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West Midlands Local Cycling and Walking Infrastructure Plan

LCWIP Report

Transport for West Midlands

August 2018

Notice

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This document has 84 pages including the cover .

Document history

Revision	Purpose description	Origin-ated	Checked	Reviewed	Author-ised	Date
Rev 1.0	Initial Draft	LH	AJ	MB	RE	10/08/2018
Rev 2.0	Final Draft	LH	AJ	RE	RE	23/08/2018
Rev 3.0	Final Report	LH	AJ	RE	RE	27/09/2018

Client signoff

Client	Transport for West Midlands
Project	West Midlands Local Cycling and Walking Infrastructure Plan
Job number	5165001
Client signature / date	

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The West Midlands will see unprecedented growth and development over the next ten years. A robust resilience plan that includes promotion and development of safer routes for cycling and walking is needed to ensure that disruption to travel is minimised for residents and visitors. The implementation of Clean Air Zones has brought to the forefront the need to change the way people travel across the region. Furthermore, the Commonwealth Games and Coventry City of Culture provide a unique opportunity to deliver a legacy of high quality cycling and walking infrastructure that benefits the people who live, work and visit the region long after these events have taken place.

Local Cycling and Walking Infrastructure Plans (LCWIPs) are a new, strategic approach developed to support the aims and objectives of The National Cycling and Walking Strategy. The LCWIP process enables the identification of cycling and walking improvements required at the local level. The process enables a long-term approach to developing local cycling and walking networks, ideally over a 10 year period, and form a vital component of the Government's strategy to increase the number of trips made by both forms of active travel.

The LCWIP process undertaken by Transport for West Midlands and the constituent Local Authorities has identified key cycling corridors and walking zones across the West Midlands. The corridors identified have significant opportunity to increase the amount of active travel journeys undertaken on a daily basis.

1. LCWIP Introduction

1.1. Transport for West Midlands Commission

Atkins Limited has been commissioned by Transport for West Midlands (TfWM) to produce a Local Cycling and Walking Infrastructure Plan (LCWIP) for the West Midlands region. The West Midlands LCWIP will provide a strategic approach to identifying cycling corridors with high propensity for cycling and a core walking zone within each constituent local authority. The LCWIP has identified constraints and opportunities across key corridors within the West Midlands to help develop a high quality cycling and walking network.

The West Midlands Cycling Charter outlines the key principles that all partners (including the seven constituent Local Authorities) have adopted to deliver the required change in cycling as a form of travel across the West Midlands Metropolitan area. It represents a shared vision and approach that will increase cycling levels across the West Midlands.

A detailed Action Plan is currently being delivered by TfWM with the target of increasing levels of cycling to 5% of all trips by 2023 from the current levels of 1.8% (Census Data, 2011). To ensure that this target can be met, it is imperative that high propensity cycling corridors are identified across the West Midlands.

In the upcoming years, the West Midlands will host several exciting and significant events such as the Commonwealth Games in 2022 and Coventry City of Culture 2021. Cycling and walking will have a key role in facilitating the increased traffic generated by such events, providing residents and visitors with a safe, healthy and convenient mode of travel.

The 2012 Olympic Games held in London, placed a significant emphasis on improving cycling and walking infrastructure and promoting the benefits of travelling by active modes. The Olympic Delivery Authority (ODA) invested more than £11 million in upgrading walking and cycling routes around venues. As well as providing a better environment for spectators travelling to Games venues, cycle and walking infrastructure has been built with legacy in mind, connecting with existing networks so everyone can continue to enjoy using them long after the Games are over. This ensures that active travel can continue to be an attractive option for all users

The major events taking place within the West Midlands provides the region with an opportunity to implement high quality cycling and walking infrastructure. The West Midlands LCWIP has identified corridors which will be critical to the successful delivery of the Commonwealth Games and Coventry City of Culture. The LCWIP provides the strategic case for such corridors and identifies the constraints and opportunities which will need to be addressed to ensure active travel journeys can be easily undertaken to both major events. The LCWIP will need to be supported by promotional and behavioural change programmes to ensure a long lasting legacy is created.

Overall, the aims of the West Midlands LCWIP are:

- Inform the implementation plan for the Strategic Cycle Network in the West Midlands;
- Identify two key regional cycling corridors within each local authority with high propensity for cycling
- Identify potential solutions to improve cycling infrastructure along the regional cycling corridors;
- Identify a key walking zone per constituent local authority which will be audited to identify potential improvements to encourage more journeys to be undertaken on foot;

- Coordinate the plans across the local authorities to ensure a consistent and aligned approach to delivery; and
- Integrate these plans into a clear series of planning and transport policies, strategies and delivery plans in the West Midlands.

1.2. Cycling and Walking Strategy Background

In April 2017, the Department for Transport (DfT) published the first National Cycling and Walking Investment Strategy (CWIS)[1]

The CWIS is based around the ambition to make cycling and walking '*the natural choices for shorter journeys, or as part of longer journeys*'. The strategy is seeking to support the transformation of local areas where the dominance of the motorised vehicle will be reduced to tackle congestion, support local economies and improve physical and mental health.

The CWIS identified short to long term objectives for cycling and walking with short term targets focusing on increased journeys by active modes including an increase in the percentage of children that walk to school. Short term safety targets have also been identified which will reduce the rate of cyclists killed or seriously injured on England's roads.

Table 1 presents the long term (by 2040) DfT aspirations relating to cycling and walking.

Table 1 – DfT Cycling and Walking Long Term Aspirations

Government Ambition	Objectives
Better Safety – *'A safe and reliable way to travel for shorter journeys'*	• Streets where cyclists and walkers feel they belong and are safe. • Better connected communities. • Safe traffic speeds, with low speed limits where appropriate. • Cycle training opportunities for all children.
Better Mobility – *'More people cycling and walking – easy, normal and enjoyable'*	• More high-quality cycling facilities. • More urban areas that are considered walkable. • Rural roads which provide improved safety for cycling and walking. • More networks of routes around public transport hubs and town centres. • Better links to schools and workplaces. • Technological innovations that can promote more and safer cycling and walking. • Behaviour change opportunities to support increased cycling and walking. • Better integrated routes for those with disabilities or health conditions.

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/603527/cycling-walking-investment-strategy.pdf

Better Streets – *'Places that have cycling and walking at their heart'*	• Places designed for people of all abilities and ages. • Improved public realm. • Better planning for cycling and walking. • More community based activities such as led rides. • A wider green network of paths, routes and open spaces.

1.3. LCWIP Background

To achieve the objectives set out within Table 1, it is imperative that local bodies across England develop high quality cycling and walking infrastructure to encourage mode shift towards active modes. To achieve Government's ambition to normalise active travel, guidance has been developed to support local bodies produce LCWIPs

LCWIPs are a new, strategic approach developed to support the aims and objectives of CWIS. The LCWIP process enables the identification of cycling and walking improvements required at the local level. The process enables a long-term approach to developing local cycling and walking networks, ideally over a 10 year period, and form a vital component of the Government's strategy to increase the number of trips made by both forms of active travel.

The key outputs of LCWIPs are[2]:

- A network plan for cycling and walking which identifies preferred routes and core zones for further development;
- A prioritised programme of infrastructure improvements for future investment; and
- A report which sets out the underlying analysis carried out and provides a narrative which supports the identified improvements and network.

Figure 1-1 presents the key benefits of local bodies developing a strategic approach to cycling and walking infrastructure through LCWIPs

Figure 1-1 - Benefits of the LCWIP Process

Identify cycling and walking infrastructure improvements from quick wins to long term aspirational schemes

Integrate LCWIP into local planning policy and strategies to ensure cycling and walking infrastructure is at the forefront of the transport network

Provide a case for future funding for cycling and walking infrastructure

[2]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/607016/cycling-walking-infrastructure-technical-guidance.pdf

1.4. Scope of the West Midlands LCWIP

As outlined within the LCWIP guidance, the governance and delivery model needs to be proportionate to the scale and complexity of the area covered within the LCWIP. The West Midlands LCWIP is one of the most significant LCWIPs undertaken across the country based on the number of local authorities involved and the population that is covered.

Due to the LCWIP guidance tailored towards a more 'local' approach, the West Midlands LCWIP, whilst following the principles set out within the national guidance, has been tailored to ensure a more regionalised approach can be undertaken. The West Midlands LCWIP is a key document for TfWM and the seven local authorities however, the LCWIP has focused on corridors which have not had significant development undertaken for cycling (such as cycle feasibility studies) therefore, the LCWIP does not cover all work undertaken for cycling and walking across the West Midlands

The West Midlands LCWIP will need to be viewed in conjunction with a variety of key regional and local policy & strategic documents to gain a full understanding of the work currently being undertaken for cycling and walking in the West Midlands. The benefit of the regionally focused West Midlands LCWIP is that the strategic document has identified 14 cycle corridors with significant propensity for cycling which can support both local and regional aims

1.5. Structure of Report

The remainder of the report is structured as follows:

Chapter 2 – Defining Scope: The chapter establishes the geographical extent of the West Midlands LCWIP, presents the preferred delivery model, governance and arrangements and the agreed timescales for the commission.

Chapter 3 – Gathering Information: The chapter presents the context for cycling and walking within the West Midlands which will be used to inform the network planning and prioritisation stages. The chapter includes a review of relevant policy documents, information on the existing network, current trip patterns and identifies current and future trip generators and attractors.

Chapter 4 – Network Planning for Cycling: The chapter presents the methodology for network planning for cycling across the West Midlands. The chapter will present the key regional corridors selected for auditing. The key output of the Chapter is 14 corridors identified which have high propensity for mode shift to cycling and a close alignment to key local and regional policy.

Chapter 5 – Network Planning for Walking: The chapter presents the methodology for network planning for walking across the West Midlands. The chapter will present a summary of one Core Walking Zone per constituent local authority, identifying specific constraints and potential solutions which have potential to improve facilities for pedestrians at major trip generators and attractors.

Chapter 6 – Route Prioritisation: The chapter presents the methodology for prioritising the key regional cycling corridors. The key output for the chapter will be a prioritised programme of cycling interventions. The prioritised programme consists of short, medium and long term interventions which demonstrates a phased approach to developing the network.

Chapter 7 - Integration and Application: The final chapter of the West Midlands LCWIP considers how the LCWIP can be integrated into local and regional, policy, plans and strategies. The application of the LCWIP includes using the information gathered (particularly through network

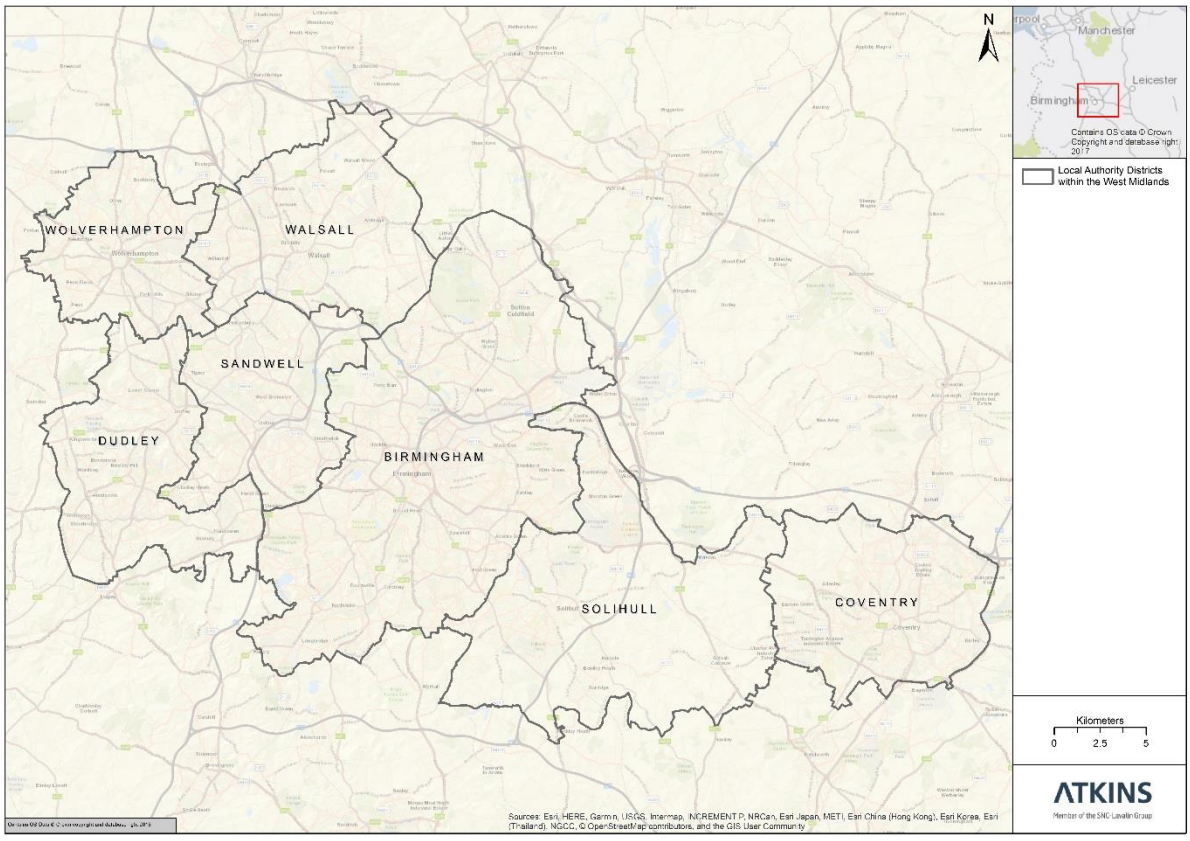
planning) to prepare funding bids and future delivery plans. The chapter presents guidance on how the LCWIP should be regularly reviewed and monitored in line with updated policy and key economic and land development.

2. Defining Scope

2.1. Defining the Geographical Scope

The first step in developing an LCWIP is to determine the geographical scope. In September 2017, the DfT announced they would provide financial support to enable the West Midlands and the seven constituent local authorities (Figure 2-1) to develop the West Midlands LCWIP. As the Expression of Interest (which led to the successful procurement of funding) was led by WMCA, it was agreed that a Combined Authority approach would be undertaken for the LCWIP.

Figure 2-1 - Constituent Local Authorities – West Midlands LCWIP



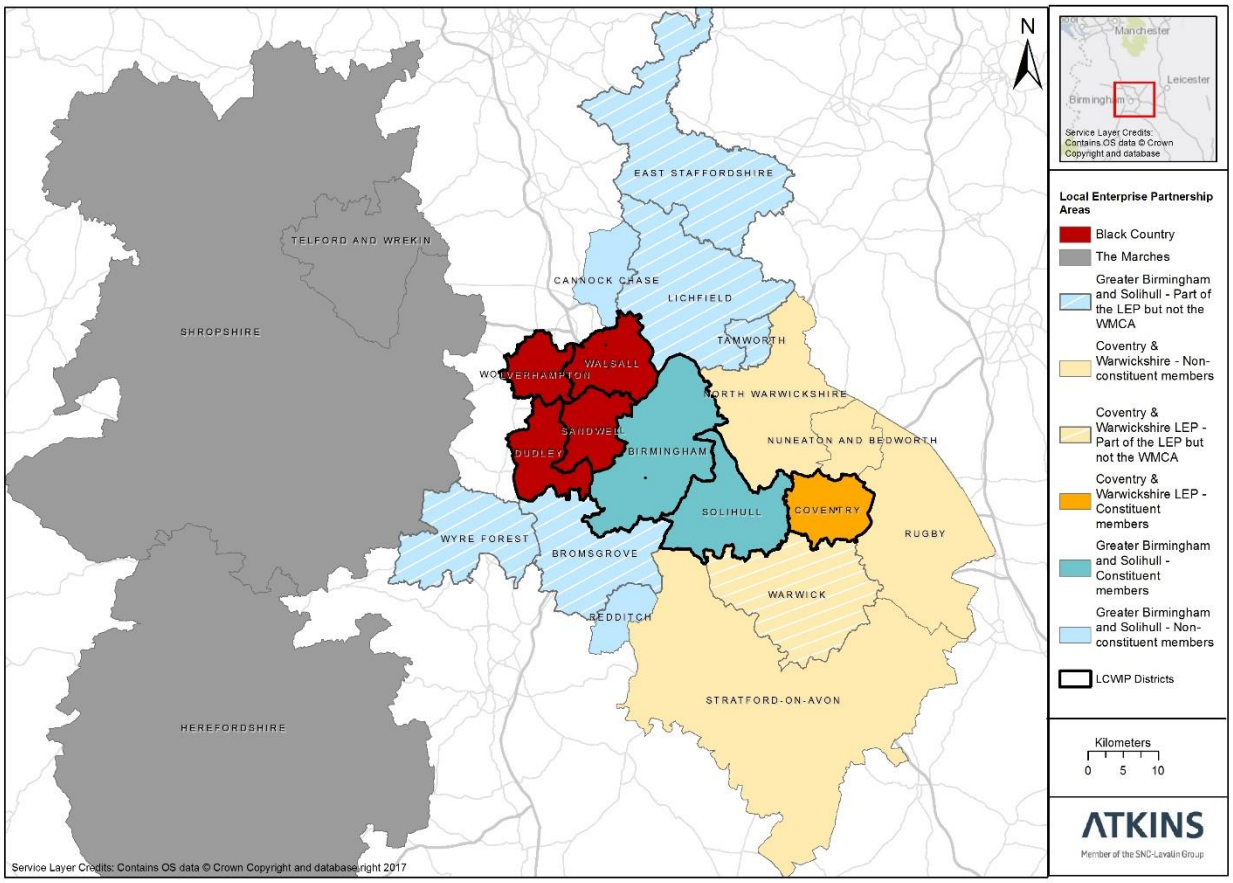
When defining the geographical scope for the LCWIP, the likely distance that would be travelled on foot and by cycle has been considered. Cycling has the potential to replace journeys undertaken by various modes as distances travelled by the bike can be up to approximately 10km (although some users will cycle far greater distances) due to the distance covered by cycle journeys, corridor wide interventions are possible which pass through numerous local authority boundaries. The average cycling trip in the UK in 2017 lasted for 23 minutes[3].

For walking trips, the distances covered are generally shorter than those undertaken by cycling, with journeys undertaken on foot being usually up to 2km. Due to the short distance covered, Core Walking Zones (CWZs) within each local authority have been identified which are generally located within town and city centres and close to multiple trip attractors.

3 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729524/nts-factsheets.pdf

Through the LCWIP process, the GIS analysis has identified that major trip generators and attractors across the West Midlands have straddled local authority boundaries. It has been important that engagement between neighbouring local authorities takes place to ensure a regional approach is implemented. A regional approach has ensured an agreement is reached on the best approach to develop the cycling and walking network.

Figure 2-2 - West Midlands LEP Areas



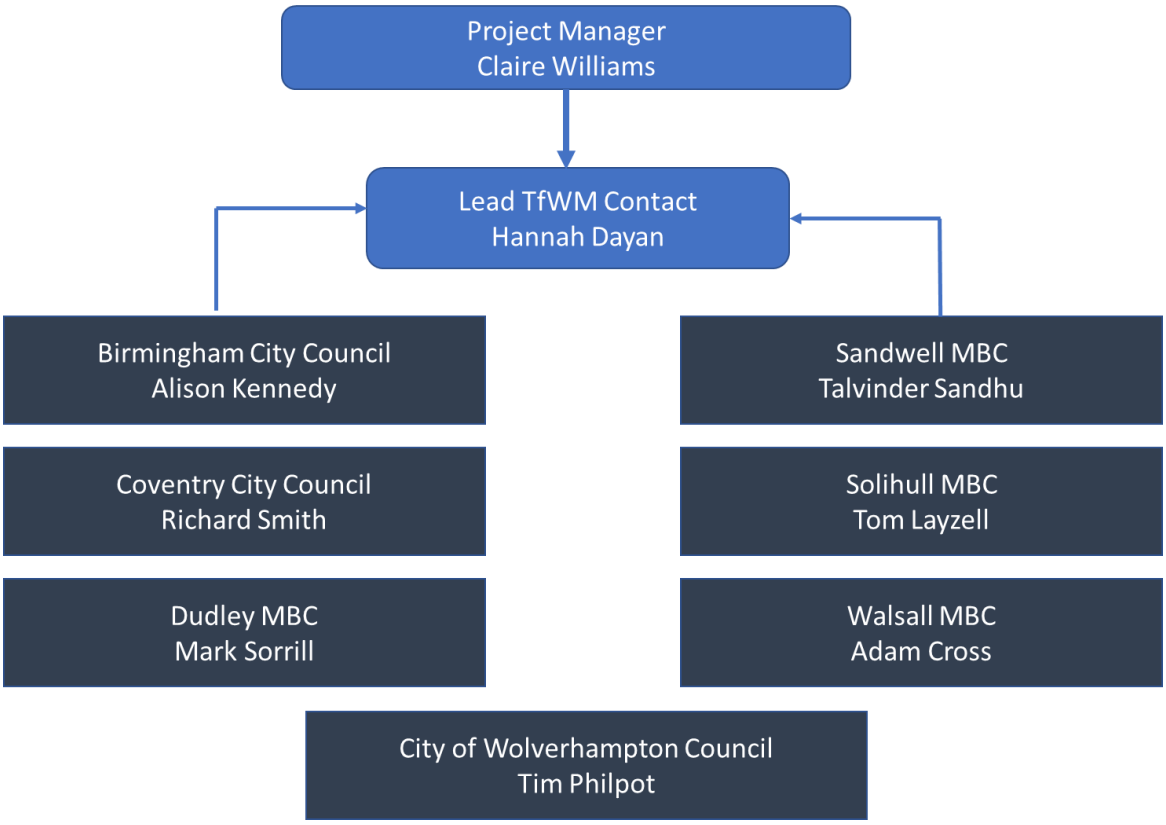
2.2. Governance and Delivery

As outlined within the LCWIP guidance, the governance and delivery arrangements need to be proportionate to the scale and complexity of the LCWIP. The delivery model set out for the West Midlands LCWIP is based on a 'combined authority approach' where a significant number of current and potential future trips take place between neighbouring authorities. WMCA has led delivered a cross sector and cross boundary LCWIP where transport and health factors were major components to identifying key corridors for infrastructure. A cross boundary approach was identified to ensure that the full benefit of a corridor (which crossed authority borders) was considered.

Following the agreement of a delivery model, the LCWIP was assigned a Project Manager who led the project team. A West Midlands LCWIP Working Group (including members from WMCA, the seven constituent local authorities and key partners) has served as a key delivery partner in developing the LCWIP through engagement at all stages particularly network planning and route prioritisation.

Figure 2-3 presents the project team involved in the LCWIP development including key contact at each local authority.

Figure 2-3 – West Midlands LCWIP Project Team



2.3. LCWIP Engagement

Stakeholder engagement has been vital to the development of the LCWIP. Engagement with stakeholders has helped to:

- Identify the key regional cycling corridors across the West Midlands;
- Identify CWZs across the West Midlands to improve conditions for pedestrians; and
- Produce a prioritised programme of cycling corridors to support the development of the cycling walking network in the West Midlands Combined Authority area.

Through engaging with stakeholders, a sense of ownership and buy-in has been achieved which is critical to the delivery of the LCWIP. Internal stakeholder engagement has taken place through the LCWIP Working Group. Table 2 presents these engagement activities that have taken place with internal stakeholders.

Table 2 – Internal Stakeholder Meetings

Meetings	Purpose of Meeting
Inception	Introduce the aims and objectives of the LCWIP process to the local authorities. The meeting identified external stakeholders who would be involved in an initial workshop to discuss priority areas for consideration.
'One to one' Local Authority Meetings	Through engagement with the lead contact from each local authority, key local priorities were identified. The meetings were also an opportunity to discuss local data requirements and gain further information on future developments which would be essential to the development of the transport network.
Progress meetings	A series of progress meetings took place with TfWM and the LCWIP working group to discuss the development of the cycling and walking network planning. The progress meetings were an opportunity to present findings of the Propensity to Cycle Tool and to inform the working group of key priorities identified.
Final Report Workshop	The final workshop included the presentation of the LCWIP Main Report. The report presented the LCWIP process from initial gathering of information through to the final stage of route prioritisation. The LCWIP working group were presented with guidance on how the LCWIP can be integrated into local planning policy and how the development of the cycling and walking network can attract funding from a variety of funding bodies.

2.4. Timescales

The West Midlands LCWIP sets out a long term strategic approach to the development of the cycling and walking network in the West Midlands. The LCWIP is based on a 10 year approach to ensure that future developments within the region are considered as part of the cycling and walking network. To provide a clear direction for a phased approach to the development of the network, schemes will be divided into three delivery periods

- Short term priority corridor – schemes with a delivery implementation of less than three years;
- Medium term priority – schemes with a delivery implementation between three to five years; and
- Long term priority – schemes with a delivery period over five years.

3. Gathering Information

As part of network planning for cycling and walking, a wealth of information has been gathered on

- Local and regional policy across the West Midlands;
- The existing transport network including local cycling links and National Cycle Network;
- Travel patterns (particularly cycling and walking trips); and
- Key trip generators and attractors within each constituent local authority.

The information collected above provides a clear context of cycling and walking in the West Midlands. For the development of the future cycling and walking network, it has been important to identify future developments and undertake an analysis of the Propensity to Cycle Tool (PCT) to determine corridors with high propensity for cycling.

As part of the information gathering exercise, meetings were held with the lead contact from the local authorities to gain insight into the local network and to identify key priorities relating to cycling and walking. The remainder of the chapter provides a summary of local and regional policy, the existing network and trip patterns and the identification of existing and future trip generators/attractors A more detailed analysis of the above can be found within the bespoke 'Background Report' (Atkins, 2018).

3.1. Policy Review

Figure 3-1 presents the key published policy and strategy documents reviewed at a national and regional level. A review of local policy can be found within the bespoke Background Report.

Figure 3-1 - National and Regional Policy – West Midlands LCWIP Alignment

Policy/Strategy	Scale	Alignment to TfWM LCWIP
National Cycling and Walking Investment Strategy	National	The TfWM LCWIP will seek to normalise both forms of active travel, supporting the overall aim of the National Cycling and Walking Strategy
TfWM Movement for Growth Strategy	Regional	The TfWM LCWIP will seek to align with the Movement for Growth strategy by ensuring both forms of active travel are safe and attractive options
West Midlands Cycling Charter	Regional	The TfWM LCWIP will develop infrastructure which will support the TfWM Cycle Charter aim of achieving a 5% mode share for cycling by 2023.
WMCA Strategic Economic Plan (SEP)	Regional	The TfWM will seek to support the WMCA SEP of 'Accessibility' – improving the connectivity of people and businesses to jobs and markets.
West Midlands 'On the Move' Physical Activity Strategic Framework	Regional	The TfWM will seek to support the aims of 'On the Move' by encouraging physical activity through cycling and walking

National Cycling and Walking Investment Strategy (CWIS)

In 2015, the Infrastructure Bill became an Act, meaning the Secretary of State for Transport was required by law to set out a strategy for cycling and walking infrastructure. In April 2017, the Department for Transport published the first Cycling and Walking Investment Strategy (CWIS) which set the following long term vision:

"The Government wants walking and cycling to be a normal part of everyday life, and the natural choices for shorter journeys such as going to school, college or work, travelling to the station, and for simple enjoyment. As part of our aim to build a society that works for all, we want more people to have access to safe, attractive routes for cycling and walking by 2040".

Short term targets for 2020 as set out in the CWIS are to:

- Increase cycling activity, where cycling activity is measured as the estimated total number of cycle stages made;
- Increase walking activity, where walking activity is measured as the total number of walking stages per person;
- Reduce the rate of cyclists killed or seriously injured on England's roads, measured as the number of fatalities and serious injuries per billion miles cycled; and
- Increase the percentage of children aged 5 to 10 that usually walk to school.

The West Midlands LCWIP will seek to increase cycling and walking activity within the West Midlands. This will be through improved infrastructure which provides an attractive alternative to the car. Infrastructure designed to West Midlands Cycle Design Guidance will have a beneficial impact on casualty rates for cycling and pedestrians. The network planning for cycling and walking will consider how infrastructure improvements can increase the percentage of children travelling by active modes.

TfWM Movement for Growth Strategy

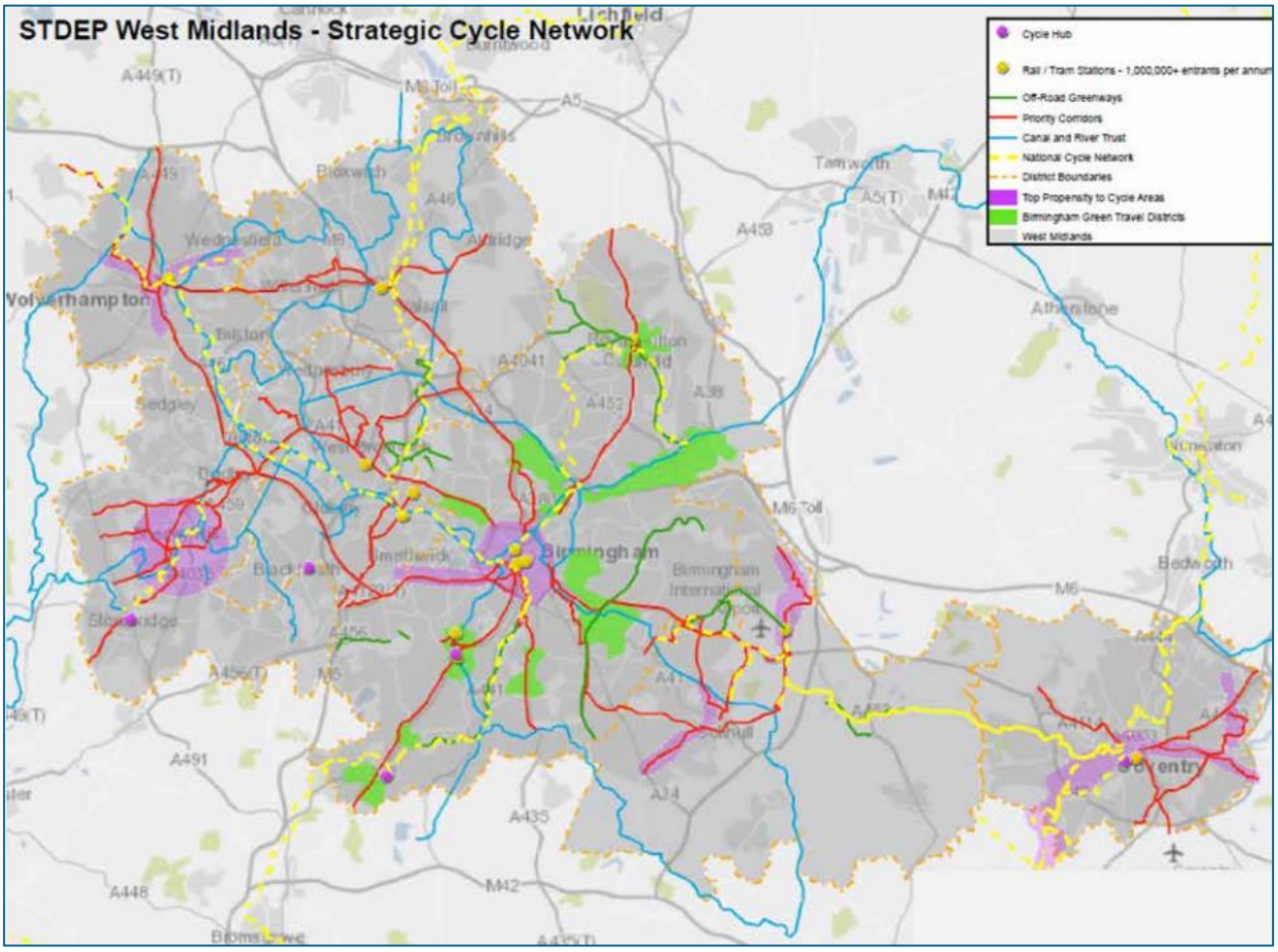
The strategic transport plan for the West Midlands sets out the long-term approach to ensure sufficient transportation improvements are made.

The vision states that the West Midlands Combined Authority (WMCA) will:

"Ensure that walking and cycling are a safe and attractive option for many journeys especially short journeys, by delivering a strategic cycle network and enhancing local conditions for active travel".

Figure 3-2 presents the Metropolitan Cycle Network outlined with the Movement for Growth Strategy. The strategy outlines how the network will be developed to serve the main flow corridors and to raise the profile of the regional cycle network.

Figure 3-2 – West Midlands Strategic Cycle Network



The West Midlands LCWIP has explored the corridors identified through the Strategic Cycle Network to determine potential opportunities as well as identifying any corridors considered 'missing gaps' which have significant potential for mode shift to cycling.

West Midlands Cycling Charter

The West Midlands Cycling Charter sets out a vision to realise the full potential of cycling's contribution to the health and wealth of the West Midlands. The WMCA is seeking to address safety concerns of existing and potential cyclists, which is fundamental to increasing the mode share for cycling. The aim is to raise the mode share of cycling across metropolitan areas by 5% by 2023, which represents a 400% increase in cycling journeys from the 1% baseline (Census 2011). By 2033 the aim is to raise cycling to 10% of all trips across the West Midlands.

The West Midlands LCWIP will have a key role in supporting the aims of the Cycling Charter. The Charter understands that to ensure an increase in cycling levels there needs to be significant changes in planning, design and maintenance of the transport network. This includes a high quality and coherent cycle network across the West Midlands for commuting and local trips that meets the needs of all levels of cyclists. The West Midlands LCWIP has considered the need of all users to ensure the network encourages all users to travel by cycling across journey purposes.

The aims of the Cycling Charter are being delivered through the Cycling Charter Action Plan. Specific actions within the plan include delivery of bikeshare across the West Midlands. As with the identification of LCWIP routes, the location of bikeshare docks are also influenced by similar trip attractors and generators. The routes identified in document will support uptake of bikeshare by providing safer options for travel.

The Action Plan also identifies a commitment to integrating cycling with public transport including, bus, rail and Metro. The routes prioritised in this LCWIP have links to public transport including several rail stations and Sprint (Rapid Bus Transit). These new cycling routes will provide opportunities to use multi-modal travel for longer journeys. This is particularly vital as the West Midlands will see considerable development and construction through delivery of HS2, Commonwealth Games and new housing and employment sites. This requires a robust resilience plan to ensure that disruptions to travel across the region is minimised.

WMCA Strategic Economic Plan (SEP)

The West Midlands Combined Authority's (WMCA) Strategic Economic Plan (SEP) sets out the vision, objectives, strategy, and actions for improving the life of all residents and employees in the WM. A key objective of the SEP is 'Accessibility' – improving the connectivity of people and businesses to jobs and markets. The SEP also outlines ambitions to address the increasing traffic congestion in the region which is reducing accessibility and creating poor air quality. The overall WMCA programme commits £1.7bn to a transport and roads package, over a 30-year period.

The West Midlands LCWIP has the potential to significantly contribute to the objectives of the SEP, particularly those related to improving accessibility. The development of a strategic cycling network and CWZs will provide a beneficial impact in terms of improving accessibility to key locations across the West Midlands, providing an attractive alternative to the car.

