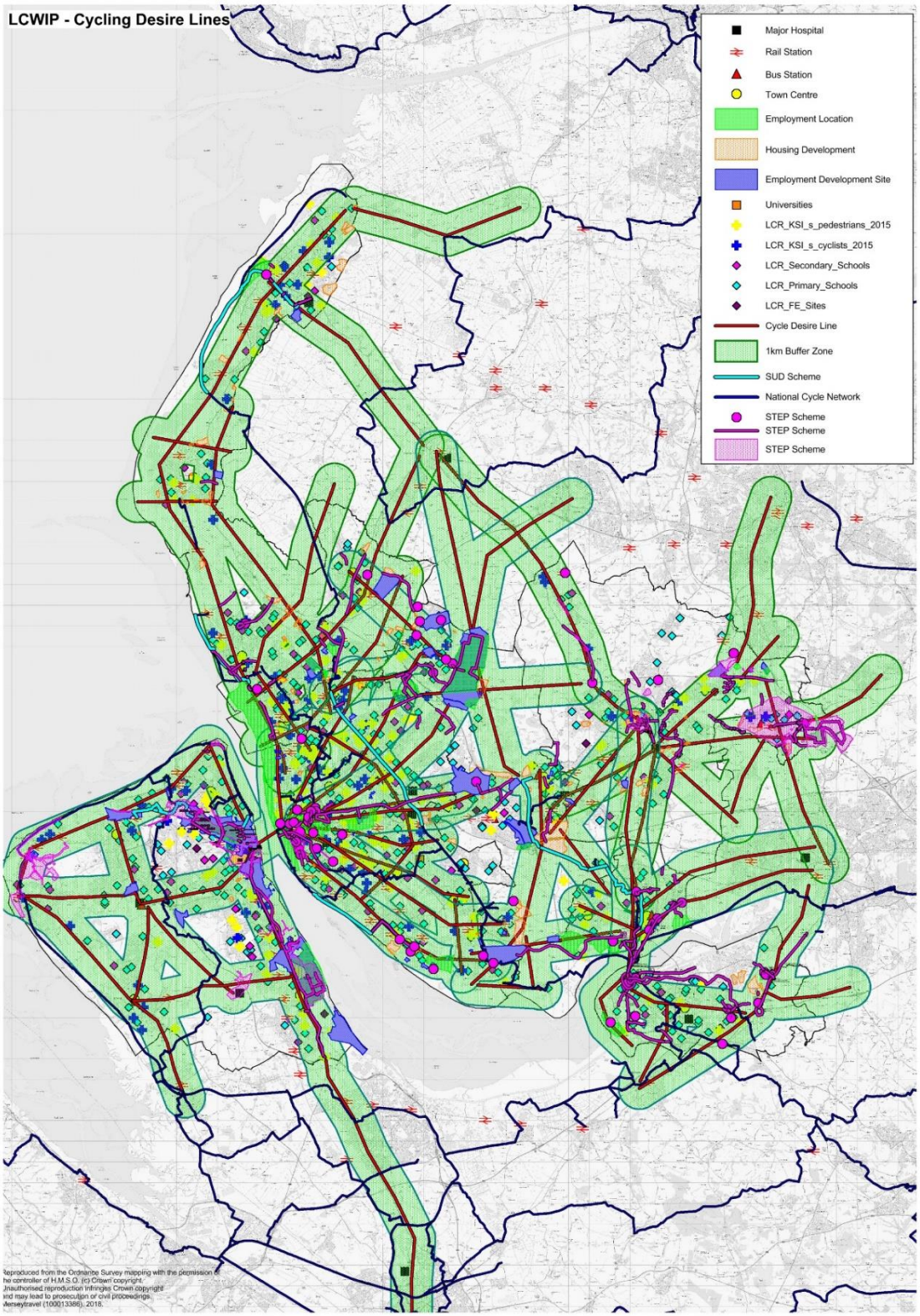


Figure 1.17 Cycling desire lines based on trip generators and PCT data

1.6 LCWIP Network Phase 2

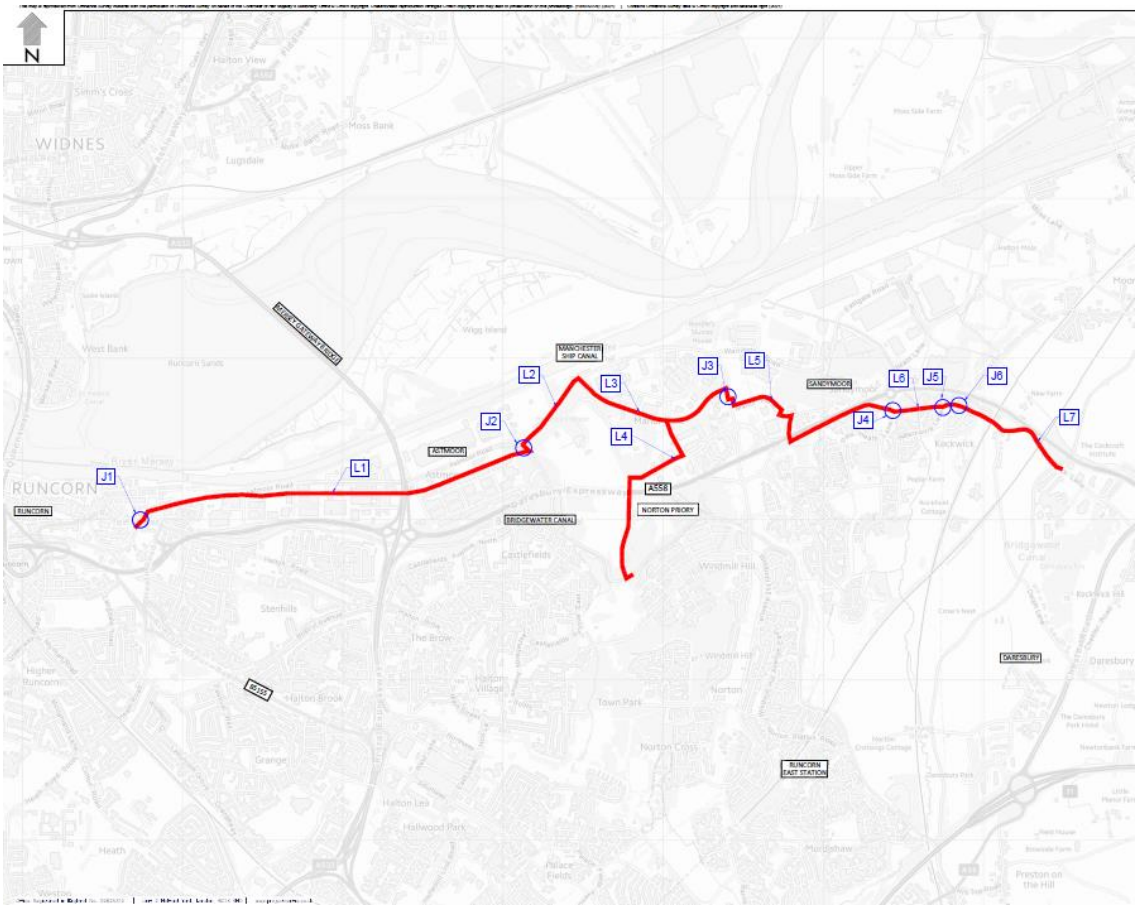
This section provides a detailed breakdown of the route to be delivered in the LCWIP Phase 2 Programme. The corridor will be delivered between August 2022 and March 2023.

Runcorn – Sci-Tech Daresbury

This corridor connects from Runcorn to Daresbury Sci-Tech Park. It links directly from the cycling infrastructure being provided by the Runcorn Station Quarter project to offer a seamless route. The route is approximately 9.3km long runs along the Bridgewater canal adjacent to High Street and Church Street in Runcorn and then joins the Runcorn Busway and runs through Astmoor Industrial Estate. At the junction with Astmoor Road, the route continues along Warrington Road towards Longbenton Way, travelling towards Manor Park Road and Manor Farm Road. There is spur off from Norton Priory linking with existing cycle infrastructure in Phoenix Park and the Windmill Hill area.

The route then continues under the Daresbury Expressway and continues on a route adjacent to the expressway until Sunnyside Lane, Calmington Lane and along Keckwick Lane to the Sci-Tech business Park. This scheme will bring improved active travel connectivity between Runcorn Station and Sci-tech, which will enable more people to embrace active travel as a method for travelling. This would help to reduce congestion and emissions and bring health benefits for users. It will also provide safer and more accessible routes for pedestrians and cyclists.

The route also takes in Astmoor Corridor Business Hubs (Busway Improvements) and Daresbury Sci-Tech (A56 improvements) funded through STEP. The start/end of the route also links to the ERDF Green Sustainable Travel Corridor route which runs from Prescot, through Cronton, onto Widnes then through to Runcorn over the SJB Bridge. The scheme directly links with Trumpet loop de-linking works being completed as part of the Silver Jubilee Bridge (SJB) reconfiguration scheme.



Reference	Road Names at Junction
J1	Junction 1 - Bridge Street
L1	Link 1 - Bridge Street to Astmoor Road
J2	Junction 2 - Astmoor Road/Warrington Head
L2	Link 2 - Astmoor Road to Longbenton Way
L3	Link 3 - Longbenton Way
L4	Link 4 - Longbenton Way to Norton Priory
J3	Junction 3 - Longbenton Way/Manor Farm Road
L5	Link 5 - Manor Farm Road to Pitts Heath Lane
J4	Junction 4 - Pitts Heath Lane
L6	Link 6 - Calmington Lane
J5	Junction 5 - Calmington Lane and Newmoore Lane
J6	Junction 6 - Calmington Lane and Keckwick Lane
L7	Link 7 - Keckwick Lane

Figure 1.18 Runcorn to Daresbury site location plan

Figure 1.19 Visualisation of Runcorn Station Quarter scheme adjacent to the route

The Runcorn Station Quarter (RSQ) is a West Coast Mainline station which currently serves both London, North Wales and the Liverpool City Region. In 2016 the station served more than 770,000 passengers, and has predicted growth of 2.5% on average. The RSQ sits at the foot of the Silver Jubilee Bridge (SJB), where people can cross the Mersey on foot or by bike.

The Runcorn Station Quarter project is an ambitious sustainable transport project which has secured funding from the Transforming Cities Fund, to deliver new and improved access to Runcorn Station, nearby Bridgewater Canal and 'Old' Town centre by delivering strong cycling and walking corridors between the areas whilst complimenting the LCWIP scheme from Astmoor to Daresbury Sci Tech EZ by connecting together.

The complementarity of the two schemes is such that residents, and visitors to Halton will be able to sustainably travel between Runcorn and Daresbury. The RSQ scheme serves both local and national travellers by providing interconnectivity between the Station and Daresbury LCWIP scheme, creating a real opportunity for modal shift between Runcorn and Daresbury and the surrounding area.

These two crucially important schemes will provide linkages to a number of existing residential and employment areas, and supports the delivery of Halton's LTP 3 and Halton's emerging Delivery and Allocations Local Plan. The schemes if successful provide the missing linkages required from the River Mersey to Daresbury with

opportunity to connect through to Warrington, enabling recreational travellers to visit Norton Priory, and the Lewis Carroll Centre at Daresbury amongst many other attractions.

