

Warrington Town Centre First and Last Mile Transport Masterplan

Executive Summary

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1 Introduction to the Study

1.1 Background

Mott MacDonald has been appointed by Warrington Borough Council to lead the development of the First and Last Mile Transport Masterplan (FLMTM) for Warrington Town Centre.

The FLMTM supports the aspirations of the Warrington Local Transport Plan (LTP4) as they apply to the Town Centre by setting out a strategy to guide changes to the highway network in the town centre, to create an inclusive and accessible place for all, and supporting Warrington's growth and connectivity ambitions through quality place-making and sustainable travel options. The FLMTM also takes into consideration the existing plans for cycle and walking network development, such as Warrington's Local Cycling and Walking Infrastructure Plan (LCWIP). A specific objective of the LCWIP is to improve the 'last mile' of journeys into the Town Centre for pedestrians and cyclists – the FLMTM is therefore in line with the on-going LCWIP programme aiming to implement high-quality cycle infrastructure.

The masterplan process has also produced a number of indicative design concepts to illustrate how these changes could be made. The study considers various influences, including:

- Poor air quality on the ring road and arterial routes;
- Severance and collisions involving pedestrians and cyclists;
- High levels of poor public health and health deprivation;
- Persistent declining bus use recorded in the borough since 2010/11;
- Growth aspirations for employment and housing in the town;
- The major opportunity of Western Link expected to open to the west of the town centre in 2026.

1.2 Objectives

The FLMTM has nine core objectives which define the desired outputs from the strategy and schemes, including tangible changes and outcome:

- 1) Enable people to walk to where they want to go via safe and attractive streets;
- 2) Western Link is our opportunity to rethink the streets of Warrington;
- 3) Make the air cleaner;
- 4) Support economic and residential growth in Warrington;
- 5) Improve public health outcomes;
- 6) Provide cycle infrastructure safe for a 12-year-old to use independently;
- 7) Provide greater priority to public transport;
- 8) Streets should play a greater role in public life – for socialising and enjoying;
- 9) Create positive first impressions – particularly at arrival points.

1.3 Method

The FLMTM has been developed through a detailed and collaborative process, through the following stages:

- **Stage 1a** – Baseline Analysis (Baseline report): identifies key issues and opportunities within the study area, at a range of scales, including local stakeholder engagement.
- **Stage 1b** – Framework Plan (Framework report): sets out a high-level strategy setting the future vision for the area, using key benchmarks together with an agreed set of objectives, vision and focus areas.
- **Stage 2** – FLM Transport Masterplan (final stage): selection and design of key interventions that deliver the vision and objectives. Public-facing document for consultation.

The Baseline Analysis and Framework Plan have been completed in draft and the Masterplan document, which will consolidate the main strategy work and then introduce indicative scheme concepts at key locations, is currently in development. This Executive Summary document provides an overview of the First and Last Mile Transport Masterplan to support, amongst other things, the emerging Town Centre SPD.



2 Summary of Baseline Findings

The following paragraphs outline the key findings of the Baseline Analysis, fully explored as part of a separate report, to identify key issues and opportunities within the Masterplan study area.

2.1 Geographies

The FLMTM study area is aligned with key geographic delineators, serving as a flexible and indicative boundary as opposed to a hard line.

The study area can be broken down into four main geographies as shown in Figure 1:

- The traditional **Town Centre**;
- The **Ring Road** – including A57 Froghall Lane/ Midland Way, A49 Mersey St, A5061 Liverpool Rd/ Wilson Patten St;
- **Key Arterials** - including A57 Sankey Way, A49 Winwick Rd, A57 Manchester Rd, A5061 Knutsford Rd, A49 Wilderspool Causeway, A5060 Chester Road;
- The surrounding **Neighbourhoods**.

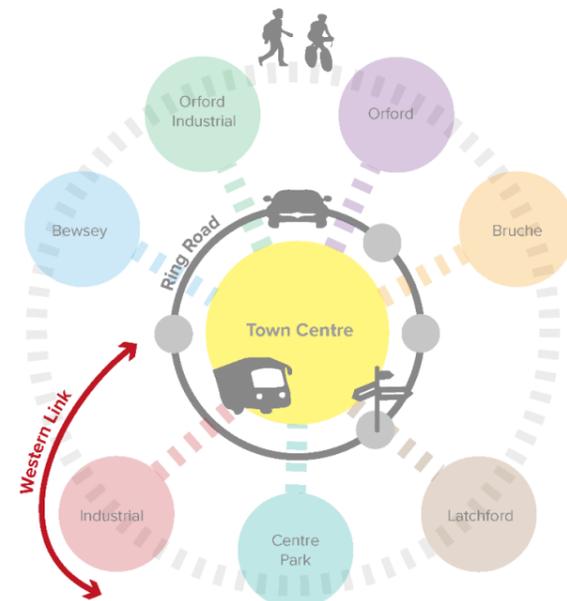


Figure 1 FLMTM Geographies

2.2 Town Centre

Several streets within the Town Centre have been identified as being commonly used by traffic to avoid traffic congestion on the wider ring road – as shown in Figure 2. This causes environmental and safety issues with excessive traffic within the town centre streets and undermines the town's attractiveness for residents and visitors. A popular "rat run" is between Sankey Street and the A5061 Wilson Patten Street. This is seen as a bypass avoiding the A5061 in front of Warrington Bank Quay Station.

Gateways into key zones of the town centre, such as the railway stations, are underwhelming and do little to create a strong first impression or 'sell' the town. Additionally, several gateways are cluttered with traffic management signage and hard engineered landscaping.

Many streets are overly focused upon the movement of vehicles, with pedestrians often not valued or welcomed. Poor public realm quality reduces the 'place' function of a street and negatively affects the public's perception, economic and social value of the street.

Figure 3 exemplifies the existing issues across the Town Centre, such as the carriageway dominance, and then suggest how a different allocation of the street space could improve its function and value.



Figure 2 Town Centre 'Rat-Running' Routes



Figure 3 Issues and Opportunities - Sankey Street

2.3 Ring Road

The 'ring road' refers to the routes that encompass the town centre on all sides, including Mersey St, Midland Way, Lythgoes Ln, Wilson Patten St and Parker St.

Wide carriageways create severance for people on foot, bike or using mobility aids. Whilst designed to cope with high traffic flows in peak periods, they can create fast-moving traffic during quiet periods and increase road danger.

Pedestrian guard-railing is used extensively in this area, reinforcing the segregation of modes. Recent research by Transport for London¹ suggests guardrail may actually have a negative impact upon road safety and people's perception of place. Additionally, multi-stage pedestrian crossings create a poor pedestrian environment and prioritise car use.



2.4 Arterials

Key arterial routes are identified in Figure 4. These routes serve an important function in moving traffic into/out of the town centre as Warrington is the focal point of several major roads and this is confirmed by its location on one of the few crossing points of the river Mersey.

A common noticeable theme between the 'Ring Road' and Arterials is the presence of wide carriageways and a relatively poor environment for active travel. As well as narrow footways, there is a limited amount of high-quality cycle infrastructure along the arterial routes. There is also a lack of on demand crossing points which creates the feeling of severance from one part of the town centre to the rest.