MoveWM Framework

The strategic framework, MoveWM, has been developed with the support of a variety of stakeholders including the local authorities. The strategy has four ambitions as set out below

- Making it easier and more desirable to move around the West Midlands;
- Making it easier and more enjoyable to be outdoors in our green and blue spaces and urban environments;
- Improving how it feels to live in our streets and communities; and
- Improving people's life chances, wellbeing, employability and access to work.

The framework identifies a range of 'themes' to support physical activity including 'Transport and HS2 Growth'. The following actions have been identified relating to cycling and walking:

- Delivering a West Midlands-wide cycle share scheme encouraging greatest use of our physical infrastructure by bike.
- Developing a combined authority approach to promoting the benefits of this enhanced network for physical activity.
- Working with a wide range of public and private sector partners to break down the barriers to walking, cycling and running. This could include a "Free Bike Scheme on Prescription"

combined with cycle training for those who are cycling for the first time or coming back to cycling.

Engagement with officers in public health and physical activity sector took place during the development of the LCWIP. One objective from these discussions included identifying opportunities to promote physical activity with safer routes and new provisions for cycling and walking.

West Midlands Road Safety Strategy

The future of road safety is critical to the West Midlands. As outlined within 'Movement for Growth'

a fresh look at road safety will be performed in the West Midlands, on the basis of seeking a reduction of at least 40% in the number of killed and seriously injured road traffic accidents within ten years from a 2015 base, whilst increasing the amount of cycling and walking in the metropolitan area.

The target set for the region is in line with European Union targets for reducing road safety fatalities by half over a ten year period. This Road Safety Strategy will also consider ways to improve the safety of powered two-wheelers, child pedestrians, young drivers and communities most affected by road safety. The development of the Regional Road Safety Strategy is currently being led by Coventry City Council. Whilst the strategy is still under development, improving conditions for cyclists and pedestrians will be key to improving safety for all road users within the West Midlands.

The West Midlands LCWIP considers safety to be a core design principle and the development of the cycling and walking network within the West Midlands will ensure high quality infrastructure is provided to tackle safety issues. The cycle and walking audits undertaken as part of network planning have identified any major safety issues and potential solutions.

3.2. Transport Network in the West Midlands

Key Route Network

A Key Route Network (KRN) of local authority roads has been developed and identified in collaboration with the combined authority's seven authorities. The aim of the KRN is to serve the main strategic demand flows of people and freight across the metropolitan area and provide connections to the national strategic road network. It will also serve large local flows which use main roads and will need to provide good access for businesses reliant on road based transport.

In November 2015 the West Midlands local Highways Authorities commenced a period of consultation on defining a Key Route Network (KRN). This is a network of key local highways across the West Midlands essential for the following main purposes:

- Serving the main strategic demand flows of people, goods and services;
- Serving large traffic volumes; and
- Providing connections to the national strategic road network.

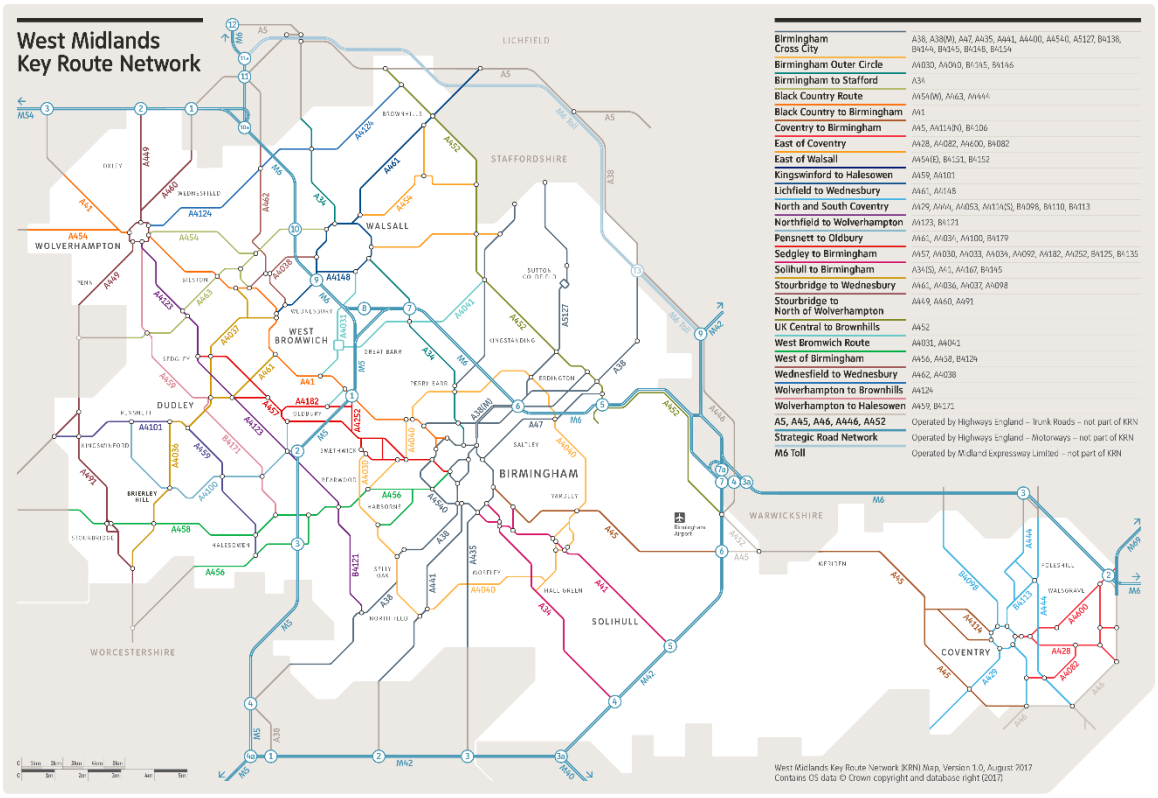
The KRN was defined and agreed in January 2016 and has subsequently been adopted in the legislation as part of the creation of the West Midlands Combined Authority (WMCA). As outlined within 'Movement for Growth' the West Midlands Strategic Transport Plan, *'Appropriate cycle provision is integral to this network, including effective junctions where cycle routes cross a main road.'*

The West Midlands LCWIP will support the further development of the KRN, the network planning for cycling and walking has considered key corridors across the West Midlands including those

identified within the KRN. The West Midlands LCWIP has identified (and will continue in subsequent reviews) potential cycling and walking improvements across a number of corridors within the KRN.

Figure 3-3 presents the Key Route Network.

Figure 3-3 - Key Route Network



Key transport services currently under development which will support the growth of the West Midlands and provide increased transport choices include SPRINT, METRO and HS2. Sprint is a bus-based rapid transit mode which is part of the vision for the future network of world class public transport in the West Midlands. Sprint is an innovative mode of transport with journey times and comfort levels that are based on those of a light rail system while maximising the flexibility and lower costs associated with bus technology.

A total of 7 routes will make up the Sprint network and these will be operational by 2026, in line with HS2. Three of these routes have been prioritised and will be delivered in time to support The Commonwealth Games in July 2022. They are:

- Birmingham Airport and Solihull to Birmingham City Centre (A45) passing the Games venues at the NEC site
- Walsall to Birmingham City Centre (A34) passing the Athletes Village at Perry Barr and Alexander Stadium
- Sutton Coldfield to Birmingham City Centre via Langley (SBL) linking to the new residential development at Langley and the business development in Peddimore

With approximately £1.3 billion being invested in extending the tram system across the West Midlands over the next ten years, this is an unprecedented light rail infrastructure project to help

deliver a lasting legacy that will enable social and economic regeneration across the region, with £250m for the Wednesbury to Brierley Hill extension confirmed by government in November 2017.

There are currently a number of schemes in different stages of development, that include:

- Wolverhampton City Centre Extension
- Edgbaston and Centenary Square Extensions
- Eastside Extension
- Wednesbury to Brierley Hill Extension
- East Birmingham/Solihull

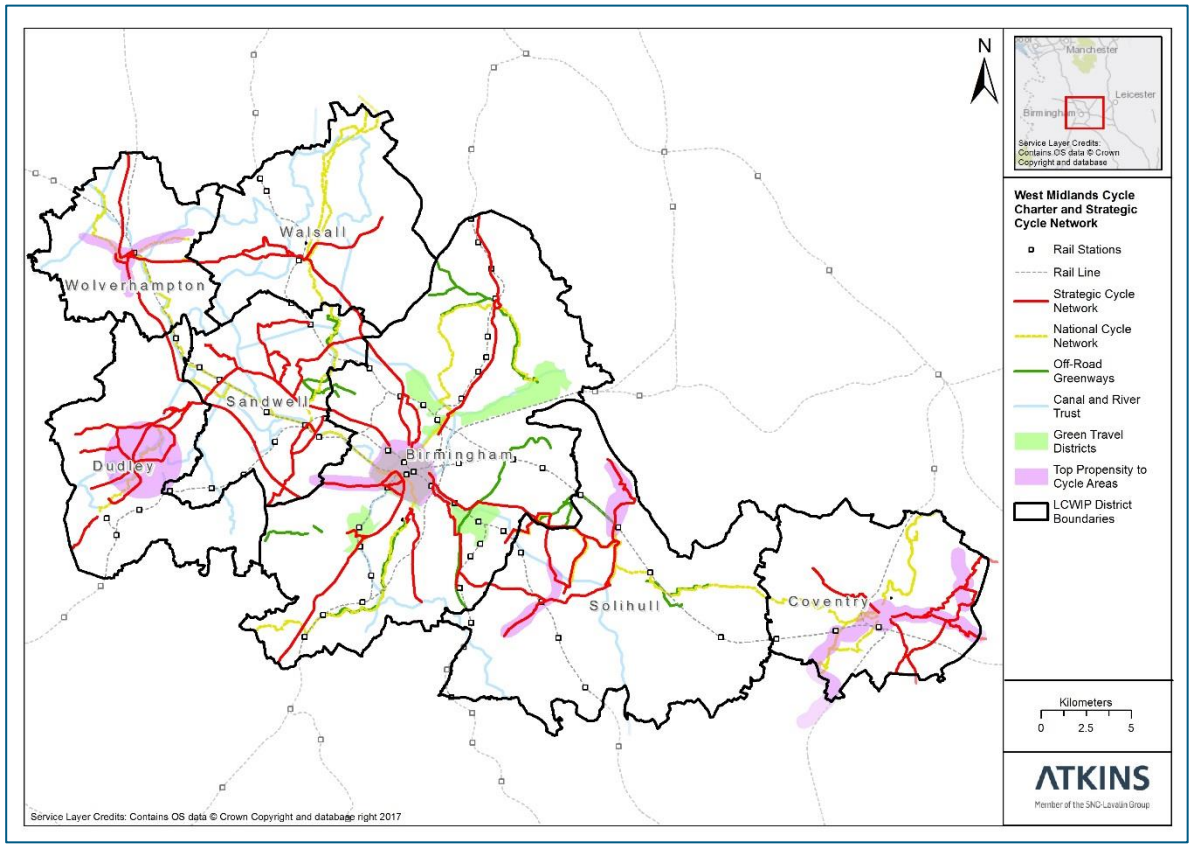
Figure 3-4 presents Sprint and Metro corridors as well as HS2 Curzon Street Railway Station and HS2 Interchange at Solihull.

Figure 3-4 - SPRINT, Metro and HS2 Proposals

Cycling and Walking Network

Figure 3-5 presents the cycle network in the West Midlands including the Strategic Cycle Network.

Figure 3-5 - West Midlands Cycling Network



The current cycling network across the West Midlands includes over 342 miles of canal towpath, greenways, National Cycle Network as well as on-road segregation. Figure 3-5 also identifies the Strategic Cycle Network which is based on a PCT analysis which identified key corridors with the highest propensity for cycling, those corridors were then put forward as part of the strategic network. The National Cycling Network passes through all local authorities with a number of cross boundary routes. As part of the LCWIP process, consideration has been given on aligning cycling and walking infrastructure with the proposed SPRINT network.

Travel Patterns in the West Midlands

Table 3 presents mode share for travel to work journeys from the 2011 census.

Table 3 – Journey to Work Mode Share – 2011 Census

	Solihull	Birmingham	Coventry	Wolverhampton	Sandwell	Walsall	Dudley	West Midlands	England and Wales
Work mainly at or from home	4%	2%	2%	2%	1%	2%	2%	3%	3%
Underground, metro, light rail, tram	0%	0%	0%	1%	1%	0%	0%	0%	3%
Train	4%	3%	1%	2%	2%	1%	2%	2%	3%
Bus, minibus or coach	5%	10%	7%	7%	8%	6%	5%	5%	5%
Taxi	0%	0%	0%	0%	0%	0%	0%	0%	0%
Motorcycle, scooter or moped	0%	0%	0%	0%	0%	0%	1%	0%	1%
Driving a car or van	45%	31%	35%	35%	35%	39%	44%	41%	37%
Passenger in a car or van	3%	3%	5%	4%	4%	4%	4%	4%	3%
Bicycle	1%	1%	2%	1%	1%	1%	1%	1%	2%
On foot	4%	6%	7%	6%	5%	5%	5%	6%	7%
Other method of travel to work	0%	0%	0%	0%	0%	0%	0%	0%	0%
Not in employment	34%	44%	41%	42%	41%	42%	37%	38%	36%

The percentage of active travel mode share is highest in Coventry, with 12% of commuters walking and 3% cycling. This is similar to the average for England and Wales. Sandwell, Dudley and Walsall only had 5% of commuters walking and 1% cycling. However, since 2011 there has been investments in cycling and public transport infrastructure across the West Midlands, which will have impacted upon these results. It is therefore likely that the mode share percentage will have increased for alternative modes to the car.

Table 4 summarises the total distances travelled to work by people in each Local Authority, separated into distance categories and the average distance travelled.

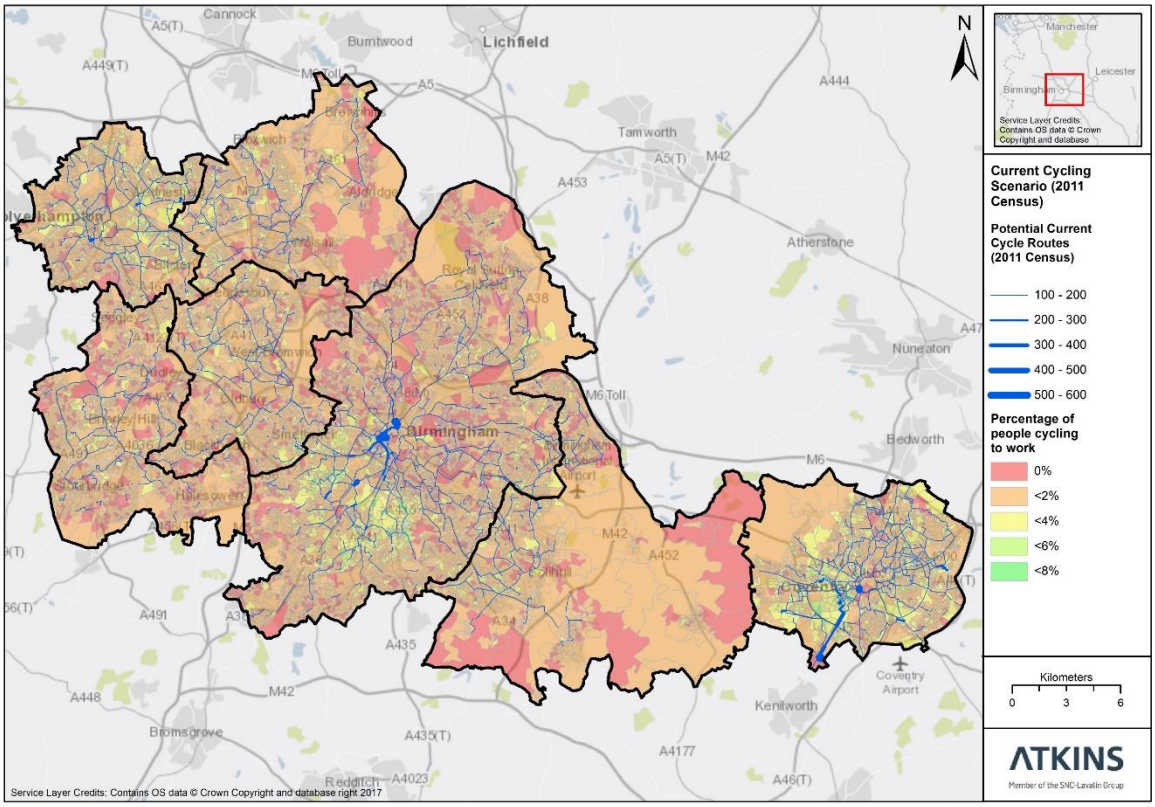
Table 4 – Distance Travelled to Work – 2011 Census

	Less than 2km	2km to 10km	10km to 40km	40km or more	Total distance (km)	Average distance (km)
Birmingham	15%	48%	17%	4%	4,378,264	12.3
Coventry	17%	46%	18%	4%	1,471,883	12.5
Dudley	16%	47%	19%	3%	1,388,958	11.5
Sandwell	16%	53%	15%	3%	1,218,915	10.9
Solihull	12%	41%	26%	4%	1,152,211	14.2
Walsall	16%	45%	21%	3%	1,119,409	11.7
Wolverhampton	17%	46%	19%	4%	1,185,101	13.2
England and Wales	20%	44%	29%	7%	323,401,017	15.0

The Local Authorities do not differ too much between travel distances, with an average travel distance being 14.1km, which is less than the average for England and Wales at 15km. Journeys less than 2km are likely to be walking or cycling trips, however this does not always occur. 17% of the travel to work distances in Coventry and Wolverhampton are for journeys less than 2km, whereas only 12% of journeys in Solihull are less than 2km. Trips over 10km are more likely to be completed using private vehicle or public transport services, 30% of journeys in Solihull are over 10km, whereas in Birmingham only 21% are, which is less than the average for England and Wales (29%).

Origin-Destination commuting data from the 2011 data was used within the Propensity to Cycle Tool (PCT) to locate potential routes which could be used by cyclists, due to many factors such as the number of cyclists, hilliness and overall journey time. Figure 3-6 illustrates these potential cycle corridors alongside the percentage of people who currently commute by bicycle within each Output Area (OA).

Figure 3-6 - Current Cycle Patterns - 2011 Census



The analysis has identified that there are significant number of areas where the percentage mode share for cycling is below 2%. Further analysis has identified that the majority of Solihull has very low levels of cycling to work, particularly in the more rural sections on the corridors towards Coventry[4].

In more urban areas, cycling has higher mode share with over 8% of journeys undertaken on bike. Figure 3-6 shows that South Birmingham has areas of over 8% mode share of cycle to work as well as locations within Wolverhampton, Coventry and Walsall

Figure 3-7 presents mode share for walking from the 2011 census.

[4] Mode share for other journey purposes is likely to be greater than 2% as more local trips are undertaken.

Figure 3-7 - Walking Mode Share - 2011 Census

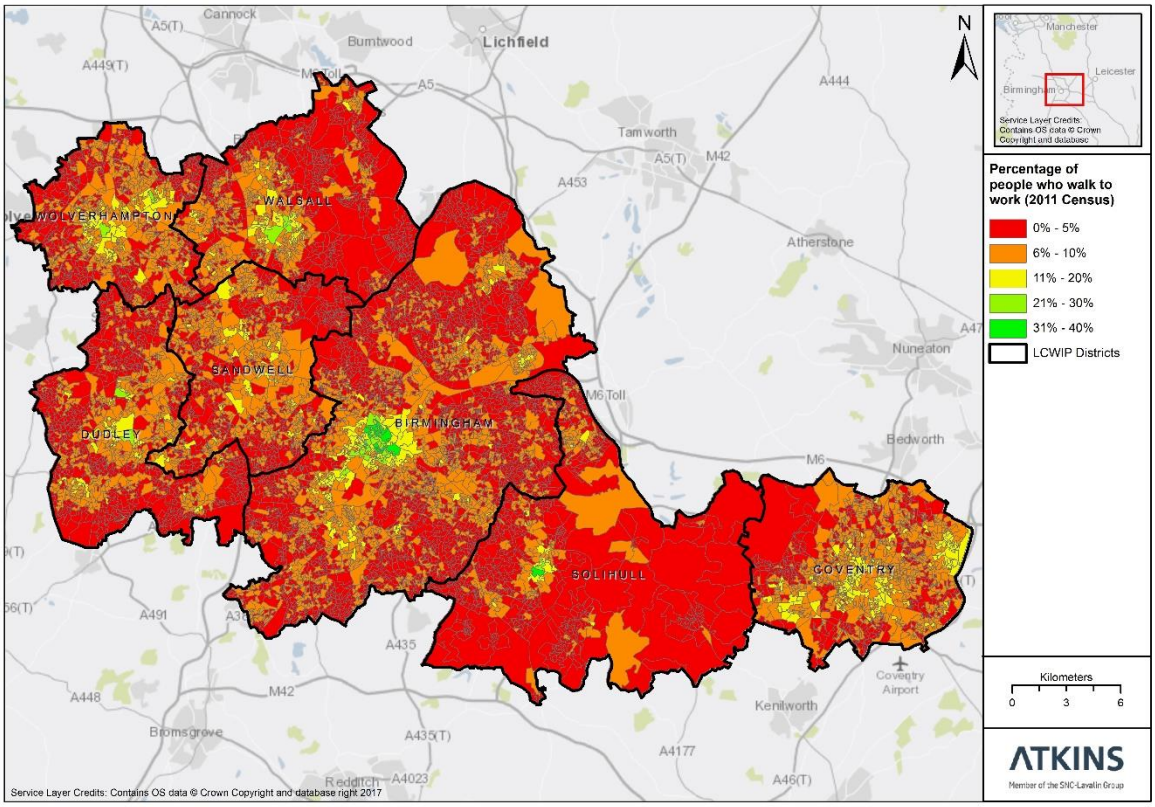


Figure 3-7 shows that the highest concentration of walking journeys to work are within the urban areas. This is generally due to a higher concentration of trip generators (such as large residential zones) and trip attractors (major employment sites, railway stations, leisure and retail sites). Across the West Midlands, suburban areas have the highest rates of walking. Solihull has lower levels of walking due to high car ownership and a large rural to semi-rural area. Central Birmingham has high concentrations of walking, with a high mode share of above 20%. Coventry has mode share varying between 6-20%, therefore providing opportunities for walking trips across the city.

3.3. Local Authority Meetings

One to one meetings were held with the local authorities to obtain insight into the local cycling and walking network. The meetings were held with the LCWIP Working Group lead for each local authority and representatives from the local authorities who have a key role in the development of the network.

A key output of the meetings with the local authorities was to identify cycling and walking priorities in relation to future infrastructure. The analysis of the PCT, with local insight from the lead contacts of the LCWIP Working Group, provided a wealth of information on current and existing future trips. The analysis has identified where future cycling trips are expected to take place due to committed and anticipated development across the West Midlands.

Table 5 presents the key local authority cycling corridors and walking zones/key interventions identified by the local authorities.

Table 5 - Key Cycling and Walking Interventions - Local Authority Priorities

Constituent Local Authority	Cycling Areas/Corridors	Walking Zones/Interventions
Birmingham City Council	• A34 (under construction) – aspiration to provide segregated route to Walsall • Bristol Road (under construction) – aspiration to provide segregated route to Northfield/Longbridge • Coventry Road • A456 Hagley Road (but constrained) • Deliverability should focus on integration with sustainable transport corridors and as part of wider Transport Space Allocation assessment	• Access to transport hubs • Ten urban centres which form part of the urban Centres Framework • Alexander Stadium (Perry Barr) and Athletes Village
Coventry City Council	**Employment Sites** • Jaguar Land Rover at Whitley • The University of Warwick • Coventry Gateway • Ansty Park • Pro-Logis Park at Keresley **Residential** • Keresley Sustainable Urban Extension • Eastern Green Sustainable Urban Extension • Proposed residential developments south of administrative boundary **Retail:** • City Centre First **Major Centres** a) Arena Park; b) Cannon Park; c) Brandon Road; and d) Eastern Green.	• Walking priorities should focus on major trip attractors including the city centre and the railway station • Focus on City of Culture • Analysis of city centre to identify accident hotspots
Dudley Metropolitan Borough Council	• Gap in NCN 54 in Dudley town centre • A4123 • NCN 81 in Coseley • Improved links in Halesowen Area – Rowley Regis Station to south of A456 via Leasowes Park • Around the Metro corridor – Brierley Hill links from NCN 54 to Metro Stops	• Key is to ensure good access to the twelve Metro stops in Dudley Borough • A4123 – key metro stop • Signalised pedestrian access to Birmingham New Road Metro stop • Tipton Road Metro Stop – (although uncertainty of where route will go)

		• Check severance issues within the town centre (Stourbridge, Halesowen, Brierley Hill, Dudley)
Sandwell Metropolitan Borough Council	• A461 West Bromwich to Dudley • Smethwick Galton Bridge to Brandhall • Strategic Cycle Network corridors linking Wolverhampton, Dudley, Sandwell & Birmingham (STDEP) • A4123 • Cycling infrastructure along the A34	• SMBC keen to identify key walking zones rather than long corridors • Cycling infrastructure improvements to incorporate pedestrian improvements • Walking improvements should provide improved access to transport hubs and employment zones
Solihull Metropolitan Borough Council	**Key centres to focus on:** • Solihull town centre • Birmingham Business Park • Solihull town centre to key local urban areas • UK Central Hub • Birmingham Airport and NEC (Strategic level) new M42 Junction 6 scheme • Key will be to connect the UK central hub to residential areas through JLR and Birmingham City Centre **Key interventions:** • Canal route between Olton and Catherine de Barnes • Birmingham Business Park access improvement	• Walking infrastructure in Solihull is generally acceptable. Junctions are the key issue in terms of delays • Town centre junction improvements are key • Potential to link to nearby primary and secondary schools
Walsall Metropolitan Borough Council	• Improvements alongside the A34 Birmingham Road • Section of the Tame Valley Canal between Rushall Canal and New Walsall Road • A4123	• Footpath extension near Heath End to Brownhills. Desire to extend footpath alongside former railway track.
City of Wolverhampton Council	• Improvements alongside the A454 • Improvements to the existing section of the Wolverhampton – Walsall corridor • A449 Stafford Road • A4123 • A4124 corridor	• There is minimal provision for pedestrians currently. This will need to be addressed • Although, current walking conditions are not favourable or inviting. Wolverhampton has developed a 'Connected Places' strategy for movement in the city – will need to explore interventions which align to strategy.

3.4. Propensity to Cycle Tool Analysis

A key tool to inform cycling network planning is PCT. The PCT has been developed to provide support to local authorities to help identify where cycling is currently taking place and where cycling has the greatest potential to grow under a range of scenarios.

The PCT is a strategic planning tool which has been used as part of the West Midlands LCWIP to help to identify priority corridors based on their potential for mode shift to cycling. Different 'visions of the future' are represented through the PCT with various scenarios of change, including the DfT's draft Cycling Delivery Plan target to double cycling in a decade. This scenario has been used to identify corridors with the greatest potential for cycling.

Figure 3-8 to Figure 3-14 present the PCT analysis undertaken for each local authority including:

- Corridors with the greatest propensity for cycling –;
- Corridors identified as priorities by the local authorities;
- Existing cycling infrastructure;
- Exiting transport hubs;
- Major housing sites;
- Major employment sites; and
- Committed infrastructure.

The PCT analysis is an opportunity to determine whether the corridors identified by the local authorities are those which are deemed to have greatest propensity for cycling through the PCT tool.

Figure 3-8 - Birmingham PCT

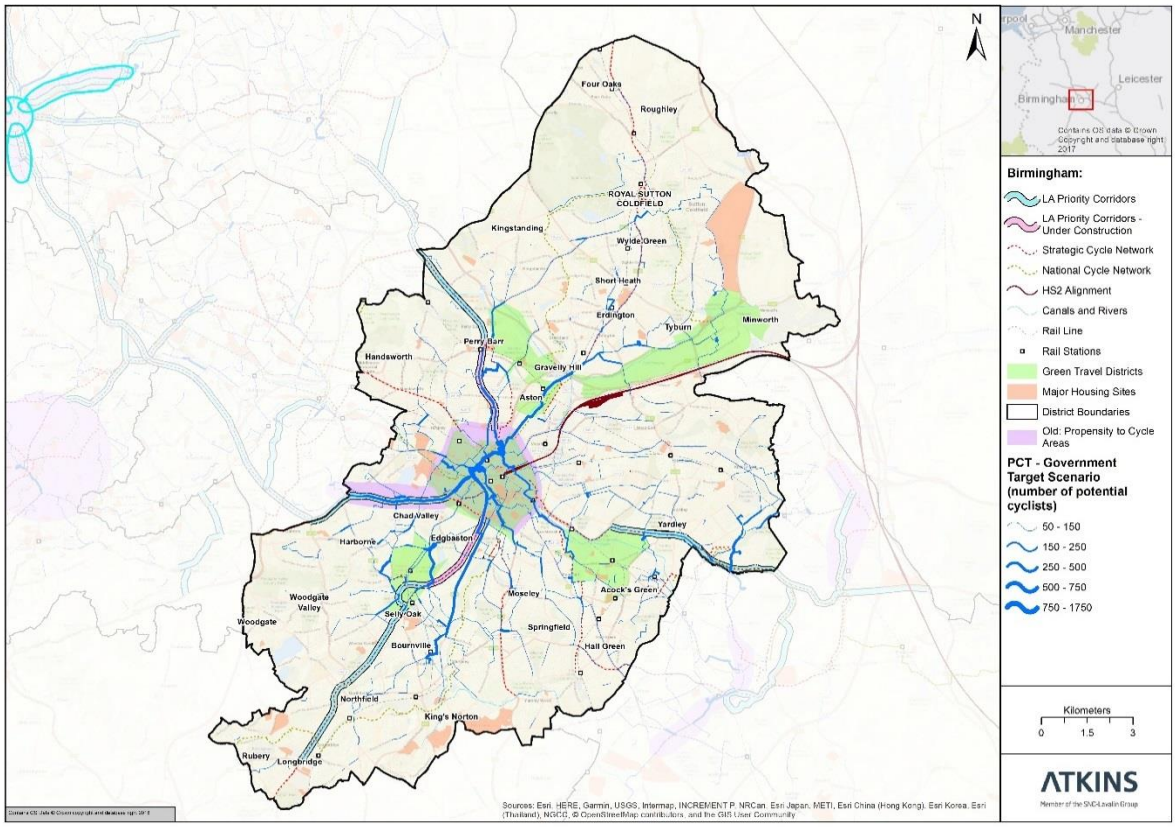


Table 6 presents a summary of the PCT analysis for Birmingham City Centre and four key corridors identified as having the highest propensity for cycling.

Table 6 - Birmingham PCT Analysis

Key PCT Priority Corridors
A441/A38 Bournville to City Centre
A5127/B4148 Minworth to City Centre
A456 Hagley Road West to City Centre
Sutton Coldfield to Birmingham City Centre – via A453 and A34
Summary of PCT analysis
The PCT analysis has identified that the majority of corridors with high propensity for cycling are located to the south of Birmingham City Centre. Key corridors include the A38 due to the link to the University of Birmingham and student residential areas such as Selly Oak. The A456 is also a high propensity corridor which links residential areas to the City Centre by Hagley Road West. Corridors to the north of Birmingham City Centre with high propensity include A34 to Perry Barr and the A5127 to Gravelly Hill.

Coventry City Council

Figure 3-9 - Coventry PCT

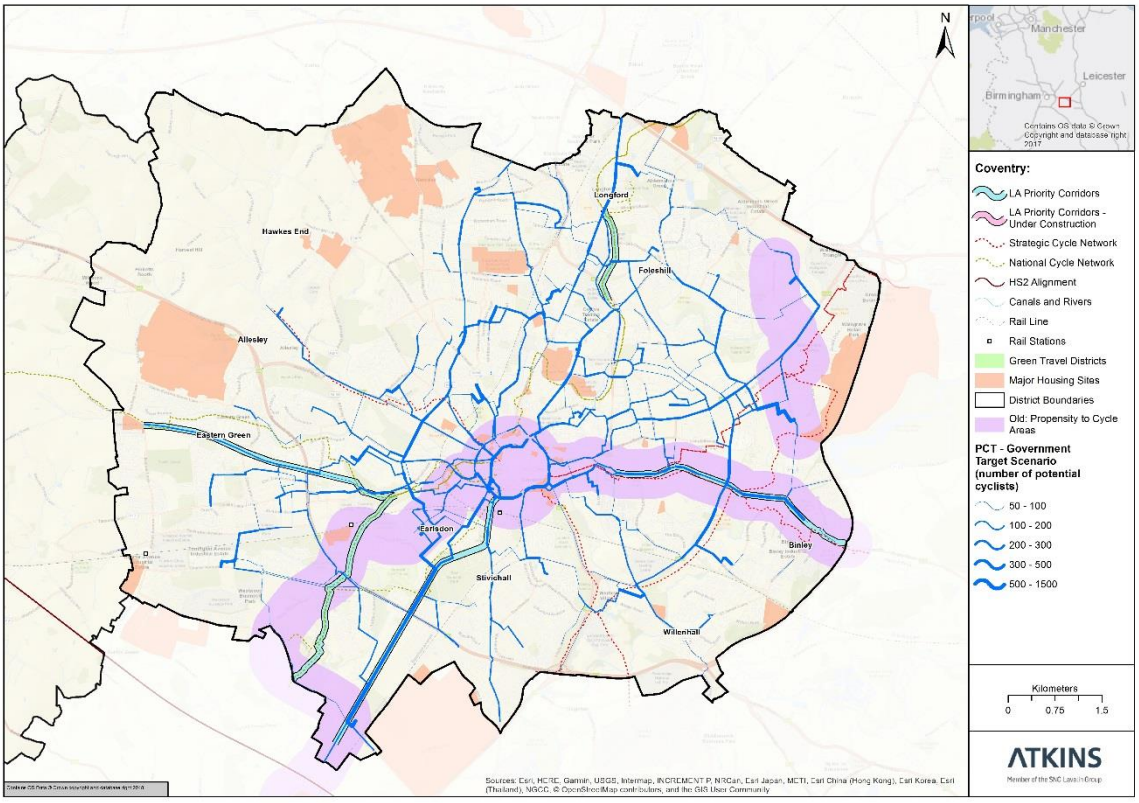


Table 7 presents a summary of the PCT analysis for Coventry City Council and the four key corridors identified as having the highest propensity for cycling.

Table 7 – Coventry PCT Analysis

Key PCT Priority Corridors
Warwick University to City Centre via A429 and B4107
Binley to City Centre via A428
City Centre to University Hospital via A4600
Foleshill to the City Centre via B4109
Summary of PCT analysis
The PCT analysis has identified a number of corridors which have a high propensity for Cycling across Coventry. A key regional corridor identified within Coventry is the A429. This key corridor links the City Centre to Warwick University and therefore has potential for significant educational trips by both staff and students. A further corridor identified as a priority within Coventry is Binley Road (A428), located to the east of the City Centre. The corridor is within close proximity to a number of retail and employment sites and is close to Coventry University. The B4109 is a key commuter route into the city centre and provides a link to Arena Park Shopping Centre. The PCT has not identified corridors with links to major housing developments as having the greatest propensity for cycling, this is due to the PCT forecasting on existing travel patterns. Coventry City Centre to Holbrooks will have high propensity for cycling due to increased population.