Key Issues & Opportunities:

- The route links to Sci-tech Daresbury, a major growing employment area
- The route links the Runcorn Station Quarter regeneration works which aim to improve the welcome into Runcorn and the wider-City Region.
- With the opening of the Silver Jubilee Bridge separated cycleway in 2021, the route with enable cycled journeys all the way from Widnes to Daresbury.
- There are also a number of key housing sites the route will provide access to including the Redrow A558 (potential for 1,200 units), Sandymoor (1400 units), Halton Lea (800 units) and Central Housing Area, Daresbury (600 units).
- The route also compliments the ongoing Mersey Gateway Plus regeneration work and the Runcorn Vision high level strategic document for regeneration within Halton. Six brownfield housing development sites including Brindley Mount, former Riverside college site and Paramount foods which the potential to deliver 250 new housing units.
- The route, along with the Silver Jubilee Bridge de-linking, will help reduce severance from Runcorn Town Centre to the Dukesfield area. The route also links to the existing facilities at the Brindley along with the proposed redevelopment.
- Taking account of the Mayoral ambition for the LCR to be the best digitally connected City Region in the UK and delivering on The Digital Infrastructure Action Plan (DIAP)’s key objective to create a fibre “superspine” will be taken into consideration on each corridor and opportunities to lay the groundwork and deliver the fibre cabling and ducting will be maximised if possible. No interface was identified for any dig once opportunity.

Scheme Description	Scheme Promoter	TCF Ask	Key Outputs
The scheme will provide cycle and walking facilities linking from Runcorn to new key housing sites at Keckwick and major employment sites at Astmoor and Sci-Tech Daresbury.	Halton Borough Council	£5.9m	• 6.2km segregated cycle way • 3.1km signed route (on existing infrastructure) • 3x toucan crossings/ junctions (Bridge Street, Busway/Warrington road/Sunnyside lane) • 1x upgrade of existing crossing on Irwell Lane to shared use crossing • 1 x Pegasus crossing (Newmoore lane) • 96 Metroactive signs • 30 lighting columns to be disconnected and removed • 50 new columns with LED luminaires will be installed
Key Milestones: Scheme on-site – Q1 22/23 Scheme complete – Q4 22/23			

Table 1.20 Runcorn to Daresbury route outputs

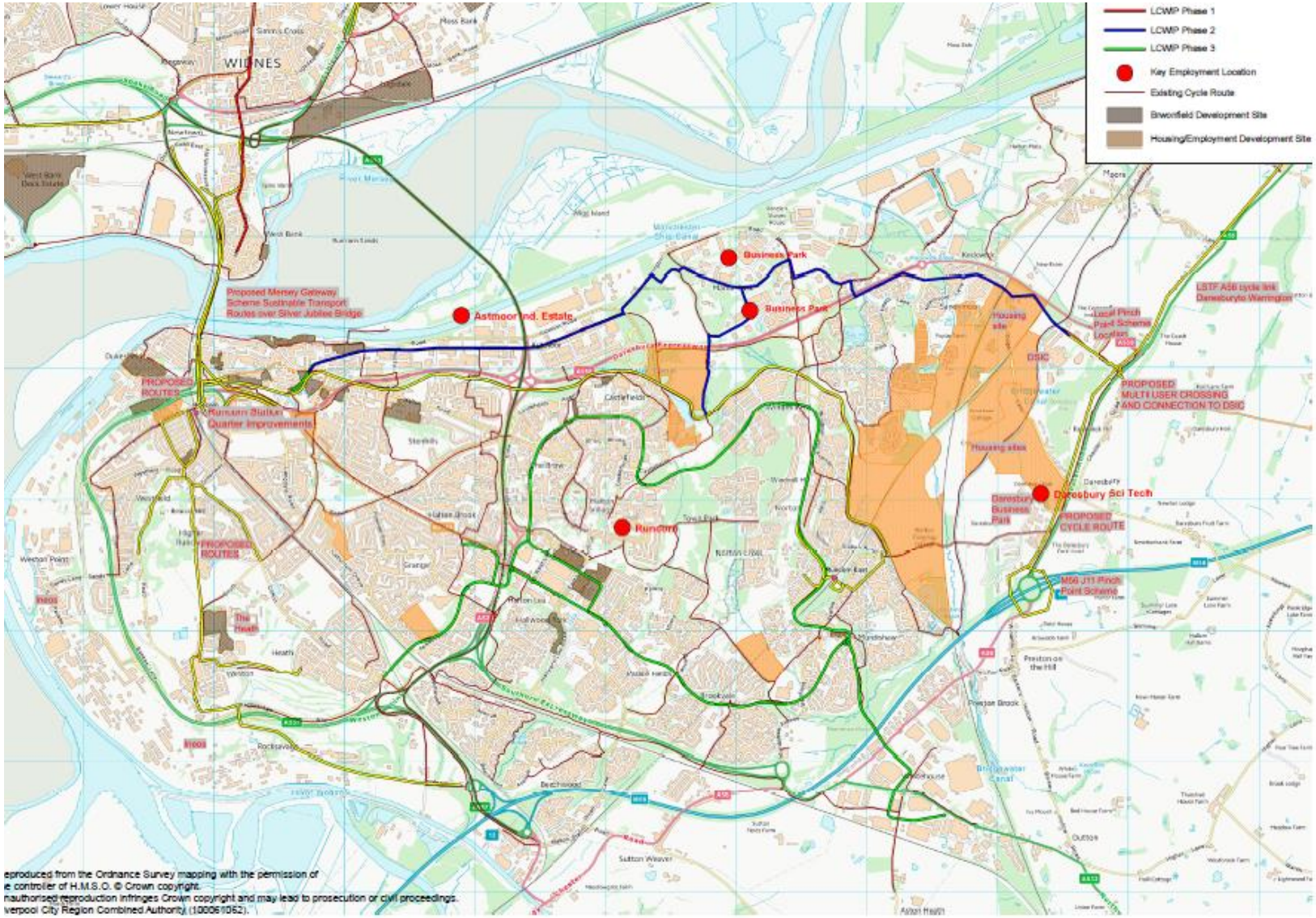


Figure 1.21 Runcorn to Daresbury links with other cycle routes

1.7 Constraints, Dependencies and Interfaces

The delivery of the LCWIP Phase 2 interventions will require a number of scheme tasks to take place to be delivered successfully. These include political support for the interventions, Traffic Regulation Orders, traffic management plans, planning approvals and identification of any potential requirement for land ownership agreements. All LCR partners have established procedures in place to deal with these delivery constraints and dependencies and further details for the management of the programme is available in the Management Case (Section 5).

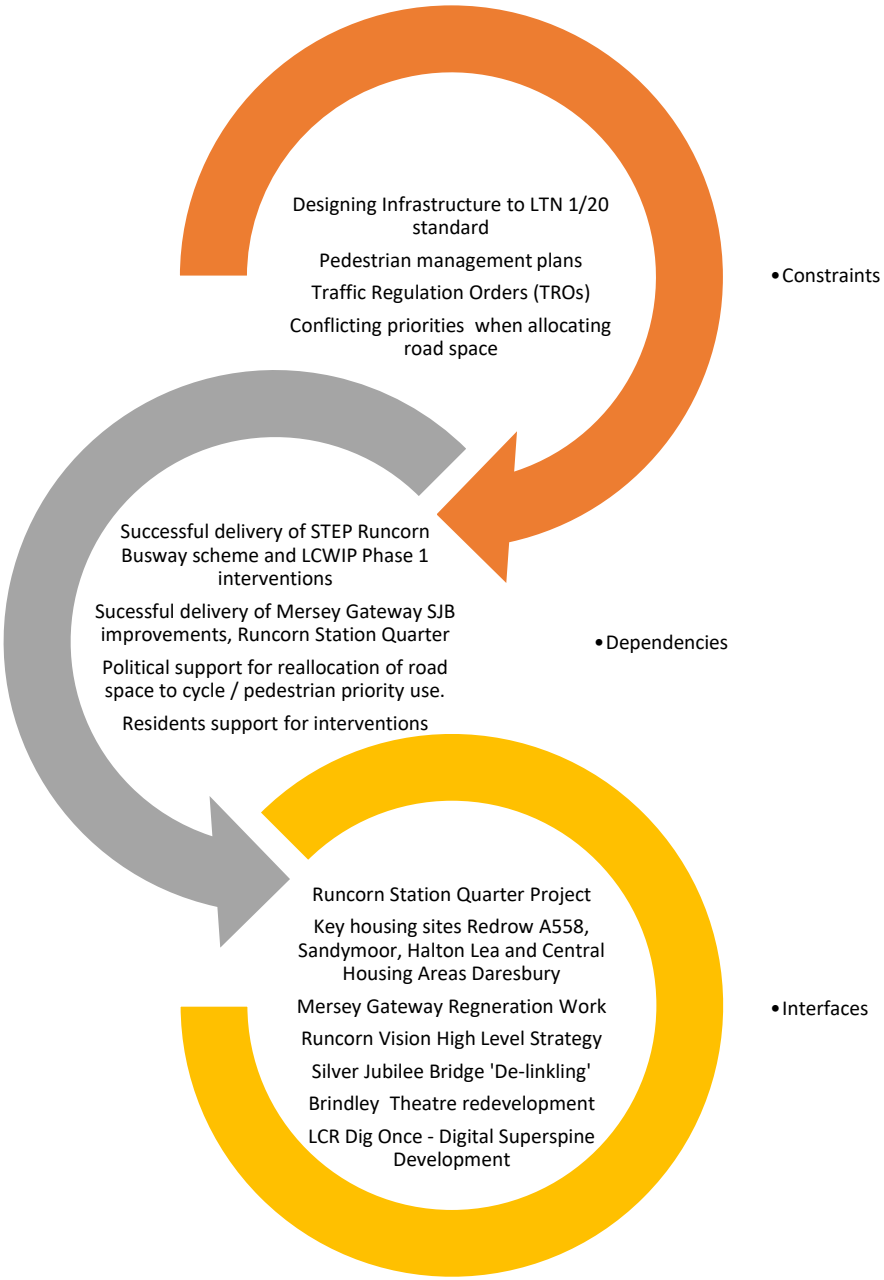


Figure 1.25 Runcorn to Daresbury Constraints, Dependencies and Interfaces

1.8 Support for investment in the LCWIP Network

1.8.1 Policy Support

Improved cycling and walking plays a key role in meeting the economic, social and environmental objectives that have been set for the City Region. It is also closely aligned with the LCR Local Journeys Strategy, the strategic investment framework for transport in the Liverpool City Region which builds on the Local Transport Plans (LTPs) for Merseyside and Halton. The Local Cycling and Walking Infrastructure Plan (LCWIP) which has been developed for the LCR sets out the plan for the cycling and walking investment in the region over the next decade, the LCWIP Network will be how we deliver this strategic network.

The LCWIP Network also contributes to other policies including the Liverpool City Centre Strategic Investment Framework (SIF) and TCF Theme 3. It also seeks to support and enable the successful delivery of our vision set out in the LCR Growth Strategy, Transport Plan for Growth, Local Journeys Strategy and the LCWIP approved by the CA in October 2019.

1.8.2 Political Support

In 2017 the Government published its first Cycling and Walking Investment Strategy (CWIS). The Strategy sets out the Government's ambition to make walking and cycling the natural choices for shorter journeys or as part of a longer journey.

The CWIS introduces Local Cycling and Walking Infrastructure Plans (LCWIPs), a new, strategic approach to identifying cycling and walking improvements required at the local level. They enable a long-term approach to developing local cycling and walking networks, ideally over a 10-year period, and form a vital part of the Government's strategy to increase the number of trips that are walked (or wheeled) and cycled.