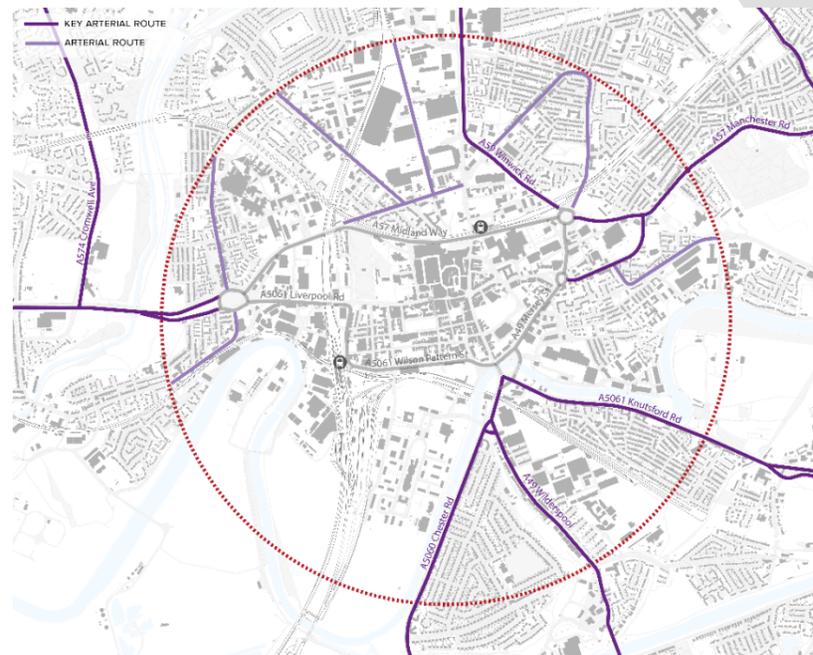


Figure 4 Arterial Routes

Additionally, there are very few bus priority routes along the arterial streets, and where they are present, they are relatively short.

Figure 5 exemplifies the existing issues across the Town Centre, such as the carriageway dominance, and then suggest how a different allocation of the street space could improve its function and value.

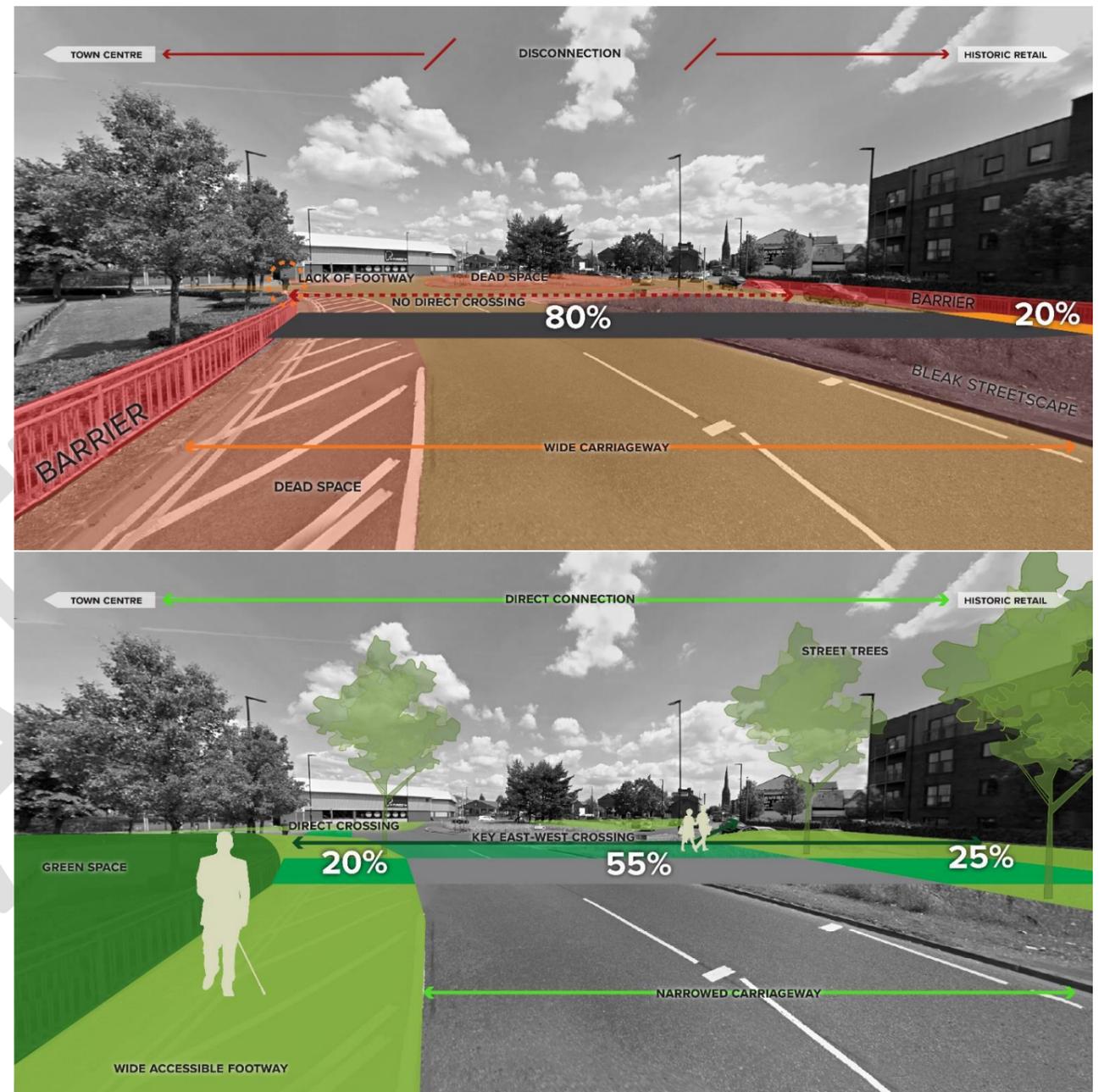


Figure 5 Issues & Opportunities - Mersey Street

¹ [http://foi.tfl.gov.uk/FOI-2274-1718/Pedestrian%20railings%20removal%20collisions%20analysis%20\(no%20stats19\).pdf](http://foi.tfl.gov.uk/FOI-2274-1718/Pedestrian%20railings%20removal%20collisions%20analysis%20(no%20stats19).pdf)

2.5 Neighbourhoods

A number of key neighbourhoods lie within the FLMTM study area, which vary in land use and character, all are separated by ether roads, rail lines, or natural features.

Most neighbourhoods experience hard severance caused by the river and railways, the southern three neighbourhoods experience the most significant severance and have the fewest crossing points available. The road design and geometry are focused on vehicles, with large radii and wide junctions. Neighbourhoods also struggle to accommodate traffic spilling from key routes to secondary and residential routes. Traffic flows on residential or minor streets has increased dramatically in the past decade, according to statistics from the Department for Transport shown in Figure 6.

Annual traffic by road type in North West

Traffic in Great Britain from 1993 to 2019 by road type in vehicle miles (billions)

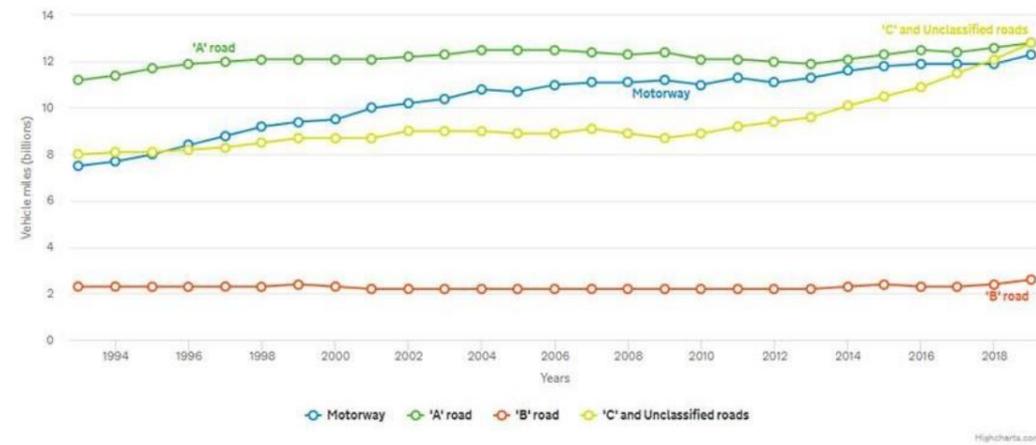


Figure 6 Annual Traffic by Road Type - DfT

This is largely due to the increased availability of mobile technology, identifying the fastest available route for drivers, regardless of the nature of that route. Rat running increases traffic on historically quieter roads, adding to the potential for collisions involving vulnerable road users, including children. Noise and emissions from rat-running vehicles can impact the quality of life for people living in the area and in some cases, residents worry that introducing traffic calming measures will affect the value of their homes. There is also a risk that rat-running drivers will drive at speed not conducive to the environment.