Dudley Metropolitan Borough Council

Figure 3-10 - Dudley PCT

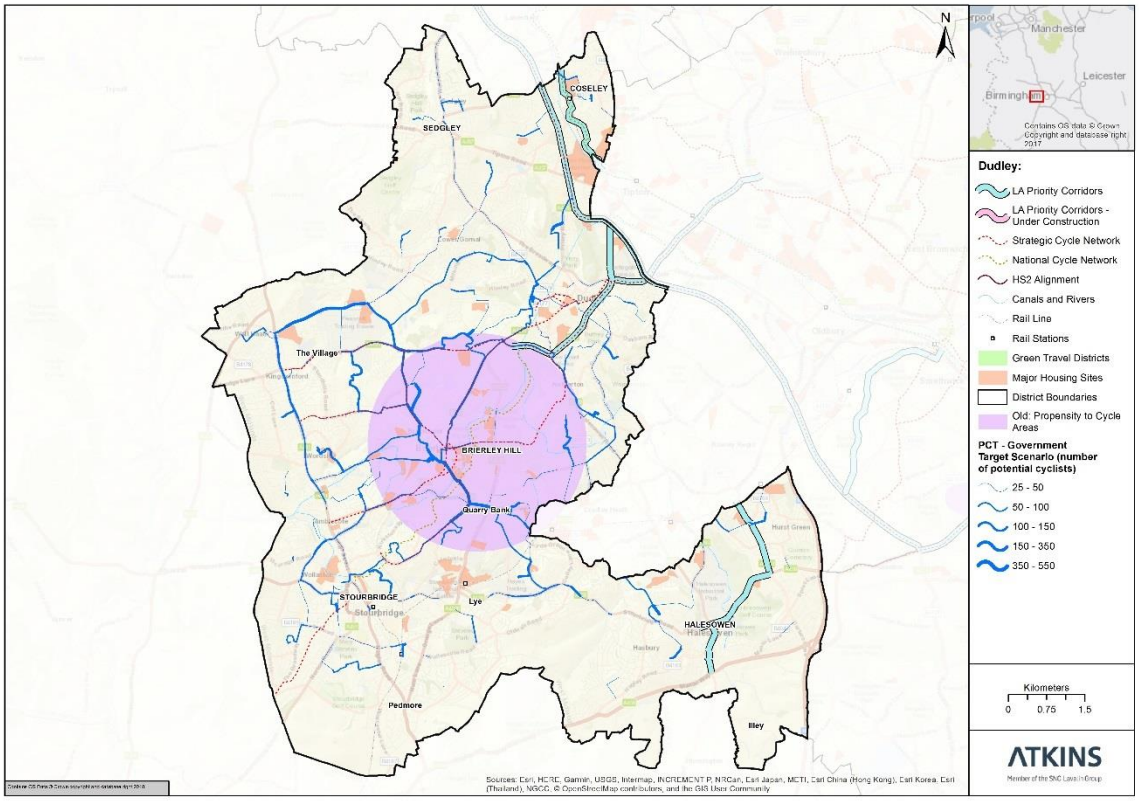


Table 8 presents a summary of the PCT analysis for Dudley Metropolitan Borough Council and the three key corridors with high propensity for cycling.

Table 8 – Dudley PCT Analysis

Key PCT Priority Corridors
Quarry Bank to Kingswinford
Brierley Hill to Dudley City Centre via the A461, A4101 and Wellington Road.
Stourbridge to Brierley Hill via the A458, A491, A4102, A461, B4172 and A4100.

Summary of PCT analysis
The PCT analysis has identified that the three priority corridors for cycling within Dudley connect into Brierley Hill. The importance of Brierley Hill is likely due to the major employment and retail opportunity at Merry Hill Shopping Centre and The Waterfront which is a key commuter and leisure destination. Other key destinations are Stourbridge town centre and Dudley town centre which are significant urban centres with the potential for significant commuter trips in the peak periods. The PCT analysis has also identified opportunities around Kingswinford with a link into Brierley Hill a key route for further analysis.

Sandwell Metropolitan Borough Council

Figure 3-11 - Sandwell PCT

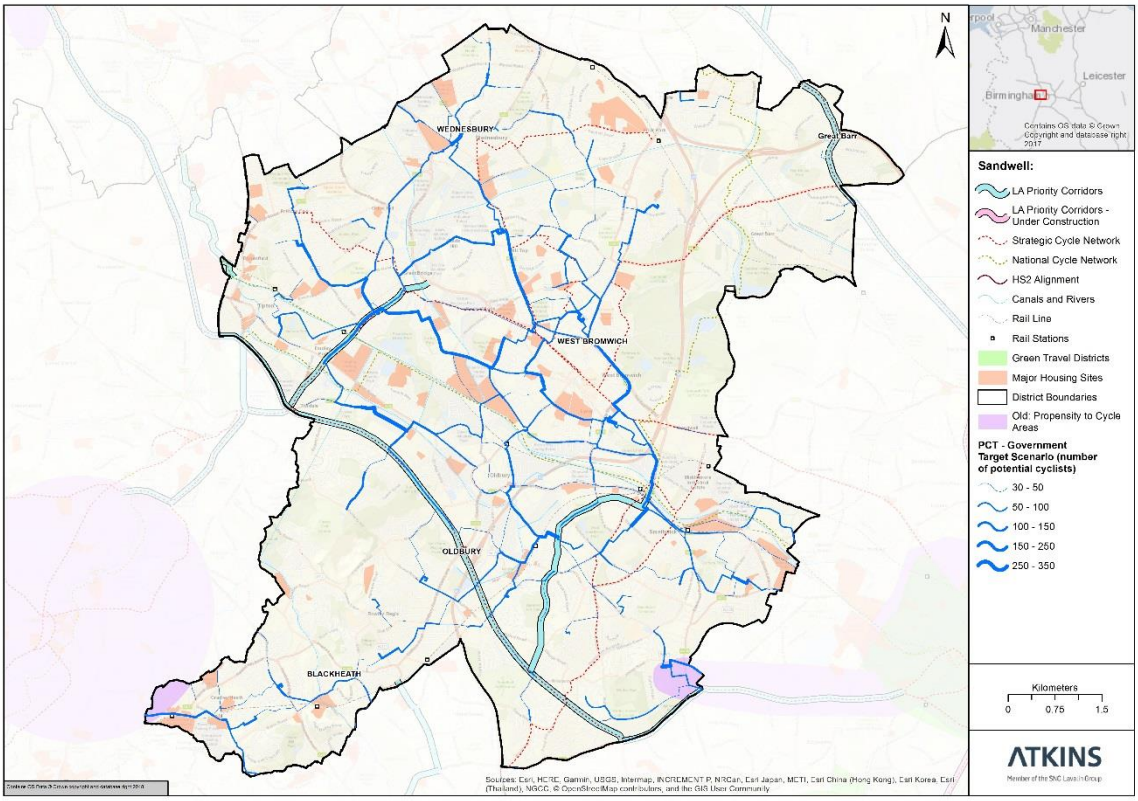


Table 9 presents a summary of the PCT analysis for Sandwell Metropolitan Borough Council and the three key corridors with high propensity for cycling.

Table 9 – Sandwell PCT Analysis

Key PCT Priority Corridors
Wednesbury to Smethwick via A4916
Smethwick to Princes End via the A4252, A4182, A461, and B4163
Old Hill to Oldbury (connecting to Sandwell and Dudley Railway Station)
Summary of PCT analysis
The PCT analysis has identified that the key urban centre for potential cycling trips is West Bromwich. The key corridor within Sandwell for cycling propensity is between the urban centres of West Bromwich and Wednesbury. The PCT has not identified any major A roads with high propensity for cycling. As demonstrated by the PCT priority corridors, the corridors are made up of small sections of A roads combined with the local highway network including B roads and residential streets.

Figure 3-12 - Solihull PCT

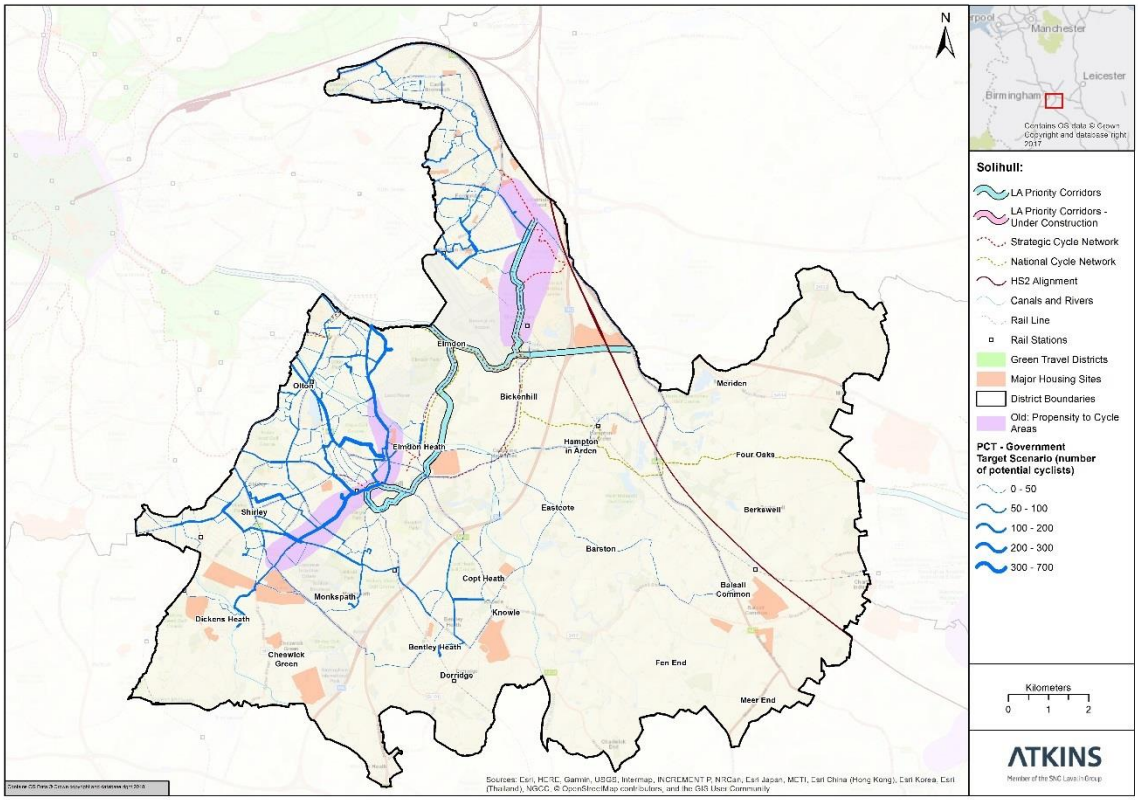


Table 10 presents a summary of the PCT analysis for Solihull Metropolitan Borough Council and the four key corridors with high propensity for cycling.

Table 10 – Solihull PCT Analysis

Key PCT Priority Corridors
B4102 Dickens Heath to Solihull town centre; B425 to Lyndon Green
Olton to Elmdon Heath/Sheldon via A41/B425 (Lode Lane)
Shirley to Bentley Heath via Union Road
Marston Green to Fordbridge
Summary of PCT analysis
The PCT analysis within Solihull has identified the B4012 from Dickens Heath to Solihull town centre as a key corridor with high propensity for cycling. This key corridor extends to Lyndon Green to create a potential significant commuter route in the AM and PM peak for cyclists. The B425 has the potential to be a key cycling corridor as a result of the JLR site connecting to residential areas including Olton. The corridor connecting Shirley, Solihull town centre and Bentley Heath has been identified as a corridor with potential for cycle mode shift.

Walsall Metropolitan Borough Council

Figure 3-13 - Walsall PCT

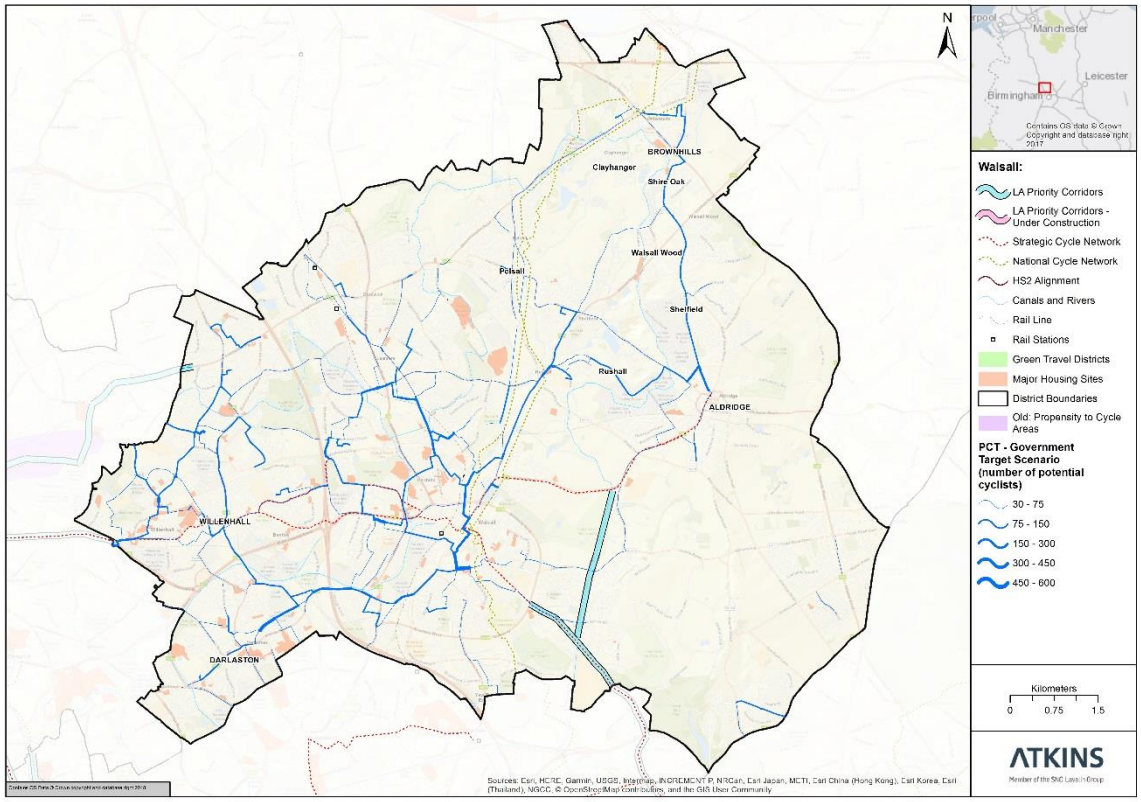


Table 11 presents a summary of the PCT analysis for Walsall Metropolitan Borough Council and the four key corridors with high propensity for cycling.

Table 11 – Walsall PCT Analysis

Key PCT Corridors
Aldridge to Brownhills via B4152, A452, and B5011
Aldridge to Walsall town centre via B4152 and A461.
Darlaston to Walsall town centre via A4038
Bloxwich to Walsall town centre via B4210, A34 and B4210.
Summary of PCT analysis
The PCT analysis has identified that the opportunities for increased cycling within Walsall are based on corridors that travel into the town centre. Corridors from Aldridge, Darlaston (A4038) and Bloxwich (B4210) have the greatest propensity for cycling.

City of Wolverhampton Council

Figure 3-14 - Wolverhampton PCT

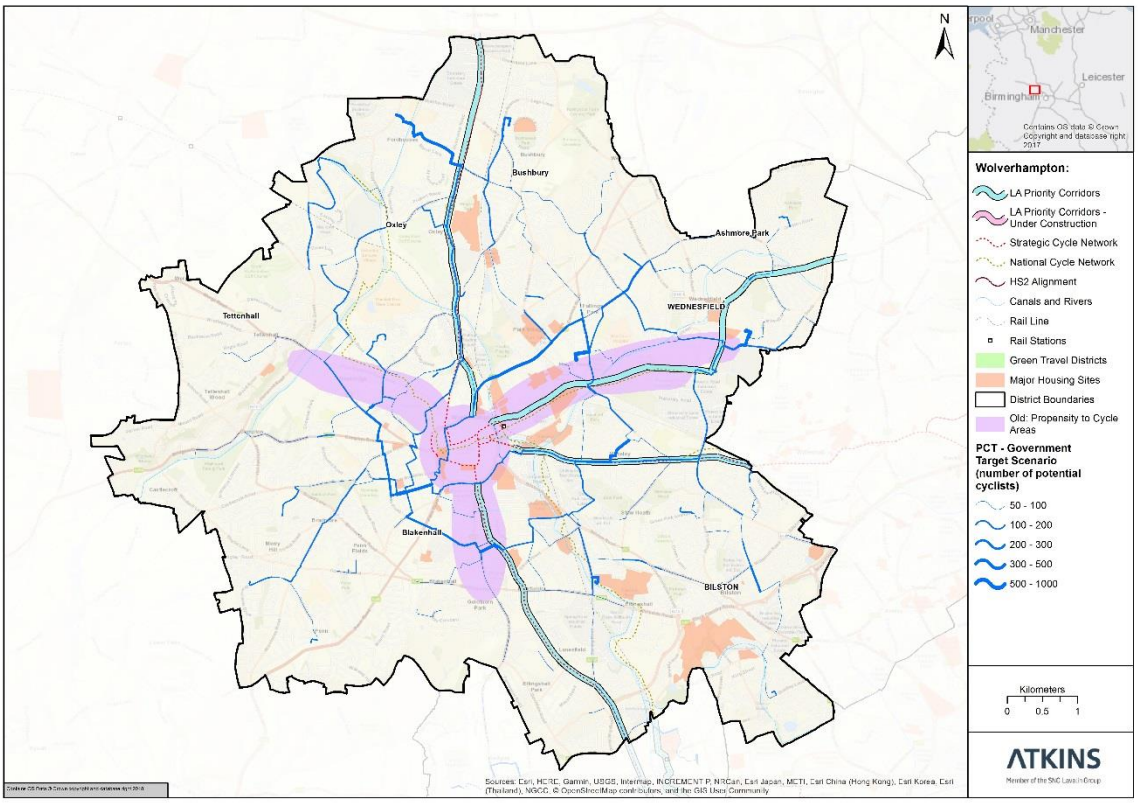


Table 12 presents a summary of the PCT analysis for City of Wolverhampton Council and the four key corridors with high propensity for cycling.

Table 12 – Wolverhampton PCT Analysis

Key PCT Priority Corridors
Wednesfield to City Centre via A426
A449 Fordhouses to Wolverhampton City Centre
A454 City Centre to Portobello
Blankenhall to Tettenhall
Summary of PCT analysis
The PCT analysis within Wolverhampton has identified the corridor between Wednesfield and the City Centre via the A426 as a route with high propensity for cycling. The corridor has high commuting levels due to key destinations including the City Centre, New Cross Hospital and Bently Retail Park. Another key corridor into the city centre is the A449 from Fordhouses.

4. Network Planning for Cycling

4.1. Background

The key output for the network planning stage for cycling has been to identify 'key regional cycling corridors' across the West Midlands conurbation. As part of the assessment, two corridors have been identified per local authority for auditing. One further corridor per local authority has been considered as part of the route prioritisation stage. Corridors which are currently under development or have already been part of a multi-modal/cycling feasibility study have not been considered for auditing. The remainder of the Chapter presents the corridors identified through discussions with the local authorities and analysis of the PCT.

A high level overview has been undertaken across the regional cycling corridors to identify whether they currently meet the standards set within the TfWM Cycle Design Guidance. A cycling audit was then undertaken to identify current constraints and opportunities. The audit provides TfWM and local authorities with a wealth of information to use as part of more detailed feasibility studies on the corridor. Detailed feasibility studies will help support the case for funding by providing a detailed solution on each corridor.

A cycling network map of the key regional corridors is presented within Figure 4-2

Constraints and opportunities across corridors is presented within Section 4.4

4.2. Tacking Cycle Crime & Theft through Network Planning

Bicycle theft is a common problem across the United Kingdom, particularly with the cost increase and high quality production of bikes found. Theft using police recorded crime data undercount the extent the problem because of the high levels of underreporting; the police are typically informed of one cycle theft for every five stolen. [5]

Whilst the West Midlands LCWIP focuses on improvements to highway infrastructure, network planning and behavioural change programmes can support the feeling of safety and help tackle cycle crime. Examples of improving the safety for cyclists includes:

- Improved lighting;
- Ensuring cycle routes are not isolated from the general public e.g. close to houses, streets etc; and
- Increase the availability of designated cycle parking in public places where cyclists can securely leave their bikes
- Cycle events raising awareness of responsible cycling and protecting bikes and equipment.

High quality new cycle infrastructure is expected to increase cycle journeys across the West Midlands. It is anticipated that the LCWIP will promote the benefits of cycling whilst tackling anti social behaviour. TfWM with the support of local authorities, will continue to consider how to tackle anti social behaviour and will ensure that new infrastructure will act as a deterrent for anti social behaviour across the key corridors identified within Section 4.4

[5] http://www.ucl.ac.uk/jdibrief/documents/bike-theft/BICYCLE_THEFT__1-Summary_.pdf

4.3. Network Planning – Methodology

Through discussions with the local authorities, the PCT and the use of Geographic Information System (GIS), cycle network planning has taken place to identify the key regional cycling corridors within the West Midlands.

Table 13 presents how each of the above methods has helped to identify the key cycling corridors across the region.

Table 13 - Cycle Network Planning

Method	How Information will be used
PCT Analysis (further information found within Chapter 3)	The analysis has identified the top three to four corridors per local authority for propensity for cycling. The corridors will be considered as potential key regional corridors due to their likely impact on mode shift towards cycling.
Local Authority Meetings (further information found within Chapter 3 and Background Report)	The meetings with the lead contacts from the LCWIP working group identified key cycling priorities for each local authority. The key priorities include corridors which will be impacted by future developments such as major housing and employment sites which will not have been picked up by the PCT.
GIS Analysis (further information below)	The GIS analysis has been undertaken to identify major trip generators and attractors particularly along the priority corridors identified by the PCT. This has informed a greater understanding and provided the strategic rationale for the corridors.

The PCT and the meetings with the local authorities have identified corridors with high propensity for cycling. To provide further analysis of such corridors, GIS was used to identify key trip generators and attractors across the West Midlands to determine whether the corridors identified link to such sites.

A key method to identify the demand for a planned network is to map the main origin (trip generators) and destination (trip attractor) points across the West Midlands. Trip origin points are usually the main residential zones within each of the local authorities with trip attractors including the following:

- City, town and district centres;
- Employment sites, business parks or large employers;
- Educational establishments, including primary and secondary schools and university campuses;
- Healthcare establishments, including major hospitals within the West Midlands;
- Retail facilities, including out of town sites;
- Community facilities, including sports stadiums and major visitor attractions; and
- Future development sites and planned transport links.

Adhering to LCWIP guidance, where LCWIPs cover large geographical areas such as the West Midlands, only major trip generators and attractors were mapped. Once existing and future trip generators and attractors were mapped, priority corridors identified by the local authorities and

those identified through the PCT were added as a layer to the GIS mapping. An analysis was then undertaken to ensure that corridors identified aligned with the key trip generator and attractors across the region.

4.4. Key Regional Cycling Corridors

As outlined within Chapter 1, the West Midlands LCWIP will focus on key regional corridors for cycling which have high propensity for cycling. As part of the overall LCWIP process, it is important to acknowledge the importance of local/short distance trips which would be undertaken on the local network. Data gathered on corridors with lower levels of propensity for cycling have been shared with the LCWIP working group to support network planning at a local level.

The identification of the regional corridors aligns closely to the classification of 'desire lines' outlined within the LCWIP guidance. Desire lines are based on direct links/corridors between major trip generators and attractors.

Table 14 presents the different types of desire lines outlined within the LCWIP guidance and how they have been considered as part of the West Midlands LCWIP.

Table 14 - Desire Line Classification

Desire Line	Classification	Consideration as part of West Midlands LCWIP
Primary corridor	High flows of cyclists are forecast along desire lines that link large residential areas to trip attractors such as a town or city centre.	Focus on Primary Corridors. Primary corridors identified which are not under development by their relevant constituent local authority, have been taken forward for auditing as key regional corridors.
Secondary corridor	Medium flows of cyclists are forecast along desire lines that link to trip attractors such as schools, colleges, employment sites.	Secondary corridors have been considered as part of the West Midlands LCWIP. Such corridors have been considered for auditing if they have a strong strategic fit at a regional and local level.
Tertiary corridor	Lower flows of cyclists are forecast along desire lines that cater for local cycle trips, often providing links to primary and secondary corridors.	Tertiary corridors have not been considered for further development as part of the LCWIP. The PCT analysis has identified tertiary corridors which will be shared with the constituent local authorities for development at the local level.

Figure 4-1 presents the criteria required for a corridor to be deemed a key regional cycling corridor.

Figure 4-1 - Regional Cycling Corridor Criteria

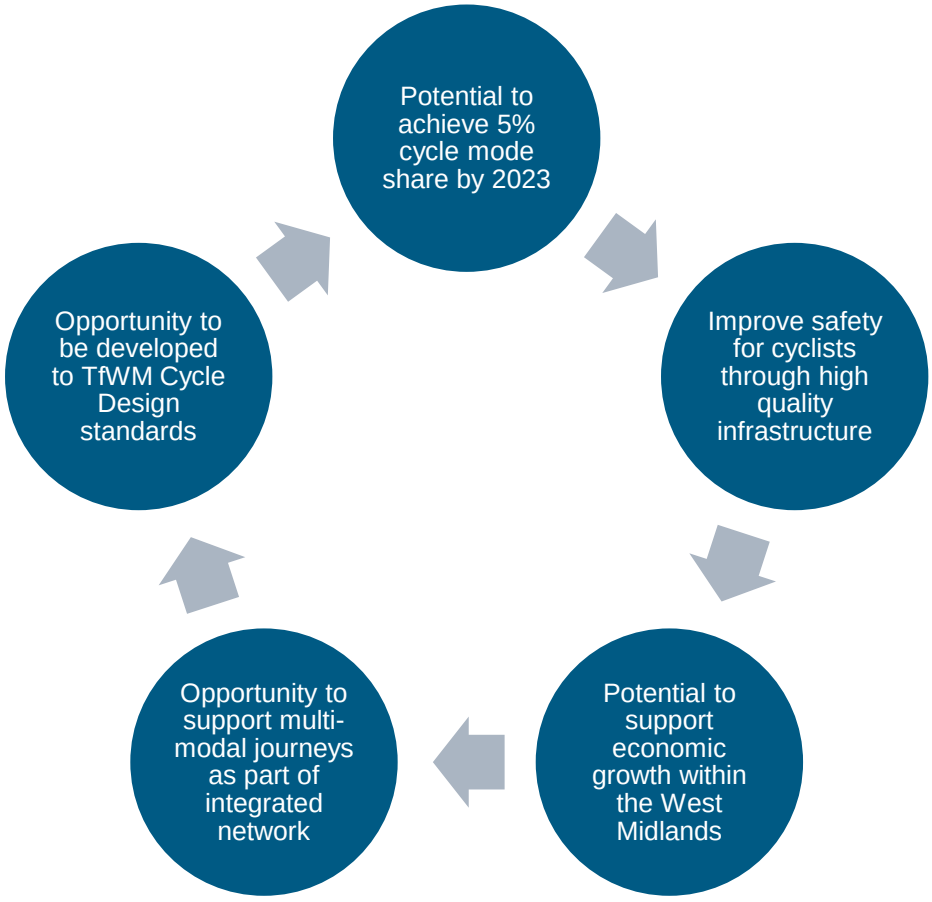


Table 15 presents the key regional cycling corridors identified to be taken forward for further consideration. The cycling corridors have been audited to determine the interventions required to ensure the corridor meets the standards set within the TfWM Cycle Design Guidance. The corridors audited are those identified as strategically important by the local authorities and identified as having good to high propensity for cycling through the PCT analysis. Table 15 also presents the strategic case for each corridor, including a PCT assessment and the alignment to trip generators and attractors. The findings for the audits are in Section 4.4.

Table 15 – Key Regional Cycling Corridors

	Corridor	Local Authority	Summary of Corridor	Audit Date
1.	**A456 Hagley Road – Beech Lane to Birmingham City Centre**	**Birmingham City Council**	• Identified as a high propensity corridor for cycling through the PCT analysis. • Priority for cycling through discussions with Birmingham City Council. A key consideration in developing cycling infrastructure along Hagley Road is the development of SPRINT Rapid Bus Transit and its impact on road space allocation. The Hagley Road SPRINT scheme will operate from Birmingham city centre towards the west of the city, along the Hagley Road to Quinton. The A456 is a major commuter corridor into the City Centre, with a number of large residential areas combined with employment zones in close proximity, the corridor has potential for a significant increase in cycle journeys.	5 June 2018
2.	**A34 Perry Barr Extension to boundary with Sandwell**	**Birmingham City Council**	• Identified as a high propensity corridor for cycling through the PCT analysis. • Priority for cycling through discussions with Birmingham City Council.	5 June 2018

			The key driver for improvements on the A34 is based on the 2022 Commonwealth Games where the redeveloped Alexander Stadium will host athletic events, accompanied by the major redevelopment to create the Athletes' Village and a new public transport interchange. The Games are anticipated to attract a significant number of visitors and the A34 will be required to accommodate the movement of athletes and spectators. Following the Games, the Perry Barr site will be transformed into a major new housing site. It is imperative that the route can facilitate increased demand from new housing developments and cycling infrastructure will help to encourage mode shift.	
3.	**Coventry City Centre to Holbrooks via B4098**	**Coventry City Council**	• Identified as a key cycle corridor with high propensity for cycling through the PCT analysis. • Strategically important for cycling through discussions with Coventry City Council. The function and role of the corridor varies from the city centre out into the residential areas to Holbrooks. Strategically, the route would provide commuters the opportunity to cycle from Holbrooks and Keresley into the City Centre. With significant housing development taking place in Keresley, cycle infrastructure improvements on the local transport network would help facilitate the increased demand and provide further transport choices.	12-13 June 2018
4.	**Binley Road from Coventry University to University Hospital**	**Coventry City Council**	• Identified as a key cycle corridor with high propensity for cycling through the PCT analysis. • Strategically important for the City Council to promote increased active travel to two of the city's major trip attractors (Coventry University and University Hospital) • Corridor with significant air quality issues. Whilst there is some provision through off road cycle infrastructure along the Binley Road corridor, upgrades and improvements are	12-13 June 2018

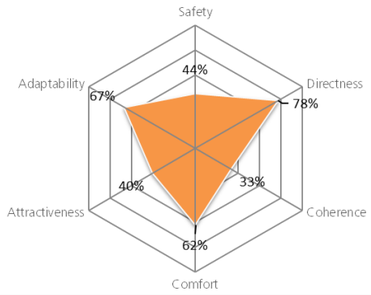
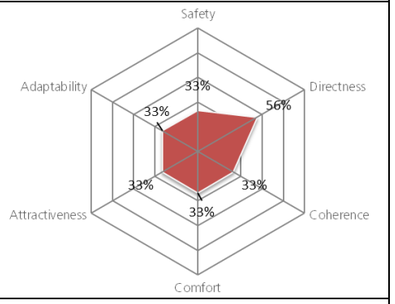
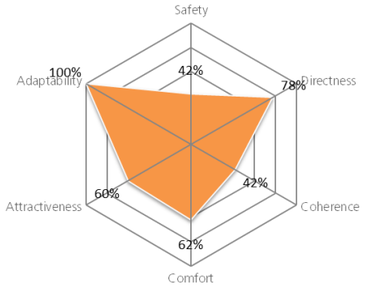
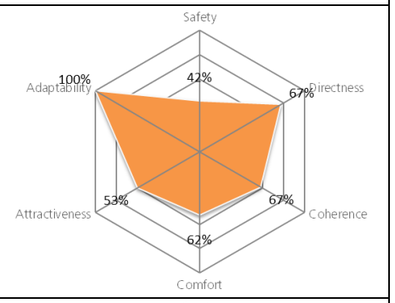
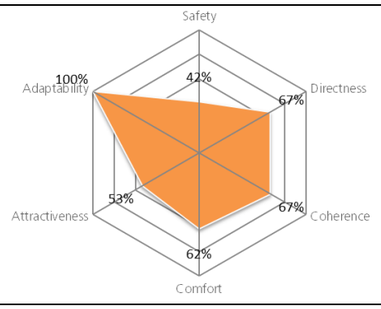
			needed to reach the potential for mode shift from motorised vehicles to cycling. Sustrans has undertaken feasibility study along the corridor but Coventry City Council in agreement with TfWM has determined that an updated analysis as part of LCWIP would be beneficial.	
5.	**Kingswinford to Brierley Hill via B4179**	**Dudley Metropolitan Borough Council**	• Identified through the PCT analysis as a key commuter corridor with high propensity for cycling • Strong strategic fit with the aspirations for cycling in the borough. The route between Kingswinford and Brierley Hill links significant residential areas with trip attractors such as employment zones (including along Stallings Lane) and town centres such as Brierley Hill.	11 July 2018
6.	**Coseley to Tipton (via NCN 81)**	**Dudley Metropolitan Borough Council**	• Route was identified as having a strong strategic fit to the aspirations for cycling in the borough. The route travels along NCN81 from Coseley rail station starting at Biddings Lane (bypassing Coseley tunnel) to Bayer Street where the route connects back to NCN81. This route then continues to Tipton station in Sandwell. The route is strategically important to the Borough as it provides a high quality link between two railway stations (Coseley and Tipton) and major residential areas in close proximity to NCN 81. The improvements to NCN81 would improve conditions for people cycling between Wolverhampton into Birmingham.	22 June 2018
7.	**Old Hill, Blackheath to Oldbury**	**Sandwell Metropolitan Borough Council**	• Identified as a high propensity corridor for cycling through the PCT analysis. • Strategic corridor for Sandwell Metropolitan Borough Council.	20 June 2018

			The route would provide a high quality link to a number of major residential suburbs including Oldbury and Blackheath. The proposed route also links to several railway stations including Old Hill, Rowley Regis, Langley Green and Sandwell and Dudley. Due to the potential to link to a number of railway stations, the route has significant multi modal opportunities for commuters.	
8.	**Smethwick to West Bromwich and Wednesbury**	**Sandwell Metropolitan Borough Council**	• Identified as having the highest propensity for cycling within the Sandwell boundary through the PCT analysis. • Identified as strategically significant • Links railway stations of Galton Bridge and Rolfe Street to West Bromwich and residential areas. The route would provide a high quality link into West Bromwich, increasing employment and leisure opportunities for commuters and nearby residents.	21 June 2018
9.	**Balsall Common to Stonebridge via A452**	**Solihull Metropolitan Borough Council**	• Not identified through the PCT analysis. • Included within the HS2 Cycle Route Study undertaken by the council. The route would provide a high quality cycle link to Berkswell Railway Station at the southern section and linking to UK central and the NEC further north. The Greenway links to Warwickshire University providing a high quality cycle route for rural communities in Solihull to access key destinations.	14 June 2018
10.	**B4102 Dickens Heath to Solihull town centre**	**Solihull Metropolitan Borough Council**	• Identified as a key cycling corridor with high propensity for cycling through the PCT analysis. • Strategically significant route. There are several major trip attractors along the corridor including Solihull Retail Park, Solihull College, University City Centre and Solihull Railway Station. Improvements in cycle infrastructure along this corridor will seek to reduce the dominance of motorised vehicles	15 June 2018

			and reduce the pressure on the local network in weekday peak periods and within the town centre on weekends. Improvements along the B4102 will increase transport options for residents living within Dickens Heath, Shirley Heath and Blossomfield.	
11.	**Darlaston to Walsall town centre via A4038**	**Walsall Metropolitan Borough Council**	• Identified as a high propensity corridor for cycling through the PCT analysis. • Identified as a key commuter corridor within Walsall Following the A4038 into Walsall town centre, the route proves a key commuter corridor from residential suburbs such as Darlaston, Pleck and Caldmore into the employment sites within and on approach to the town centre. There is HGV traffic due to a number of industrial estates in close proximity (particularly around Heath Road in the Darlaston area) to the corridor therefore, providing high quality cycle infrastructure will reduce conflict between cyclists and motorised vehicles. The route also provides future potential access to the new railway station at Darlaston.	7 June 2018
12.	**Rushall to Brownhills via B4152**	**Walsall Metropolitan Borough Council**	• Identified as a corridor with high propensity for cycling through the PCT analysis. • Strategically important for cycling aspirations in the borough. The route follows the B4152 connecting Aldridge to residential areas such as Shire Oak and Brownhills. Along the B4152 there are a number of employment sites including Maybrook Industrial Estate.	8 June 2018
13.	**A454 Wolverhampton City Centre to Portobello**	**Wolverhampton City Council**	• Identified as a corridor with high propensity for cycling through the PCT analysis. • Key commuter corridor within Wolverhampton with significant traffic flow in AM and PM peak along Willenhall Road (A454). • Wolverhampton City Council is currently working with Walsall Metropolitan Borough Council on three major schemes along the A454. The audit as part of the LCWIP has taken a corridor wide	18 June 2018

			approach to identify constraints and opportunities in regard to a consistent high quality cycle facility along the entirety of the route.	
14.	**A4124 Wolverhampton City Centre to Walsall**	**Wolverhampton City Council**	• Strategically important corridor for cycling within Wolverhampton. The A4124 links Wolverhampton with neighbouring borough Walsall. This route is a key commuter route for those travelling between Walsall (particularly around Bloxwich) and Wolverhampton. There are a number of significant trip attractors including Bently Retail Park, Key Industrial Park and New Cross Hospital. The A4124 connects to numerous residential areas including Wednesfield and Ashmore. The route would provide an opportunity to connect to Wolverhampton Railway Station Interchange which is undergoing major redevelopment.	19 June 2018

A34 Perry Barr Extension

Cycle corridor, section	Barriers / constraints		CLOS
Section 1: **Heathfield Road to A4040**	Limited highway space between Heathfield Road/A4040, due to the A34 flyover, properties in close proximity and significant kerbside activity. Birchfield Road/A4040 junction also has limited capacity and does not provide opportunities for cycling infrastructure due to loading activity that occurs for the retail unit approaching the roundabout.		
Section 2: **A4040 to Cliveden Avenue**	Very constrained, with limited opportunity between the Birchfield Road/A4040 junction and One Stop Shopping Centre. Potential conflict points for vehicles and cyclist movements along this section of the A34 corridor, with two access points into the One Stop Shopping Centre and cyclists travelling along the A34 northwards.		
Section 3: **Cliveden Avenue to Perry Avenue**	Fewer constraints due to more highway space. Due to the road layout, there are issues with traffic speeds combined with significant traffic flows. Parking bays are present along this section of the A34 which has the potential to impact on implementing cycling infrastructure		
Section 4: **Perry Avenue to Dyas Avenue**	The bus lane and car parking on the exit of the A34/Rocky Lane junction provides limited scope There is highway/footway space, however highway width is constrained where the A34 passes over the Tame Valley Canal.		
Section 5: **Dyas Avenue to A4041 (Scott Arms Junction)**	Multiple constraints due to car parking bays; grass verge/ trees impacting on space for a contraflow cycle lane adjacent to Harris Drive; Bus lane on the northbound approach to Scott Arms Junction. There is highway/footway space along this section of the A34 to provide adequate provision for cyclists.		