Locally, in October 2019, Metro Mayor Steve Rotherham announced a call for an 'active travel revolution' in the Liverpool City Region over the next 10 years. The first phase of the network is currently in delivery with over £16m being invested. The Liverpool City Region has a target to become net zero carbon by 2040. In September 2019, the Combined Authority agreed a list of schemes to commission for further development aligned to Transforming Cities Funding, based on the key issues and identified by the city region. This intervention was identified as it directly supports Mayoral priorities.

In October 2019, Simon O'Brien was appointed the LCR Cycling and Walking Commissioner. As Commissioner, Simon is helping to deliver the Mayor of the Liverpool City Region's vision for an active travel revolution across all six districts of the City Region. This further strengthens the momentum for delivering this second phase of the network.

1.8.3 Stakeholder and Community Support

The LCWIP programme will provide new and improved separated cycling and walking corridors across an integrated LCR wide network which will be linked to existing local routes in the Liverpool City Region. The ethos behind the development of the LCWIP network is about making streets more cycle and pedestrian friendly, which in some cases means reallocating road space away from motorised traffic. This is a step change for the region in terms of the level and quality of cycling infrastructure proposed which has necessitated the need to engage with key stakeholders, local communities and elected members from the outset.

The public consultation surrounding the Runcorn to Daresbury Cycle route has been carried out in two phases. The community of Halton, including businesses and residents, were asked to provide their thoughts about the proposals; and how they affected their neighbourhood and the way they moved around it.

The early engagement phase, which took place between Monday 3 August to Sunday 6 September 2020, aimed to inform the public about the proposed cycle route in the Halton district and gain an understanding of the issues and priorities across the community.

The second phase of consultation, which was carried out between Monday 1 March to Sunday 4 April 2021, aimed to share updated plans with the community, which incorporated feedback from the early engagement phase. During the second consultation phase, residents and stakeholders were once again asked to share their feedback.

Key findings:

- Respondents to the early engagement survey held more reservations about the plans for the new cycle route with only 43% of respondents in support of the plans, 39% were unsupportive and 16% were neutral.
- 87% of respondents from the phase two survey answered supporting the proposals to improve cycling and walking facilities between Runcorn and Daresbury, with only 11% unsupportive and 2% unsure.
- Within the early engagement stage 36% of respondents felt that the plans were not cycle friendly, whereas 64% of respondents to the second phase survey answered that the rationale for their support for the plans was because they were cycle friendly.
- Key comments from both stages of the consultation centred on the need for improvements to cycle safety, particularly surrounding junctions, street lighting and cycle path/ footway maintenance.

Non public consultation was also undertaken with local Stakeholders. A summary of these discussions is included within Appendix J.

The full Communications Plan and Stakeholder Management Strategy for LCWIP is included as Appendix J.

The LCR Listens large-scale public engagement project around key priorities for the public in the City Region found the following key points concerning general satisfaction with transport:

- Equal access across the whole City Region and outside of it
- Increasing congestion concerns
- Connected walking and cycling routes are increasingly important
- Lack of current routes means increasing danger for cyclists
- Pricing – particularly for buses is a concern
- Environmental / air quality concerns – pollution is a significant issue

1.8.4 Consultation and Synergies

Table 1.22 sets out the partners involved in the development of the LCWIP Network and the role they have in supporting its implementation.

Stakeholder	Role
Mayor of the Liverpool City Region	Champion LCWIP across the LCR and nationally.
LCR Transport Portfolio Holder	Drive forward the priorities around cycling and walking for the LCR
LCR Transport Committee	Undertake the development of the LCWIP network on behalf of the Combined Authority

Stakeholder	Role
LCR District Council Members / MPs	Support the LCR Metro Mayor
Local Enterprise Partnership	Integration of LCWIP with wider strategic priorities through the Growth Strategy –Productivity, People and Place and how the LCWIP network will contribute towards reducing carbon emissions and improving air quality to strengthen the LCR as a place to live, work and invest.
Transport Advisory Group (TAG)	This group will ensure that the overall strategic direction of the LCWIP Network development is kept on track.
Chamber of Commerce and BIDs	Engage with the business community about LCWIP and how it will enhance the work programmes promoting walking and cycling to businesses.
Planners & Developers	Deliver enhanced design and infrastructure to support and promote walking and cycling infrastructure to encourage more active travel for local journeys,
LCR Residents	We will complement infrastructure investment with information and marketing across the spectrum of communication platforms. We will implement a City Region wide programme of behaviour change measures and travel solutions.
Cycling & Walking Interest Groups	We will ensure that messages to interest groups communicate how the CA and partners are working conjointly to improve their cycling and walking experience, and look to how we can complement and incorporate the activities of the third sector into our prioritised programmes.
Education & skills sector	We will engage with this sector to update on scheme progress and new initiatives relevant to students and apprentices. We will work with young people, apprentices, job seekers and those in work to support more journeys to work and education through sustainable active travel.
Health sector	We will work with the health sector, and third sectors to enhance accessibility, broaden travel horizons, improve health and air quality, and look to engage with existing programmes to enhance the delivery of the LCWIP Network.
Road Safety Management Group	We will seek to maximise safety and encourage sustainable choices for local journeys, and adopt a design guide that provides value for money and consistent quality across its life cycle by designing out accidents for cyclists and pedestrians.
Innovation	We will work with groups such as the Smart Cities Board and others to secure funding to deliver cycling and walking through innovation and technology.

Table 1.22 Summary of Community and Stakeholder Consultation

1.8.5 Synergies

The synergies between LCWIP, key transport policies, ongoing transport schemes and wider economic investments are summarised in Figure 1.23.

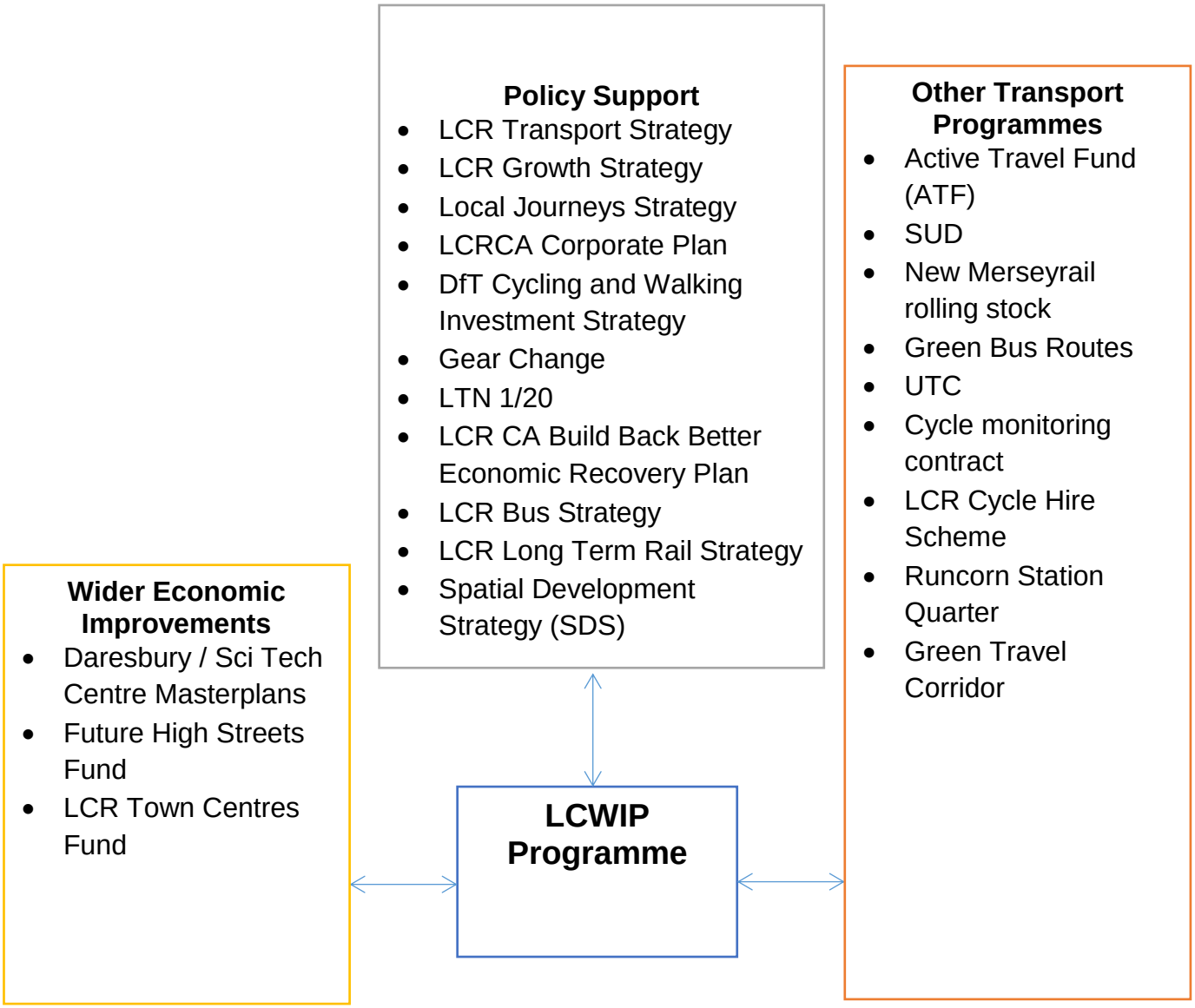


Figure 1.23 Synergies with Policy, Other Transport Schemes and Wider Economic Investments

1.9 The Impact of Not Securing Funding

The continued development of the LCWIP network is in response to the Climate Emergency declared in May 2019 and is directly aligned with the Mayor's vision for an Active Travel revolution across the City Region. By providing high quality separated cycle infrastructure, there is the ability to affect high levels of mode shift away from the private car. Studies show that increasing levels of cycling and walking amongst residents can have a positive impact on physical and mental health. In the LCR there are still many entrenched pockets of concentrated poverty and investing in a good quality cycle network will help to get more residents active which can help to reduce the likelihood of long-term illness and improve wellbeing.

1.10 How will success be realised?

As a City Region we are committed to continuous measuring and monitoring processes to make sure that we maximise the benefits of our investments and outcomes achieved are in line with the strategic objectives we have defined. Overall, we see success for Phase 2 of LCWIP as consisting of:

- Scheme delivery to time, budget and specification
- Safer, segregated cycling routes
- Improved health and well-being of City Region residents
- Increased accessibility and permeability of the City Region for employees, businesses and visitors
- Enhanced access via active and public transport to key employment and skills destinations
- A well-functioning and reliable transport network
- Increased attractiveness and sense of place for LCR residents and visitors

To ensure we realise success, a Monitoring and Evaluation Plan can be found in annex K.

1.10.1 Benefits Realisation and Monitoring and Evaluation

A Benefits Realisation and Monitoring and Evaluation Plan identifies the key beneficiaries of the programme, as well as the outcomes, indicators, responsible body and timeframes for each of the strategic outcomes. The evaluation of phase 2 of the LCWIP Network will primarily take the form of an outcome monitoring approach using a ‘before and after’ design to assess how outcomes have changed over the course of the interventions. For example, measurement of whether there has been an increase in the number of cyclists using the corridors after the improvements.