The increased road danger impacts active travel levels, particularly affecting vulnerable groups like the elderly, people with visual and mobility impairments and children - less able to use street independently.

2.6 Stakeholder Engagement

Local stakeholders were directly involved during the Baseline Analysis to gain a deeper understanding into the key strategic and local issues which are faced within the FLMTM study area. This was important to understand opportunities and create a general direction for the following strategy proposals. Figure 7 compiles the issues and opportunities identified during the first stakeholder engagement workshop.

The main issues identified during the stakeholder workshops included major severance along the Ring Road, the high levels of car dependency and poor quality of street environment – often lowering the value of places. The ‘rat-running’ corridors across the town centre and neighbourhoods were also highlighted as key obstacle to safety and accessibility. Opportunities were recognised to reconnect communities to the town centre, breaking down barriers to everyday walking and cycling, eliminating through-traffic, enhancing public realm and promoting sustainable growth through great design.

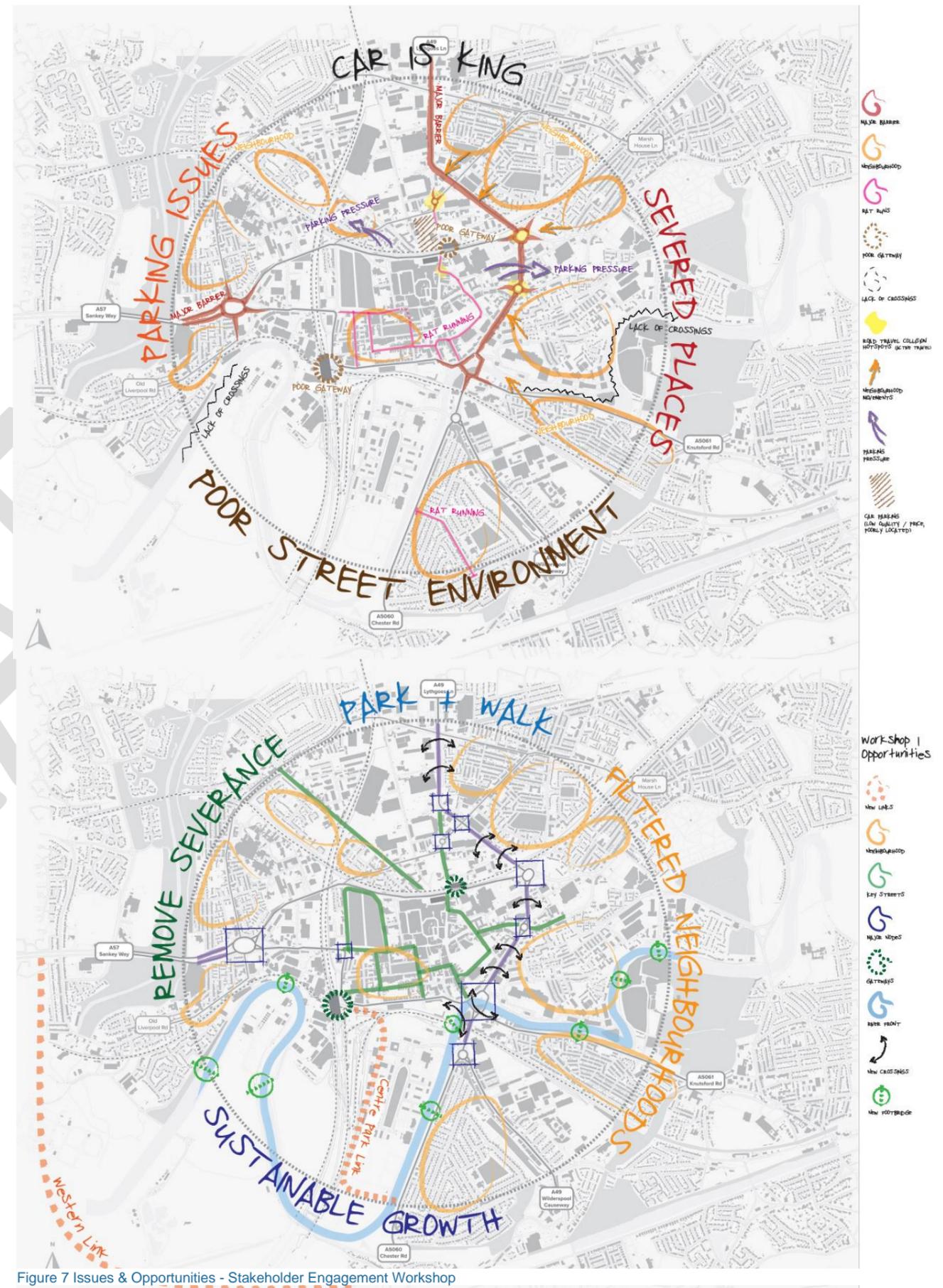


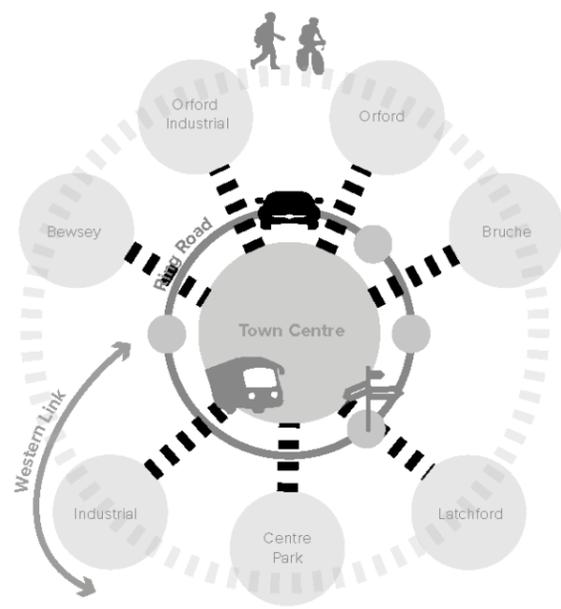
Figure 7 Issues & Opportunities - Stakeholder Engagement Workshop

3 Draft Strategy

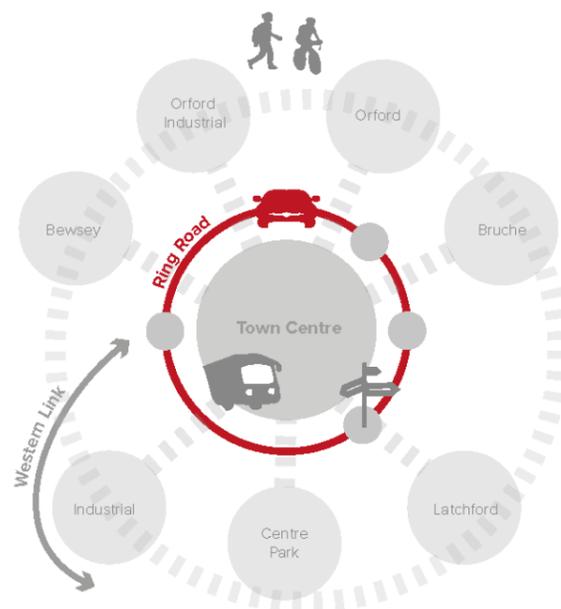
3.1 Core Principles

The core principles of the draft strategy have been developed in coordination with key stakeholders, and provide an ambitious but achievable framework for change.