Recommendations

There are constraints along the A34 Perry Barr (particularly within section 1-2).

Whilst Section 1 and 2 have been identified as lacking sufficient highway space currently, there are opportunities to implement high quality cycle infrastructure to connect to the existing A34 cycling scheme currently under development.

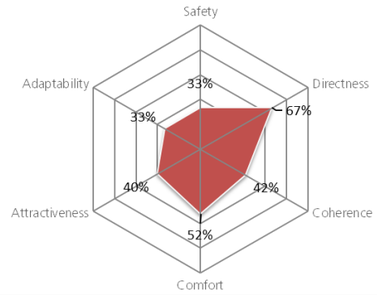
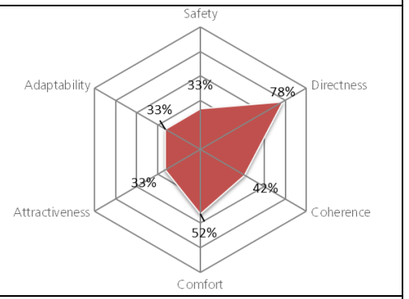
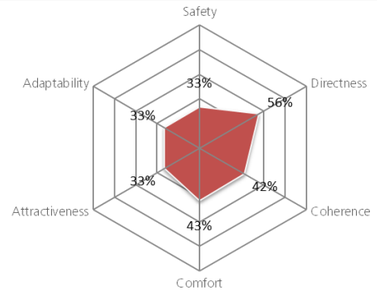
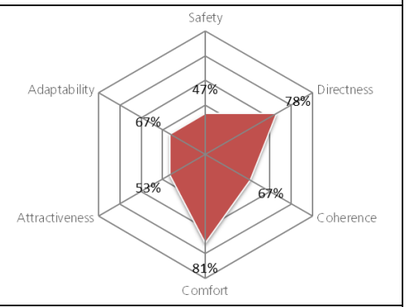
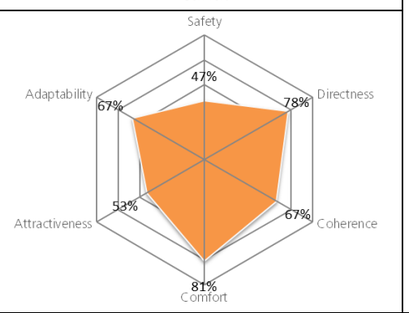
It is recommended that a full feasibility study is undertaken on the A34 Perry Barr to identify the opportunities to implement a scheme of similar consistency to that which is currently being developed and to fully integrate SPRINT proposals.

The site visit has identified that there is sufficient space along the A34, whilst acknowledging a number of pinch points particularly in close proximity to One Stop Shopping Centre.

Further assessment recommendations will need to be subject to flexibility as masterplanning for the One Stop Shopping Centre and Perry Barr Railway Station come forward.

More details of the assessments undertaken are provided in Appendix B.

A456 Hagley Road

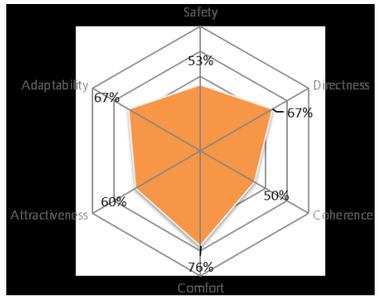
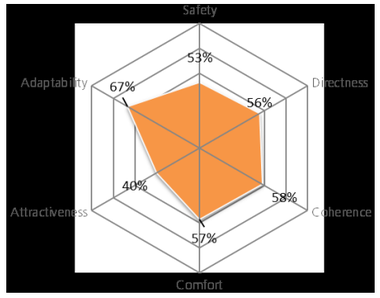
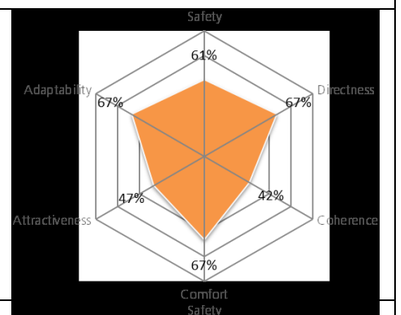
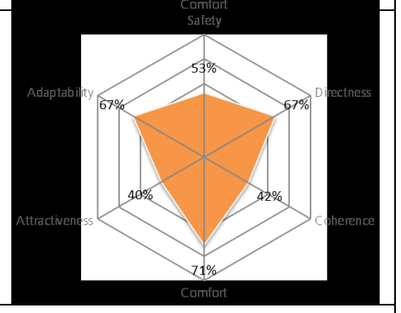
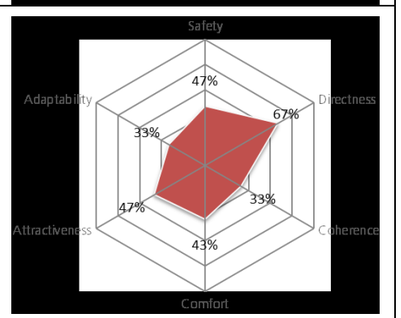
Cycle corridor, section	Barriers / constraints		CLOS
Section 1: **A4040 to Sandon Road**	Four lanes of traffic means limited options to reduce highway and provide cycle infrastructure. Narrow footway on either side of the carriageway is not suitable for shared use cycle/footway. There are residential properties in close proximity to the carriageway on both sides and kerbside activities and residential accesses need to be considered with any proposal to include cycle infrastructure along this section.		
Section 2: **Sandon Road to Manor Road**	Hagley Rd/Sandon Rd Junction has 5 lanes with a dedicated right-hand turn lane to Sandon Rd. Whilst there is adequate highway space, the right turn limits the options on either approach. Other constraints include a pinch point over the Harborne Walkway (underneath the A456), bus stops, and residential and commercial properties in close proximity, with limited footway widths.		
Section 3: **Manor Road to Portland Road (B4125)**	Four lanes of traffic along this section with limited options to reduce highway capacity. Wide footway provision on either side of the corridor is currently being used by some cyclists as an alternative to cycling on the carriageway. Hagley Rd/Rotton Park Rd junction has a lack of provision for cyclists with no infrastructure in place to protect or prioritise cyclists or pedestrians against motorised vehicles.		
Section 4: **Portland Road to Plough & Harrow Road (B4532)**	Some potential for cycle infrastructure by reallocating highway capacity. The number of traffic lanes fluctuates between 4 and 7 lanes. Three key junctions do not currently provide adequate provision for cyclists, with lane mergers creating the potential for conflict between cyclists and motorised vehicles.		
Section 5: **Plough & Harrow Road to Five Ways Roundabout**	There is limited highway capacity, however there is significant footway capacity on the west bound side. Access into Morrisons Supermarket is a potential conflict with cyclists if cycling on the shared use path. The shared use path, on the south side of the carriageway, does have pinch points where the width is reduced for bus stops and other kerbside activities.		

Recommendations

Due to the constrained conditions on the Hagley Road, it is suggested that the parallel route identified in Appendix A is explored in more detail with a feasibility study undertaken to identify the opportunities and potential constraints along this parallel route.

The study should identify the merits of implementing cycle infrastructure along the corridor between Meadow Road and Harborne Road and the type of cycle facility which is most suitable. With increased capacity between Portland Road and Five Ways Roundabout, the parallel route has potential to link back to the Hagley Road at Portland Junction.

Coventry City Centre to Holbrooks (on approach to Ricoh Arena)

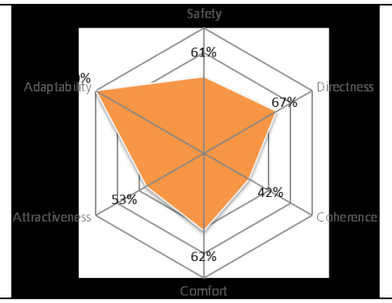
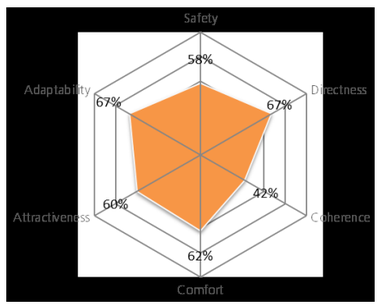
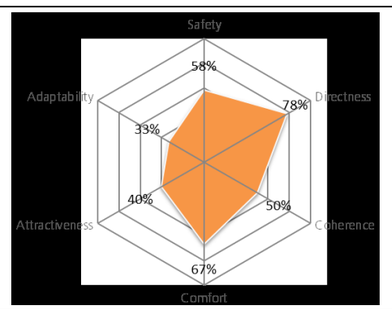
Cycle corridor, section	Barriers/ constraints		CLOS
Section 1: **A4053 to A4053, City Centre**	Traffic flows and wide carriageways are potentially off putting for cyclists with two lanes of traffic along Warwick Rd, increasing to up to four lanes along Greyfriars Rd. Hill St toward A4053 is residential street with little room for cycle infrastructure. Two-way traffic is permitted along Hill St which increases potential conflict between cyclists and vehicles.		
Section 2: **A4053 to Moseley Avenue**	A bridge over the A4053 allows cycle/pedestrian access to/from the city centre, but is an unattractive option. Upper Hill St toward Coundon St is narrow with two lanes of traffic, but little opportunity due to on street parking. Coundon Rd has residential properties and on street parking limiting potential. The rail crossing also provides a challenge for dedicated cycle infrastructure. Barkers Butts Ln has sufficient highway but is constrained by mature trees on the city centre approach and on street parking on either side.		
Section 3: **Moseley Avenue to Brownshill Green Road**	Moseley Av/Engleton Rd has four lanes of traffic, but only two lanes are utilised due to on street parking. Mature trees limit opportunities for increasing the footway width. Engleton Rd/Radford Rd is a busy junction, but provides advance stop lines for some priority and safety. There are no major capacity constraints along due to the significant highway space and verge/footway.		
Section 4: **Brownshill Green Road to Greens Road**	Brownshill Green Rd/A4098 has limited opportunity due to the junction geometry and proximity of housing. Kersley Rd/Wallace Rd/ Norman Place Rd junction has significant traffic flows and potential for increased traffic speeds acting as a deterrent for cyclists. Sufficient space exists on Kersley Rd to the Scotchill Roundabout. Kersley Green Rd to Greens Rd is narrow with a narrow footway providing a further constraint.		
Section 5: **Greens Road to Halfords Lane**	Between Greens Rd and Lowe Rd, Bennetts Rd South is narrow with two lanes of traffic and little opportunity for infrastructure such as dedicated cycle tracks. Footway widths also limit the potential reconfiguration. Between Lowe Rd and Kersley Brook Rd, highway space remains restricted. Traffic near to the school and on street parking reduces footway/highway space. On street parking remains an issue on Keresley Brook Rd toward Halford Ln, but green space provides an opportunity.		

Recommendations

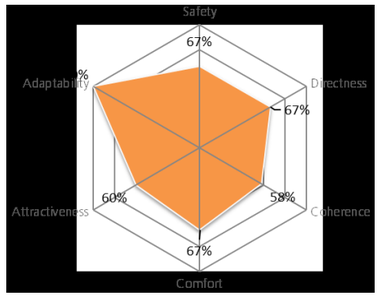
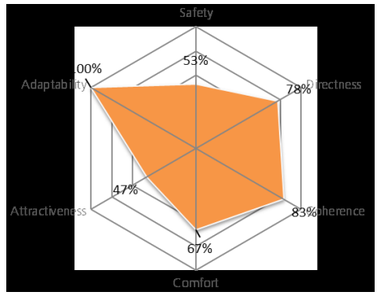
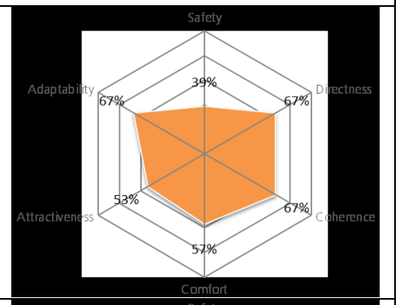
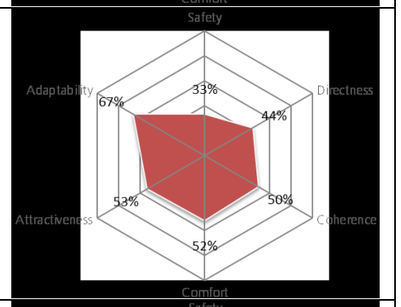
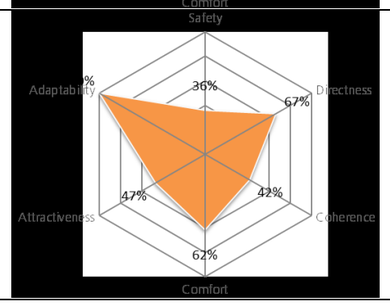
The audit has identified that the route has a variety of characteristics and a number of challenges including pinch points, crossing the A4053 and limited space along several sections.

A detailed feasibility study is required to develop an intervention which will provide a consistent high-quality approach for cyclists travelling between Holbrooks and Coventry City Centre.

The audit has identified that a potential solution would be a high-quality cycle track on the outbound approach (from Coventry City Centre), however several junctions would require improvements to allow for such an intervention to be implemented.

	Section 6: **Halfords Lane to Morland Road**	Glentworth Av toward Beake Av has sufficient capacity for cycle infrastructure. However, on-street parking along Glentworth Av causes potential conflict between vehicles/cyclists. Beake Av/ Rotherham Rd junction does not provide cycle priority or safe movement, but there is sufficient space to improve this. Rotherham Rd to Morland Rd is residential with two lanes of traffic. Speed calming measures reduce traffic speed, but on-street parking is an issue.				
	Section 7: **Morland Road to Compton Road**	Rotherham Rd to Holbrook Ln remains consistent with section 6. However, two lanes of traffic narrows where speed humps are present. Footway widths provide an opportunity to reallocate space, but is currently used for on street parking/ parking on the footway. Rotherham Rd/Holbrook Ln junction is signalised but with no dedicated cycle infrastructure in place, a concern especially for right hand turns. Lythalls Ln toward Compton Rd has little highway capacity, due to pinch points, on street and mature trees.				
	Section 8: **Compton Road to Bedlam Lane**	Opportunities at the bridge over Jimmy Hill Way, are limited due to a lack of highway/footway space. On approach to Bedlam Lane there is potential for cycle infrastructure but reconfiguring the layout would be required. Bedlam Rd is a cul-de-sac with two lanes of traffic but on street parking restricts much of this to one lane. Green space could be used for some form of cycle infrastructure				

Coventry University to University Hospital (Binley Road/Clifford Bridge Road)

Cycle corridor, section	Barriers/ constraints		CLOS
Section 1: **Gosford Street to Marlborough Road**	Gosford St to Coventry University provides opportunities to include high quality segregated cycle infrastructure. There is minimal highway capacity, but there is sufficient footway capacity. Gosford St to Binley Rd operates a one-way system which limits the opportunities. retail units, on street parking available, Bus services causes potential conflict with cyclists. Binley Rd to Kingsway requires cyclists to negotiate Sky Blue Way (a six-lane traffic) or use shared use facilities through Gosford Park and Gosford Green.		
Section 2: **Marlborough Road to Church Lane**	On Kingsway to Marlborough Rd, the carriageway restricts and residential properties are in close proximity. Cycle lanes on either side of the carriageway do not provide adequate protection from motorised vehicles and are not to standard. Highway capacity is limited, but significant footway capacity and green space could be utilised. Retail units have side access creating potential conflicts. Central hatchings and railings reduce highway capacity but, enough to provide dedicated cycle infrastructure.		
Section 3: **Church Lane to the A4082**	Church Ln to Binley Rd/A4082 there is a mixture of bus and cycle lanes, but the cycle lanes are below standard. There are no major constraints and sufficient space for cycle infrastructure. Highway capacity varies between Church Ln to Allard Way has up to five lanes of traffic, particularly at key junctions. No pinch points to prevent a dedicated cycle facility, however kerbside and mature trees would restrict off-carriageway infrastructure.		
Section 4: **A4082 to Mill Lane**	Mill Ln to Clifford Bridge is two lanes with limited width to accommodate cyclists. Residential side roads could cause conflicts between motorised vehicles and cyclists, and there is no for support cyclists making right turns. On street parking along Clifford Bride Rd presents potential conflict between cyclists and cars parking/departing and limits footway/highway capacity. Two roundabouts require improvements to provide provision for cycling.		
Section 5: **Mill Lane to Clifford Bridge Roundabout**	Busy section of the corridor with limited highway capacity. However, off-road cycle facility and footway capacity on the outbound approach means there is potential to upgrade the existing facility without impacting on existing highway capacity. Mature trees are an issue and could restrict the potential to improve the existing off carriageway facility.		

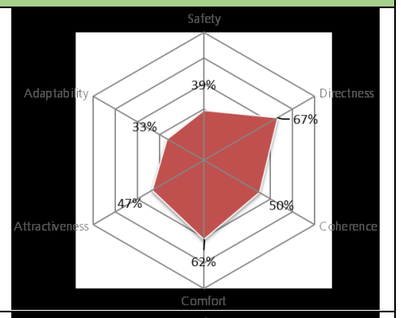
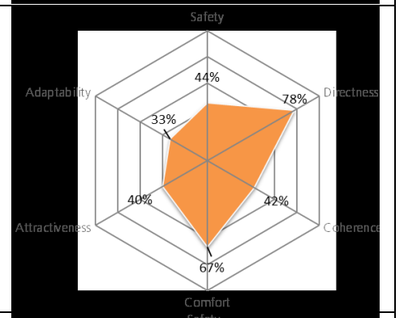
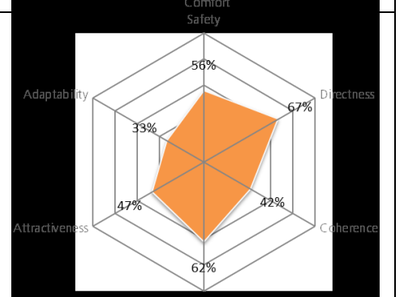
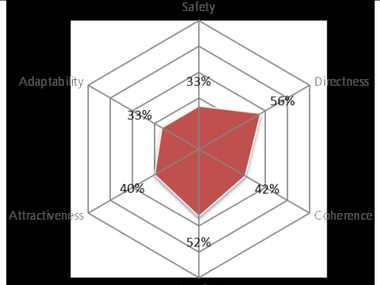
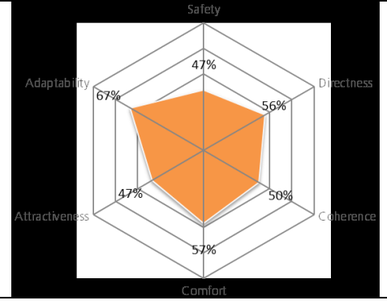
Recommendations

A more detailed assessment is required to determine the feasibility for a dedicated cycle track between Coventry University and University Hospital via Binley Road.

It is recommended that the cycle track is on the outbound approach from the city centre.

The initial audit has identified a number of opportunities outlined above, including maximising on available space along Binley Road and removing street parking on several pinch points.

Kingswinford to Brierley Hill

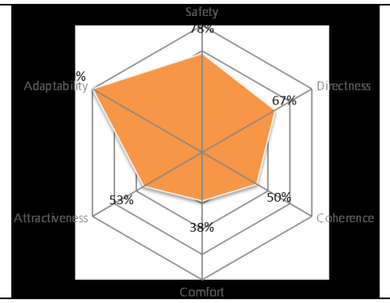
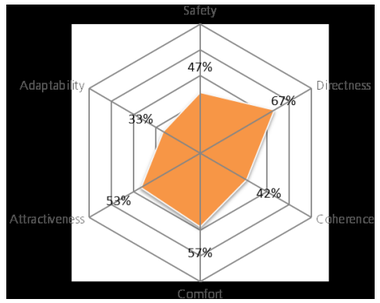
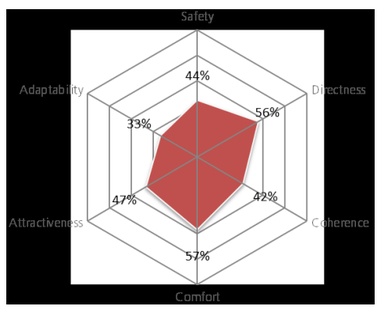
Cycle corridor, section	Barriers/ constraints		CLOS
Section 1: **Manor Park to Stallings Lane**	Between Manor Park and A4101/Market St, the carriageway is constrained with no staged turning/ advanced stopping lines. Between A4101/Market St junction and Back Rd, the carriageway remains narrow with access points onto Moss Grove (A4091). Between Back Ln and Stallings Ln the highway is also narrow, with hatchings limiting capacity. The Moss Grove/Stallings Ln junction is currently signalised but does not provide further infrastructure.		
Section 2: **Stallings Lane to Second Avenue**	Between Moss Grove/Stallings Ln junction and Courtland Rd via B4175, the carriageway remains narrow with competing movements such as access to Lidl which has potential to cause conflict. Between Courtland Rd and Second Av, there is limited capacity due to industrial units and a risk of conflict with HGVs, or intimidating user experience. Limited footways widths would be insufficient for shared use.		
Section 3: **Second Aneue to Smithu Lane**	Between Second Av and junction at Stallings Ln/ Oak Ln/ Tansey Green Rd, the highway & footway has limited space. HGV access/exit for the B4175 may also mean conflict with cyclists. Stallings Ln/Oak Ln/Tansey Green Rd junction does not have cycle support but, the tight geometry restricts vehicle speeds. Between Stallings Ln/Oak Ln/Tansey Green Rd junction and Smithy Ln the highway is constrained with narrow footways.		
Section 4: **Smithy Lane to High Oak**	Smithy Ln to Tansey Green Rd/High St (A4101) junction has limited highway and footway width. On street parking further constrains capacity. Due to the close proximity of residential properties, there is limited scope to use the highway or footways for new cycle infrastructure. The High St has three lanes of traffic with high volumes throughout the day. There is limited space and no protection for cycles from passing vehicles.		
Section 5: **High Oak to Blewitt Street**	Between High St/High Oak and Tiled House Ln the B4179 has limited space for extra capacity. Footway widths are constrained by housing in close proximity. On street parking is also present on the B4179 which further reduces space. Between Tiled House Ln and Blewitt St, highway widths increase and footway widths also increase significantly with housing set back. However, on street parking reduces space and creates potential conflict between cyclists and vehicles.		

Recommendations

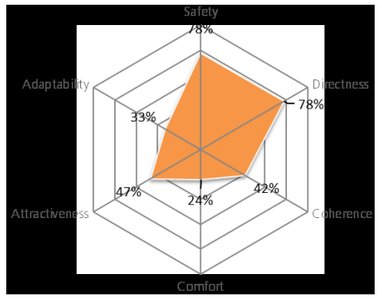
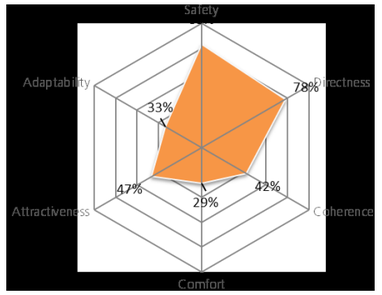
The site visit identified limited opportunities for dedicated cycling infrastructure along the route. However, this route would benefit from footway improvements, particularly as traffic volumes are high in many sections which could deter cyclists from using the carriageway.

We would recommend further assessment of footway provision along the corridor and a feasibility study into the provision of shared footways/cycleways along the route in combination with further assessments of potential light segregated facility where possible.

Alternative routes could be considered for assessment around Section 7 to avoid the railway overbridge, which currently limits highway width. A feasibility study of removal on street parking could also be considered in order to increase highway space for cycle infrastructure.

Kingswinford to Brierley Hill	**Section 6:** **Blewitt Street to Hickman Road**	This section is predominantly off-road, from Blewitt St and follows a track behind Grove Pool then re-joins the B4179 prior to Wallows Rd. The off-road route does not provide a direct link and is an unnecessary diversion, so it is advised that the route continues along the B4179. Between Wallows Rd and Hickman Rd the B4179 has sufficient highway and footway widths for an increase of space used for cycle infrastructure.				
	Section 7: **Hickman Road to William Street**	Hickman Road is constrained by houses but the highway/ footway can accommodate cycling infrastructure. Signalised crossings on B4180 do not have dedicated stopping areas. Station Rd has capacity due to wide highway and footway, but the footway on the eastern side is limited due to housing directly fronting the highway. On-street parking, vehicles mounting the footway are an issue. South of Pheasant St the footway narrows on with houses fronting the carriageway. Despite road markings, the side junction on Gortsy Av has a design that could allow high vehicles speeds. South of Gortsy Av a narrow highway/ footway, houses fronting the carriageway and on street parking restrict capacity. The railway overbridge next to Fenton St/ Bradleymore Rd has a very narrow highway and footways with blind bends reducing visibility, and no footway on the northern side. Fenton St provides adequate highway space but, on-street parking (eastern side) and mature trees and houses on both sides restrict space.				
	Section 8: **William Street to Venture Way**	Fenton St is mostly uphill from William St to Moor St which could deter some cyclists. Brockley Cl has a junction design which could allow high vehicle speeds. Fenton St has wide footways either side, but highway widths are constrained by houses either side. The road narrows south of Sion Cl, with on street parking and mature trees. Capacity is restricted between Sion Cl and Moor St, but there is a grass verge which be used. Moor St continues uphill to the High St, but is limited by multiple lanes of traffic and properties fronting the road. Westbound is less constrained but footways are constrained width and kerbside activities. Steps and landscaping outside Moor Shopping Centre are potential pinch points. The junction between Moor St/Cottage St/Mill St currently limits access. Footways are narrow and kerbside activity limits space. Junctions do not have cycling stopping areas and traffic volumes could deter some cyclists. Houses restrict widths on Mill St and has relatively narrow footways further restricted by signposts, mature trees and bus stops.				

Tipton to Coseley NCN Route 81

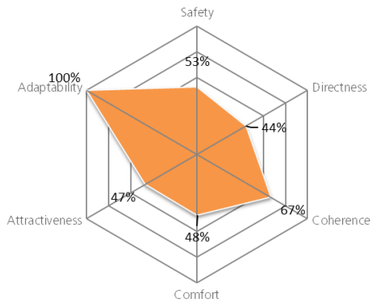
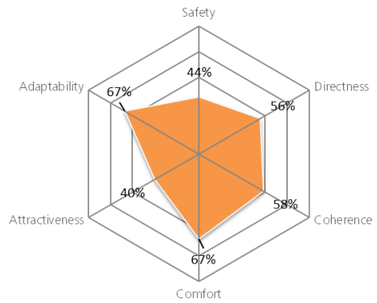
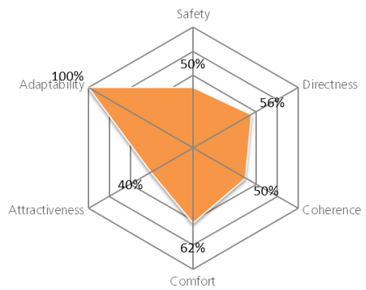
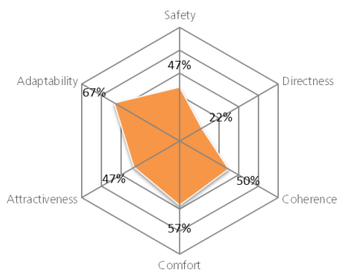
Cycle corridor, section	Barriers/ constraints		CLOS	
Section 1: **Biddings Lane to Central Drive Road**	Narrow highway and footways on Biddings Ln constrains access over the bridge for the canal. Highway and footway space is also constrained at Havacre Ln, with limited wayfinding and signage. The towpath has been upgraded on the northern side, but is poor quality and overgrown in some areas and has significant level changes and a retaining wall between the towpath and Coseley. There is no lighting on the towpath, and varying levels of personal security.			
Section 2: **Central Drive to Tipton Station**	Generally, a poor quality, narrow, overgrown towpath provided, with limited access points to the towpath from surrounding areas. Low bridges (below minimum design standards) exist on the towpath, providing safety and access issues. There is no lighting on the towpath, and varying levels of personal security.			

Recommendations

Whilst the canal network and towpaths offer opportunities for cycle routes, they have issues of connectivity issues with limited access points. This route would benefit from improvements to what forms the existing NCN Route 81, and feasibility of upgrading the Coseley tunnel could be explored.

We would recommend further assessment of the feasibility of providing more accesses onto the towpath and a study into improving the alternative route to access Coseley, using Bridge Street and Bayer Street should be considered.

Smethwick , West Bromwich to Wednesbury

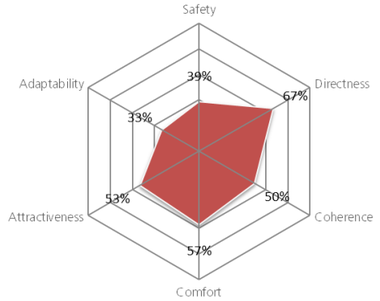
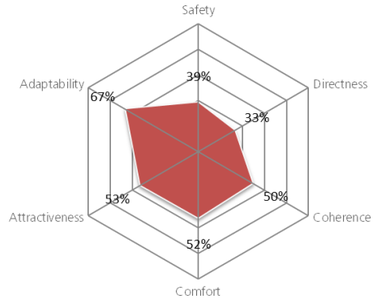
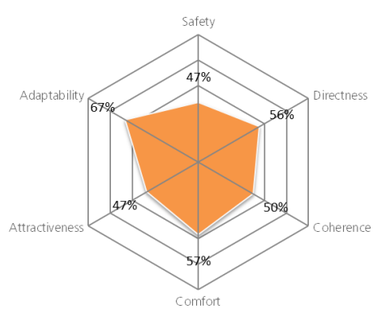
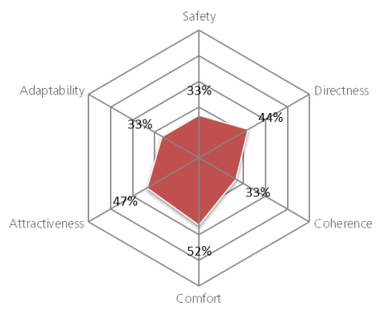
Cycle corridor, section	Barriers/ constraints	CLOS
Section 1: **Rolfe Street to M5**	Many of the crossing in this section are segregated/staggered which may delay cyclists. Kerbside activity, on street parking and bus stops may impede access and capacity improvements. The A457 has limited capacity and traffic volumes may be off-putting. Opportunity to utilise the verge between the A457 and B4169 (High Street). Lots of kerbside activity and on-street parking on High Street. The design of the canal crossing does not allow easy cycle access. Roebuck Lane's on-street parking, lack of lighting and narrow highway may cause safety issues for cycle access. Kenrick Way, the route is narrow with lots of vegetation and steep gradients. 	
Section 2: **M5 to Trinity Way**	The M5 underpass is an unattractive environment for cyclists, with poor visibility and is narrow and low. From Kenrick Way the route narrows toward the underpass, potentially limiting access. Roebuck Way has enough width but is limited by on street parking, narrow footways and site access for HGV – lighting could also be provided. Capacity is good on the High St, but on-street parking, footway parking, and side access junctions with poor crossing facilities limit options. Capacity is restrained toward Trinity Way, with shop fronts and narrower footways. 	
Section 3: **Trinity Way to All Saints Way**	Some sections of existing, high quality cycle provision, but it is not continuous, and varies from segregated and shared use. This creates a lack of clarity and continuity, deterring cyclist from using the route. Traffic flows on this section are high, and on-street parking limits space for continuous cycle provision. 	
Section 4: **All Saints Way to Old Meeting Street**	Segregated infrastructure is provided with a segregated crossing across All Saints Way, but multiples lanes of traffic and the crossing could cause some delay. Capacity is limited on the footway to Hargate Ln. Between Hargate Ln and Old Meeting St the route is not intuitive or follow a straight line of travel. It is also limited by the highway capacity, property access, on-street/footway parking and poor-quality surfaces. There is greater capacity on Peel St and Garratt St, with wider footways and/or carriageways, however this section is limited by a lack of continuity, side junctions and property access. 	