2 The Economic Case

2.1 Introduction

For the purposes of this Business Case, analysis has been undertaken to determine the economic benefits resulting from investment in the LCWIP Phase 2 network:

1. Runcorn-Daresbury
   - connecting Runcorn old town, a key redevelopment zone to rapidly growing employment areas at Daresbury via industrial and residential areas through Runcorn new town

The aim of the infrastructure investments under consideration is to encourage a step-change in the level of cycling in Liverpool City Region, with benefits to individuals, society and the environment. The routes include substantial sections of separated cycle tracks. The schemes also include junction upgrades and improvements to pedestrian infrastructure.

Liverpool City Region Combined Authority, Merseytravel and the six local authorities will use the results in prioritising the routes and schemes for further development work.

This section includes information on the economic assessment method used, the baseline data used in the assessment, how estimates of future use have been derived, the results of the assessment for core scenarios and the results of sensitivity tests.

Throughout the report prices are reported in 2010 values unless otherwise stated.

2.2 Method

The assessment methodology used in this exercise in aligned with guidance set out in the Department for Transport's (DfT) Transport Analysis Guidance (TAG), specifically the following sections:

- **Cost benefit analysis: TAG Unit A1.1 (May 2018) Cost-Benefit Analysis**
- **Preparation of scheme costs: TAG Unit A1.2 (July 2017) Scheme Costs**
- **Cycling scheme assessment: TAG Unit A5.1 (May 2018) Active Mode Appraisal**
- **Decongestion benefits: TAG Unit A5.4 (May 2018) Marginal External Congestion Costs**
- **Modelling and assessment values: TAG Databook May 2019 (v1.12)**

The BEIS Green Book supplementary guidance: valuation of energy use and greenhouse gas emissions for appraisal (2012, updated April 2019) was used in preparing an initial estimate of the potential impact of variations in carbon abatement costs (see section 4.3).

A spreadsheet-based approach has been used to calculate benefits and costs using values from TAG.

2.4 Activity Benefits

Activity benefits which individuals and society at large derive from cycling are quantified in this assessment in line with research published by the World Health Organisation (WHO) which identifies two main sources of benefits:

- **mortality (reduction in relative risk of premature death due to physical inactivity)**
- **absenteeism (reductions in absence from work)**

2.5 Estimate of current usage (BASELINE DEMAND)

In the absence of route-specific cycle counts or other sources of similar data we have derived estimates of current levels of cycling along the routes being assessed from 2011 Census travel to work data for relevant Middle Super Output Areas.

For each pair of MSOAs within the city region where people might feasibly use the route under assessment for some part of their journey to work, we drew down the number of people currently cycling for travel to work. We then multiplied the number of people in each cell by a factor which represents an estimate of how useful the particular route being assessed is likely to be for people living and working in the relevant MSOA pair for their journey to work. The factors were as follows:

- **0.9 Route will be useful for most trips between these MSOAs**
- **0.6 Route will be useful for many trips between these MSOAs**
- **0.3 Route will be useful for some trips between these MSOAs**
- **0.0 Route will not be useful for any trips between these MSOAs**

Figure 1 illustrates this, for example

- **90% of trips between MSOAs E02002583 and E02002582 are likely to use the route (green arrow on map)**

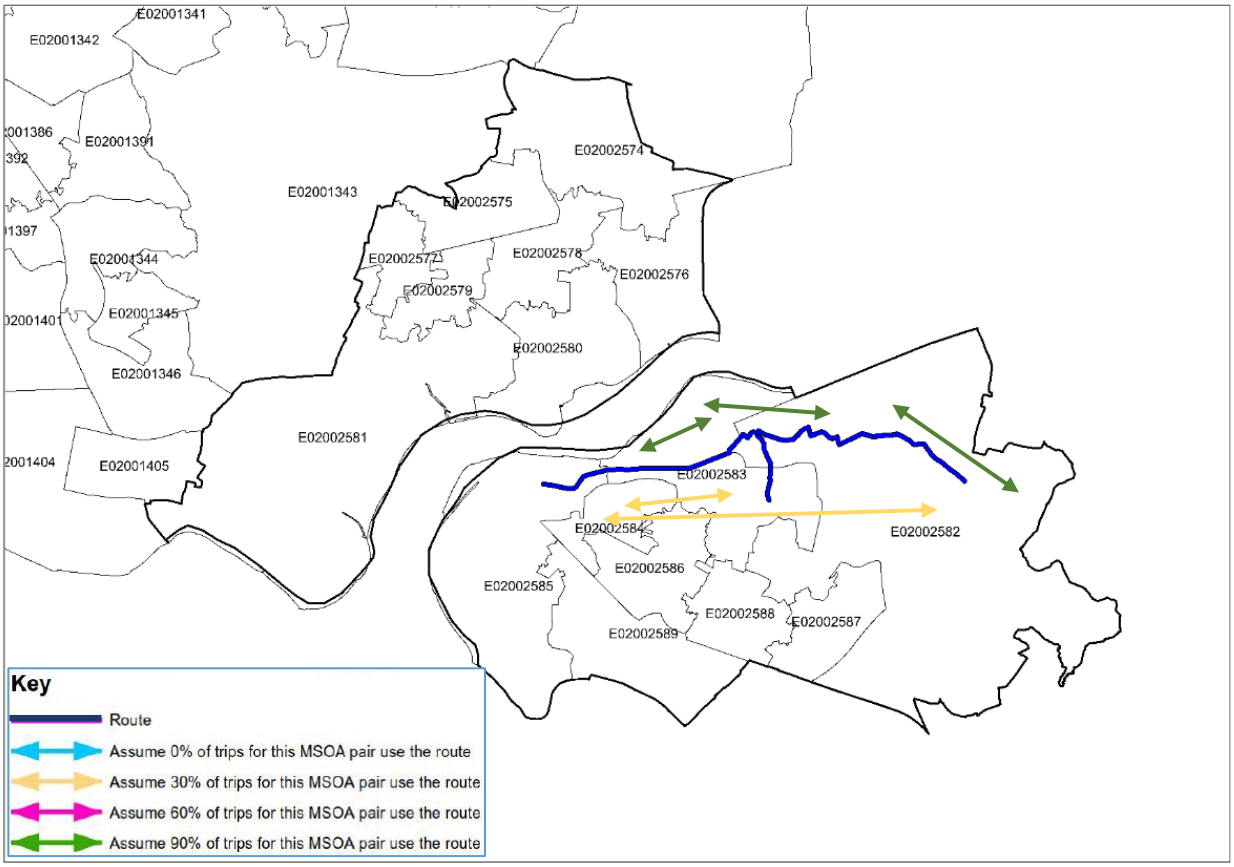


Figure 2.1: Example MSOA pairs in categories for usefulness of proposed cycle route

The sum of these products for all MSOAs pairs gives an estimate of the number of people likely to be using the route now for travelling to work. We multiplied this total by 2 to give as estimate of the number of one-way trips each day (home to work and work to home).

We then multiplied this estimate of the number of one-way work trips by 3 to generate an estimate of the total number of one-way trips for all purposes. These assumptions are as detailed in DfT Value for Money guidance provided for Active Travel Fund assessments in July 2020. The all-purpose cycling trips is noted in the guidance to derive from National Travel Survey data.

The significant level of development in the location in terms of both employment and residences has then been added in to represent the growing Daresbury employment centre and housing increases expected.

The baseline number of trips is subjected to an uplift to reflect the significant increase in employment in Daresbury since the 2011 Census. Approximately 1000 new jobs have been created at these locations over recent years. Assuming 4% if these employees travel by bike and each cycling employee make 2 trips per day on the network, this suggests an additional 80 trips per day are being made by bike.

The results of these calculations have been used as the baseline (current number of trips) for the Runcorn-Daresbury routes.

2.6 Estimate of Future Usage

- Number of cycling trips without proposed intervention = **573** (analysis undertaken from PCT using Census MSOA Data from/to trips and methodology detailed above.
- Number of cycling trips with proposed intervention = **1026** (analysis undertaken from PCT using Government Target Near Market Scenario MSOA Data from/to trips and methodology detailed above.

2.12 Background Growth (TEMPRO)

Background growth demand factors from DfT's Trip End Model Presentation Program (TEMPRO) have been considered. Over the assessment period as a whole TEMPRO predicts little overall change in traffic levels compared with a baseline of 2011 (the Census date), with a slight increase in all traffic and a slight decrease in cycle traffic. Given this limited change and the use of an assessment method (for the core case) which assumes a step-change in cycling activity following construction of the scheme with usage then remaining steady throughout the assessment period, with no year-on-year adjustments made for motorised or active travel trip rates, it is proportionate to disregard these small fluctuations in background traffic levels.

It is worth noting that landowners and developers of the two main employment areas at the eastern end of the Runcorn-Daresbury route, Sci-Tech Daresbury and Daresbury Park, between them envisage the creation of 10,000 new jobs during the assessment period for the cycle scheme. In addition to this a Redrow housing estate with 500 homes to be constructed in Daresbury adjacent to the route is planned. These potential increases have not been factored in, meaning that the estimates are cautious.

2.13 Comparative Case Studies

Four reports summarising recent cycling infrastructure schemes and the changes in travel behaviour observed after their construction have been considered as a sense-check on whether the estimates of future use for this study are plausible.

- **Transport for Quality of Life / Technopolis / Sustrans (2017) Cycle City Ambition Programme – Baseline and Interim Report**
- **8 towns and cities with significant investment in cycling infrastructure on specific routes. At this interim stage – and with work ongoing to establish consistent data sources – indications were that on corridors with significant investment cycling levels had increased by between 8% and 128% over 4 years, with city-wide increases ranging from essentially 0% up to 84%.**
- **Transport for Quality of Life, Arup, TRL (2017), Meta-analysis of outcomes of investment in the 12 Local Sustainable Transport Fund large projects: final report**

- **7 of the 12 towns and cities made sizeable investments in infrastructure and behaviour change measures for walking and cycling (as well as public transport). Cycling uplift on routes where the investments were made ranged from 23% to 46%, with area-wide increases between 2% and 34%.**

- **AEA / TRL / Transport for Quality of Life / UWE / University of Aberdeen (2010), The effects of Smarter Choice programmes in Sustainable Travel Towns**

- **3 towns and cities with investment made in "soft" measures – personal travel planning, travel awareness campaigns, public transport marketing, and walking and cycling promotional activities. Levels of cycling increased by 26%-30%.**

- **Transport for Quality of Life / Sustrans / Cavill Associates / UWE (2017), Summary of outcomes of the Cycling Demonstration Towns and Cycling City and Towns programmes**

- **18 towns and cities; cycling increases ranged from 6% to 62% within the study periods, with annual growth rates averaging 5.3% in cycling demonstration towns and 8.0% in cycling cities and towns with no apparent ceiling to the growth rate. The evaluation concludes that these levels of growth appear to be replicable, given comparable investment programmes in similar areas. The evaluation also notes that these improvements took place in political and policy contexts which were "not always fully supportive" and where "the quality of cycling [infrastructure] provision … remains modest in relation to that observed in much of continental Europe."**

These reports together cover 36 towns and cities across the UK. Most schemes considered showed increases in cycle use in the first few years following construction, ranging from 6% up to 128%, and with continued year-on-year increases. This gives us confidence that the estimates of future use for the schemes under consideration here are plausible.