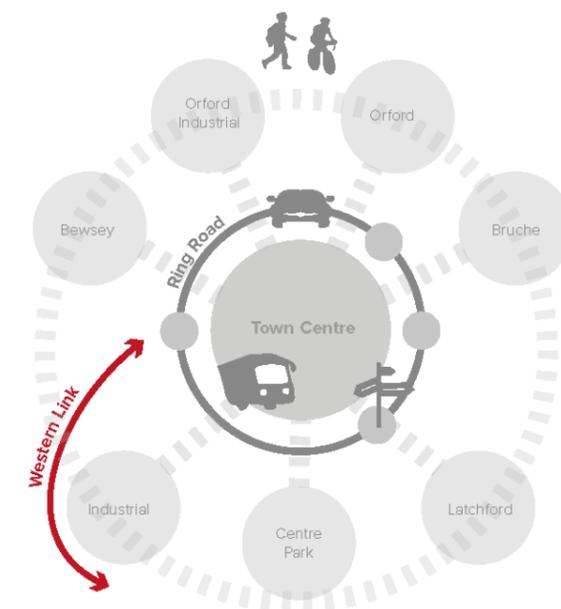
1 No rat running traffic permitted through the Town Centre and Neighbourhoods



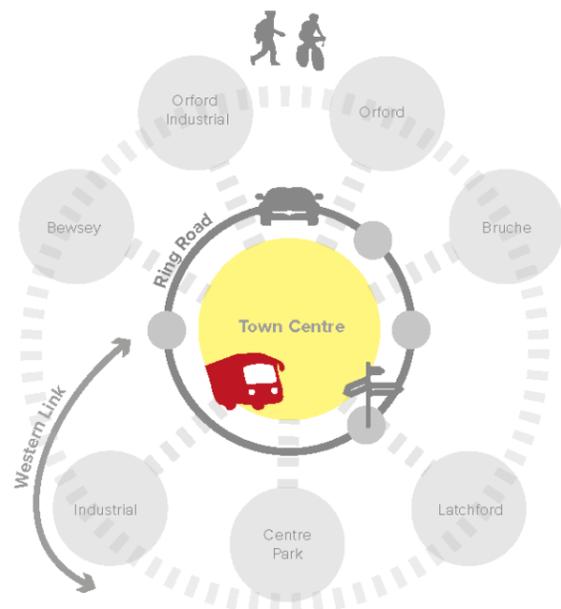
2 Linked to Principle 1, use the Ring Road to distribute car trips around the Town Centre and Neighbourhoods



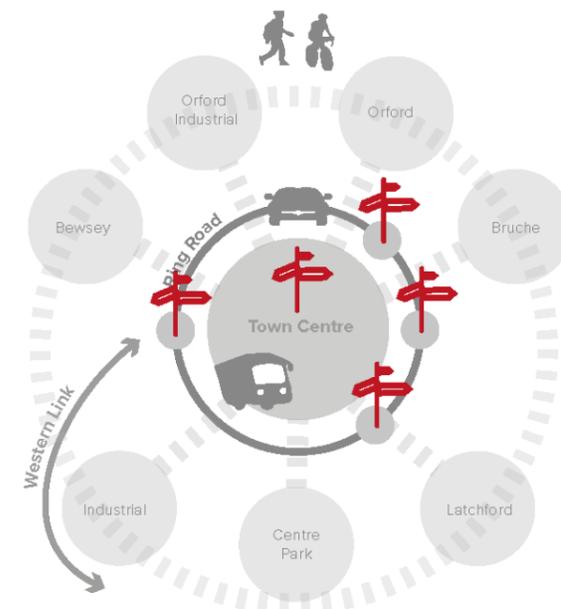
3 Use the Western Link for strategic east-west trips, to reduce the number of vehicles in central areas of the town



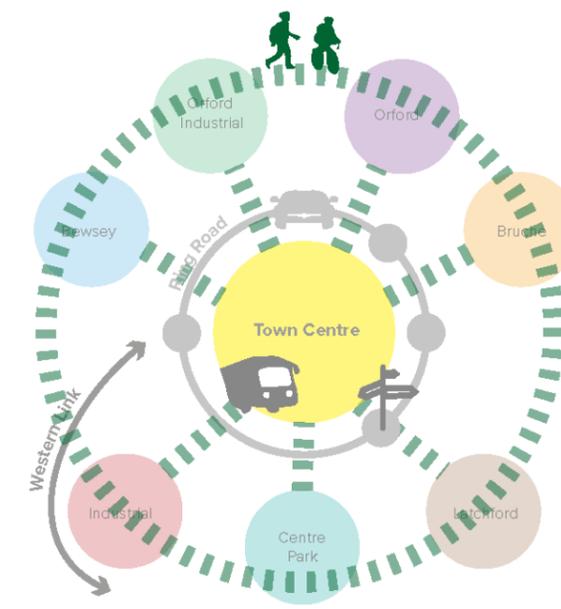
4 Strengthen the role of public transport by improving bus priority, particularly on approaches to and through the town centre



5 Create great first impressions at gateway points



6 Break down severances to movement, particularly for people on foot and bike



3.2 The Circulation Plan

As previously highlighted, there are several rat-runs across Warrington Town Centre and between or through residential neighbourhoods.

This has negative impacts on congestion, air pollution and road safety - particularly for pedestrians and cyclists. The Circulation Plan proposal restricts vehicles from travelling *through* the town centre and some residential areas – but crucially maintains ready access to all key amenities, businesses and properties. Instead, through-traffic is redirected on to the ‘ring road’ and key arterials – higher capacity routes more suitable for higher volumes of traffic.

A series of modal filters will be implemented to deliver the circulation plan. A modal filter is a feature used to limit through-journeys along a street by certain modes of transport. They are used to achieve ‘filtered permeability’ and are an essential tool in delivering low traffic neighbourhoods.

The proposed filters would be a mix of 'No Vehicular Access' or 'Bus Only', depending on location. Modal filters can bring benefits by controlling congestion levels and improving road safety; local streets and areas previously used as ‘rat-runs’ become safer, quieter and more welcoming to people.



The FLMTM Circulation Plan is designed to achieve that end goal, whilst also retaining means of access for those who do need to use a car. Whilst more work is needed to determine the precise location and design of these filters, Figure 8 illustrates a number of potential locations to reduce or remove through traffic:

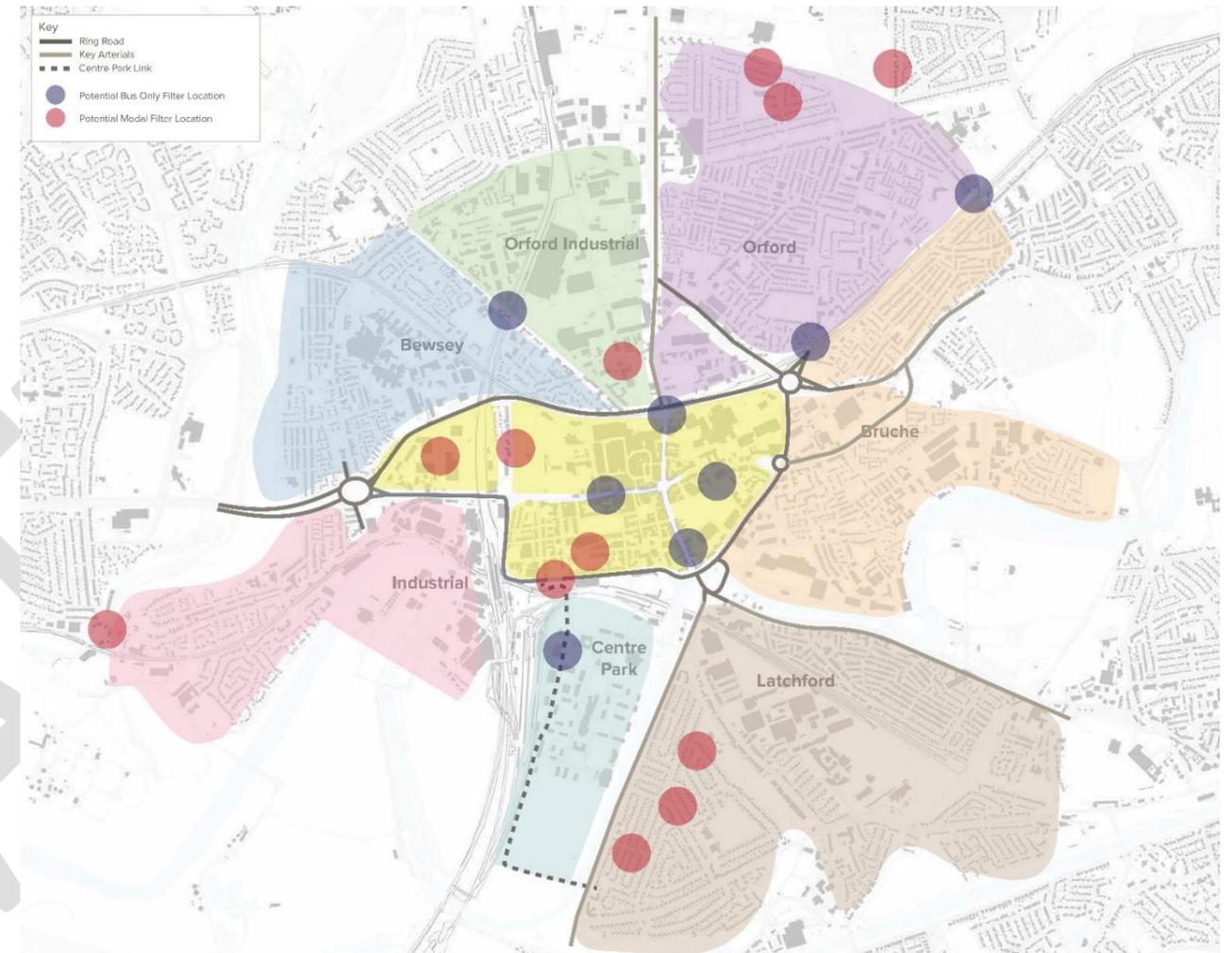


Figure 8 Circulation Plan

3.3 Ring Road Option Development

The option of reducing the ring road (between Lythgoes Lane and Bridgefoot Gyratory) to one lane in each direction has been considered as part of the strategy optioneering process. The implications of this option have been explored using the strategic transport model. As would be expected, the Volume to Capacity (V/C) ratio (a measure of congestion) generally increases where lane reductions occur, in both peak periods.

The ring road lane reduction has subsequently been discounted, particularly as it is also in partial conflict with the Circulation Plan – which is likely to push more traffic onto this more appropriate route. However, it is still important to reduce the severance the ring road causes, and therefore major changes to junction layout and formats have been explored which retain the strategic function of the ring road but better balance the needs of people to cross this currently unwelcoming barrier.

3.4 Street Types

The three street types presented in the FLMTM build upon current Chartered Institution of Highways and Transportation (CIHT) guidance set out in 'Creating Better Streets' (2018). Whilst designs need to be context specific and flex to localised requirements, broad identification of street types helps consider the 'big picture' approach to change.

- **Traditional Streets** are designed to accommodate higher levels of vehicular traffic, whilst also providing a welcoming and safe environment for pedestrians and cyclists.

This layout includes conventional traffic controls and element such as standard footways and raised kerbs. The street is designed to encourage walking and cycling and making these modes more apparent to motorists to encourage careful driving behaviours.



- **Informal Streets** are usually designed with low kerbs, narrowed carriageways, and minimal signing. There is still a pavement and a carriageway, but the differentiation between them is typically less than in a Traditional Street. The design of Informal Streets needs to pay particular attention to the safety and accessibility of blind/partially sighted people: for example, crossings and footways need to be detectable. Research commissioned by Guide Dogs for the Blind indicates a 60mm kerb is recognisable by guide dogs. Informal Streets layout rely on quality public realm to welcome and give priority to people movements, encouraging slow-moving traffic to give way to pedestrians.



- **Pedestrian Priority** design is best suited for low traffic flow streets, introducing traffic restrictions and public realm improvements to create streets where pedestrians feel that they can move freely anywhere and where drivers should feel they are a guest.

Pedestrian Priority Streets are designed with no kerbs and minimal traffic signage, and travel lanes should be kept as narrow as possible to maximise pedestrian walking space.



The incorporation of these street types and design principles is fundamental to effectively answer the challenges posed by carbon emissions, post COVID19, sustainability and accessibility in Warrington. The interaction between the various street types is illustrated in Figure 9:

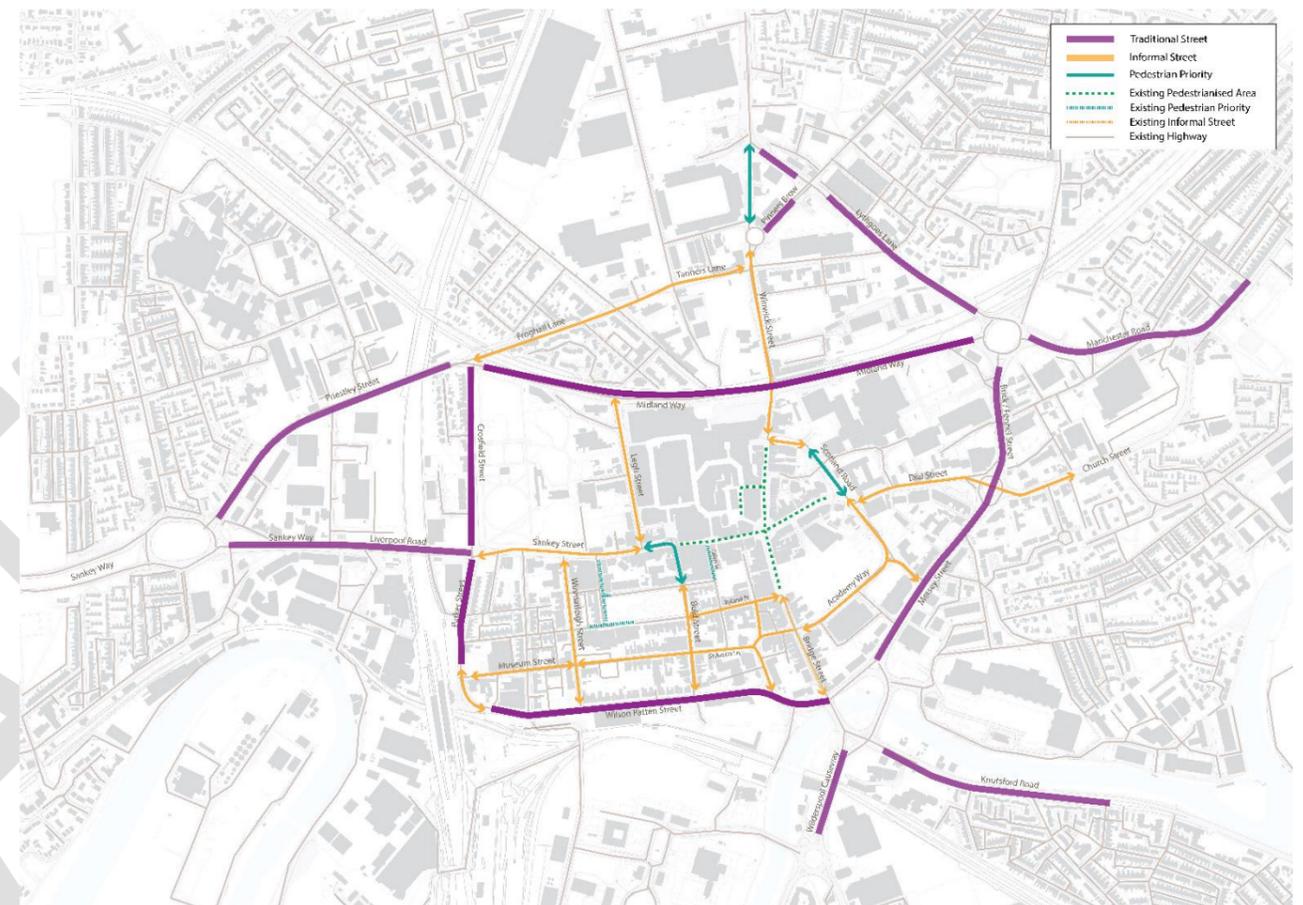


Figure 9 Street Types – Existing and Proposed

4 Concept Design

A number of locations were chosen as 'concept design' demonstrator projects – to explore how the principles of the strategy and street types could be delivered in practice.