Recommendations

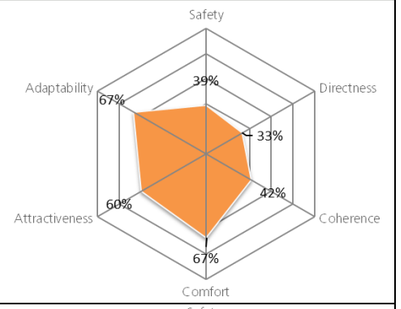
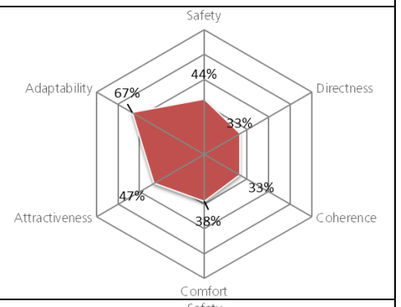
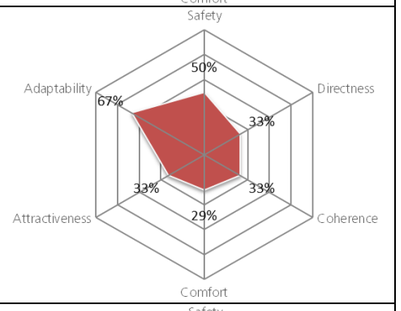
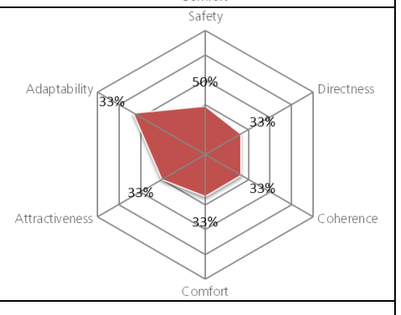
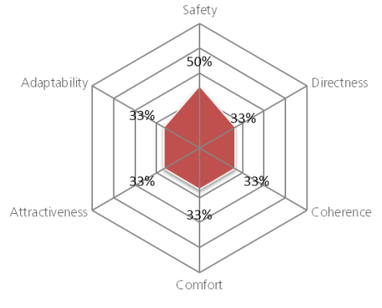
The audit has identified that the route has sections of high quality cycle provision, but without a continuous route the benefits and attractiveness are limited.

A detailed feasibility study is required to develop an intervention which will provide a consistent high-quality approach for cyclists travelling between Smethwick High Street, West Bromwich and beyond.

The audit has identified that a potential solution would be a high-quality cycle track however several junctions would require improvements to allow for such an intervention to be implemented.

	Section 5: **Old Meeting Street to Brecknock Road**	Highway and footway capacity is good, but this section is constrained by property access and side junctions, on-street parking, presence of HGVs/buses and high traffic volumes. There are also steep sections on this route which may be off-putting. The crossroads at the B4149 has irregular provision of pedestrian/cycle signals – refuge islands and dropped kerbs also limit capacity, and may cause delay to cyclists. Crossing facilities for site access and side junctions could be improved, including dropped kerbs, to allow continuity of movement.				
Smethwick , West Bromwich to Wednesbury	**Section 6:** **Brecknock Road to Portobello Road**	Similar issues exist to those in Section 5. High volumes of vehicles use side accesses/driveways and site entrances. Crossing facilities on New St junction limit use and access due to tight corners and mature trees. North of New St, highway capacity is limited with more kerbside activity and shop fronts. Melbourne Cl to Portobello Rd is not intuitive and does not follow a cycling desire line. Capacity is limited by highway widths, on-street parking and residential access.				The audit has identified that this section of the route is more constrained, with limited options for cycle provision to connect to Wednesbury. The level of traffic flows and industrial nature of the surrounding area, creates an intimidating environment for cycling. Therefore, further off-carriageway provision is recommended, but given the likely cycle flows, shared use or mixed directional segregated provision is considered appropriate.
	Section 7: **Portobello Road to Potters Lane**	Portobello Rd has limited capacity due to narrow carriageway, on road and footway parking, and residential access. On Holloway Bank, cycle lanes are provided but do not provide sufficient clearance from passing vehicles with potential safety concerns with traffic and HGVs. On-street and footway parking, gradients on Holloway Bank, site access' and side junctions are also capacity issues.				
	Section 8: **Potters Lane to Whitney Street**	Infrastructure capacity and quality on Potters Ln is poor. Holloway Bank to Perry St has narrow footways (even absent in part), on-street parking, site accesses and concealed entrances which limit access and cause safety risks. Highway capacity improves north of Perry St, but similar issues persist. Lighting is generally poor, with similar conditions on Victoria St. Crossing at Holyhead Rd is limited with no cycle priority. High traffic volumes and poor visibility toward Holyhead Rd may cause safety issues. Dudley St has a lack of crossing facilities at the car park entrance, high traffic volume and lack of separation. Capacity is limited on Trouse Ln due to kerb side activity. The entrance/exit to the petrol station may cause safety issues for cyclists and limit ease of access.				

Oldbury to Blackheath and Old Hill

Cycle corridor, section	Barriers/ constraints	CLOS
Section 1: **Bromford Road (A4034) to Birmingham Road (A457)**	Bromford Rd has sufficient highway width for infrastructure, but HGVs may deter cyclists and traffic islands reduce access. Kerbside activity near Sandwell and Dudley Station restricts capacity. McKean Rd has capacity with one-way traffic flow and wide footways, but on-street parking may restrict this. Highway widths at Broadwell Rd, boundary walls, property access & trees may limit space. Birmingham Rd has similar issues. 	
Section 2: **Birmingham Road (A457) to Western Road**	On-street parking at Green St & Stone St may limit capacity. Crossings on Stone St roundabout need improvement and the road is restricted by houses. Tat Bank Rd capacity is limited due to on-street parking and access to industrial units. Parked vehicles block sections of the footway. Kerbside activity also limits ease of access and space for cycle infrastructure. Fewer restrictions exist toward Western Rd.	
Section 3: **Western Road to New Henry Street**	Western Rd has no footway provision on the west side. Kerbside activity at Langford Green station and footway parking impedes cycle access. Access to the station car park may present a safety risk due to vehicle access. Crossings at Station Rd need improvement for cycle access. Mill Ln has poor infrastructure, abandoned land, limited lighting and a narrow discontinuous footway. 	
Section 4: **New Henry Street to Penncricket Lane**	Highway width on the junction with Langley Rd is restricted by footways and property access. New Henry St has capacity but on-street parking and property access may inhibit cycle access. The A4123/Wolverhampton Rd crossing is restricted due to segregated signalised crossing, with limited space on refuges. Causeway Green Rd, has capacity but kerbside activity is high and may inhibit access for cyclists.	
Section 5: **Penncricket Lane to M5**	Capacity is restricted with property access and on-street parking between Grafton Rd and Cakemore Rd. Space is limited on Penncricket Rd due to traffic calming and on/off road parking. Highway/footway capacity is limited at the railway overbridge. West of the M5, good foot/highway widths exist but property access and other kerbside activity may impede access. Mini-roundabouts at Harrold Rd, Hackett Rd and York Rd restrict easy access. From Hackett Rd, space is restricted due to on-street parking, property access and narrower highway and footways.	

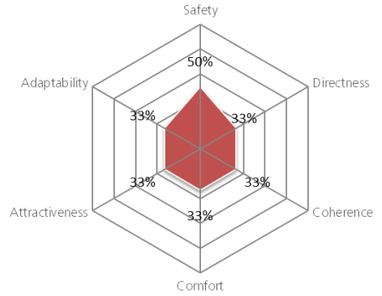
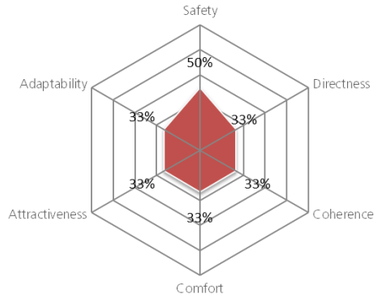
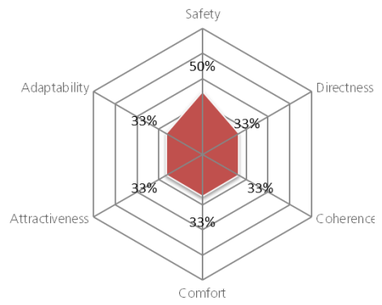
Recommendations

Given the constrained nature of the route and low scoring CLoS on many of the sections, it is recommended that an alternative route is considered.

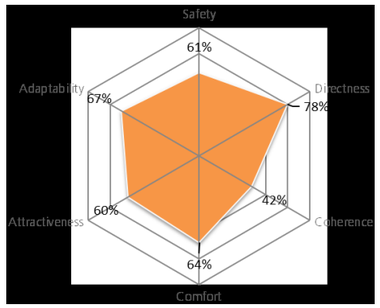
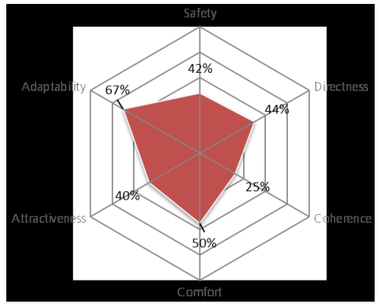
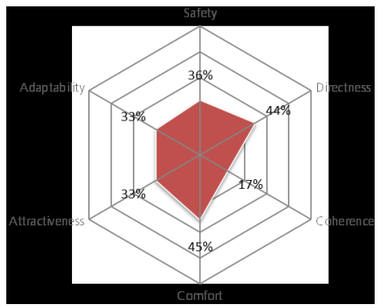
The topography of sections 7 and 8 make the provision of attractive cycle routes difficult and the indirect, convoluted routing of sections 2-5 would lead to a lack of route clarity.

Therefore, it is recommended that an alternative route from Blackheath to Oldbury is included for consideration in further studies.

This route is mainly a dual carriageway with a central reservation and verges, with possibilities to reallocate space to provide high quality cycling facilities with a direct route along the A4034.

Oldbury to Blackheath and Old Hill	**Section 6:** **M5 to Birmingham Road**	Summer Rd/ Habberley Rd restricted by property access and on-street parking. Britannia Rd has limited access due to the school site. There is a lack of crossing facilities along this section of the route, and is needed for Britannia Rd to Carlyle Rd access. Kerbside activity such as on street parking, property access and telegraph poles restricts space on Carlyle Rd.				
	Section 7: **Birmingham Road to Higgs Fields Crescent**	Dedicated crossings are needed at Birmingham Rd for cyclists. Highway width are constrained on Regis Rd due to on-street parking, property access and mature trees. Space is restricted on High St and Holly Rd due to high levels of kerbside activity. Waterfall Ln is not suitable for many cyclists due to a 15% incline.				
	Section 8: **Higgs Field Crescent to Mace Street**	Waterfall Ln is not suitable for many cyclists due to a 15% incline on this road. Waterfall Ln past Perry Park Rd, has capacity but high levels of kerb activity could impede ease of access. Station Rd to Waterfall Ln/Wrights Ln, has capacity but kerbside activity may impede cyclist access. Highway width is constrained past Wrights Ln due to properties fronting the highway, narrower footways and on-street parking. Lack of crossing facility at the Halesowen Rd/ Station Rd/ Heathfield Way roundabout could restrict access and add safety risk. Capacity is restricted on Halesowen Rd due to on-street parking and properties fronting the carriageway.				

Balsall Common to Stonebridge

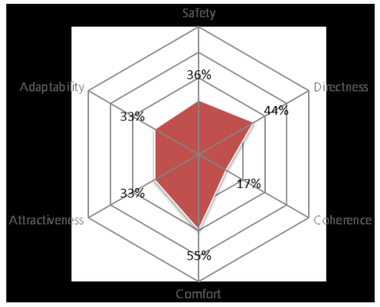
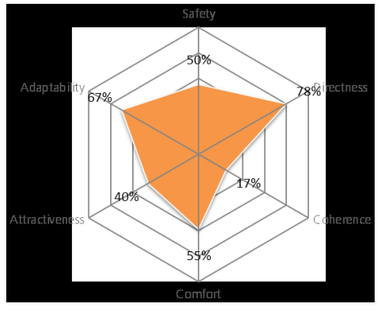
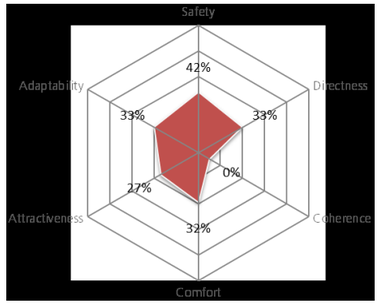
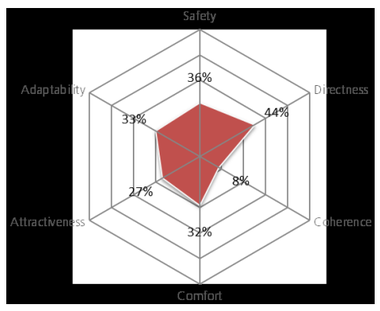
Cycle corridor, section	Barriers/ constraints		CLOS
Section 1: **Station Road to Lavender Hall Lane**	Narrow highway at Berkswell Station may impede cycle access to Station Rd/ Hallmeadow Rd roundabout. The footway/ cycleway is too narrow to accommodate two-way cycle movements. Hallmeadow Rd/ Station Rd and Hallmeadow Rd/ Lavender Hall Ln roundabout crossings both include a refuge but may need improvement. Adequate capacity on Hallmeadow Rd, but some kerbside activity (signs, lights and signal boxes).		
Section 2: **Lavender Hall Lane to Park Lane**	Existing segregated walkway/cycleway up until the Hallmeadow Road/A452 junction. The Hallmeadow Road and the A452 roundabout crossings include refuges, but need updating. Updating these crossings could improve ease of access and safety. There is adequate highway capacity on the A452 for cycle infrastructure, but kerbside activity (bollards, trees, lampposts, signs and driveway accesses are an issue). Car wash entrance at Wootton Ln junction also a risk. The footway is narrow north of Wootton Ln but the grass verge may allow extra width. High traffic speeds could discourage some cyclists.		
Section 3: **Park Lane to Wyevale Garden Centre**	Layout of Park Ln/A452 junction, kerbside activities could limit provision of a cycleway. Central verge could fit a cycleway, however trees in the middle may limit what can be used. North of Wall Bros, an agricultural track and reduction of the verge limits highway width. Narrow footway on the west side of the highway, but the footway stops south of Wyevale Garden Centre, & highway width is limited due to properties fronting the road. High vehicle speeds may discourage some cyclists.		

Recommendations

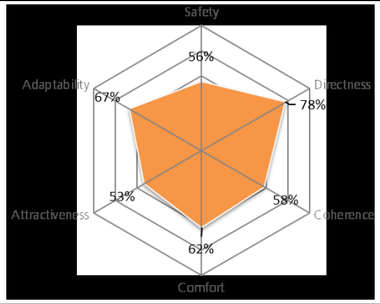
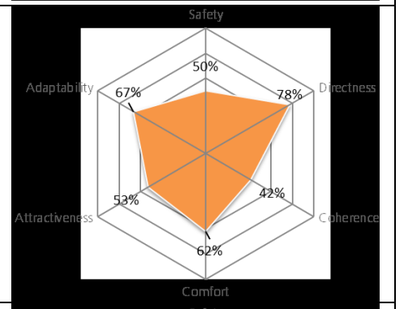
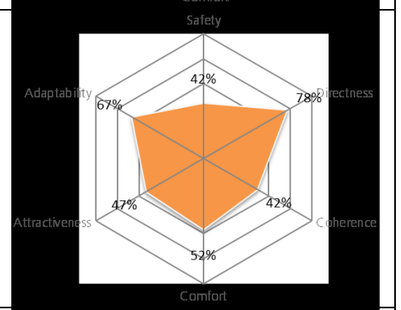
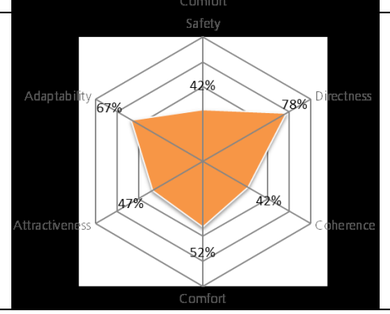
The main barrier on this route is the inconsistency for cycle provision. Some proposed sections of the route have no/limited highway infrastructure.

It is recommended that alternative routes are identified along this corridor, particularly between Section 5 and 7, where the existing A452 route could be utilised. Further feasibility studies could be considered to assess the suitability of offline sections such as Marsh Road and the access road north of Diddington Lane.

It is recommended that any infrastructure improvements in relation to HS2 are included in further feasibility assessments of the proposed route. This is particularly relevant for Section 6, which currently has no infrastructure in place for cyclists.

	Section 4: **Wyevale Garden Centre to Marsh Lane**	Current layout of the Wyevale Garden Centre access may impact on new cycling infrastructure, with large flare and high levels of kerbside activity. Highway widths are constrained by properties to the north of the Garden Centre, with limited central verge. Other accesses may also inhibit provision of cycling infrastructure. The Bradnocks Marsh Ln roundabout may require updating to address safety and ease of access. The footway is also restricted by verge width and kerb side activity (speed camera & trees/foliage). Access to Marsh Ln, requires crossing the A452, which needs updated crossing facilities.				
	Section 5: **Marsh Lane to Meriden Road (B4102)**	A new crossing of Meriden Rd is needed to provide cycle access. A crossing is also needed on Marsh Ln near the A452 junction. Junction layouts limit visibility, impeding ease of access and add safety risks. The footway at the A452/Marsh Ln could be utilised, but the truck stop could cause issues in terms of access and safety. Marsh Ln is mainly used for private access and could facilitate dedicated cycling infrastructure, but is constrained by surface quality, isolation and lack of wayfinding and lighting facilities.				
Balsall Common to Stonebridge	**Section 6:** **Meriden Road to Diddington Lane**	This section could be utilised with the development of the High Speed 2 railway line, and could facilitate cycling infrastructure. This section currently runs through farmland and there is no sustainable infrastructure available for cyclists. The feasibility of cycle provision on the A452 dual-carriageway should be considered.				
	Section 7: **Diddington Lane to A45**	Highway width is limited by hedgerows on Diddington Ln, with a blind summit causing a safety issues. Fast highway speeds may deter some cyclists, as they are not segregated from traffic. A private access road to the north of Diddington Ln, could facilitate cycle infrastructure. However, surface quality, isolation and lack of wayfinding and lighting facilities are issues.				

Dickens Heath to Solihull

Cycle corridor, section	Barriers/ constraints		CLOS
Section 1: **Buckridge Lane to the B4102**	Existing step-free access is restricted by design, with crossing facilities/ quality of towpath needing improvement. Existing shared footway/ cycleway on the west side of the carriageway, lacks clarity. Housing limits capacity due to properties fronting the highway with parking access. North-east of Dickens Heath village, an overbridge restricts highway width, with a refuge and fencing along the footways.		
Section 2: **B4102 to Chalford Way**	Limited capacity due to high levels of kerbside activity. Road crossings need better access and safety, including Tanworth Ln, Dog Kennel Ln and Stratford Rd. Footways narrow toward Stratford Road roundabout, with kerb side activity affecting capacity. Cyclists could utilise a residential road but steps are a barrier. Between Stratford Rd/Chalford Rd on-street parking, narrow footways and kerbside activity are issues.		
Section 3: **Chalford Road to St Gerards Road**	Crossings on Chalford Rd roundabout need upgrading, but kerbside activity Chalford Rd to/ Oakenshaw Rd may restrict options. The roundabout at Oakenshaw Rd may be an issue for access. On-street parking on the B4102 inhibits provision of cycle infrastructure. Bus stops may restrict provision of cycle infrastructure. The central hatching could be utilised to allow more capacity.		
Section 4: **St Gerards Road to White House Way**	On-road cycle lanes are provided, but usability could be affected by side road access, property access and bus stop provision. Near Alder Park Rd, the highway narrows with a traffic island and right turn lane. This limits the clearances vehicles can give cyclists, a potential safety risk.		
Section 5: **White House Way to B4102 Roundabout**	On road cycle lanes are provided, although ease of access could be inhibited by side road access, property access and bus stop provision. Highway space is restrained north of Dorchester Rd due to the railway overbridge. Highway space is limited north of the railway overbridge due to the access junction for Solihull Railway station and properties either side of the carriageway.		

Recommendations

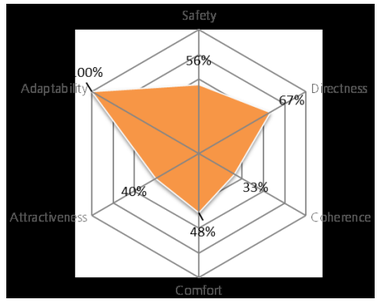
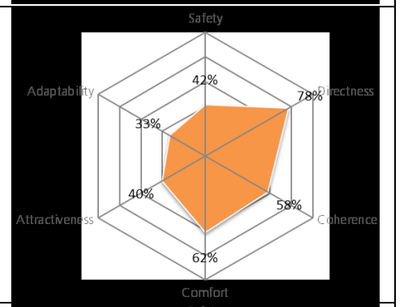
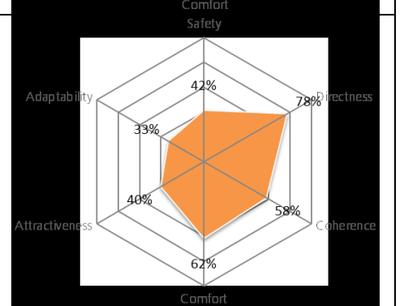
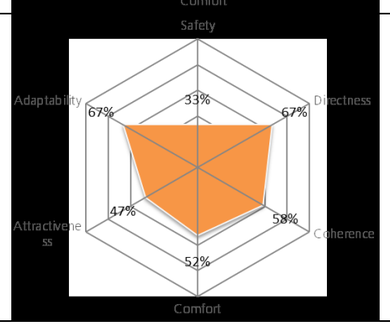
One of the main barriers and points of severance on this route is crossing the A34 Stratford Road. Further assessment of junction capacity and implications of relocating the signalised crossing point closer to desire lines should be undertaken. A study into the benefits of signalising the roundabout may also be beneficial.

A study of existing on-street parking behaviours should be undertaken to understand the implications of removing/restricting sections of on-street parking.

It is also recommended that a full feasibility study with detailed assessment of carriageway geometries is undertaken if this route is taken forward.

As a key link into Solihull Town Centre, high quality segregated cycle infrastructure is recommended where feasible.

Darlaston to Walsall Town Centre

Cycle corridor, section	Barriers/ constraints		CLOS
Section 1: **King Street to Heath Road**	King St to Avenue Rd has limited capacity. Within Darlaston, footway parking stops the footway being shared use. Pinch point exists at Victoria Park, with a potential conflict between cycles and vehicles due to a narrowing of the carriageway. Avenue Rd toward Station St has on-street parking and is likely to cause issues for cyclists. Station St has no infrastructure in place for cyclists, and HGV traffic may be an issue. Surfaces are generally poor with potholes and on-street parking forcing cyclists into the highway.		
Section 2: **Heath Road to Gower Street**	Heath Rd experiences high HGV traffic with limited lane width, there is no cycle infrastructure to help safe movement between Heath Rd/Kendricks Rd. Kindricks Rd is narrow toward Cemetery Rd, with limited width for multiple uses. Personal security is a concern along Kendricks Rd due to its isolation. Inconsistency along this corridor results in cyclists entering the carriageway or cycling along a narrow footway which creates conflict with pedestrians.		
Section 3: **Gower Street to Bescot Crescent**	Gower St to Old Pleck St has limited capacity which increases the potential conflict between cyclists and vehicles. Bus stops are built out into the carriageway creating additional pinch points. On-street parking and busy side roads create additional capacity/ safety issues for cyclists. Old Pleck St/Wednesbury Rd junction has advanced stop lines but cars stop in the cycle area. The Railwy Bridge is main issue reducing capacity at Old Pleck St/Bescot Cr.		
Section 4: **Bescot Crescent to Mount Street**	Regular on-street parking between Millton St and Corporation St reduces capacity with potential conflict between cyclists and vehicles. There is no infrastructure in place to protect cyclists turning right at Wednesbury Rd/Corporation St junction which may be a deterrent to some cyclists.		
Section 5: **Glebe Street to Bridgeman Street**	Regular on-street parking occurs in this section. Bradford St toward the Town Centre has sufficient highway width but the on-street parking reduces space and created potential conflict between cyclists and vehicles. Busy side roads with no protection for cyclists, may be a potential safety risk and deterrent for some cyclists.		

Recommendations

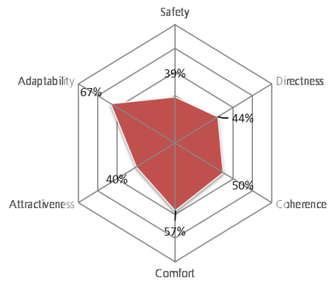
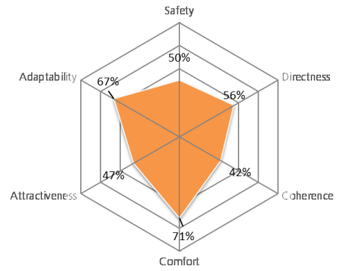
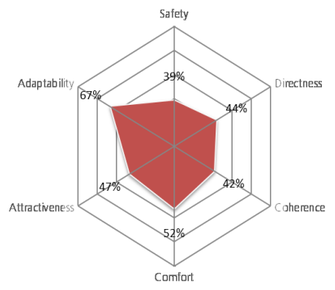
A detailed feasibility study will be required to identify a suitable solution on the corridor between Darlaston and Walsall Town Centre.

The site audit has identified a number of constraints across the corridor which will need to be studied in more detail to determine whether a consistent and coherent scheme can be implemented.

The main considerations to be assessed as part of a feasibility study include

- The potential for a light/full segregated facility across the entire corridor
- The use of shared use paths to accommodate cyclists without impacting on the highway network
- Addressing major pinch points including key junctions and bridges
- The impact of removing on street car parking
- Improvements to off street cycle facility through Victoria Park
- The use of Heath Road and Fredricks Road to avoid Walsall Road.

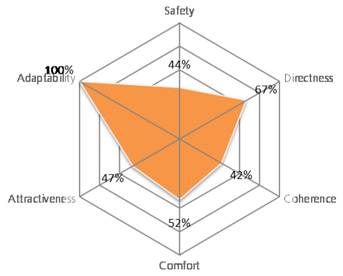
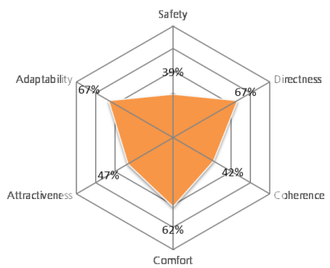
Rushall to Brownhills

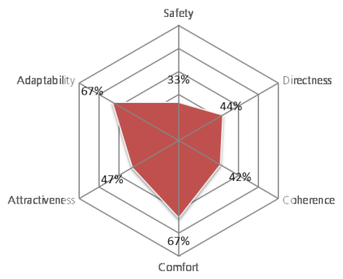
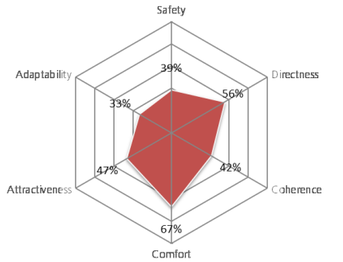
Cycle corridor, section	Barriers/ constraints	CLOS
Section 1: **Daw End Lane to Linley Road**	Section 1 – Daw End Lane to Linley Road Lichfield Road (between Daw End Lane and Winterly Lane) varies in highway capacity with some sections limited to two lanes of traffic Space is limited in Rushall town centre due to many lanes of traffic, narrow footways and high kerb side activity. Other pinch points on Lichfield Road include bus stops. Presence of HGVs could deter cyclists Lichfield Road has limited footway space which could be reallocated for cycle highway infrastructure Barns Lane to Linley Road is a residential street with two lanes of traffic with residential properties in close proximity to the highway. On street car parking further limits space for cyclists. 	
Section 2: **Linley Road to Dumbledery Lane**	Section 2 – Linley Road to Dumbledery Lane Linley Road to Dumbledery Lane continues along Barnes Lane and Westgate with two lanes of traffic and little footway space. Due to a number of industrial units along Westgate, HGV traffic is frequent which provides a constraint and potential barrier for cyclists. On street parking is frequent along Barnes Lane and Westgate which further reduces space and provides potential conflict between motorised vehicles and cyclists. 	
Section 3: **Dumbledery Lane to Shenstone Drive**	Section 3 – Dumbledery Lane to Shenstone Drive Dumbledery Lane to Stubbers Green Road via Wharf Approach is consistent with Barnes Lane and Westgate with two lanes of traffic however, there is additional footway space along small sections which increases the overall highway/footway capacity. Deflection of the footway on Westgate/Wharf Approach creates pinch points and does not follow cyclist line of travel Due to a number of industrial units along Westgate, HGV traffic is frequent which provides a constraint and potential barrier for cyclists. Stubbers Green Road & Leighswood Road to Leighswood Avenue continues to have limited width with two lanes of traffic and limited footway space. On Leighwood Avenue, there are constraints in terms of kerb side activity – such as mature tree planting A further constraint is the bridge passing over the Daw End Branch, little space is available currently which results in cyclists travelling on the carriageway  	

Recommendations

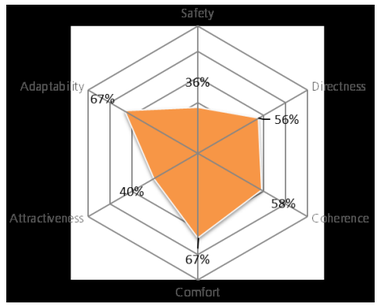
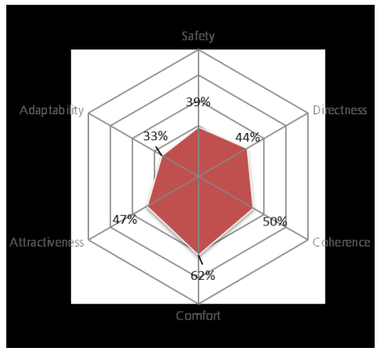
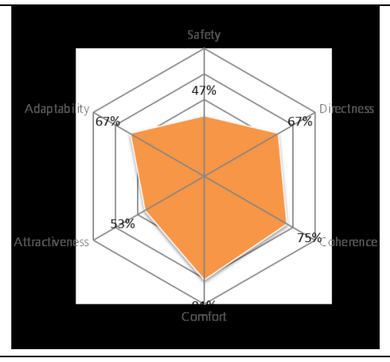
The study has shown that there is potential for cycling infrastructure along this corridor however, the capacity of the highway network fluctuates along the B4152 therefore, limiting opportunities for a consistent high quality segregated cycle track. The corridor provides a key link into Aldridge and therefore it is recommended that a segregated cycle track is provided, a more detailed feasibility study is required to identify opportunities along the B4152 and how to address key constraints particularly the northern section from the Lichfield Road Junction to Ogley Road.

Whilst the route has considered the link to Rushall, this does not have a strong regional strategic case as the route follows a number of residential streets linking to industrial units. It is recommended that the focus of the study is the link between Brownhills and Aldridge.

		Leighwood Avenue is a residential street with housing in close proximity on both sides of the carriageway. On street parking is present which further reduces capacity. The B4152 up to Shenstone Drive has limited highway capacity with two narrow lanes of traffic however, there is grass verges on both sides which provides the potential to reallocate to cycling infrastructure. Footway quality is poor and side access road present safety risks from industrial units			
	Section 4: **Shenstone Drive to Walton Drive**	Section 4 - Shenstone Drive to Walton Drive Shenstone Drive to Northgate Way has limited highway capacity with two lanes of traffic however, there is opportunity for footway capacity to be reallocated to cycle infrastructure due to underutilised grass verges on both sides of the carriageway. Northgate Way to Walton Road there is less capacity and opportunities to introduce cycle infrastructure due to residential, retail and industrial properties in close proximity to the highway. Kerbside activity is present along this section of the corridor including lighting, on street and footway parking and mature trees. There is poor quality footway provision, including lack of dropped kerbs in places			
	Section 5: **Walton Drive to Laburnum Road**	Section 5 – Walton Drive to Laburnum Road The B4152 between Walton Road and Coppice Lane consists of two lanes of traffic with limited capacity to allocate cycle infrastructure. There is footway capacity and green space on the outbound approach (towards Lichfield Road) which has the potential to be reallocated to cycle infrastructure. Between Coppice Lane and Castle Road along the B4152, constrained section of the corridor with very limited highway and footway capacity. Residential properties and industrial units are in close proximity to the carriageway which limits any opportunities to provide dedicated cycle infrastructure. Between Castle Road and Laburnum Road on the B4152, the carriageway remains constrained with limited highway and footway capacity. There is grass verge available between Castlefort Road to Laburnum Road on the inbound approach (towards Aldridge)			

	Section 6: **Laburnum Road to Coppice Road**	Section 6 – Laburnum Road to Coppice Road Between Laburnum Road and Beacon Way there is a grass verge on the inbound approach however, highway capacity is limited and footway capacity on the outbound approach is narrow. Between Beacon Way and Wolverson Road there is limited highway and footway capacity with residential properties in close proximity. Small sections of on street parking was present on site visit on the inbound approach which presents a further constraint for cycling Between Wolverson Road and Coppice Road there is limited highway and footway capacity. The B4152/Lichfield Road is a signalled junction but does not provide a staged crossing or priority for cyclists which could be an issue for cyclists turning right in particular.				
	Section 7: **Coppice Road to Ogley Road (B5011)**	Section 7 – Coppice Road to Ogley Road (B5011) Between Coppice Road and Paul's Coppice, highway capacity is constrained however there is a grass verge on the inbound approach which could be allocated to some form of cycle infrastructure. Between Pauls Coppice and B4125/A452 junction, capacity remains constrained with little capacity to reallocate to cycle infrastructure. Residential properties are in close proximity to the highway providing limited opportunities to reallocate space to dedicated cycle infrastructure Between B4125/A452 junction, there is limited highway capacity however there is the potential to remove or reduce the middle carriageway hatchings to realign the carriageway to allow for space for cycle infrastructure.				