3 Core Case

3.1 Assumptions and Inputs for Core Case

The updated Economic Assessment of the Core Case has been calculated using the latest Active Mode Appraisal Toolkit (AMAT) spreadsheets released in May 2022 by DfT to ensure all background DfT figures are aligned with TAG, including 20% optimism bias for schemes at Full Business Case. The following inputs and assumptions were used in the core case economic assessment:

- Appraisal Year = **2022**
- Intervention Opening Year = **2023**
- Appraisal Period = **30 years**
- Local Area Type = **Inner and Outer Conurbations**

- Number of cycling trips without proposed intervention = **573** (analysis undertaken at from PCT using Census MSOA Data from/to trips and methodology)
- Number of cycling trips with proposed intervention = **1026** (analysis undertaken at from PCT using Government Target Near Market Scenario MSOA Data from/to trips and methodology)
- How much of an average cycling trip will use the intervention = **100%** (this is based on AMAT guidance to use average cycle trip length divided by scheme length, with a maximum of 100% for schemes longer than average trip length)
- Current cycling infrastructure = **No Provision**
- Proposed new cycling infrastructure for this route = **off-road segregated cycleway**
- No additional shower or secure storage facilities are proposed
- Number of current walking trips without proposed intervention = **0**
- Number of proposed walking trips with proposed intervention = **0** (this is due to the scheme aiming to increase cycling journeys rather than walking so no uplift has been represented)
- How much of an average walking trip will use the intervention = **100%** (this is based on AMAT guidance to use average cycle trip length divided by scheme length, with a maximum of 100% for schemes longer than average trip length)
- Investment Costs = **£5.9m**
- Operating costs = **£10,000 per year** (this is based on the assumption that it will costs £1,000 per km each year for maintenance as outlined in the original Full Business Case submission)
- Optimism Bias = **20%** (based on DfT AMAT guidance that for Full Business Cases, Optimism Bias should be 20%)
- Average Cycling trip length = **5.6km** (National Travel Survey 2012-14)
- Average Cycling speed = **15 km/h** (National Travel Survey 2012-14)
- Proportion of cyclists who are employed = **56.4%** (National Travel Survey 2018)
- Proportion of cyclists otherwise using a car = **57.4%** (Liverpool City Region Household Travel Survey 2017 car driver/passenger mode share in Halton)
- Proportion of cyclists otherwise using a taxi = **2.4%** (Liverpool City Region Household Travel Survey 2017)
- Average walking trip length = **1.18km** (National Travel Survey 2012-14)

- Average walking speed = **5 km/h** (National Travel Survey 2012-14)
- Proportion of walkers who are employed = **56.4%** (National Travel Survey 2018)
- Proportion of walkers otherwise using a car = **57.4%** (Liverpool City Region Household Travel Survey 2017)
- Proportion of walkers otherwise using a taxi = **2.4%** (Liverpool City Region Household Travel Survey 2017)
- Return journeys = **90%**
- Background growth rate in trips = **0.75%**
- Period over which this rate applies = **30 years**
- Number of days for which intervention data is applicable per year = **253 days**
- Car occupancy rate = **1.6** (National Travel Survey 2002-2016)
- Taxi occupancy rate = **2.4** (TAG Data Book 2010)

The Runcorn-Daresbury scheme achieves a **BCR of 3.00** on the core case, which is classed as **High VfM** under the Department for Transport Value for Money Framework (2015).

Typically around half of the benefits of cycling schemes are health benefits for individuals choosing to cycle, derived from the reduced risk of premature death and reduced absenteeism. These relate to the absolute number of people who increase their level of cycling; where increases are essentially proportionate to the baseline number, it is inevitable that routes with higher levels of current cycling activity see larger absolute increases and hence higher benefits.

4 Sensitivity Tests

Following the core scenario, a series of sensitivity tests were completed to provide confidence in the Value for Money (VfM) of the scheme. The sensitivity tests demonstrate the impact on the BCR of differing factors including:

Sensitivity Test 1: Proportion of cyclist otherwise using a car or taxi

The default figures for both proportion of cyclists otherwise using a car (11.0%) and a taxi (8.0%) was used as alternative statistics to the Liverpool City Region Household Travel Survey 2017 figures that were used in the core case.

Sensitivity Test 2: No Annual Maintenance

Operating costs have been assumed to be zero for 30 years assuming this cost will be absorbed within existing maintenance budgets at no additional cost.

Sensitivity Test 3: Increased Pedestrian Demand

The number of walking trips without the proposed scheme is 511. The original scheme appraisal did not include analysis of people walking as the scheme is primarily aimed at increasing cycling. However, this sensitivity test assumes an increase of 10% in current walkers as an indirect impact of the scheme.

Sensitivity Test 4: Proportion of trips using the scheme

This sensitivity test reduces the proportion of each trip using the scheme from 100% (as detailed in the core case) to 50%. By assuming that half of each trip is accessing the route and continuing off it (for example, the initial part of a trip from home to the scheme, and the last part of the trip from the scheme to a workplace) the benefits are reduced.

Sensitivity Test 5: Increasing Annual Maintenance

It has been assumed that Operating Costs in this sensitivity test will increase over the 30-year appraisal period from:

- Year 2 to Year 10, operating costs will be £10k per annum
- Then from Year 11 to Year 20, operating costs will be £28k per annum (taking into account potential inflation)
- And finally, from Year 21 to year 30, operating costs will be £90k per annum (taking into account potential inflation and renewals costs)

Sensitivity Test 6: Lower Cycling Demand

It has been assumed that the increase in cycling demand is 15% of the baseline demand, leading to 659 with-scheme cycle trips.

Sensitivity Test 7: 20 Year Appraisal Period

The appraisal period is 20 years in this sensitivity test as per DfT guidance for walking and cycling schemes.

Sensitivity Test 8: 20% Increase in Investment Costs

It has been assumed that Investment Costs will increase by 20% to £7079k in this sensitivity test due to the current economic uncertainty surrounding inflation rates. Optimism bias is retained at 20%.

The table below shows all sensitivity tests and the core scenario test.

Sensitivity Tests

	Core Scenario Outputs	Sensitivity Test 1: Proportion otherwise using car and taxi	Sensitivity Test 2: No Annual Maintenance	Sensitivity Test 3: Increased Pedestrian Demand	Sensitivity Test 4: Proportion of trips using the scheme	Sensitivity Test 5: Increasing Annual Maintenance	Sensitivity Test 6: Lower Cycling Demand	Sensitivity Test 7: 20 Year Appraisal Period	Sensitivity Test 8: 20% Increase in Investment Costs
Baseline Cycle: current trips	573	573	573	573	573	573	573	573	573
Cycle trips with scheme (per day)	1026	1026	1026	1026	1026	1026	**659**	1026	1026
Baseline Walking: current trips	0	0	0	**511**	0	0	0	0	0
Walking trips with scheme (per day)	0	0	0	**562**	0	0	0	0	0
Scheme cost (£m)	5.899	5.899	5.899	5.899	5.899	5.899	5.899	5.899	**7.079**
Appraisal Period (years)	30	30	30	30	30	30	30	**20**	30
Optimism bias	20%	20%	20%	20%	20%	20%	20%	20%	20%
Maintenance costs (£000 per year)	10	10	**0**	10	10	**2024 - 2032 = 10 2033 – 2042 = 28 2043 – 2052 = 90**	10	10	10
Proportion of average cycling trip using the scheme?	100%	100%	100%	100%	**50%**	100%	100%		100%
Proportion of cyclists otherwise using a car	57.40%	**11%**	57.40%	57.40%	57.40%	57.40%	57.40%	57.40%	57.40%
Proportion of cyclists otherwise using a taxi	2.40%	**8%**	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%
Congestion benefit (£000)	1498.13	414.74	1498.13	1533.67	1498.13	1498.13	284.41	1020.25	1498.13
Infrastructure (£000)	4.25	1.18	4.25	4.35	4.25	4.25	0.81	3.03	4.25
Accident (£000)	130.63	36.16	130.63	133.73	130.63	130.63	24.80	92.81	130.63
Local Air Quality (£000)	23.51	6.51	23.51	24.07	23.51	23.51	4.46	17.32	23.51
Noise (£000)	8.71	2.41	8.71	8.92	8.71	8.71	1.65	6.19	8.71
Greenhouse gases reduction (£000)	64.51	17.86	64.51	66.04	64.51	64.51	12.25	47.12	64.51
Reduced risk of premature death (£000)	4465.26	4465.26	4465.26	4657.93	4465.26	4465.26	847.71	2976.27	4465.26
Absenteeism (£000)	533.38	533.38	533.38	571.34	533.38	533.38	101.26	376.52	533.38
Journey ambience (£000)	5907.96	5907.96	5907.96	5907.96	2953.98	5907.96	4551.97	4170.45	5907.96
Indirect taxation (£000)	-70.50	-19.52	-70.50	-72.17	-70.50	-70.50	-13.38	-59.83	-70.50
Investment costs (£000)	4114.59	4114.59	4114.59	4114.59	4114.59	4114.59	4114.59	4114.59	4937.65
Operating costs (£000)	80.85	80.85	0.00	80.85	80.85	245.22	80.85	66.15	80.85
PVB (£000)	12561.58	11364.75	12561.58	12831.47	9607.60	12561.58	5815.13	8647.10	12561.58
PVC (£000)	4191.19	4194.26	4110.34	4191.09	4191.19	4355.56	4194.63	4177.71	5014.24
BCR	**3.00**	**2.71**	**3.06**	**3.06**	**2.29**	**2.88**	**1.39**	**2.07**	**2.51**

5 Conclusion

Following the updated Economic Assessment, the Core Scenario demonstrates a **BCR of 3.00** representing High Value for Money.

Eight sensitivity tests have been completed in order to provide confidence in the Value for Money (VfM) of the scheme. These demonstrate how varying factors and inputs impact the BCR and ultimately the Value for Money of the scheme. All sensitivity tests demonstrate either a Low Value for Money or a High Value for Money as the BCR's range from 1.39 to 3.06. As a result, the range of sensitivity tests should provide confidence that the VfM would remain high under a large range of circumstances differing from the Core Scenario.

- **the Runcorn-Daresbury scheme achieves a High BCR of 3.00 for the core case.**

3 The Financial Case

The Financial Case considers the affordability of the scheme, providing evidence on the following topics:

- Spending profile and costings
- Financial risks and risk allowance
- Funding sources
- Long-term financial sustainability of the scheme (including costs for operation, maintenance and major capital renewals

3.1 Spend profile

Detailed designs have been prepared for Halton: Runcorn to Daresbury and costings undertaken by a quantity surveyor to provide o Bill of Quantities. Utilising TCF pre-development funding for the scheme Project Centre Ltd prepared outline designs. Halton BC have furthered this design to final design including signalised junction designs.

	Halton Pricing May 2022 Year 1 (2022/23)	**Scheme Total**
TCF Request	£5,898,614	**£5,898,614**
Other funding	£0	£0
Scheme Total	£5,898,614	**£5,898,614**

Table 3.1: Scheme spend profile

The detailed cost breakdown is provided in Appendix M.

3.2 Financial risks and risk allowance

The itemised costings for each route are shown in Appendix M. Costs have the following contingency and allowances

1. Preliminaries are included within Bill of Quantities

2. Traffic management is included within Bill of Quantities

3. Allowance based on construction costs above (prior to obtaining more detailed SU estimates) for works for and by Statutory Undertakers, consultations, signal power supplies – based on estimates from Statutory undertakers

4. Site supervision is included within Bill of Quantities

5. An allocation for signage is included within the costings

6. Cost estimates related to the requirement to move statutory undertaker equipment have been included as high end estimates.