The key locations are:

- Sankey Street
- Winwick Street
- Scotland Road
- Mersey Street / Dial Street / Church Street Junction

These locations were chosen for several reasons, but each presents a strategic point within the FLMTM study area where change has the potential to be transformational. The concepts presented are the result of early optioneering, and further work is required in all locations to arrive at a preferred scheme.

Principles of good design have been established to ensure consistency and clarity of form while designing sustainable, feasible transport solutions:

1. Tidy Up, De-Clutter & Merge



Reducing the amount of intrusive street furniture has both aesthetic and road safety benefits. The proliferation of signs, road markings, traffic lights and marketing boards creates cluttered streets. Although these elements are intended to reduce the likelihood of accidents, they can also increase driver confidence leading to increased speeds and decreased driver vigilance.

2. Trial Measures



Temporary measures, or try before you buy, are a low-cost experimental intervention to test or trial measures. Though the degree of formality may vary, these trials share the common goal of using low-cost materials to experiment with and gather input on potential street design changes. Temporary buildings, markets, painting, planters and public spaces can be used to drive interest and vitality.

3. Rethink Traffic Management

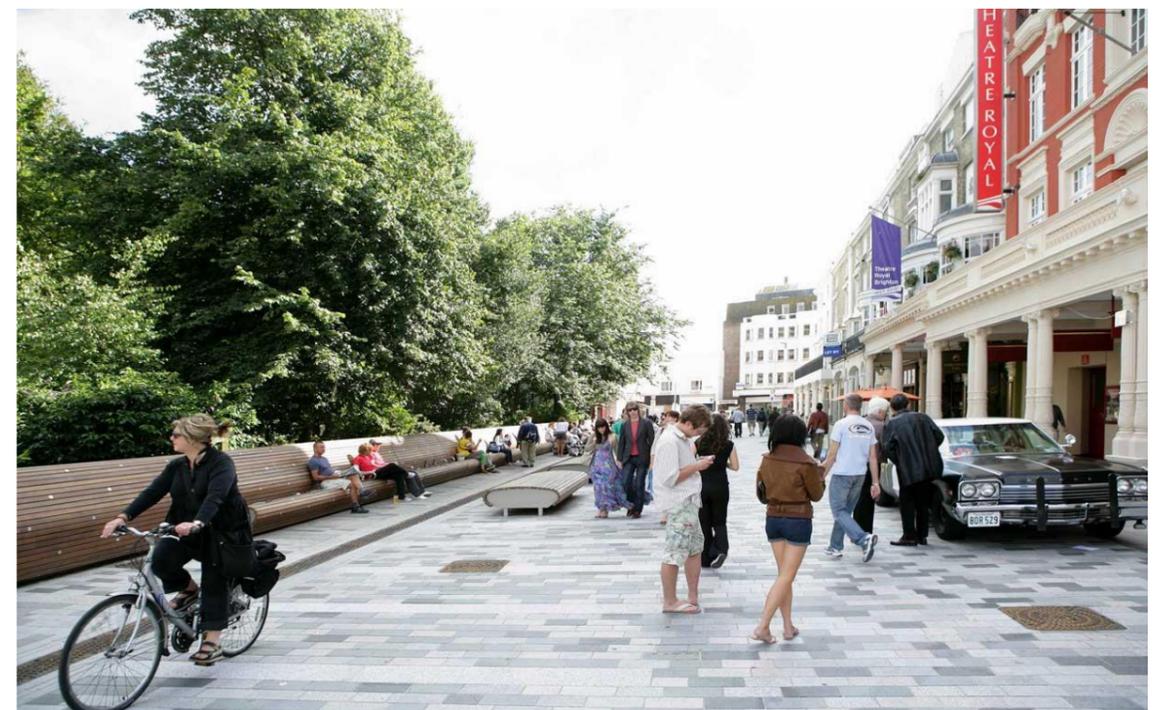


We have set out a major ambition for managing traffic via the Circulation Plan. However, smaller simple changes, such as providing pedestrian crossings in areas of demand, or replacing dog-leg crossings with single stages, can have a significant impact at the local level.

4. Recreate the Street



Some streets will warrant a higher level of intervention than others. In particular, streets with a high 'place' function – either at a key gateway or with significant levels of surrounding activity (such as retail or commercial uses) – should be considered for complete transformation. Fundamentally, the street functions more as a public space than a highway.



4.1 Sankey Street

Sankey Street is a town centre street with a mix of retail, office and residential uses along its length. The street is presently dominated by the carriageway and the public realm doesn't reflect its civic and economic importance. Sankey St is also an important gateway from the west and experiences high bus flows. The proposed scheme aims to create a high-quality street befitting of its importance to the wider town, through an Informal Street design which transitions to Pedestrian Priority Street as it crosses Legh Street. The junction with Liverpool Road will need to be developed in conjunction with LCWIP and other strategies.

Core components:

- High-quality public realm, including widened footways, more frequent crossings, high-quality materials and new trees;
- Narrowed carriageway;
- Short stay parking bays;
- Reinforcement of the bus and access only restriction at the junction with Bold St.