Wolverhampton City Centre to Wednesfield on A4124 towards Walsall

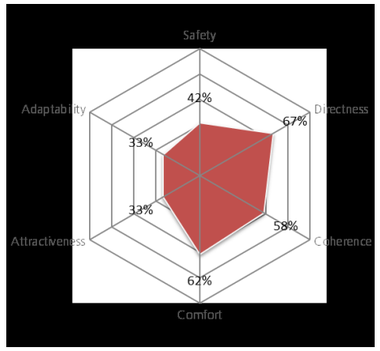
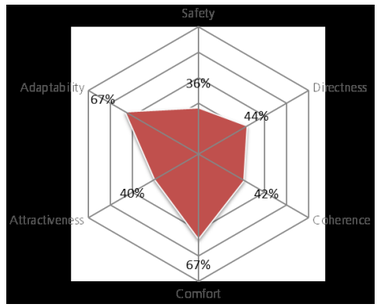
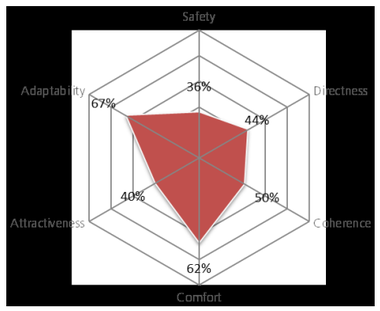
Cycle corridor, section	Barriers/ constraints		CLOS
Section 1: **A4150 to Woden Road**	Cycle lane on the exit from the A4150 ends approximately 50 meters after the junction. Highway limited by railway overbridge with raised footways. A concealed entrance may cause safety issues. Culwell St junction space is limited due to kerbside activity. Bus lane on the south side restricts the highway. Sun St to Woden Rd side junctions and property access may inhibit ease of access and cause safety issues. Inkerman St junction does not have high quality crossing facilities. Inkerman St to Woden St has high levels of kerbside activity and footway parking on the north side. There is sufficient carriageway width to accommodate new infrastructure, but on the southern side the carriageway width is restrained with narrow footways provided.		
Section 2: **Woden Road to Dace Road**	Between Woden Rd/Grove St cyclist use the bus lanes (against best practice). Grove St to Tudor Rd/Deans Rd increased kerbside activity may limit ease of access. Crossing Dean Rd requires using a segregated crossing with multiple lanes of traffic and may limits ease of access or deter some cyclists. The footway ceases (north side) at the junction with Wolverhampton Rd limiting continuity. Fewer issues exist east of Wolverhampton Rd due to footway width and a grass verge which allow for new infrastructure.		
Section 3: **Dace Road to Neachells Lane**	The crossing on Dace Rd could be improved to allow ease of access and minimise risks. Dedicated cycleway/footways and toucan crossing on New Cross Av to Wednesfield Way are good, but signalised crossings are not provided on Bentleybridge Way/Backhouse Ln/Sidings Cl/ Well Ln. The access junction at Sidings Cl is a pinch point with narrow footways and limited space. The wide junction may allow for high vehicle speeds at the junction with Sidings Cl.		

Recommendations

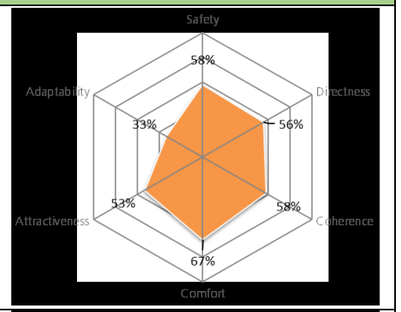
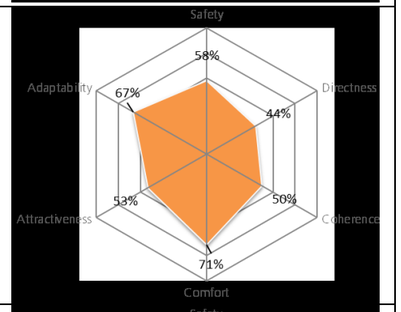
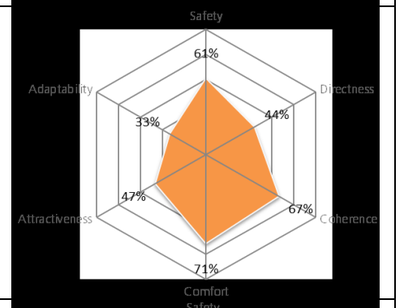
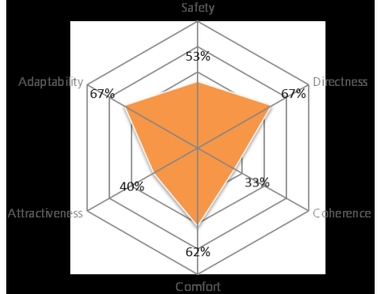
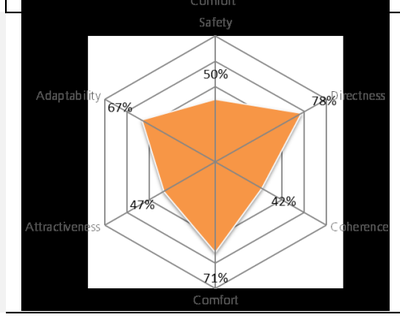
This route has sections of existing segregated off-carriageway provision, however, providing continuity and clear connections into the city centre and major trip attractors would unlock supressed benefits.

Given that this is a main arterial route into Wolverhampton, it is recommended that segregated off-carriageway cycle facilities are continued along the length of this route where possible.

It is recommended that the existing disjointed constrained cycle provision under the railway bridge, should be removed, to support the clarity of higher quality alternative route via Lock Street and the park area off Little's Lane.

	Section 4: **Neachells Lane to Green Meadow**	Cycleway/footways are good along Wednesfield Way but the footway restricts east of Neachells Ln with limited visibility on the bend for the roundabout. Kerbside activity may also restrict cycle movements. The segregated footway ceases on Wednesfield Way north of Steelpark Way. Footways adequate but ease of access is limited by property access and side junctions. Highways are constrained due to boundary walls and fencing. Waddens Brook Ln/March End Rd has limited access and would require cyclists to use segregated crossings across multi-lane traffic. Side road junctions also restrict ease of access and safety.				
	Section 5: **Green Meadow to Colman Avenue**	Highway widths Green Meadow to Lichfield Rd are adequate but mature trees restrict the footway. Residential side roads may also impede ease of access and cause safety issues. Near Lichfield Rd/Hyde Rd roundabout cyclists must cross two roads on approach to the roundabout reducing access. Shared footway/cycleways continue on Lichfield Rd but the school access (east side), side junctions, property access points and kerbside activity including mature trees, bus stops and light posts provide a number of design barriers for new infrastructure. However, space should be sufficient.				
	Section 6: **Colman Avenue to Broad Lane North**	Shared footways/cycleways on either side of the carriageway have similar constraints to section 5, including property access, side junctions and bus stops. Ease of access is restricted by the double mini-roundabouts between Linthouse Ln and Stubby Ln as cyclists must navigate non- signalised crossing on side roads. Between Stubby Ln and Broad Ln North, there is sufficient highway width on this route to provide cycling infrastructure. The main constraints are kerbside activity such as bus stops and tree plantings and side junctions and property access, particularly entrances/exits to businesses which do not provide high quality crossing facilities.				

Wolverhampton: City Centre to Portobello A454

Cycle corridor, section	Barriers/ constraints		CLOS
Section 1: **Station Road to Lavender Hall Lane**	Waterloo Rd, School St and Salop St restricted due to on-street parking and bus stops, plus other kerbside. There is greater highway space on Peel St, but the Market Car Park may impact cycle movements/add safety issues. Highway width on Hallet Dr restricted by on-street parking and kerbside activity however opportunities to utilise the existing footway or grass verges would enhance the highway space.		
Section 2: **Lavender Hall Lane to Park Lane**	Side road junction at Graisley St may impact cycle movements and cause safety issues. Kerbside activity on Retreat St and Mander St with properties fronting the carriageway. Despite double yellows, on-street/ footway parking impacts cycles. Side junction at Williamson St may impede cycles and be a safety issue as on-street parking limits visibility. The A4150 cycleway is obstructed by light posts/sign posts in the cycle lane.		
Section 3: **Park Lane to Wyevale Garden Centre**	Junction of A4150/A459/Birmingham Road, with segregated crossings over multiple lanes of traffic may inhibit access and deter some cyclists. Shared footways/cycleways and wide footways with occasional kerbside activity may impede cyclist movements.		
Section 4: **Wyevale Garden Centre to Marsh Lane**	Junction with Ward St may have access/safety issues as boundary walls/narrow footways limit visibility. Bollards and raised kerbs at James St limit through movement of cycles to the A454. Highway capacity is limited between James St/Shakespeare St due to properties and on-street parking. Access to properties limits also capacity at the A454 with on-street parking and bus stop also an issue. The crossing on Lower Walsall St may also impede cyclist movements.		
Section 5: **Marsh Lane to Meriden Road (B4102)**	Side roads and car parking may restrict ease of access and add safety issues. Between Old Heath Cr/Coventry St/Plascom Rd properties and mature trees may limit cycle options. The bus lane on the south of the carriageway restricts highway space. Limited footway at East Park Way with properties and on-street parking restricting highway space. Residential side streets off the A454 could be used but on-street parking, access and side junctions may be issues.		

Recommendations

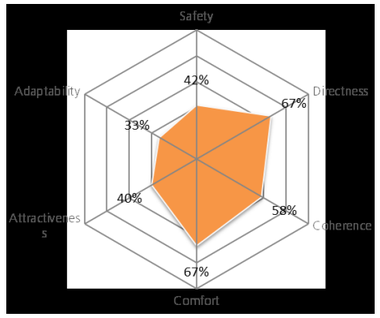
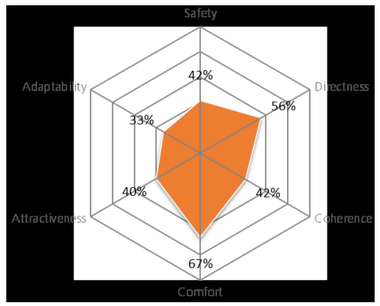
This route has many sections of existing cycle provision but there would be many benefits unlocked by improving the continuity and clarity of the route.

Given that sections of this route are within the city centre, it is recommended that cycle and pedestrian movements are segregated due to the high pedestrian footfall.

It would create a more attractive cycle route if cycle crossings in the city centre were prioritised and kept at grade. We would recommend further assessment of the junction capacity of junctions where this route crosses the ring road, to ascertain the feasibility of incorporating toucan crossings.

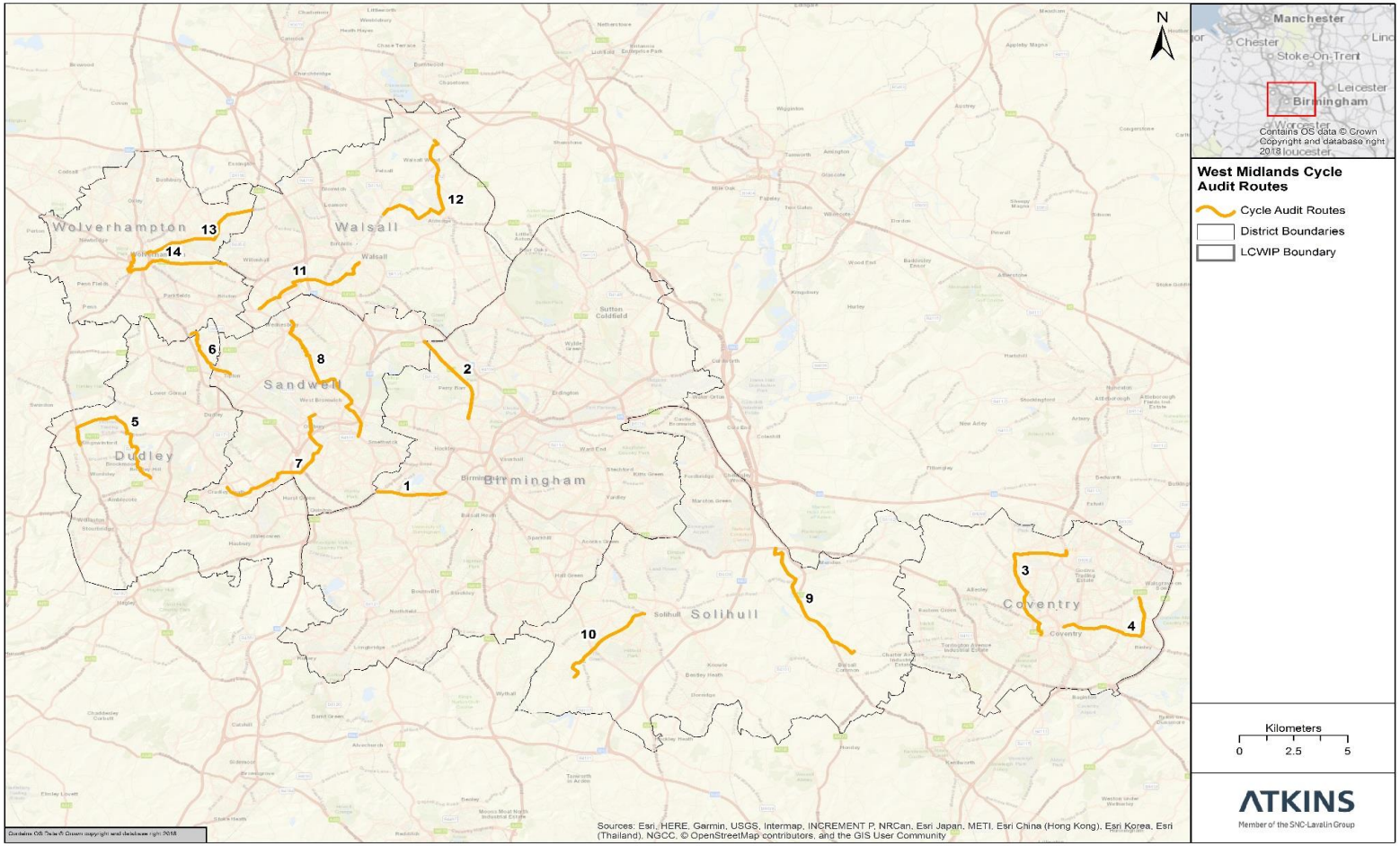
If this is not possible, opening up what appears to be a former access on the south side of Penn Road Island should be investigated.

On the A454 corridor a study of on-street parking bays is recommended to understand the use of on-street parking bays and assess the feasibility of removing these to provide space for a segregated cycle track.

Wolverhampton: City Centre to Portobello A454	**Section 6:** **Meriden Road to Diddington Lane**	Limited highway width in this section (A454) due to a bus lane/stops and other kerbside activity, central hatching and pinch points at signalised crossing. Residential streets off the A454can be used but on-street parking, access and junctions are issues. Junction with Stow Health Ln/Deans Rd involves segregated crossings over multiple lanes of traffic, which could inhibit ease of access. Kerbside activity may restrict cyclist movements at the junction. There is a wide footway on the south side but property access, side junctions and parking bays may limit new cycle infrastructure.				.
	Section 7: **Diddington Lane to A45**	Kerbside activity such as fencing, light/sign posts, bus stops, on-street parking and property access may restrict new cycle infrastructure. Footways are wide enough to facilitate shared use but there are some barriers that could limit ease of access. Footway parking was observed and may need enforcement. Between Noose Ln/Hill Rd a subway entrance could limit space for new capacity. Junction of Neachells Ln/Moseley Rd has busy segregated crossings over multiple lanes and kerbside which could inhibit cyclist movements.				

The Key Regional Corridors as described in Table 15 are presented within Figure 4-2.

Figure 4-2 - TfWM Regional Cycling Corridors



4.5. Cycling Corridors – Infrastructure Required

Designing for cyclists across the West Midlands is a difficult challenge where highway layouts have long been established and predominantly favour the motorised vehicle. The LCWIP is an ideal opportunity to challenge the existing layout and to determine the priorities for the road network moving forward, particularly the role of active travel in facilitating increased demand on the network.

During the route audits undertaken on the key regional cycling corridors, the auditors have based their judgement on the principles set out within the 'West Midlands Cycle Design Guidance' particularly focused on the aim to

"Ensure consistent and high-quality provision with a more standardised approach that reflects the function and importance of the cycle route within a local network (regardless of whether the space for cyclists is provided via an off-highway route, off-carriageway track, on carriageway cycle lane or carriageway shared with motor vehicles.)"

The key questions the audits were looking to address on the corridors include:

- What is the ideal form for cycle provision within the design?
- What common hazards should be considered and address?
- What typical design constraints (available dimensions, topography, drainage requirements and other street activities) need to be considered and how can they be managed?

The overall width available, the intensity of use by all modes and the relative speeds of the different types of user are key factors when identifying the most suitable form of cycle infrastructure. It is also important to understand who we are designing for when improving cycle infrastructure. Due to the lack of high quality infrastructure, cycling in the West Midlands (particularly in towns and cities) is mainly undertaken by experienced and confident cyclists, those who have the confidence to share road space with other users such as HGVs and car drivers. Whilst current cyclists have the confidence to cycling under current conditions, it does not mean that conditions can improve. A comfortable, high quality, hazard free experience would still benefit the most confident of cyclists.

Whilst we must recognise that cycling will not appeal to everybody, it is essential to provide high quality infrastructure across the West Midlands, this will ensure that anybody contemplating cycling for any journey purpose, can consider it a viable and safe transport option.

To ensure conditions are safe for people new to cycling, it is important that the design of infrastructure significantly reduces the sense of hazard (and interaction) from motor vehicles. There is a huge potential to increase cycling for people who simply want to use a bike for some of trips they make, designing cycle infrastructure should not simply for those who commute regularly by cycling . Examples of different journey purposes include:

- A primary or secondary school child cycling to school;
- A new commuter who wants to experience a new form of travel;
- Leisure journeys e.g. enjoying an active Sunday as a family;
- A shopping trip ; and
- Meeting friends socially (travelling a short distance)

The LCWIP process encourages all corridors to have the highest quality of cycle infrastructure possible. Where there is sufficient space, segregated cycle infrastructure (fully or light) separated from motorised vehicles with a coherent route connecting key destinations has been preferred. A segregated route provides the most safety for cycle users and reduces safety concerns for the less confident cyclists.

The merits of different forms of infrastructure on each corridor have been assessed during the audit process however, where possible, on-carriageway options have been preferred. identified within the West Midlands Cycle Design Guidance.

Figure 4-3 presents different forms of cycling infrastructure identified within the West Midlands Cycle Design Guidance.

Figure 4-3 - Options for Cycle Infrastructure

4.6. Cycling Corridors – Constraints and Opportunities

To determine the current conditions and identify interventions required across the key regional cycling corridors, a cycling audit was undertaken for each corridor using a Cycling Level of Service (CLoS) spreadsheet. The existing characteristics and the potential interventions vary significantly along the proposed routes. In order to assess the existing conditions each corridor was divided into sections to reflect changes in route characteristics. Sections are made up of links with similar characteristics or cycling environment and major junctions. A map of each key regional corridor is presented in Appendix A

A site audit for each corridor was undertaken on bicycle or on foot between 4th and 29th June 2018 which consisted of a systematic review of the existing conditions for cycling along the corridors to inform a detailed Cycling Level of Service (CLoS) Audit.

The aim of the Cycling Level of Service (CLoS) audit is to understand the existing conditions through a quantitative process that can be used to compare corridors and identify existing issues that are likely to dissuade people from cycling. Information gathered through the audit has helped to identify potential interventions to meet the standards set out within the TfWM Cycle Design Guidance.

The CLoS method assesses six design outcomes of safety, directness, coherence, comfort, attractiveness and adaptability; each of which are scored on-site using a series of criteria relating to capturing the surrounding infrastructure. Each score is weighted to provide an overall score in line with the London Cycling Design Standards scoring system and a ‘spiderweb’ diagram produced to give a percentage score for each link.

These scores can be used to help prioritise links which are especially low scoring, and to use the measures for the six design outcomes to inform decisions relating to the types of interventions that could make the most transformational impact. The Datasheets presented within Appendix B provide the existing CLoS Assessment as well as identifying potential constraints and opportunities along each corridor.

The audits found that each corridor had several constraints which would need to be addressed to implement high quality cycling infrastructure. Whilst the corridors all have limited highway space, with ambitious cycle design and providing increased priority to cycling, every corridor audited (barring Coseley to Tipton, via NCN 81) has the potential for some form of high quality segregated or light segregated infrastructure.

Table 16 presents a summary of the key constraints and opportunities along each corridor.

Figure 4-4 to Figure 4-17 present a detailed analysis of each regional cycle corridor audited.

Table 16 – Regional Cycling Corridors – Opportunities and Constraints

	Corridor	Constraints	Opportunities and Recommendations
1.	**A456 Hagley Road – Beech Lane to Birmingham City Centre**	• Constrained highway network and heavily used bus route • Limited cycle infrastructure at present. • Cyclists in regular interaction with motorised vehicles • A4040 to Portland Road has very limited capacity for introducing cycle infrastructure. • SPRINT will be introduced onto Hagley Road.	• Due to importance of this corridor, it is advised that a fully segregated route be considered. • Consider segregated infrastructure along alternative route which could be adapted to reconnect to Hagley Road at various side roads. • A potential alternative route would begin on Meadow Road connecting to Woodbourne Road/Augustus Road/Harborne Road with a number of options to connect back on to Hagley Road. This is dependent on other scheduled infrastructure projects.
2.	**A34 Perry Barr Extension to boundary with Sandwell**	• High traffic flows particularly in the AM and PM peaks. • Currently poor quality cycle provision. • Number of busy junctions (with no cycle infrastructure) including Birchfield Road/A4040 and Perry Avenue/A34/Church Road. • Constrained highway capacity between Heathfield Road and Cliveden Avenue. • Severely limited capacity around Perry Barr Railway Station.	• Explore opportunity for a two way segregated cycle track to connect to the scheme currently under development. • Opportunities to play an important role in providing a high quality sustainable transport link to the Commonwealth Games developments in Perry Barr and Alexander Stadium.
3.	**Coventry City Centre to Holbrooks via B4098**	• Constrained sections between Greens Road to Halford Lane (particularly during school run). • The A4053 Coventry Ring Road is a major constraint in terms of providing high quality	• Potential solution would be a high quality cycle track on the outbound approach (from Coventry City Centre). Several junctions would require improvements to allow for such an intervention to be implemented.

		infrastructure, a bridge over the A4053 is the only realistic viable option. • To bypass the A4053 Ring Road, cyclists have to travel over the carriageway which is potentially unappealing for many cyclists. • The route outside of the city centre follows predominantly residential streets where opportunities are limited to provide high quality cycle infrastructure. • On street parking is a key constraint along this corridor.	• A shared use facility would suffice on approach to Ricoh Arena if a segregated track is not deemed feasible or strategically required.
4.	**Binley Road Coventry University to University Hospital**	• Significant traffic flow particularly in AM and PM peak. • Existing cycle lanes along Binley Road do not provide protection from motorised vehicles. • Busy junctions along Binley Road. • Existing on street parking along the route limits the highway capacity and increases potential conflict between motorised vehicles and cyclists.	• There is limited space along Binley Road which is reduced further by on road parking, removing street parking on several pinch points to maximise space. • Segregated two way cycle track on outbound approach from the city centre to Coventry University Hospital would be the most viable option (based on the audit findings)
5.	**Kingswinford to Brierley Hill via B4179**	• Narrow traffic lanes throughout the corridor provides limited space for cyclists and creates conflict with motorised vehicles. • Several busy junctions which would be unappealing for the majority of cyclists. • Significant HGV traffic particularly between Stallings Lane and Smithy Lane. • Significant traffic in AM and PM peaks, unappealing environment for cyclists.	• Route would benefit from footway improvements. • Feasibility study needed to investigate provision of shared footways/cycleways along the route in combination with potential light segregated facility where possible. • Alternative routes could be considered for assessment around Hickman Road? to avoid the railway overbridge, which currently limits highway width.

		• Railway overbridges pose barriers to access and the provision of cycling infrastructure.	• Consider removal on street parking increase highway space for cycle infrastructure.
6.	**Coseley to Tipton (via NCN 81)**	• Significant level changes and steep gradient from canal to Coseley. • Poor quality towpath surface on the southern parts of the route. • Un-cycle friendly constrained access points to the canal on some sections. • Limited existing off-carriageway cycle provision.	• Improve access onto the canal towpath for example, by the Biddings Lane bridge. • Improve canal towpath surfacing • Improve Coseley Canal tunnel although this would have high cost implications and would not connect with the trip attractors of Coseley and the railway station. • Kenelm Road offers an alternative quite residential road access to the towpath with a reasonable gradient.
7.	**Old Hill, Blackheath to Oldbury**	• Topography of some of this route is a significant constraining factor, particularly on Station Road, Old Hill which has a steep gradient. • High levels of kerb side activity impacts access and instances of on road parking, particularly in residential areas where the route traverses narrower side roads and many properties front the carriageway. • Lack of safe crossing facilities.	• Alternative route should be considered through the corridor from Blackheath to Oldbury which includes dual carriageway with a central reservation and verges. • Potential to reallocate space to provide high quality cycling facilities with a direct route along the A4034. • Potential to link to railway stations
8.	**Smethwick to West Bromwich and Wednesbury**	• Topography of some of this route is a significant constraining factor, particularly on Station Road, Old Hill which has a steep gradient.	• Continuity and consistency of existing facilities are needed. • Improve route clarity and wayfinding. There are good foundations to work on between Smethwick and West Bromwich. • Potential to link to railway stations

		• Poor lighting and perceptions of personal safety on sections of this route such as Mill Lane. • Dense residential areas can make it challenging to navigate and would allow limited capacity for dedicated cycling infrastructure.	• Alternative routes considered in Hill Top where the cycle route uses convoluted residential side streets. Further studies could be considered to assess the feasibility of removing cycle lanes on Holloway Bank and providing improve footway/cycleway facilities. • Alternative routes could also be considered in the vicinity of Potters Lane, where current infrastructure is poor and there are significant barriers to cyclist movements.
9.	**Balsall Common to Stonebridge via A452**	• Narrow carriageway and parking access in vicinity of Berkswell Station. • Roundabout crossings could inhibit ease of access and safety. • No cycling provision on the A452 currently. • Constrained highway capacity in some places, infrequently along the A452 and throughout the route section on Diddington Lane.	• Alternative routes should be identified along this corridor, particularly between Marsh Lane and Coventry Road (A45) where the existing A452 route could be utilised. • Further feasibility studies could be considered to assess the suitability of offline sections such as Marsh Road and the access road north of Diddington Lane. • Infrastructure improvements in relation to HS2 are included in further feasibility assessments of the proposed route. This is particularly relevant between Meriden Road and Diddington Lane which currently has no infrastructure in place for cyclists.
10	**B4102 Dickens Heath to Solihull town centre**	• Constraints to cycle routes due to limited highway capacity in residential areas between Buckridge Lane and St Gerards Road. • Improved crossing facilities are required on intersections and junctions to allow ease of access and maintain safety of cycling routes. • Frequent issues with on street parking, particularly between Chalford Way and St	• Further assessment of junction capacity and implications of relocating the signalised crossing point closer to desire lines should be undertaken. A study into the benefits of signalising the roundabout may also be beneficial. • A study of existing on-street parking behaviours should be undertaken to understand the implications of removing/restricting sections of on-street parking.

		Gerards Road which could cause barriers to the provision of cycling infrastructure. • The railway overbridge adjacent to Solihull Railway Station limits highway capacity on part of the route.	• Light or fully segregated cycle facility is considered, utilising the sections of existing space designated for shared use.
11	**Darlaston to Walsall town centre via A4038**	• HGV presence particularly between Section 1 (King Street) and 2 (Heath Road) due to industrial sites. • On road parking on approach to Walsall town centre creates potential conflict with cyclists. • A4038 is generally a constrained network with limited cycle infrastructure which does not provide segregation for cyclists (except for small sections of share use path). • A number of pinch points result in a suitable cycle route diverting from the most direct route.	• Light or fully segregated cycle facility. • Feasibility study should assess delivery of shared use paths to accommodate cyclists without impacting on the highway network, addressing major pinch points including key junctions and bridges and improvements to off street cycle facility through Victoria Park.
12	**Rushall to Brownhills via B4152**	• Traffic flow particularly in AM and PM peaks provide a barrier for cyclists on narrow roads. • Little cycle infrastructure to provide protection for cyclists • Constrained capacity along the B4152 between Lichfield Road/B4152 Lane junction and B4152/A452 junction. • HGV traffic throughout the day which provides a significant constraint and safety issue for cyclists.	• Varying highway space along the B4152 fluctuates therefore, limiting opportunities for a consistent high quality segregated cycle track. • Segregated cycle track is needed, given the traffic flows, however a key issue will be how to address key constraints particularly the northern section from the Lichfield Road Junction to Ogley Road. • Whilst the route has considered the link to Rushall, this does not have a strong regional strategic case as the route follows a number of residential streets linking to industrial units. It is recommended that the focus of the study is the link between Brownhills and Aldridge.

13	**A454 Wolverhampton City Centre to Portobello**	• Provision of cycling infrastructure is mainly constrained by kerb side activity, on road parking and properties located on the carriageway, particularly in residential areas, city centre locations and where industrial units are present. • However, large sections of the route have wide footway and existing cycling infrastructure provided, with limited constraints to cycling access. • However, major junctions involving segregated crossing and multiple lanes of traffic could impact on ease of access, desirability and safety of cycling routes.	• Improve continuity and clarity of the route. • Cycle and pedestrian movements are segregated due to the high pedestrian footfall. • Prioritised cycle crossings in the city centre at grade would make route more attractive. • Further assessment of the junction capacity of junctions where this route crosses the ring road, to ascertain the feasibility of incorporating toucan crossings. If this is not possible, opening up what appears to be a former access on the south side of Penn Road Island should be investigated. • Feasibility study to assess removing on street parking to provide space for a segregated cycle track.
14	**A4124 Wolverhampton City Centre to Walsall**	• Lack of provision of cycling infrastructure on junctions and roundabouts is the main barrier to cycling movements on this route. • Narrow footway/cycleways. In general, footway width and highway space is not a limiting factor along the majority of the route, except between Culwell Street and Sun Street and in the vicinity of Neachells Lane. • This route provides continuous footway/cycleways along its length, except in the vicinity of Wolverhampton Road to the east of Tudor Road. This limits the continuity of the route on the northern side of the carriageway.	• Provide continuous and clear connections into the city centre and major trip. • Segregated off-carriageway cycle facilities that are continued along the length of this route. • Removal of existing disjointed constrained cycle provision under the railway bridge shown in photos 1 and 2, to support the clarity of higher quality alternative route via Lock Street and the park area off Little's Lane.

4.7. Cost of Regional Cycle Corridors

As outlined in Section 4.5, TfWM with the support of the seven local authorities, will develop and implement cycle infrastructure of the highest quality possible. The West Midlands LCWIP has audited 14 corridors where varying constraints and opportunities have been identified to further develop the corridors.

Moving forward, full feasibility studies will be required to identify the most suitable form of cycle infrastructure, where possible this will be in the form of Cycle superhighways (such as the A34 Perry Barr and A38 Bristol Road schemes being developed by Birmingham City Council) which provided fully, or light segregated infrastructure separated from traffic.

Typical features of a Cycle superhighway include

- Physically protected segregation from traffic and pedestrians for much of the route, using kerbs, paving level differences or other physical means.
- Sufficient width to accommodate large flows of cyclists with no issue of conflict between users.
- Cyclist priority at side roads with speed tables to slow cars and clearly demonstrate priority for cyclists.
- Clearway orders to prevent parking in the cycle lane.
- Cyclist 'bypasses' to the rear of bus stops forming passenger waiting 'islands'.
- Dedicated cycle crossing facilities across major roads, signalised where necessary.
- A feeling of safety so that confident cyclists feel comfortable using the route.

The cost of implementing a Cycle superhighway (fully or light segregated) can vary according to a variety of factors. Cycle superhighways generally concentrate on providing the most direct routings possible, such routes are already occupied by major road where the layout has been set for many years.

To minimise traffic disruption, construction of physically segregated space for cyclists is generally restricted to off-peak periods or overnight, adding additional costs to construction. Other factors which influence the cost of the scheme include:

- The degree of physical segregation throughout the route – wider width paths and high quality measures at side roads (such as speed tables) and bus stops increase costs
- Roads with verges, significant underutilised road space or where the highway itself can be narrowed, allow cheaper route construction
- Tight environments in older centres with buildings close to the roadside with little road space require more complex solutions to negotiate obstacles, increasing costs of construction
- A 'Light segregation' option may have lower capital costs with less infrastructure provided throughout the route
- Maintenance costs are generally higher for fully segregated routes due to infrastructure such as armadillos and splitter islands requiring maintenance or replacing

The DfT publication 'Typical Costs of Cycling Interventions' [6]has provided a wealth of up to date information on the costs of implementing cycling infrastructure. The publication presents the typical

6 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/738308/typical-costings-for-ambitious-cycling-schemes.pdf

costs of cycling interventions and the factors that affect them, drawn from expenditure during delivery of Phase 1 of the Cycle City Ambition (CCA) programme.

Drawing on examples from Cycle City Ambition Phase 1, a high level cost estimate has been identified for a fully and light segregated option on each of the 14 cycle corridors audited. The cost estimate is based on an aggregate spend per KM of the cycle schemes delivered as part of CCA1. The aggregate spend for a fully segregated route as part of CCAG1 was £1.30M/km and 0.74M/km for a light segregated route. To identify the total cost per regional cycle corridor, the aggregate spend (per km) has been multiplied by the length of the route.

To identify a more detailed cost estimate, a feasibility study along each corridor will be required to determine the type of intervention required, the scale of the intervention and other key considerations such as tackling major constraints such as large junctions and pinch points. Once such factors have been considered, a more tailored cost estimate can be provided. The cost estimate provided in Table 17 is a useful benchmark to identify an estimate total cost for the 14 corridors audited.

A 'Strategic Cycle Route' has been costed where a fully or light segregated route might not be deliverable (based on a detailed feasibility study) or not deemed suitable based on local requirements, traffic volumes and speeds. As outlined within the recent 'Cost of Cycle Interventions' published by the DfT a strategic cycle route is defined as:

"*An extended cycle route to facilitate cycling along a strategic corridor, comprising a mixture of: signed route without dedicated lanes along quieter roads; on-road lanes without physical segregation; physically segregated cycle lanes along busier roads; marked cycle routes away from roads where such alignments are available.*

The cost of infrastructure implemented and defined as a 'Strategic Cycle Route' varies and is dependent on various factors. A key factor is proportion of the route where physical segregation from traffic is provided. Based on schemes delivered as part of the CCAG programme, the aggregate spend for strategic cycle route is £0.67M/km

Corridors have been costed on the type of infrastructure deemed deliverable and/or suitable based on the audits undertaken as part of the West Midlands LCWIP.