Optimum bias of 20% has then been applied to total scheme costs for the purposes of economic assessments including BCR and Value for Money assessment.

3.3 Funding sources

This scheme is listed within LCR Transforming Cities Funding (TCF) £172.5m programme commissioned by the Combined Authority September 2019. Final designs have been produced by Halton BC to provide cost certainty for this Full Business Case.

3.4 Alternative Funding Arrangements

No alternative funding arrangements have been identified. If this TCF funding were not secured, this phase of the LCWIP network would not continue. This would affect the LCR reputation and impact on the Mayor's ability to deliver an 'Active Travel Revolution'.

It would also impact on the LCR's ability to secure additional central government funding to deliver active travel measures.

3.5 Accounting Implications

In January 2019, the LCR Combined Authority has agreed an Assurance Framework for the financial management of government funding. This Quality Assurance Framework will form the basis of the financial management of the City Region's LCWIP Phase 2 funding. A Grant Funding Agreement will be prepared between LCRCA and Halton BC to legally contract with the Combined Authority to the terms and conditions of the Assurance Framework.

Merseytravel, on behalf of the Combined Authority, will put in place appropriate arrangements for the proper use and administration of the LCWIP Phase 2 funding. Building on local government financial systems, Merseytravel will require quarterly grant claims, signed and authorised by each of the Partner's Chief Financial Officer and Head of Internal Audit, whilst reserving the right to randomly audit Partner expenditure.

4 The Commercial Case

4.1 Introduction

The Commercial Case provides evidence on the following topics:

- Output Based Specification;
- Procurement Strategy;
- Contract Management;
- Alternative Options;
- Programme Implications and Risk; and
- Conclusion.

4.2 Output Based Specification

The LCWIP Network seeks to invest in cycling and walking infrastructure, which will support the sustainable growth of our Region. Phase 2 routes are programmed for delivery in Halton. The design and construction of this initial programme will be based on the pre-existing and well-established contractual arrangements within each of the local authorities concerned.

The principal outputs for the **LCWIP Phase 2 Route are as follows:**

Runcorn – Daresbury Outputs

9.3km of continuous cycleway linking existing infrastructure work to complete this route comprising of the following new and upgraded infrastructure:

- 6.2km segregated cycle way
- 3.1km signed route (on existing infrastructure)
- 3x toucan crossings/ junctions (Bridge Street, Busway/Warrington road/Sunnyside lane)
- 1x upgrade of existing crossing on Irwell Lane to shared use crossing
- 1 x Pegasus crossing (Newmoore lane)
- 96 Metroactive signs
- 30 lighting columns to be disconnected and removed
- 50 new columns with LED luminaires will be installed

4.3 Procurement Strategy

During the Full Business Case development, the detailed /technical design work has been completed. This has incorporated alterations following two stages of public consultation. Design services were procured using the Merseytravel framework for Halton and design work by Project Centre Ltd was undertaken in collaboration with Halton design and highways colleagues. The designs have been completed by Halton BC, including designs of the phasing and timings of the signalised junctions and crossings within the route.

Work along the corridor will be delivered using an existing term contractors. Halton Borough Council has existing contractual arrangements with Lambros Paving Contractors LG Limited which covers Highway construction schemes. This contract has been procured through full OJEU procedures, has provided commercial viability and has been operating successfully since 2018. Early contractor involvement has been established with Lambros, who have provided the Bill of Quantities on the based on their contract rates.

Halton BC and an Assurance Manager from the PMO team will have the responsibility of the overall programme to monitor performance and overall evaluation of the programme and to report to Senior Officers groups of the Combined Authority including TCF Board. This is based on the governance and assurance framework approved by the CA.

Contractual arrangements are such that payments are made at interim stages throughout the delivery of a scheme. Claims can be made quarterly, based on expenditure. It is the responsibility of the Project Manager with Halton to oversee the delivery of individual schemes including sign-off for payments. Final payments will be made following scheme completion.

4.4 Contract Management

As indicated above the term contracts are managed within each district via the appropriate existing and well-established management structures. Monthly project control meetings will be scheduled throughout the delivery programme between the Core Programme Team/Programme Manager and the partner's Project Manager to monitor progress against the programme, assess risk and monitor spend against budget. These meetings will be supplemented at a local level by meetings between the Project Managers and the relevant contractors.

4.5 Alternative Options

Alternative procurement options have been considered and discounted as set out in Table 4.3.

LCR Partner	Services Included in the Contract	Current Contractor	Contract End Date
Halton	Highway Construction works	Lambros Paving Contractors Ltd	March 2023
	Highway works > £250k and other civil engineering construction works	Open Tender	Project specific

Table 4.1: Existing Contractual Arrangements – Construction and Engineering

LCR Partner	Services Included in the Contract	Current Contractor	Contract End Date
Halton	Highway design transportation, public realm and asset management	In-house but can be supplemented by individual commissions	N/A
LCRCA	Lot 11 Highways Infrastructure Consultancy Professional services - design, technical support, QS	HaskoningDHV, WSP, Flinders Chase, Project Centre, Pell Frischmann, Mott MacDonald,Waterman, Aecom	April 2023

Table 4.2: Existing Contractual Arrangements – Technical and Design Work

Procurement Option	Option Summary	Advantages	Why Discounted
No centralised Project Management with Delivery via LCR partner Districts (Status Quo)	The existing way of delivering cycle schemes is that each LA completes their own programme which may or may not link with a neighbouring borough, at present there is no central co-ordination of cycling infrastructure in the region and this has led to a disjointed cross boundary network.	Existing delivery mechanisms in place with long standing commercial/ contractual relationships in place means schemes can be procured under pre-existing legal frameworks in a timely manner to assist the delivery process.	Individual tenders developed across the LCR resulting in a number of smaller tenders and the equivalent number of back office tasks being repeated across the LCR. No centralised Project Management would result in no centralised overview of progress, financial management, risk mitigation learning and programme management and consistency of approach to reporting etc This option would also put increasing pressure on the same level of LA staff to deliver a mounting number of highway schemes which could lead to further deliverability issues.
Centralised Delivery via the Combined Authority	A team that sits in the CA and works with local highways authorities to approve design and programme works etc would deliver the strategic corridors centrally.	Would allow for centralised commissioning with its equivalent reduction in the number of tenders procured, the back office tasks undertaken to produce tenders etc. etc. potentially resulting in an overall cost saving to the Combined Authority. This approach would mean that there would be clear strategic direction and the network would be delivered more efficiently as design would be completed centrally so would ensure that it meets the LTN 1/20 standards and a build contract would be let to ensure that consistent delivery is achieved across the LCR.	Large procurement process at a large value would involve a new OJEU process leading to extremely long lead in times which would not meet the delivery dates for TCF expenditure The central delivery team would also need to be granted powers by the LA to undertake any works on their highway, which may not be acceptable to local authorities who may resist relinquishing control of works undertaken on their highway network.

Table 4.3 Discounted Procurement Options

4.6 Programme Implications and Risk

4.6.1 Programme Timeline

The overall programme for the delivery of the Runcorn to Daresbury route will be provided following the FBC submission.

4.6.2 Contract Risk Management

The use of existing term contracts (along with the existing relationships) provides for a robust risk management process which ensures that risks are raised at the earliest opportunity and dealt with expeditiously, thus optimising key project targets. A risk register has been developed at a programme wide level. Halton BC will be required to maintain an ongoing risk register for each scheme that is monitored and reported on at monthly project control meetings.

4.7 Conclusion

Procurement for the LCWIP Network will take place via the existing term contracts already in place in Halton with Lambros Paving Contractors Ltd. This enables early contractor involvement with a view to procuring construction immediately following business case approval.

The contracts will be managed on a day-to-day basis by the responsible Project Manager in both Halton, with regular update meetings with the Core Project Team at LCRCA.

Contract risks were identified and discussed as part of the programme wide risk assessment and formed the basis of the Quantified Risk Assessment. A risk register has been produced at a programme level.

5 The Management Case

5.1 Introduction

The Management Case considers whether a proposal is deliverable. It provides evidence on the following topics:

- Governance
- Evidence of Delivery of Similar Projects in the LCR
- Assurance
- Delivery Programme
- Risk Management
- Communication and Stakeholder Management
- Monitoring & Evaluation
- Conclusion

5.2 Governance

The LCWIP programme will be managed through the LCRCA Strategic Investment Fund Assurance Framework approved by the Combined Authority in December 2018. The co-ordination and management of the overall LCWIP programme and its varied elements sits with the LTP Development Team within Merseytravel. Halton BC will deliver the project, reporting to the Project Management Office (PMO) within the LCRCA. The need for an effective governance structure is vital given the level of investment planned over the relatively short time frame, any delays, risks or dependencies will need to be identified at an early stage and fed back to the Key Route Network Group.

The Government's Cycling and Walking Investment Strategy (CWIS), (April 2017) sets out the ambition for creating a walking and cycling nation, targets and objectives, available resources, a delivery strategy, and governance arrangements. More recently the Governments Policy document Gear Change: A Bold Vision for Cycling and Walking (2020) and the new DfT Local Transport Note (LTN) 1/20 Cycle Infrastructure Design (July 2020) both establish the step change in the approach from central government to delivering good quality cycling and walking infrastructure.

The CWIS advocates the development of Local Cycling & Walking Infrastructure Plans (LCWIP) to identify cycling and walking improvements required at the local level. The Runcorn to Daresbury route set out in this document is the first phase of the LCR's Strategic Cycling and Walking Infrastructure Plan seeking investment.

Governance of the LCWIP Phase 2 programme will follow the LCR Strategic Transport Structure which has a strong track record of successful delivery.

5.3 LCR Strategic Transport Governance

City Region partners have agreed an implementation structure designed to manage delivery of the Combined Authorities many areas of responsibility e.g. transport, employment and skills and other elements of the Strategic Investment Fund. Merseytravel is the established lead for the delivery of both transport projects and transport operations.

5.4 Programme Management Office

The Programme Management Office (PMO) has set out a defined, consistent project management framework for Merseytravel and LCR projects. The PMO have developed a common approach to project controls including schedule management, cost and spend profile and risk management. For example for the Active Travel Fund programme a monthly dashboard with project progress is reported to a programme board, TAG and to colleagues from the Department of Business, Energy and Industrial Strategy. LCWIP Network will be managed in alignment with the established PMO processes, with Halton BC required to implement the necessary project controls and to submit a dashboard. Using the project control data collected on a monthly cycle, the PMO will utilise established methods of measuring individual project progress and performance by comparison to baselines.