EXISTING

PROPOSED



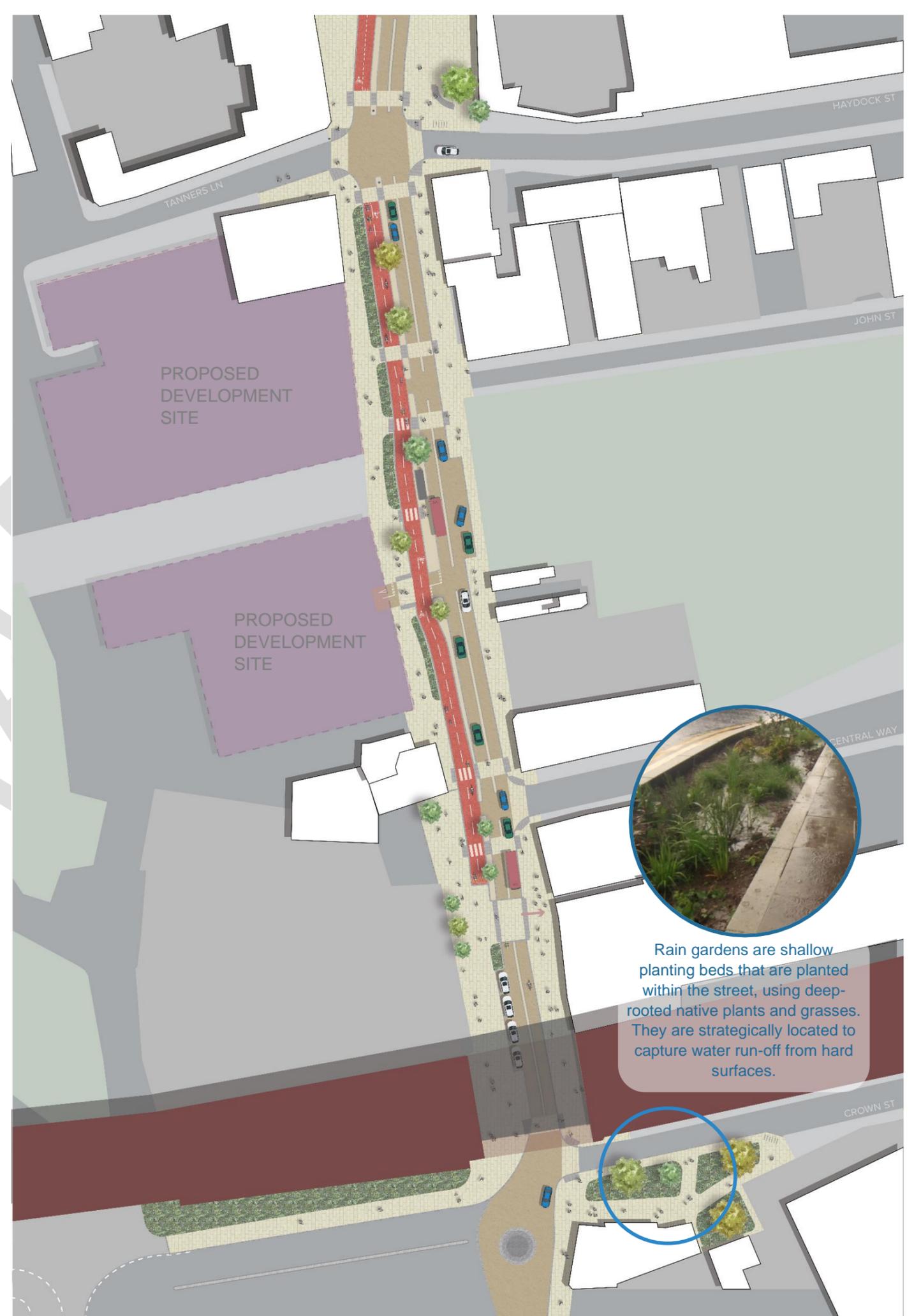


4.2 Winwick Street

Winwick Street is a key route on the northern side of the town centre including the Warrington Central Station gateway, but the overall street environment is poor and unwelcoming. Major new development is planned to the west of the street, spanning between the Halliwell Jones Stadium, Central Station and the Bus Station. At present, the street layout is dominated by the carriageway and the public realm is underwhelming. This is a strategically key street to improve form and function of.

Core components:

- High-quality public realm, including widened footways, more frequent crossings, high-quality materials and new trees;
- Bidirectional cycle track on the west side of the street;
- Narrowed carriageway;
- Rain gardens / SUDS installation;
- Bus stop central to development site.

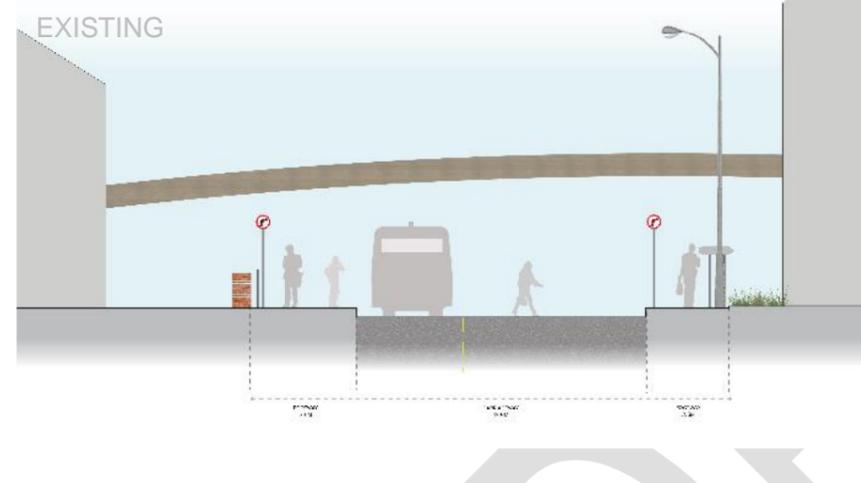


4.3 Scotland Road

Scotland Road is a key north/south link between the Central Station gateway and the town centre. Similar to Winwick St, the carriageway is excessively wide and creates a poor walking environment. Major new development is also proposed on the east side of the street. Scotland Road has the potential to help expand the town centre core and support regeneration.

Core components:

- High-quality public realm, including widened footways, more frequent crossings, high-quality materials and new trees
- Pedestrian supercrossing at the junction of Scotland Road & Horsemarket St;
- Bus only public space, just north of Town Hill;
- Pedestrian priority public space, at the junction of Scotland Road & Buttermarket St;
- Rain gardens / SUDS installation;
- Changes to traffic management (see inset diagram).

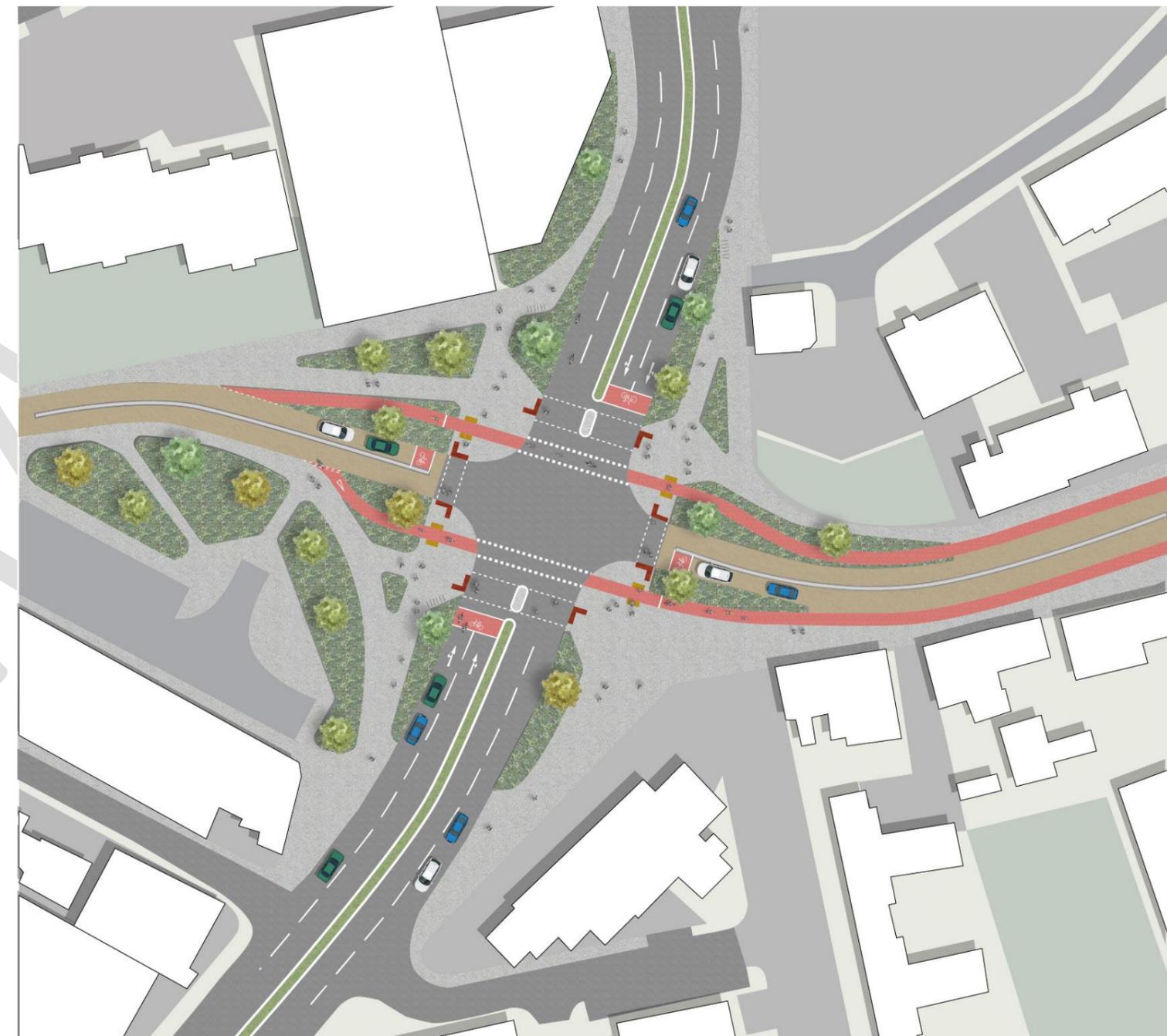
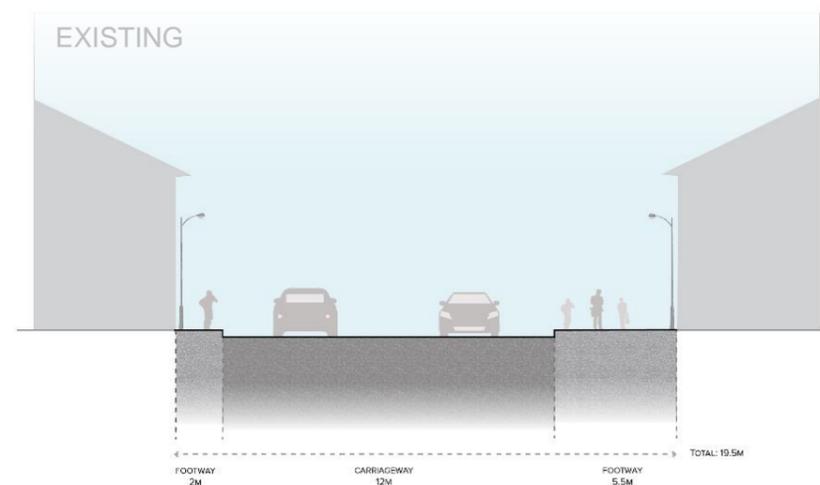