Table 17 – Cost of Regional Cycle Corridors

Route	Length (KM)	Fully Segregated (£M)	Cost of Light Segregation (£M)	Strategic cycle route
A456 Hagley Road – Beech Lane to Birmingham City Centre	4.5	5.85	3.33	N/A
A34 Perry Barr Extension to boundary with Sandwell	4.9	6.37	3.63	N/A
Coventry City Centre to Holbrooks via B4098	7.8	10.14	5.77	N/A

Binley Road Coventry University to University Hospital	5.9	7.67	4.37	N/A
Kingswinford to Brierley Hill via B4179	7	N/A	5.18	4.69
Coseley to Tipton (via NCN 81)	3.2	N/A	N/A	2.14
Old Hill, Blackheath to Oldbury	8	10.4	5.92	N/A
Smethwick to West Bromwich and Wednesbury	8.7	11.31	6.44	5.83
Balsall Common to Stonebridge via A452	7.7	10.01	5.7	N/A
B4102 Dickens Heath to Solihull town centre	5.3	6.89	3.92	N/A
Darlaston to Walsall town centre via A4038	6	7.8	4.44	N/A
Rushall to Brownhills via B4152	7	N/A	5.18	4.69
A454 Wolverhampton City Centre to Portobello	6	7.8	4.44	N/A
A4124 Wolverhampton City Centre to Walsall town centre	13.2	17.6	9.77	N/A

5. Network Planning for Walking

5.1. Background

The key output for the network planning stage for walking has been to identify CWZs within each local authority and key interventions which will address issues such as severance and safety. The remainder of the Chapter presents the CWZs identified through discussions with the local authorities and the evidence gathered as part of Chapter 3.

As part of network planning for walking, a high level overview has been undertaken across the CWZs to identify their strategic relevance and to identify the main corridors within each CWZ. A 'Level of Service' audit has been undertaken to identify existing conditions and to develop interventions required within each CWZ.

A map of each CWZ is presented within Section 5.3. The programme of interventions across the CWZs is presented within Section 5.4

5.2. Network Planning – Methodology

Through discussions with the local authorities, stakeholder engagement and the use of Geographic Information System (GIS), walking network planning has taken place to identify the CWZs and key walking interventions across the West Midlands.

Table 18 presents how each of the above methods has helped to develop the walking network.

Table 18 – Walking Network Planning

Method	How Information will be used
GIS Analysis (further information below)	The GIS analysis has been undertaken to identify major trip generators and attractors along the priority walking corridors identified through discussions with the local authorities. This has helped to gain a greater understanding and provide the strategic rationale for the corridors.
Local Authority Meetings (further information found within Chapter 3 and Background Report)	The meetings with the lead contacts from the LCWIP Working Group identified key walking corridors (within a designated CWZ) per local authority. The key walking corridors are those which currently have high walking mode share or are key commuting corridors which have potential for significant walking trips.

A key task to determine the walking network is to identify the key trip generators and attractors within each local authority, this has been undertaken through a GIS analysis. Due to the regional scale of the LCWIP, the analysis has only considered major trip destinations such as large employment zones, city centres and large educational establishments such as universities.

Once the major trip generators and attractors were discussed with the local authorities, the CWZs were identified. The CWZs consist of major trip generators in close proximity within each local authority. The CWZs are predominantly located within the major urban centres of the West Midlands.

Once the CWZs were determined, the key pedestrian corridors per CWZ were located and mapped within a 1km radius. the West Midlands LCWIP will focus on specific interventions required to improve the pedestrian environment within the CWZs.

The footway hierarchy presented within Table 19 (as shown within the DfT LCWIP guidance) has classified pedestrian infrastructure to help identify corridors of most importance. The pedestrian corridors identified within each CWZ fall within the 'prestige walking zones' and 'primary walking routes' categories. Data gathered on local walking links such as secondary walking routes have not been considered as part of the West Midlands LCWIP however, local authorities have been encouraged to consider how secondary walking routes and local links are connected to primary routes and prestige walking zones.

Table 19 - Footway Hierarchy

Name	Description
Prestige Walking Zones	Very busy areas of towns and cities, with high public space and street scene contribution.
Primary Walking Routes	Busy urban shopping and business areas and main pedestrian routes.
Secondary Walking Routes	Medium usage routes through local areas feeding into primary routes, local shopping centres etc.
Link Footways	Linking local access footways through urban areas and busy rural footways.
Local Access Footways	Footways associated with low usage, short estate roads to the main roads and cul-de-sacs.

One of the key aspects of walking network planning has been to identify severance issues within each CWZ. Severance is often a major barrier for discouraging local journeys to be undertaken on foot. Individual meetings with the local authorities has helped to identify major severance issues. Key barriers considered include heavily-trafficked roads with limited crossing points and major employment and retail zones with poor permeability for pedestrians.

As outlined further in Section 5.4, once the key corridors were identified within each CWZ, an audit of the existing walking infrastructure was undertaken to determine where interventions were required. As part of the LCWIP guidance produced by the DfT, a Walking Route Audit Tool (WRAT) was developed to assist local authorities in network planning for pedestrians. The WRAT has been used as part of the West Midlands LCWIP to audit corridors across the West Midlands.

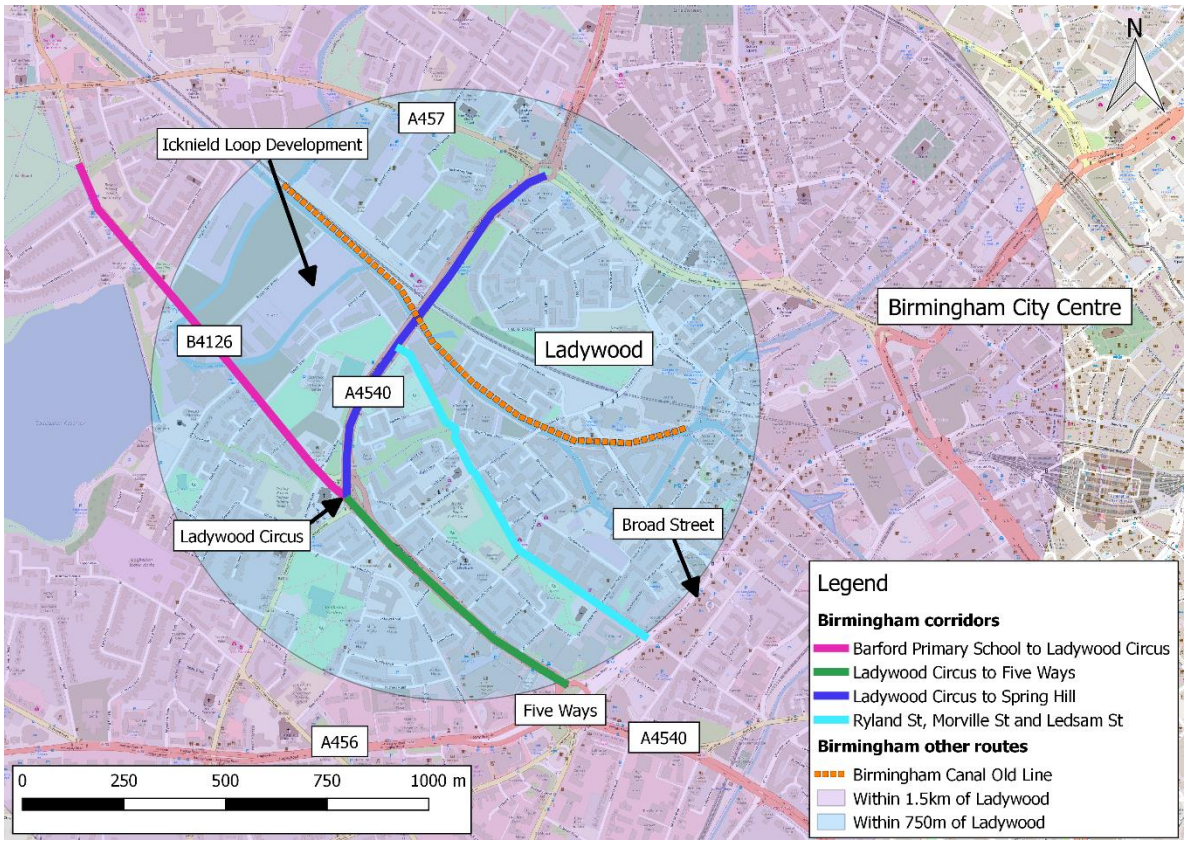
5.3. Core Walking Zones

Figure 5-1 to Figure 5-7 present the CWZs across the West Midlands. A CWZ has been identified within each local authority.

Birmingham

Through discussions with Birmingham City Council, the area around Ladywood Circus was selected as the most appropriate to audit given the potential increase pedestrian activity in the area generated by the proposed 1,150 residential unit and mixed use development at Icknield Port Loop. Key walking links connecting the proposed development site to trip attractors in Birmingham City Centre, Broad Street and Five Ways were considered in the audit, Identified in Figure 5-1.

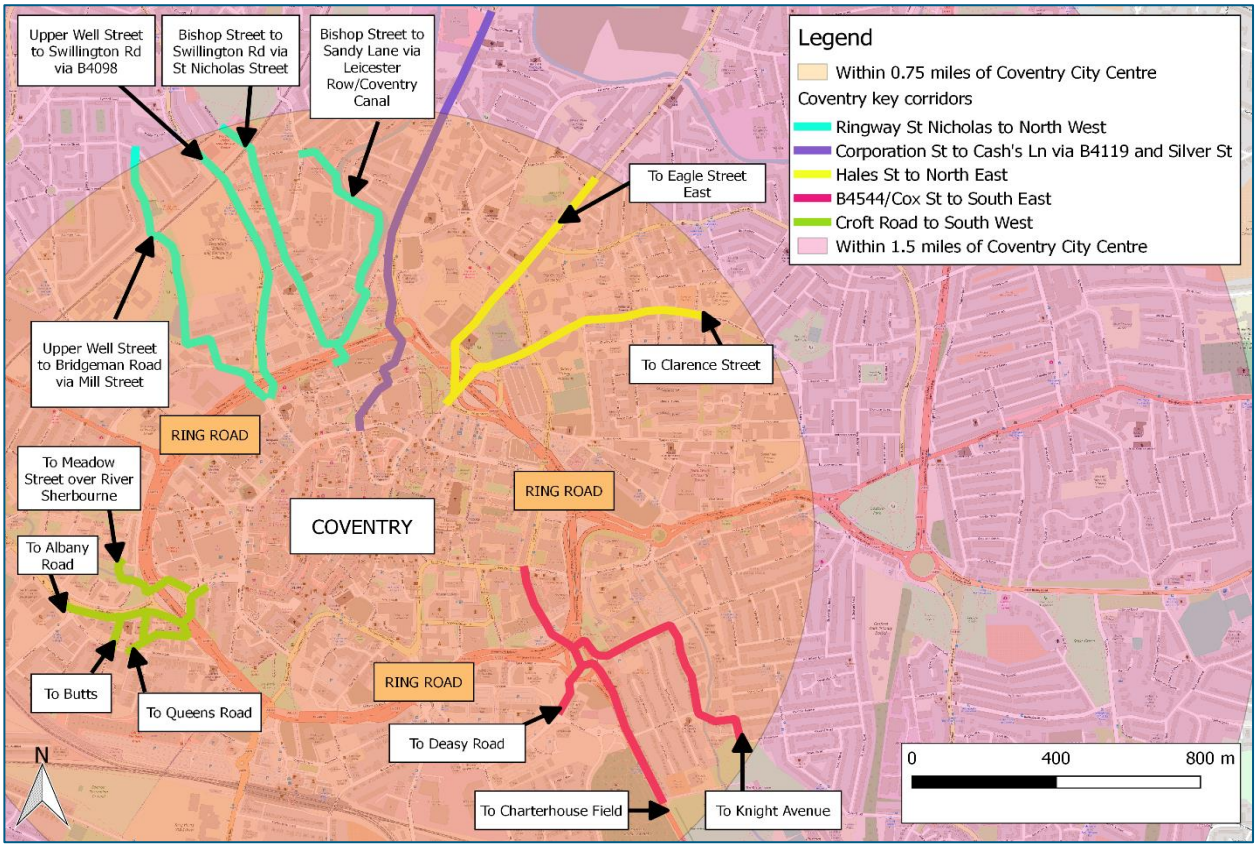
Figure 5-1 – Birmingham Ring Road CWZ



Coventry

Through discussions with Coventry City Council, it was agreed that the CWZ should be based around the A4053. A mapping exercise identified the key corridors which have to negotiate the A4053 Ring Road to access the city centre. The Ring Road has been identified as a major barrier for pedestrian journeys and therefore the aim of the audit was to identify improvements to the walking environment that would encourage local people to walk to and from the city centre.

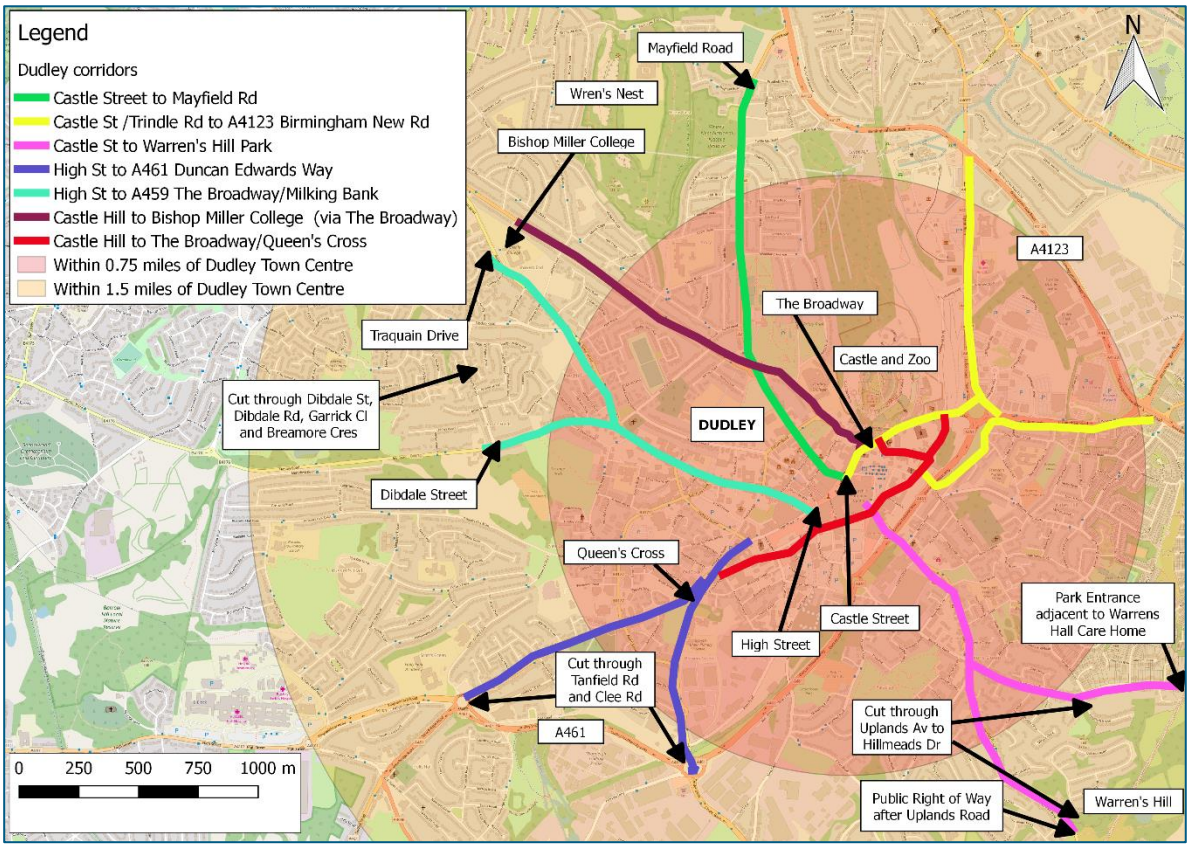
Figure 5-2 - Coventry A4053 CWZ



Dudley

Following discussions with Dudley Metropolitan Borough Council, it was agreed that the CWZ within Dudley should focus on Dudley town centre. The aim of the CWZ is to identify improvements to the key corridors within and on approach to the town centre as well as identifying any key public realm improvements which could improve the overall walking environment within the town centre and links to proposed Metro stops.

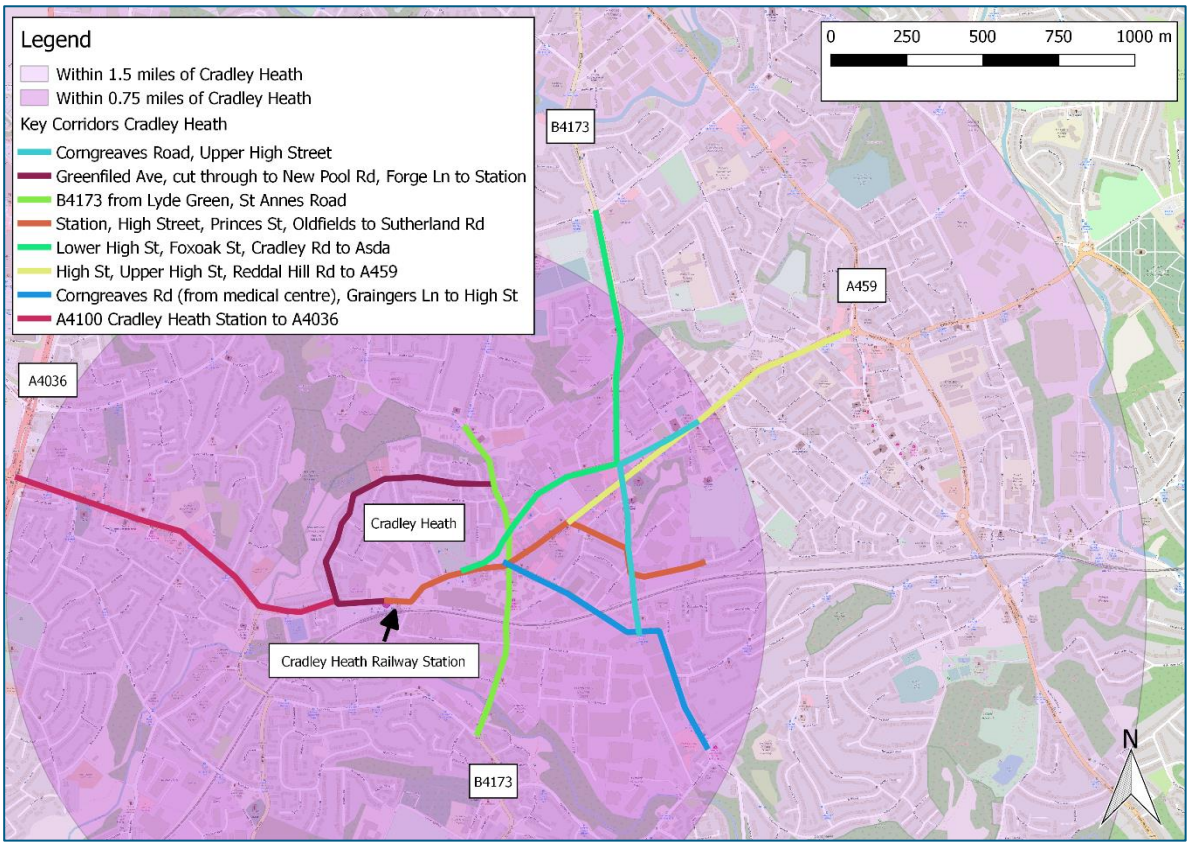
Figure 5-3 - Dudley Town Centre CWZ



Sandwell

Through discussions with Sandwell Metropolitan Borough Council, it was agreed that links to and from Cradley Heath Railway Station would make up the Sandwell CWZ. The aim of the audit has been to identify current conditions and explore potential improvements around Cradley Heath Railway Street. The audit looked at links from Cradley High Street and Quarry Bank High Street, as well as nearby residential catchment areas and business frontages.

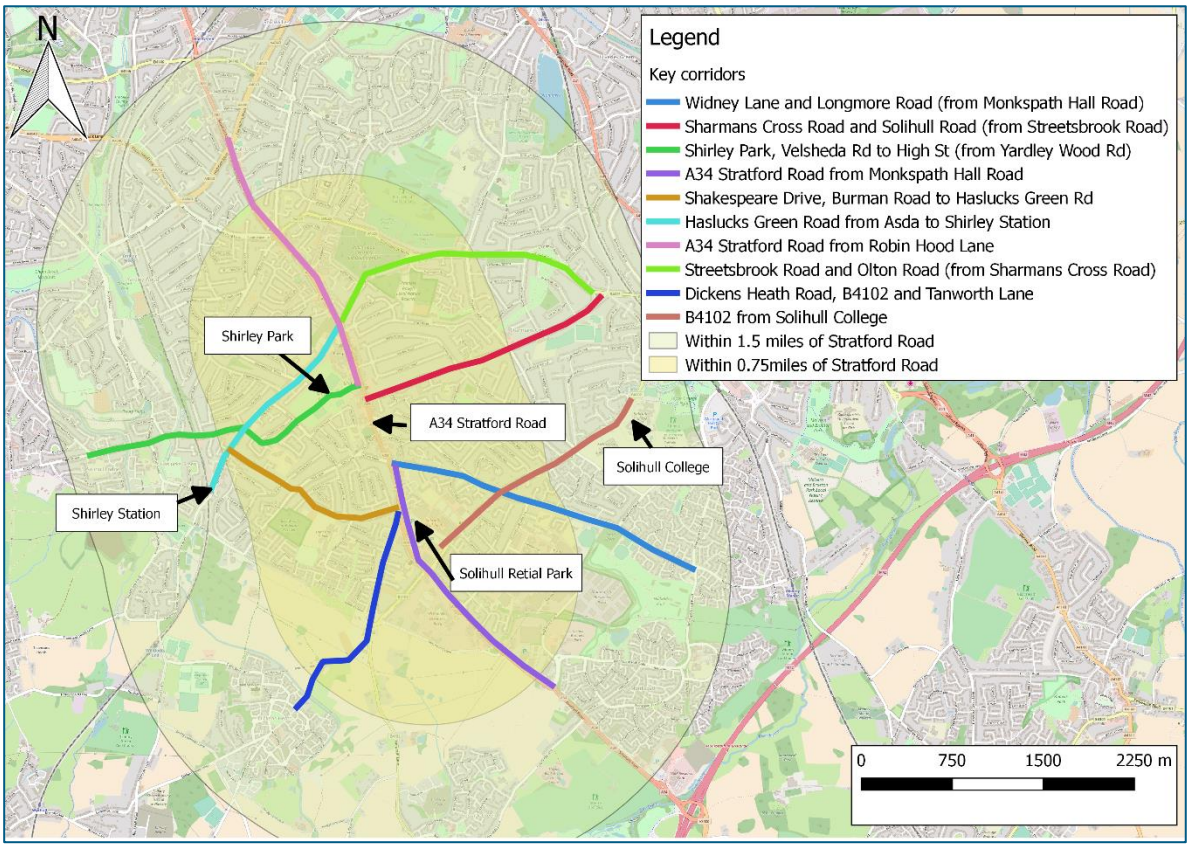
Figure 5-4 - Sandwell - Cradley Heath CWZ



Solihull

Through discussions with Solihull Metropolitan Borough Council, it was agreed that the focus of the Solihull CWZ would be on Shirley High Street. Currently Shirley High Street experiences significant traffic flow with a large proportion of traffic deemed as 'local' journeys which could be undertaken on foot. The audit has identified the current conditions on the main routes onto the High Street as well as potential solutions

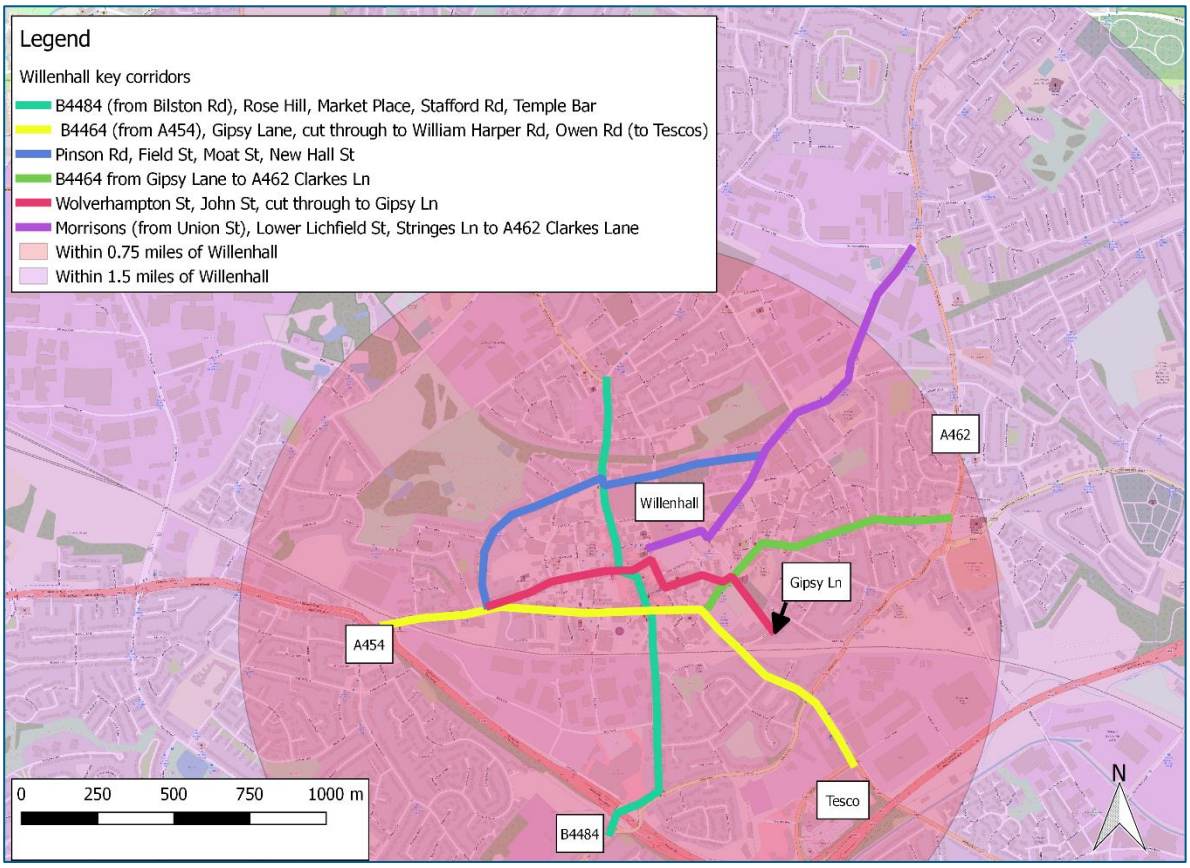
Figure 5-5 - Solihull - Shirley CWZ



Walsall

Following discussions with Walsall Metropolitan Borough Council, it was proposed that the CWZ within Walsall should focus on Willenhall. During the meeting between the LCWIP team and Walsall MBC, Willenhall was identified due to the proposed new railway station with links to and from Willenhall town centre a key factor. Walsall MBC officers also mentioned that public realm improvements have been proposed for Willenhall town centre.

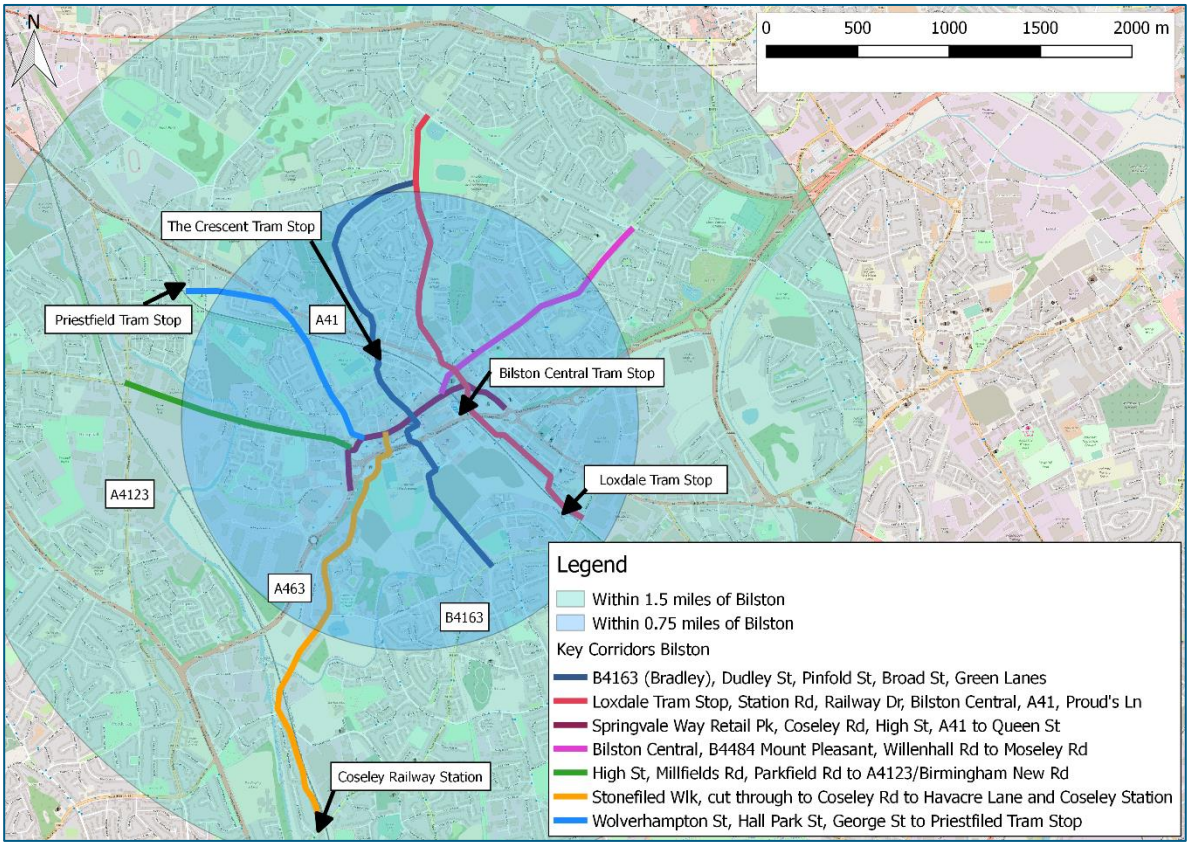
Figure 5-6 - Walsall - Willenhall CWZ



Wolverhampton

Following discussing between the LCWIP project team and City of Wolverhampton Council, it was agreed that the focus of the Wolverhampton CWZ should be on Bilston. Bilston is an area undergoing regeneration in the form of the Bilston Urban Village, a large housing development being built on former industrial land to the south of Bilston centre. The development is currently in progress where there is a strong severance between the Urban Village and the traditional centre by the bypass road.

Figure 5-7 - Wolverhampton - Bilston CWZ



5.4. Programme of Infrastructure Improvements

The WRAT developed as part of the LCWIP follows the five key design principles outlined below.

- attractiveness
- comfort
- directness
- safety
- coherence

The audits undertaken within each CWZ have helped to identify the required interventions along the pedestrian corridors within each CWZ. The interventions proposed include improving existing infrastructure as well as introducing new pedestrian facilities such as wayfinding, new pedestrian crossings and benches to improve the public realm.

Table 20 - Summary of CWZs

CWZs	Summary of CWZ and Key Interventions Required
Birmingham –Ladywood Circus/ Icknield Port Loop.	Routes in this CWZ are likely to provide key walking links to/from the proposed Icknield Port Loop residential (1,150 units) and mixed-use development, connecting to the key trip attractors of Five Ways, Broad Street and Birmingham city centre. • Additional signalised crossing points, particularly on Ladywood Middleway should be considered. • Improvements to dropped kerbs and tactile paving to provide more consistent facilities • Resurfacing, improved lighting and wayfinding on route between Ledsam Street and Ryland Street • Step-free access to the canal towpath • Traffic calming and restrictions to on-street parking should be considered on Icknield Port Road
Coventry – City Centre Ring Road	Routes in the CWZ are likely to provide adequate to good walking links to/from suburban residential developments and Coventry City Centre. The City Centre is a major retail, leisure and employment attraction, as well as for the main bus interchange. • The A4053 presents a barrier to the continuity and attractiveness of walking routes. Improvements should look to improve and modernise crossings and access for pedestrians within the limits of the dual carriageway, particularly accessing Foleshill Road from the City Centre. • Improvements to dropped kerbs, tactile paving and crossing could provide more consistent, high quality facilities. • General attractiveness of routes could be improved, for example removing instances of litter and unkempt vegetation, improved lighting, and potential enhancement to streetscapes. • More dedicated pedestrian crossings could be provided to improve ease of access, particularly on the B4098, Foleshill Road, Gulson Road and White Street. • Pedestrians are often faced with high traffic volumes, particularly on the B4098, Foleshill Road and the A4114, which may reduce the attractiveness of routes. There are safety concerns on the B4098, particularly around Barr's Hill School and Community College. Improvements could look at mitigating high traffic flows or improving separation between pedestrians and the carriageway.

Dudley town centre	Routes in this CWZ are likely to provide good walking links between the surrounding suburban housing and the redeveloped town centre. The town centre is a significant draw for employment, as well as for bus interchange. • Improvements to dropped kerbs and tactile paving to provide more consistent facilities. • Improvement and modernisation of crossings and access for pedestrians at B4171 outside the Churchill Shopping Centre. • Traffic calming measures to regulate vehicle speeds, especially near Blowers Green Primary and Bishop Milner Catholic College. • Upgrade signalised crossings to pelican crossings as a number of traffic lights do not have pedestrian control.
Sandwell – Cradley Heath	Routes in the Sandwell CWZ produce moderate facilities for pedestrians through Cradley Heath town centre, Cradley Heath Railway Station and surrounding residential areas. Cradley Heath town centre provides opportunities for employment, retail and leisure, but is not a high trip attractor compared to a more significant town or city centre. • Improvements to dropped kerbs and tactile paving to provide more consistent facilities. • The quality and visibility in side road crossings could be improved, particularly on the B4174. • Some sections are particularly steep, including the A4100 in Quarry bank, in the vicinity of Tesco on the A4100 and the B4173 (Newtown Lane and Bridge Street) which whilst unavoidable, does provide barriers to walking. Consideration for benches or reducing gradient could be considered. • Pedestrian crossing facilities could be improved on Corngreaves Road, particularly on Newlyn Road with evidence of HGV traffic. • Footway width could be improved on Corngreaves Road, Graingers Lane in places, particularly considering high traffic flows. • The quality of footways should be improved in the vicinity of railway overbridges on the B4173 (Cradley Road), Grainger Lane and Corngreaves Road. • Greenfield Avenue is not suitable for pedestrians and nearby routes should be considered.
Solihull – Shirley High Street	Routes in this CWZ are likely to provide good walking links between the surrounding suburban housing and the developed high street along the A34. Shirley provides a strong draw for employment and retail. Rail links are peripheral to the CWZ. • Improvements to dropped kerbs and tactile paving to provide more consistent facilities.