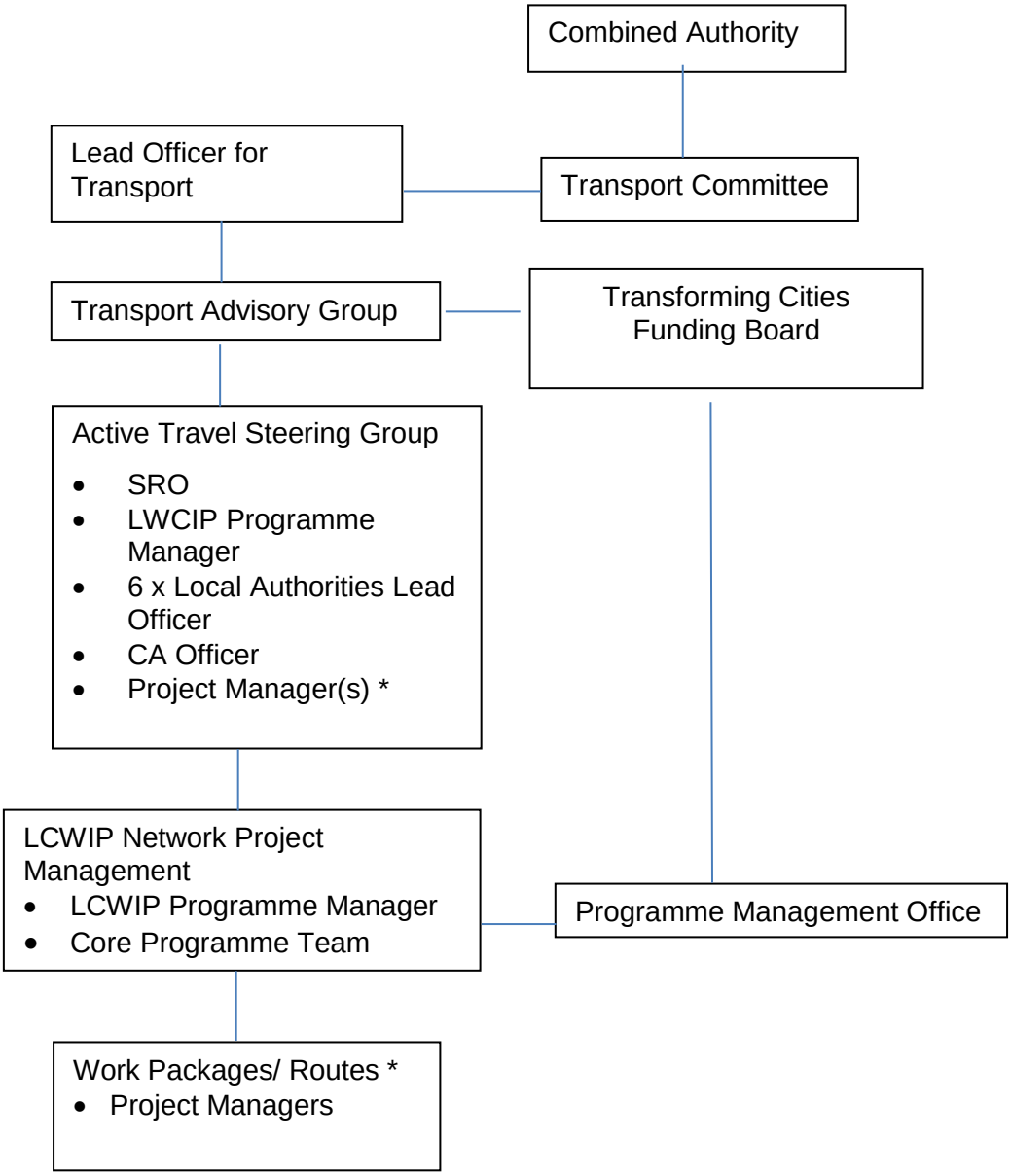
5.5 LCWIP Network Governance

The programme will be managed through the governance and assurance framework approved by the Combined Authority. The co-ordination and management of the overall programme and its varied elements sits with the LTP Development Team within Merseytravel, who have responsibility for coordination of active travel across the LCR. The Project Manager will liaise on a regular basis via monthly meetings and project diary updates with the Lead Officer / Project Manager from Halton Council responsible for the Runcorn to Daresbury route. The need for an effective governance structure is vital given the level of investment planned over the relatively short time frame, any delays, risks or dependencies will need to be identified at an early stage and fed back to the TCF Board.

5.6 LCWIP Programme Management

The scheme will be managed through the governance and assurance framework approved by the Combined Authority.

The LCR Governance Structure for the delivery of LCWIP Network is illustrated in Figure 5.1 and the roles and responsibilities of each group are outlined in Table 5.3. This model is specifically for delivery of the LCWIP routes, but follows on closely from governance of the LCWIP and how the network was developed, which is shown in Figure 5.2 below.



*As appropriate as the network is delivered

Figure 5.1 LCWIP Network Programme Management Delivery Governance

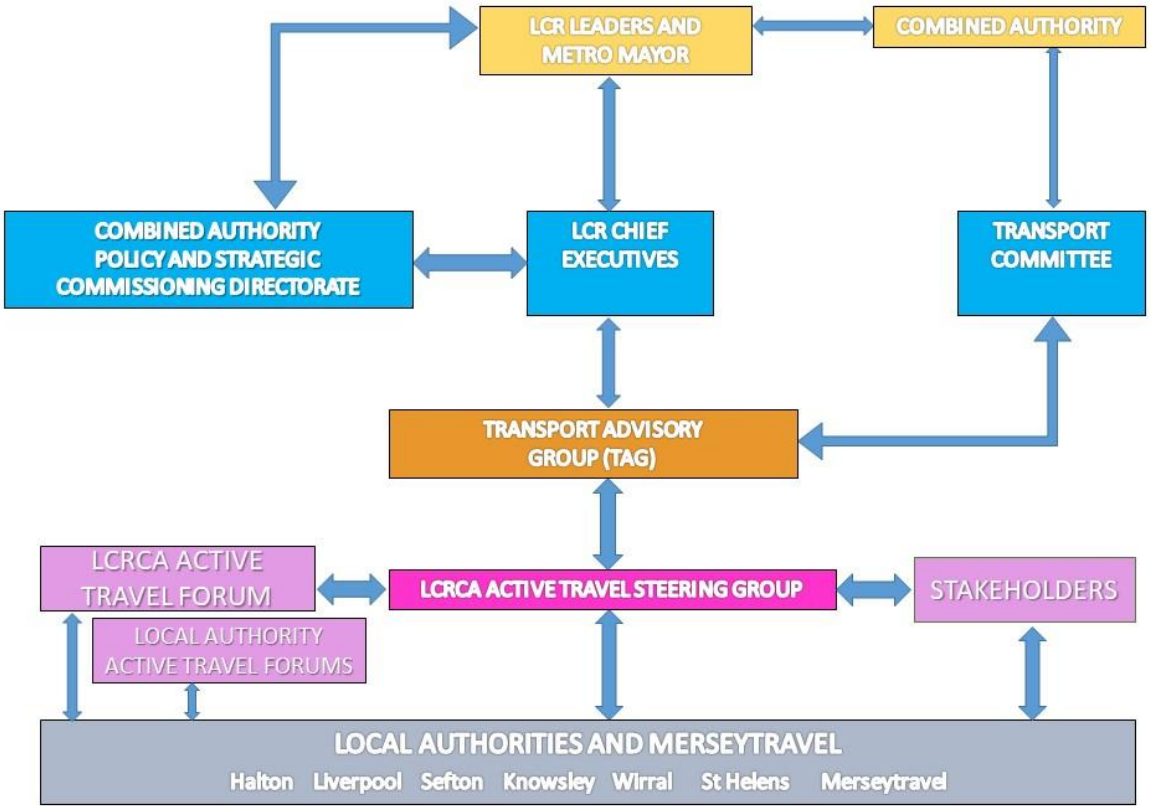


Figure 5.2 LCWIP Development Governance

Group	Role	Responsibilities
Combined Authority	Metro Mayor and leaders of the LCR who meet Monthly	Responsible for taking key decisions on the executive functions for the LCR
Transport Committee	Overall responsibility for both CA and District Operations	Overall responsibility for implementing key decisions on the executive functions of the CA
Transforming Cities Fund Board/ Lead Officer for Transport	Group of senior Officers including Lead Officer on Transport within the LCR reporting to the Chief Executives Group	Responsibility for Transforming Cities Fund in the LCR. To provide guidance to TAG.
Transport Advisory Group (TAG)	TAG will monitor the programme at a strategic level to ensure	To lead on Transport in the LCR and to advise the LCR, as appropriate. To act on behalf of the Lead Officer for Transport.

Group	Role	Responsibilities
	that it is being delivered on time and to budget.	
Key Route Network Group/ CA Programme Delivery Group	Monitor all projects being delivered on the KRN ensuring integration of all modes will act as Programme Board to manage coordination of the programme across the LCR partners ensuring progress and reporting to TAG as appropriate	To advise on programme and portfolio performance. Directs delivery of LCWIP schemes. Assists in decision making, risk management, issue resolution and on-going progress of the scheme. Provides specialist advice
LCR Active Travel Group	Supports development of LCWIP and advises on priorities at a local authority level	Assists in making recommendations, to KRN Group. Provides specialist advice
LCWIP Project Management	Includes the LTP Development Team who develop the prioritisation programme of the LCWIP and Project Manager leading scheme delivery within the local authority.	Responsible for overseeing day-to-day delivery and risk management of the scheme. Reports to and raises any issues to the KRN Group. Manages contractor.
Programme Management Office	To liaise with LTP Development Team and Project Manager to manage project as an integral part of TCF.	To ensure a mechanism for resolving issues is brought forward. To independently report LCWIP progress on a quarterly basis to TAG within the context of wider TCF programme progress within the LCR.
Local Authority Project Managers	The project manager will liaise with other local authority officers, the LTP Development Team and contractors to ensure implementation of measures.	Provides feedback and advice as appropriate.

Table 5.3 LCWIP Network Programme Management Governance Roles and Responsibilities

5.6.1 Management

The co-ordination and management of the overall (LCR wide) programme and its varied elements sits with the LTP Development Team. The LTP Development Officers liaise on a regular basis via monthly meetings with the Lead Officer / Project Manager and commissioned consultant for each of the individual routes within the LCWIP i.e. Runcorn to Daresbury route.

The Runcorn to Daresbury route will have a Lead Officer/ Project Manager within the local authority concerned (Halton) with responsibility for project delivery of all aspects of the scheme with agreed budget and timescales. They will feed into the Project Management meetings, Key Route Network Group meetings and upwards to Transport Advisory Group (TAG) who will oversee the process.

5.7 Transport Advisory Group (TAG)

The Transport Advisory Group (TAG) will support the process and liaise with the LCRCA to work with other sectors within the CA, such as Employment and Skills, Regeneration and Housing.

TAG will be represented by Directors of Transportation services across the LCR. The Group will meet on a regular basis. Regular reports will be provided on LCWIP updates, financial management, risks and key issues.

5.8 Transforming Cities Fund Board

The Transforming Cities Fund (TCF) Board, attended by Directors of the CA, will receive updates on project progress via the monthly dashboard reporting and advise and make recommendation to the CA on delivery of TCF projects.

5.9 Evidence of Delivery of Similar Projects in the LCR

Working together, partners from across the private, public and voluntary sectors in the Liverpool City Region have a long history of success in implementing sustainable transport and regeneration programmes. In recent years, City Region partners have delivered several large scale programmes, as detailed in Table 5.4. Each of the programmes has had robust programme management arrangements put in place from the outset, with a Programme Board being created with senior representation from partner organisations giving a strategic steer to each of the programmes. The Programme Board was then supported by a Steering Group made up of key stakeholders who met regularly to track the progress of scheme implementation and discuss and resolve any issues that arose. The Steering Groups reported to their

relevant Programme Boards with details on progress. Similar management arrangements will be used for LCWIP Network, learning from our successes elsewhere.