4.4 Mersey Street / Dial Street / Church Street Junction

The junction between Mersey Street, Dial Street and Church Street is a key node on the ring road, separating the town centre from its hinterland. The existing roundabout creates a major severance for pedestrians and cycles, and has been identified as a hotspot for road traffic collisions involving cyclists.

Core components:

- Formalised east-west cycle infrastructure, including signalised crossings;
- Extension of the town centre material palette across the ring road and on to Church St;
- Wide, single-stage pedestrian supercrossings;
- Rain gardens / SUDS;
- Potential for further bus priority measures and/or development opportunities on land released.



5 Conclusion

The FLMTM has been developed to tackle core issues - such as severance, 'rat-running', road safety, air quality and underwhelming public realm – but also support growth and regeneration. This Masterplan will support use of public transport, and increase the amount of journeys made on foot, bike or mobility scooter. It's core deliverable is creating streets that better cater for people, that are more equitable for active and sustainable movement, are attractive to spend time in and encourage social interaction and result in economic vitality.

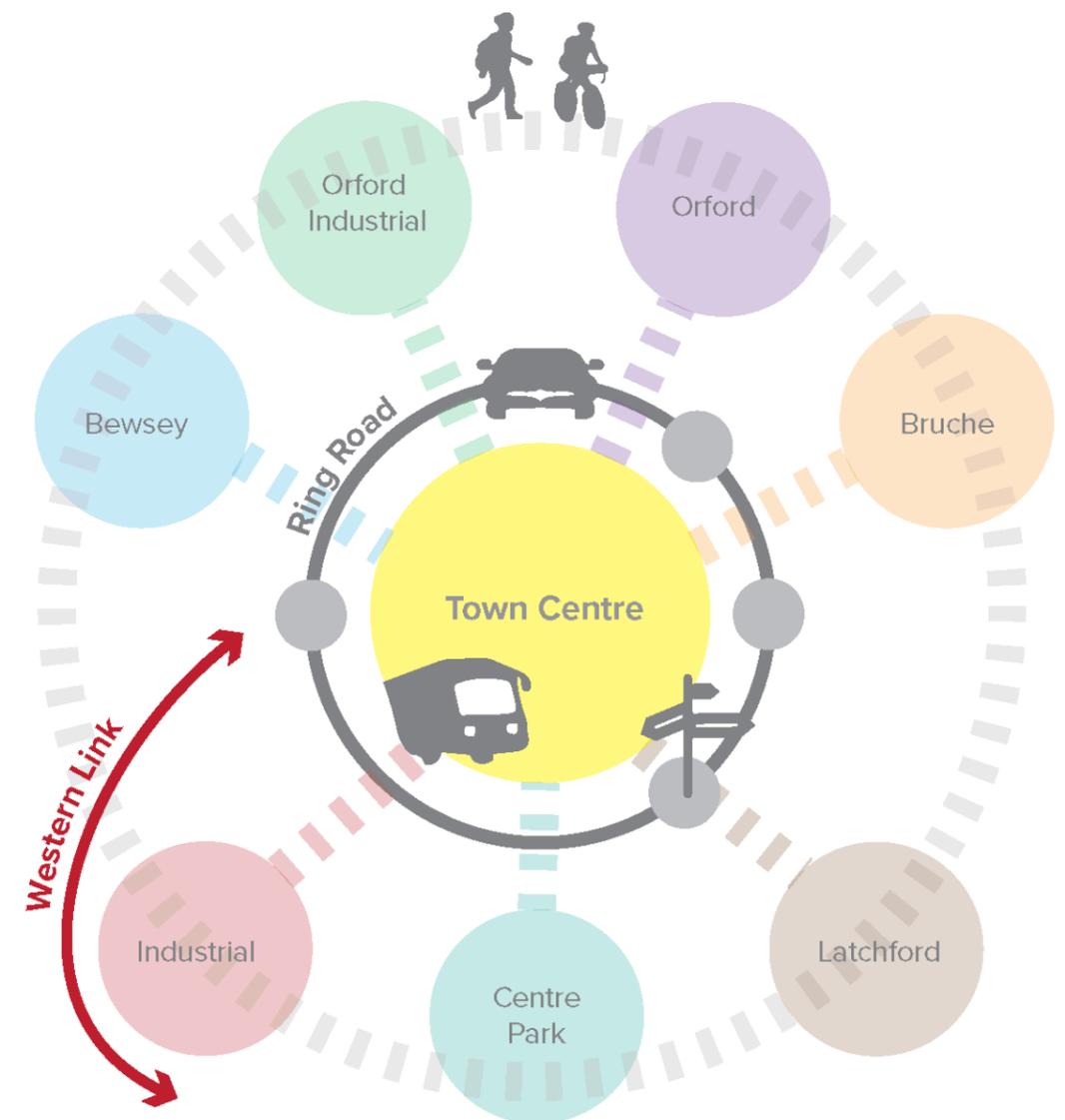
The implementation of the proposed schemes, both in case study locations and the wider adoption of principles, is critical for the success of the wider town, and provides a major opportunity to truly change how people travel in and around town – addressing congestion, along with the environmental and health issues associated with high car dependency.

At this stage, the FLMTM study comprises of:

- A baseline identifying key issues and opportunities within the study area, at a range of scales;
- An ambitious yet practical high-level strategy setting the future vision for the area, using key benchmarks together with an agreed set of objectives, vision and focus areas;
- A selection of concept design and key interventions to deliver the vision and objectives;
- Transport modelling work undertaken to understand impacts upon traffic circulation and congestion around Warrington's network.

Throughout this process, key stakeholders have been a vital source of information for building the picture of, and barriers to, movement in Warrington. A series of workshops have been held to gain a deeper understanding of the key strategic and local issues, set out the vision and objectives underpinning the plan, and present and discuss key emerging schemes. Public consultation is likely to be undertaken later in 2021.

Once schemes have been approved, their delivery will be through the planning process and through separate council bids to external funding opportunities.



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