Programme Name	Value	Time frame	Key outputs delivered	Delivered to time?	Delivered to budget?
Sustainable Transport Enhancements Package (STEP)	£41.4m capital	2015-2021	Over 26km of new or improved cycle routes delivered in years 1 and 2 • Journey time savings on Liverpool City Corridor • Improved public realm for 30 business	Currently in delivery	YES
Merseyside LSTF	£25m capital and revenue	2011-2015	• Over 350 cycle parking spaces introduced/upgraded • Over 40km of new or improved cycle routes delivered • Over 100 cycle hire stations introduced	YES	YES
Integrated Transport Block	£17.2m capital	2018/19	• LCR minor works scheme delivery including public transport schemes • Delivery of road safety improvement schemes	YES	YES
Key Route Network	£25m capital	2017/18-2019/20	• Package of 15 schemes on the Key Route Network • Including an upgrade of UTC infrastructure across the LCR	YES	YES
SUD (LCWIP Phase 1)	£16.7m Capital	2019/20-2022/23	• Package of 8 schemes delivering new and upgraded cycle routes throughout the region • Each route will have a significant green infrastructure element inc. biodiversity upgrade, tree planting and flood mitigation measures	On track	On track

Table 5.4 Programme Management Experience

5.10 Delivery Programme

A delivery programme will follow this FBC submission once Halton have received this from contractors Lambros.

5.11 Risk Management

5.11.1 Risk Management Strategy

The production of a risk register is an integral component of the standard project management procedures that are conducted by all partners involved in LCWIP Network. The risk register will be reviewed regularly throughout the detailed design, procurement, delivery and indeed post-delivery phases as a standing item in progress meetings. The full Risk Register is included in Annex I which includes a detailed risk registers for Programme Governance Risks.

5.11.2 Risk Assessment

A scheme delivery risk workshop was undertaken with partners in September 2019 to identify risks and mitigation measures associated with LCWIP, and assess their likely impact in terms of both time and cost. The Risk Assessment and Management Strategy and are included in Annex I. Details on Risk Allowances can be found in the Financial Case.

5.12 Constraints, Dependencies and Interfaces

The delivery of the LCWIP Network schemes will require a number of scheme tasks to take place to be delivered successfully. These include receiving political support for the interventions, Traffic Regulation Orders, traffic management plans, planning approvals and land ownership agreements. All LCR partners have established procedures in place to deal with these delivery constraints and dependencies and as detailed above. Further information relating to the constraints, dependencies and interfaces for each corridor can be found in the Strategic case.

5.13 Communication and Stakeholder Management

5.13.1 Stakeholder Management Strategy

The full Communications Plan and Stakeholder Management Strategy is included as Appendix J. The strategy outlines the approach to engagement and consultation with stakeholders and the public to support the LCWIP route Runcorn to Daresbury. This strategy provides a framework for clear, consistent and purposeful communications with those who have an interest in the LCWIP schemes across the Liverpool City Region, to ensure that the schemes developed appropriately considers wider views and inputs.

This strategy sets out at a high level the stakeholder groups who have been engaged with as part of the process, key tools to support stakeholder management and the approach to engaging with these stakeholders at a local level.

The plan has a detailed breakdown of the key stakeholders and approach to engagement. Stakeholder mapping for the programme shows varying stakeholders for the project, which by nature of how closely their area of work interacts with the project will naturally have varying levels of interest and influence. This mapping has allowed us to determine the most effective way to engage with them throughout the programme.

The stakeholder mapping exercise has allowed us to identify key stakeholders who provide valuable comments and input to LCWIP schemes. Engagement is over two phases to obtain early buy-in to the LCWIP scheme (which took place in August/September 2020) followed by a second phase of engagement on the final designs (which took place in March 2021). There is also the possibility of greater joint working with key partners in economic development, planning and road safety in order to maximise the delivery potential of schemes. Through early and frequent communication with stakeholders, during detailed design, as the FBC has been completed, we can ensure the aims, objectives and benefits of the LCWIP schemes are shared and fully understood by all stakeholders and also allow stakeholders the opportunity to feed into the detailed design. This allows scheme promoters to actively put measures in place to mitigate anticipated future objections.

5.13.2 Summary of Key Stakeholders Identified

Appendix J Communications and Stakeholder Plan is a detailed document of all the engagement carried out and planned. A stakeholder mapping exercise identifies a number of key stakeholders and endeavours to determine their level of interest in and influence over the LCWIP. This will enable the LCR Transport Partners to determine how best to engage with each stakeholder group throughout the development and delivery of the LCWIP.

5.13.3 Communication

Given the range of stakeholders involved with the LCWIP programme, a variety of communication methods are required to actively engage them, during detailed design, during and after scheme delivery.

Activity	Objectives	Target Audience	Timescale / Frequency	Outcomes
Partnership Newsletter	Information provision – regular updates on LCWIP and Majors Opportunities to share good practice	LCR CX's, Leaders & Local Cllrs MP's Businesses Chambers of Commerce, DfT, LEP, transport operators, local Business's, local Media etc.	Quarterly	Feedback on proposed schemes Ability to feed information to residents Strive for continuous improvement
Local Authority led Area Committees	Support schemes, local input into proposals and political support	Local area directors local councillors Residents forums Cycle groups	6 weekly	Input into current cycling and walking schemes
Road Shows	Information provision	LCR residents	As and when required depending on scheme delivery	Raise awareness of LCWIP
Websites – CA / LAs and Merseytravel	Information provision and consultation	LCR Residents, statutory consultation mechanism	As and when required	Publish key LCWIP milestones & business cases etc.
Local Politicians Briefings	Information provision – regular updates on LCWIP, feedback from constituents comments.	Local Cllrs	As and when required	Feedback on proposed schemes Ability to respond to residents
LEP – link with main employment sites	Participation – Recognised need to link cycling and walking with the LCR Strategic Economic Plan & key	LEP Officers LEP Networks Large employers e.g. Peel Ports, Unilever	As and when required	Input into cycling and walking scheme design

Activity	Objectives	Target Audience	Timescale / Frequency	Outcomes
	employment areas.			
LCR Chambers of Commerce	Information provision and consultation - High level updates on Bike Life, link to consultation activities	Chamber members	As and when required	Feedback on proposed schemes Information fed to local businesses
Employers Network	Information provision – update on LCWIP activities Opportunities to share best practice.	Local businesses	3 times a year	Feedback on proposed schemes
Feedback Via Planning Process	Information provision and participation	Developers, businesses in identified growth zones, future growth zones, development areas	As and when required via district planning officers	High level update on LCWIP schemes when appropriate Ensure LCWIP schemes are linked to sites of key strategic importance

Table 5.6: Key Communication Methods

The activities above will be complemented by the governance and reporting mechanisms in place for the LCWIP programme. The full Communications Plan and Stakeholder Management Strategy will be included as part of the Full Business Case submission.

5.14 Monitoring & Evaluation

5.14.1 Benefits Realisation Plan

A Benefits Realisation Plan has been developed which identifies the key beneficiaries of the programme, as well as the outcomes, indicators, responsible body and timeframes for each of the strategic outcomes.

It will be the responsibility of the Core Programme Team and Programme Manager working with relevant Project Managers to ensure that the tasks in the Benefits Realisation Plan are undertaken in a timely fashion. Appropriate feedback procedures will also be put in place with Project Managers to ensure that measurement and monitoring become dynamic tools to assist and enhance delivery as part of a regular project control meeting.

The Core Programme Team will report updates to the Combined Authority on a Quarterly basis; these reports will include updates on the key measures of the Benefits Realisation Plan.

The Benefits Realisation Plan will sit alongside the Governance Reporting Structure, this will ensure that:

- The Benefits Realisation Plan is effective, maintained and implemented;
- Benefits Realisation becomes a focus of the overall programme development; and
- Benefit Realisation allows for a dynamic process within the programme to enable each project to adjust and refine actions to ensure delivery of objectives.

On this basis, Benefit Realisation will become an integral part of the LCWIP Network programme. It will be the responsibility of the Core Programme Team and Programme Manager working with relevant Project Managers to ensure that the tasks in the Benefits Realisation Plan are undertaken in a timely fashion. Appropriate feedback procedures will also be put in place with Project Managers to ensure that measurement and monitoring become dynamic tools to assist and enhance delivery as part of a regular project control meeting.

5.14.2 Monitoring and Evaluation

Monitoring of the outputs will be undertaken quarterly throughout the delivery phase. The outputs of the scheme include those listed below.

Runcorn – Daresbury Outputs

9.3km of continuous cycleway linking existing infrastructure work to complete this route comprising of the following new and upgraded infrastructure:

- 6.2km segregated cycle way
- 3.1km signed route (on existing infrastructure)
- 3x toucan crossings/ junctions (Bridge Street, Busway/Warrington road/Sunnyside lane)
- 1x upgrade of existing crossing on Irwell Lane to shared use crossing
- 1 x Pegasus crossing (Newmoore lane)
- 96 Metroactive signs
- 30 lighting columns to be disconnected and removed
- 50 new columns with LED luminaires will be installed

The routes will form clearly defined continuous cycling and walking routes.

Monitoring of the scheme outcomes will utilise innovative sensor technology which will be located at key locations on each of the corridor. This innovative technology captures and classifies real-time transport usage through cutting edge Machine Learning techniques and will replace the existing network of cycle counters in the region which have become obsolete. The sensors measure in real time movements across the network. An example of the data that can be provided is shown below. A map of the proposed locations in in annex F.

A full Monitoring and Evaluation Plan, which includes further detail of the methodologies is included in Annex K.

5.15 Complying with Regulations and Requirements

5.15.1 State Aid

Funding obtained under this application will be applied exclusively to general public infrastructure of benefit to the general public (on a without charge and non-discriminatory basis) only and so it does not constitute State aid at all. Accordingly, partner organisations are outside the scope of state aid.

5.15.2 Legal Issues

The Combined Authority will be acting as the accountable body for the project ensuring project performance and compliance with TCF regulations. The accountable body will manage each of the partners through a proven grant management arrangement which has been used to deliver a number of SIF and Growth Deal Funding programmes.

5.15.3 Planning and Other Consents

The majority of works proposed are on Local Authority Highway, the exceptions to this, at present, are shown in the table below.

Permissions Required	Status
Adoption of small triangle of land on the northern side of the busway connecting Bridge Street and Irwell Lane	The land edged red is unregistered but maintained by the Council. Therefore the scheme is simply a change in status to existing Council maintained land. However HBC property services team have been instructed to register this land with the land registry to allow formal highway adoption. The developer agreement is in respect to alterations to boundaries only to give a better frontage to the scheme so will not affect deliverability.
Adoption of the land sited between Calmington Lane and Stalbridge Drive	It is likely that Homes England would be open to dedicating highway land for the scheme and HBC are making an approach to confirm agreement.
Longbenton Way closure to motor traffic excluding the short section on the eastern end to provide access to the development currently under construction	The TRO has HBC Operational Director approval and will be progressed and advertised asap.
Keckwick Lane closure to motor traffic	This will happen in conjunction with the delivery of the new Redrow Development and the new junction on A558 (S278 works); this forms an early stage planning condition for the development

Table 5.7 Current known potential planning requirements

5.16 Conclusion

Information provided in the Management Case evidences that:

- Robust governance, assurance and risk management processes are in place to deliver the schemes;
- Risks have been fully considered and mitigated;
- Stakeholder views have been taken into account in scheme development;
- A communications and stakeholder management strategy is in place to ensure effective engagement through scheme delivery;
- Monitoring and evaluation plans will provide data to assess the success of the programme in meeting its objectives; and
- The programme will comply with the necessary regulations and requirements including State Aid, legal issues and planning and other consents.