	• A34/ Union road, crossings would benefit in being closer to the junction. • Multiple locations have traffic islands which should be considered for removal or improved to provide sufficient space. • High vehicle speeds require enforcement to reduce risk to pedestrians and other vulnerable users. • B4102/Danford Road consider a crossing at the junction to improve crossing facilities for pedestrians. • Outside Alderbrook school, a formal crossing would be preferable to allow safe crossing for pedestrians.
Walsall – Willenhall	Routes in this CWZ are likely to provide adequate walking links to/from surrounding suburban housing areas to Willenhall however, public transport links are limited. • B4484/B4462 roundabout, needs a formal crossings and pedestrian refuges. • Improvements to dropped kerbs and tactile paving to provide more consistent facilities. • Rose Hill/ B4590 requires a new crossing. • Wolverhampton St requires enforcement of double yellows outside 'The Garage Willenhall'. • New Hall St/ Stringes Lane require footway maintenance.
Wolverhampton – Bilston	Routes in this CWZ are likely to provide good walking links to/from surrounding suburban housing areas to Bilston, with good access to Bilston metro stop. Bilston as a centre provides small opportunities for employment and leisure. • Remove barriers and provide step free access over the canal at Ladymoor Road. • Improvements to dropped kerbs and tactile paving to provide more consistent facilities. • Fly tipping on Ladymoor Road needs to be addressed to provide attractive environment for pedestrians. • Footway parking at Station Road (Loxdale Primary School) - footway is almost impassable for pedestrians. • Many locations with uneven surfaces caused by trees/tree roots, or poor maintenance.

6. Cycle Route Prioritisation

6.1. Introduction

As outlined within the LCWIP guidance, the key outputs of the LCWIP prioritisation process are as follows:

- Developing timescales for short, medium and long term schemes; and
- Prioritising each corridor based on a range of criteria including policy alignment, deliverability and effectiveness

The programme of improvements will divide the proposed schemes into those which can be implemented quickly (short term), those where further issues require mitigation before work can begin (medium term) and those which are more aspirational or have no defined solution (long term). Greatest priority will be given to the improvements which are likely to have the greatest impact based effectiveness, policy and deliverability based on analysis of predicted use.

6.2. Methodology

Table 21 presents the criteria which has been developed to assess and prioritise the key cycling corridors across the West Midlands. Due to the importance of the prioritisation process, the criteria and the weightings applied were discussed with TfWM and the LCWIP Working Group. This was important to ensure that there was a collective buy in to the prioritisation process.

The methodology includes prioritising schemes into the following timeframe categories

- **Short term** (typically under three years) **–** improvements which can be implemented quickly, under development or are those which are strategically important to be delivered within a three year period (feasibility study to determine deliverability)
- **Medium term** (typically under five years) – Improvements where there is a clear intention to improve the current infrastructure for cyclists however, such corridors are deemed not to be strategically as significant as short term schemes. Medium term schemes are also those where the deliverability of cycle infrastructure is dependent on other factors such as funding or engineering constraints.
- **Long term** (typically over five years) – more long term aspirational improvements or those which are waiting for a more refined solution to deliver.

Table 21 – Route Prioritisation Criteria

Prioritisation Criteria	Factors	Description
Effectiveness	Current levels of cyclists using the corridor	Current cycling usage across all journey purposes on the corridor.
	The forecast increase in the number of cycling trips	Likely increase in usage for cycle journeys, based on improvement of scheme and growth factors such as housing, employment etc.
	Link to major trip generators i.e. residential developments	The corridors link to major trip generators including current and future developments. This will include direct access and major trip generators in close proximity.
	Link to major trip attractors i.e. employment areas, city and town centres	The corridors link to major trip attractors including current and future developments. This will include direct access and major trip generators in close proximity.
Policy Alignment	Ability to achieve West Midlands Cycling Charter objective	Does the corridor through cycle infrastructure improvements have the ability to achieve a 5% mode share for cycling by 2023.
	Support key regional priorities	Does the corridor have the ability to support the Movement for Growth agenda including supporting sustainable economic growth, reducing single occupancy vehicles journeys and increasing active travel mode share.
Safety and Environment	Addresses road safety	Does the infrastructure improvements on the corridor address any safety issues previously identified?
Integration to Network	Link to existing cycle network	Does the corridor link to existing cycle network therefore supporting a continuous cycle journey?
	Ability to integrate into multi modal journeys	Does the corridor link to public transport, providing users an opportunity to undertake a multi-modal journey.
Deliverability	Scheme feasibility/deliverability	Is the corridor feasible to deliver? Are there major constraints? Will it have a negative impact on the network?

6.3. Cycle Prioritisation Assessment

Table 22 presents the findings of the prioritisation process. The 14 corridors audited across the West Midlands as well as seven further corridors (one per local authority) were put through the process. The additional 7 corridors were those identified in the PCT analysis or through discussions with the local authority. The LCWIP assessment has produced a high level prioritisation and therefore, individual corridors will need to be reassessed once the detailed intervention has been identified following a feasibility study.

Each factor outlined in Table 21 was scored between 1-3 therefore, the maximum a corridor could score was 30 points. The prioritisation spreadsheet including the rationale for total score percorridor is presented within Appendix C.

Table 22 – Route Prioritisation Summary

Corridor	Total Score (out of 30)	Summary of Prioritisation
A456 Hagley Road – Beech Lane to Birmingham City Centre	**24**	• High existing levels of cycling (for the West Midlands) of over 4%. • High propensity for cycling with future investment (4.3% mode share growth). • Main arterial route from key suburban housing areas to the west of the City Centre and therefore a major generator of commuter trips. Major commuter route into the City Centre.
A34 Perry Barr Extension to boundary with Sandwell	**23**	• Low levels of cycling currently (below 2%). • PCT analysis shows a 5.5% growth with cycle infrastructure investment. • Link to major cycle scheme currently under development on the A34. • Provide a key link to the Commonwealth Games site (and legacy development), plus new Public Transport Interchange. • Major commuter route into the City Centre.
Sutton Coldfield Town Centre to Birmingham City Centre	**19**	• Significant commuter corridor linking a major town centre to the city centre. • Low levels of cycling currently on corridor due to poor cycle infrastructure. • Potential to link to a number of railway stations presenting multi modal opportunities. • Link to major trip generators and attractors, particularly Birmingham City Centre.
Coventry City Centre to Holbrooks via B4098	**16**	• Low levels of cycling currently. • PCT analysis identifies a 6% cycle mode share increased. • Important link to Coventry City Centre.

		• Link to small/medium residential areas therefore has the potential to be a key commuter route for those accessing the City Centre. • Link to major trip attractors on City Centre approach.
Binley Road Coventry University to University Hospital	**21**	• Moderate levels of cycling currently. • PCT analysis identifies a 5.5% cycling mode shift increase. • Link to major trip attractors either side of route (Coventry University and University Hospital)
Coventry City Centre to Warwick University via Hearsall Common	**23**	• Moderate levels of cycling currently. • High propensity for cycling with the route linking to Warwick University (students presenting high propensity for cycling). • Major trip attractors (Warwick University and Coventry City Centre). • Route would navigate via Hearsall Common picking up areas with high student population.
Kingswinford to Brierley Hill via B4179	**14**	• Low levels of current cycling. • Low propensity for future cycling. • Route does not provide a link to a major town centre or employment zone. • Route does, however, link to a number of significant residential estates.
Coseley to Tipton (via NCN 81)	**13**	• Low levels of current cycling. • Low propensity for cycling with future investment. • Route is anticipated to be a leisure route rather than a significant commuter corridor.
Halesowen – Leasowes to Old Hill	**11**	• Low levels of current cycling. • Low propensity for future cycling. • Route is anticipated to be a leisure route rather than a significant commuter corridor. • Route does not provide high quality access to major trip generators or attractors.
Old Hill, Blackheath to Oldbury	**16**	• Route would provide links between key residential areas and trip attractors in Blackheath and Oldbury, with significant new developments proposed in the Rowley Regis area. • However, the PCT assessment suggests limited propensity to cycle. • Route alignment is restricted by topographical and geometric constraints.

Smethwick to West Bromwich and Wednesbury	**23**	• Parts of the scheme, namely the section from Smethwick to West Bromwich, have potential to provide high quality links to key trip attractors • Route would play a key role in providing missing links to the cycle network in that area. • However, the Sections further north close to Wednesbury are more constrained (geometry and topography) with less likelihood/propensity of attracting significant numbers of new cyclists.
Princes End, Tipton to West Bromwich	**15**	• Low levels of current cycling. • Low propensity for future cycling. • Route has potential to provide links to local trip generators and attractors. • Further consideration required on how to ensure route could become a key cycling commuter corridor in the West Midlands.
Balsall Common to Stonebridge via A452	**19**	• Very low levels of cycling mode share currently (below 1%). • Potential to increase cycling mode share with investment in infrastructure. • Few residential areas along route. • The north of the corridor links to Birmingham International Airport, NEC and Birmingham Business Park so has the potential to be a commuter route from Berkswell Railway Station and surrounding areas.
B4102 Dickens Heath to Solihull town centre	**22**	• Route currently has moderate levels of cycling (approximately 3.5% of current mode share). • Route has strong growth potential. PCT indicates mode shift growth of 6.5%. • Corridor links major urban/suburban residential areas as well as a link to Solihull Town Centre. • Route provides a link to Solihull Town Centre therefore, has strong potential for multi modal journeys.
Shirley to Bentley Heath	**17**	• Low to moderate levels of cycling corridors • Shirley high street has moderate to high propensity for cycling. • Shirley has significant growth plans via the Local Plan. Cycling mode shift will be required to facilitate the development growth planned on the local network.
Darlaston to Walsall town centre via A4038	**18**	• Variation in cycle use currently across the route with some areas having high levels of cycle mode share at 9%. • PCT indicates a >5% cycle mode share rise is possible

		• Mixed use along the corridor, there is significant suburban/urban mid to high density housing along the corridor. • Light/medium industrial, business/retail park, so potential for commuter journeys to business parks and Walsall town centre.
Rushall to Brownhills via B4152	**12**	• Moderate to high mode share for cycling along corridor (up to 6% cycle mode share). • Mode share for cycling could increase by 5-6% however, traffic volumes are low compared to other corridors therefore, cycle mode share increase is not as significant. • The route does not provide a link to a significant urban/employment centre therefore, unlikely to be a significant commuter corridor.
Bloxwich to Walsall town centre	**17**	• Low levels of cycling currently. • PCT analysis identifies low propensity for future cycling. • Route would provide a link to Walsall town centre - a potential key commuter link. • Significant residential areas which provides opportunities for increases in cycle trips.
A454 Wolverhampton City Centre to Portobello	**19**	• Corridor has moderate to high levels of cycling, ranging between 2-7% of mode share, but averages at 4.8%. The number of cyclists on this corridor are double those on the A4124 corridor at the PCT baseline. • PCT analysis has identified an increase of over 6% for cycling mode share. • Route links major residential areas to Wolverhampton City Centre, therefore providing a key commuter corridor.
A4124 Wolverhampton City Centre to Walsall along	**18**	• Moderate levels of cycling currently on the corridor (approximately 3-4%). • PCT analysis identifies that a mode share increase for cycling could be up to 5-6%. • Route links to Wolverhampton City Centre and Wolverhampton Transport Interchange.
A449 Fordhouses to Wolverhampton City Centre	**22**	• A449 provides a key link between the residential areas around Fordhouses to Wolverhampton City Centre. • High propensity for cycling as shown through PCT. • Major trip attractors within Wolverhampton City Centre.

6.4. Cycle Corridor – Delivery Timetable

Table 23 presents the prioritised corridors into 'short' 'medium' and 'long' term timeframe categories. The schemes are based on their strategic significance as well as deliverability factors. The LCWIP assessment has produced a high level assessment of deliverability and individual schemes will need to be reassessed once the detailed solution has been identified following a feasibility study.

Table 23 – Key Regional Cycle Corridors- Delivery Timetable

Delivery Timescale	Regional Cycle Corridors	Summary of Corridors
Short Term (Priority Corridors to be delivered first) Delivered within three years (2018-2021)	• A456 Hagley Road – Beech Lane to Birmingham City Centre • A34 Perry Barr Extension to boundary with Sandwell • Binley Road Coventry University to University Hospital • Coventry City Centre to Warwick University • B4102 Dickens Heath to Solihull town centre • A449 Fordhouses to Wolverhampton City Centre • Smethwick to West Bromwich and Wednesbury	The short term priority corridors have been identified as those which are strategically important to the region and have the ability to create the biggest mode shift from motorised vehicles to cycling. The corridors are seen as key commuter corridors which link large residential areas to city and town centres where large employment opportunities are present. The A34 Perry Barr scheme is considered as a priority corridor due to its importance of facilitating demand as part of the Commonwealth Games and legacy driven transformation of the areas.
Medium Term Delivered within five years (2021-2023)	• Sutton Coldfield to Birmingham City Centre – via A453 and A34 • Coventry City Centre to Holbrooks via B4098 • Balsall Common to Stonebridge via A452 • Darlaston to Walsall town centre via A4038 • Bloxwich to Walsall town centre • A454 Wolverhampton City Centre to Portobello • A4124 Wolverhampton City Centre to Walsall	The medium priority corridors have been identified as important to the region yet, are not deemed imminent priorities. Some of the medium priority corridors (such as Sutton Coldfield to Birmingham City Centre) are strategically dependant on future developments taking place which will increase their significance to the region. The corridors in Wolverhampton, whilst connecting into the city centre, do not have high levels of cycling currently and the

		analysis (including PCT) does not show significant propensity for cycling. Whilst all medium priority corridors show opportunities to increase cycling trips, they do not fit into the top priority category.
Long Term Delivered after 2023	• Kingswinford to Brierley Hill via B4179 • Old Hill, Blackheath to Oldbury • Shirley to Bentley Heath • Rushall to Brownhills via B4152 • Coseley to Tipton (via NCN 81) • Princes End, Tipton to West Bromwich • Halesowen – Leasowes to Old Hill	The long term corridors are those which required further development to ensure that they can achieve mode shift from motorised vehicles to cycling. All corridors identified as long term opportunities have the potential to increase cycling journeys through linking small/medium residential areas to employment opportunities however, further consideration is required to ensure that such corridors link to the appropriate trip generators (residential sites, railway stations etc.) and attractors (large employment, education, retail, leisure sites)

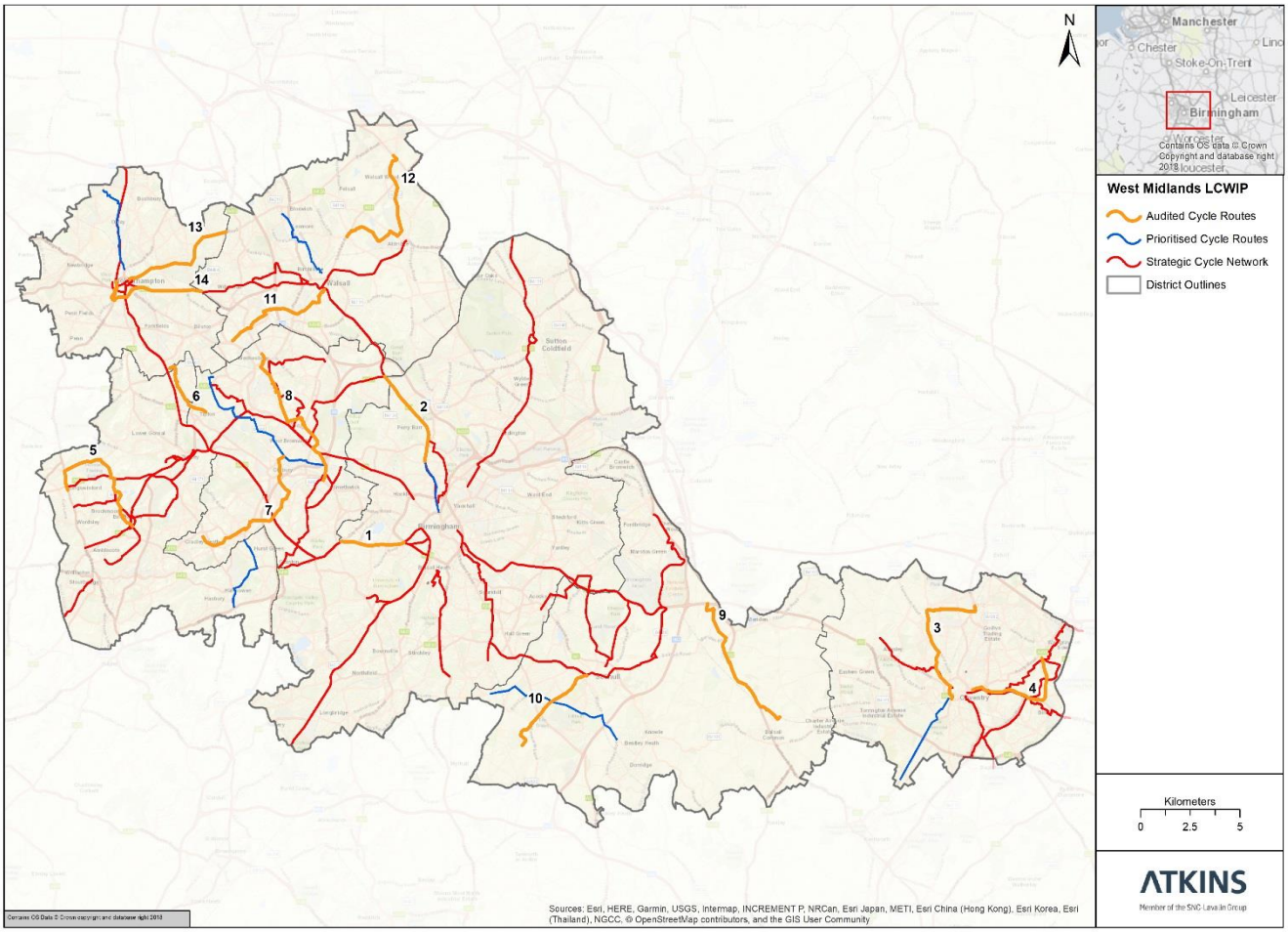
7. Application and Integration

7.1. Strategic Cycle Network

The Strategic Cycle Network for the West Midlands identified in Movement for Growth highlights the priority corridors for cycling in the region. Through the LCWIP process, 14 corridors have been prioritised, with specific routes and roads that should be considered as optimal for cycling with upgraded with safer infrastructure included segregated cycleways. The prioritisation process is based on a logical approach that looks at the future of the corridor in relation to other priorities and schemes included transport and events (Commonwealth Games) as well as trip attractors (e.g. retail and employment sites) and housing development. This approach provides a realistic plan for the 274 km of Strategic Cycle Network.

Figure 7-1 presents the Strategic Cycle Network and the 21 corridors identified for further development as part of the LCWIP process.

Figure 7-1 - Strategic Cycle Network & LCWIP Prioritised Corridors



7.2. Embedding into Local and Regional Policy

Due to the regional scale of the West Midlands LCWIP, it is anticipated that the approach to embedding and applying the LCWIP locally will vary according to circumstances of individual local authorities. It is imperative that for a clear link is identified between the LCWIP and local strategic documents such as Local Transport Plans, Supplementary Planning documents and Cycling and Walking Strategies.

The West Midlands LCWIP is expected to support local authorities through:

Preparation or updating local cycling and walking strategies to reflect regional vision and priorities

Allocation of funding within Local Delivery Plans

Preparation of Neighbourhood Plans

Further consultation with the public and stakeholders regarding active travel

Cycle and walking 'proofing of major schemes'

Constituent local authorities may consider that a more localised 'LCWIP' is required and this is encouraged to support the West Midlands LCWIP. The regional LCWIP has identified key cycling corridors across the West Midlands which have a good propensity for significant mode shift from motorised vehicles. More localised LCWIPs have an opportunity to integrate the key corridors into a coherent and well connected local network.

For the cycling element in the LCWIP, primary corridors make up the majority of audited routes. A more localised LCWIP could identify primary corridors within a local authority as well as identify the following types of corridors (as outlined within the LCWIP guidance):

Secondary Corridors - Medium flows of cyclists are forecast along desire lines that link to trip attractors such as schools, colleges, employment sites.

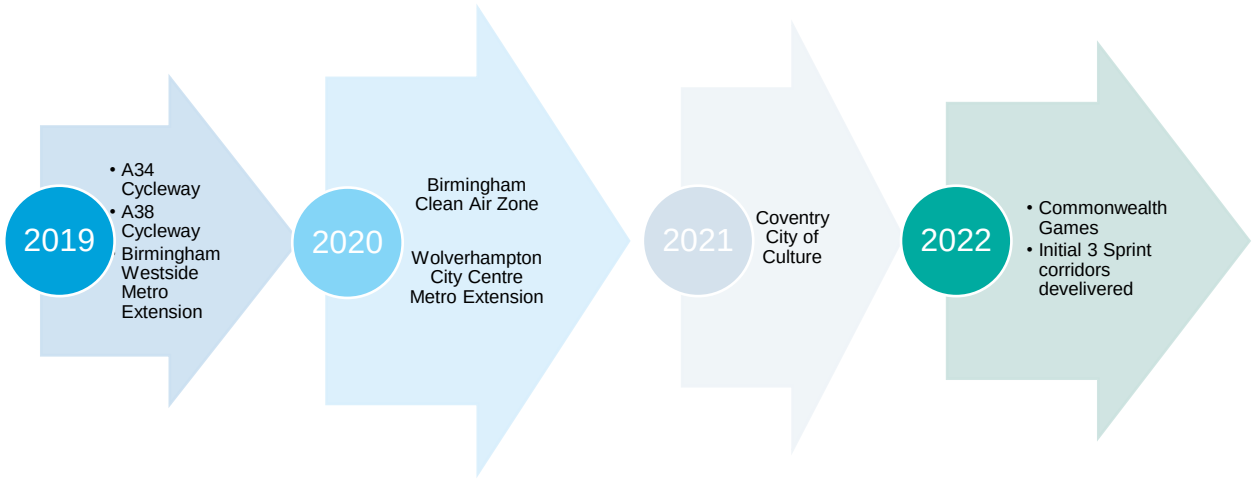
Tertiary corridor - Lower flows of cyclists are forecast along desire lines that cater for local cycle trips, often providing links to primary and secondary corridors.

For walking, the LCWIP has summarised key issues and opportunities within a defined area (CWZ) per local authority. The CWZ had been identified through discussions with the LCWIP working group key contacts. Localised LCWIPs have the opportunity to undertake further walking audits across numerous CWZs.

7.3. Development in the West Midlands

The West Midlands will see unprecedented growth and development over the next ten years. A robust resilience plan that includes promotion and development of safer routes for cycling and walking is needed to ensure that disruption to travel is minimised for residents and visitors. The implementation of Clean Air Zones has brought to the forefront the need to change the way people travel across the region. Furthermore, the Commonwealth Games and Coventry City of Culture provide a unique opportunity to deliver a legacy of high quality cycling and walking infrastructure that benefits the people who live, work and visit the region long after these events have taken place.

The routes along the primary corridors in the West Midlands LCWIP and CWZ were selected as priority as they have implications in each of these future programmes and schemes:



The recommendation for delivery of the LCWIP priority cycling routes and CWZ is through a holistic, whole corridor approach that takes into consideration all modes along each of the highways and roads of the routes. Many of the corridors are also important arterial routes for public transport. Delivery of safer routes for cycling and walking adds value to public transport schemes by providing local connections within communities and linking first and last mile of travel. The delivery of new public transport schemes, where works are needed provides an opportunity to realign the highway and reallocate space for cycling and walking.

7.4. Mechanism for Funding

Attaining appropriate funding levels is a critical component of planning for cycling and walking infrastructure. As public expectations of cycling and walking infrastructure continue to mount in the West Midlands, it is becoming increasingly necessary for local governments to consider alternative funding opportunities. This is particularly true for cycling infrastructure, which is not always deemed to be a high priority.

The LCWIP is a strategic document outlining the current context for cycling and walking in the West Midlands. The TfWM also highlights the potential propensity for cycling if funding increased to implement high quality cycle infrastructure. It is imperative that the LCWIP report is used to promote active travel and to use the data within the document as a mechanism for funding.

Funding opportunities and routes to delivery include the following:

- **Funding from a dedicated local government cycling infrastructure budget** – this source may, in some cases, be insufficient to meet the infrastructure required and would therefore need to be supplemented by other funding streams.

- **Incorporating cycling and walking infrastructure into other works programmes** – Cycling and walking infrastructure, relative to other infrastructure items, is not necessarily expensive and can often be readily incorporated into other works.

- **Developer funded schemes/agreements (such as S106) –** Opportunity to use future developments (regardless of scale) to implement high quality cycling and walking infrastructure within new developments. S106 agreements could be utilised to encourage improvements to existing and proposed offsite improvements.

- **Funding through Local Economic Partnerships (LEP**) – The LCWIP is an opportunity to promote the regional and local benefits of cycling and walking to the relevant LEPs.

- **Integrated Transport Block.**

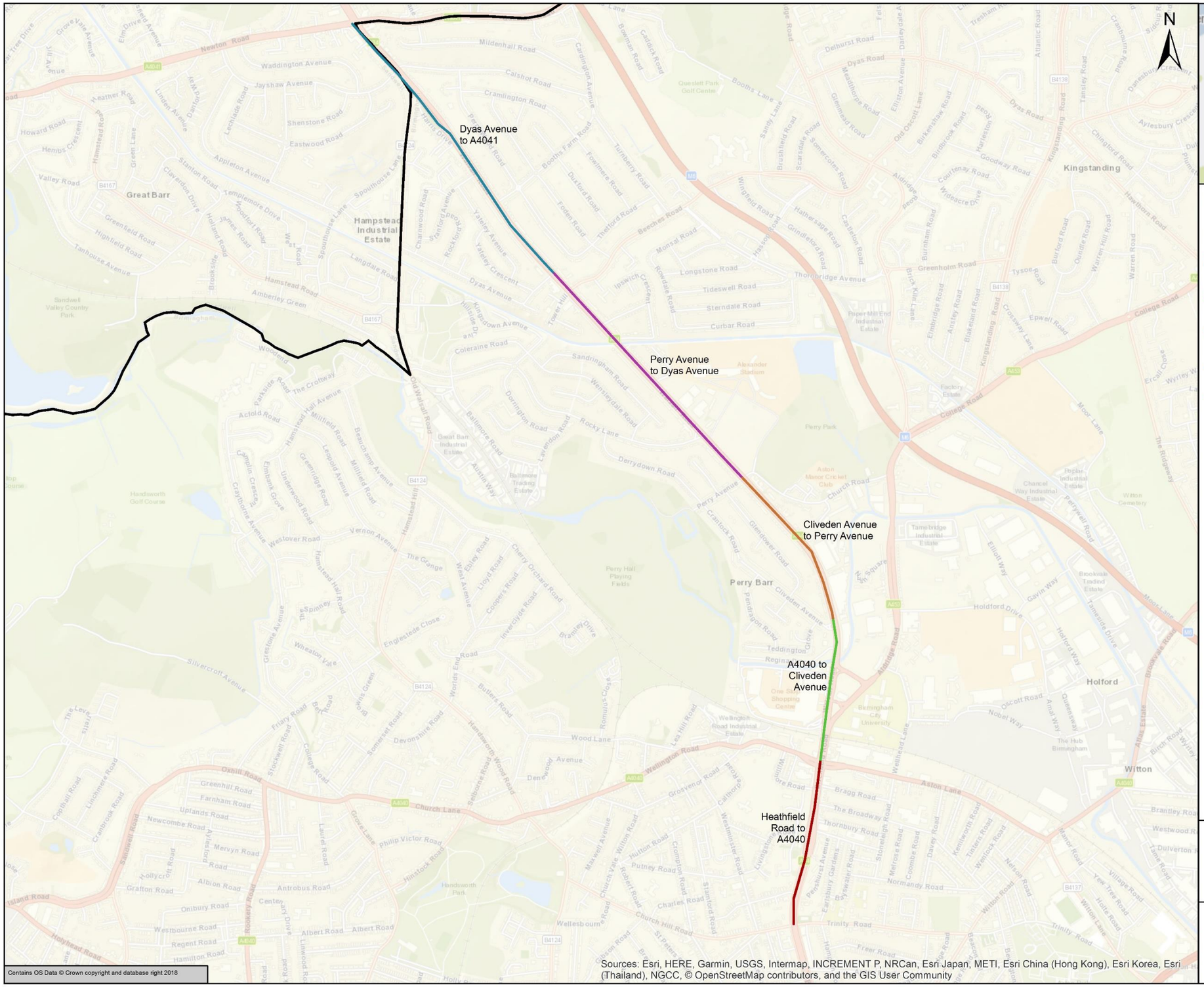
The LCWIP process considered only the infrastructure needed to improve levels of cycling and walking. While providing safer routes will encourage behaviour change, the rate will be slower without other interventions that address barriers (e.g. bike ownership, awareness, training). Both capital and revenue investment are needed to reach the aims of CWIS and the Cycling Charter. The funding of schemes needs to consider all aspects of delivery including the infrastructure, promotion as well as monitoring and evaluation.

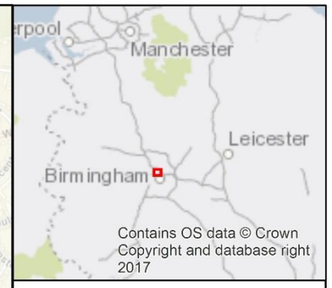
7.5. Review and Updating LCWIP

In line with regional policies and strategic transport plans, it is envisaged that the LCWIP will need to be reviewed and updated on bi annual basis to ensure that the corridors identified as 'key regional priorities' remain strategically significant to the West Midlands. It is envisaged that regular communication will take place between TfWM and constituent local authorities to ensure that implementation of the cycle corridors is discussed on an on-going basis.

Appendices

Appendix A. Cycle Corridor Maps





Birmingham:

A34 - Route Sections

- 1. Heathfield Road to A4040
- 2. A4040 to Cliveden Avenue
- 3. Cliveden Avenue to Perry Avenue
- 4. Perry Avenue to Dyas Avenue
- 5. Dyas Avenue to A4041
- District Boundary

Kilometers

0 0.25 0.5

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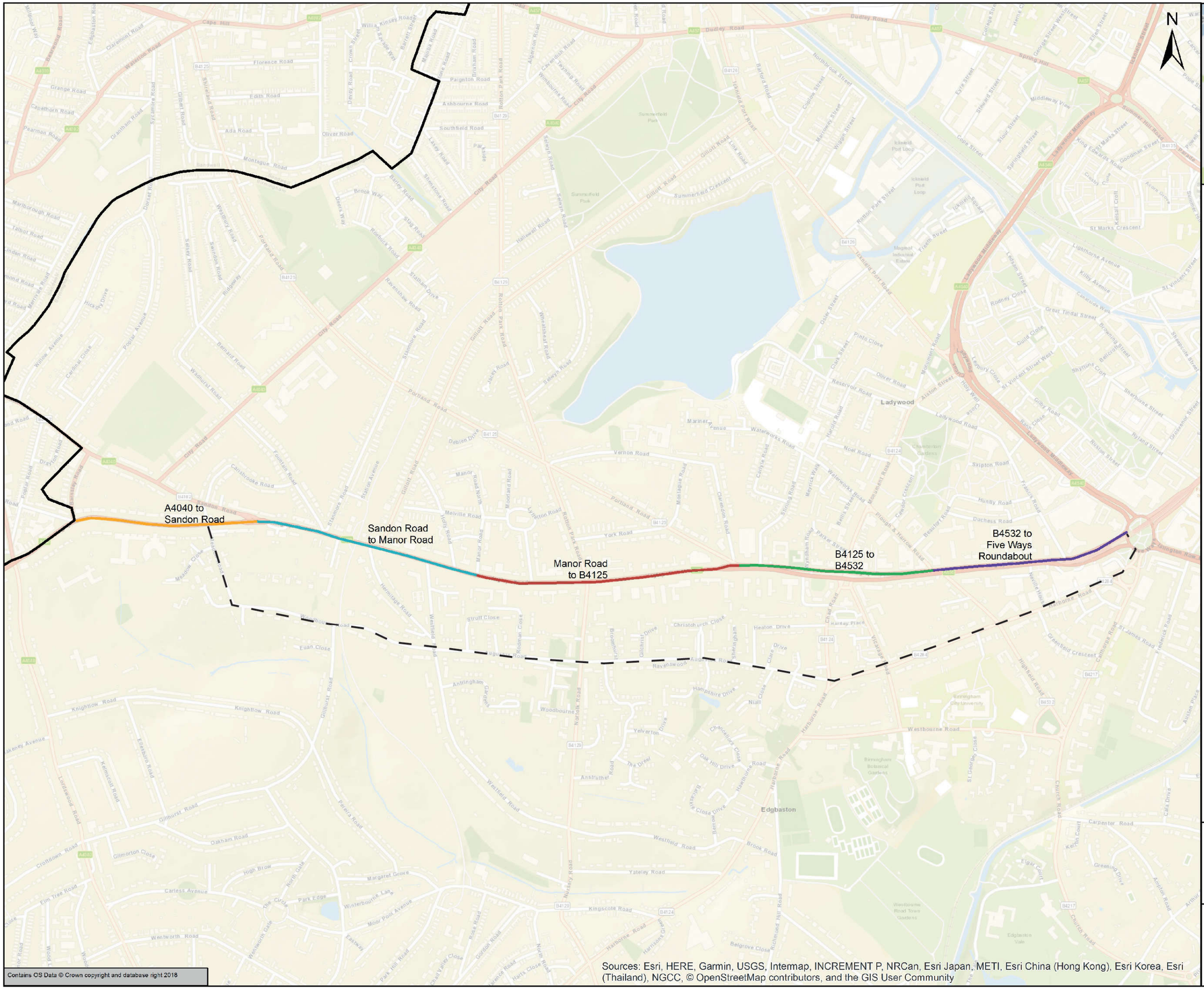

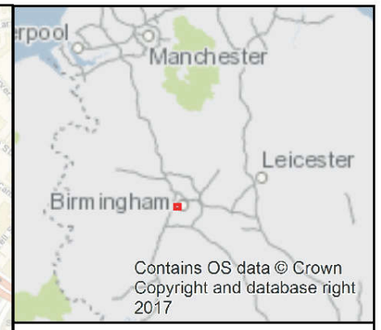

Birmingham:

Hagley Road - Route Sections

- 1. A4040 to Sandon Road
- 2. Sandon Road to Manor Road
- 3. Manor Road to B4125
- 4. B4125 to B4532
- 5. B4532 to Five Ways Roundabout
- Identified as a potential alternative route

Kilometers

0 0.15 0.3

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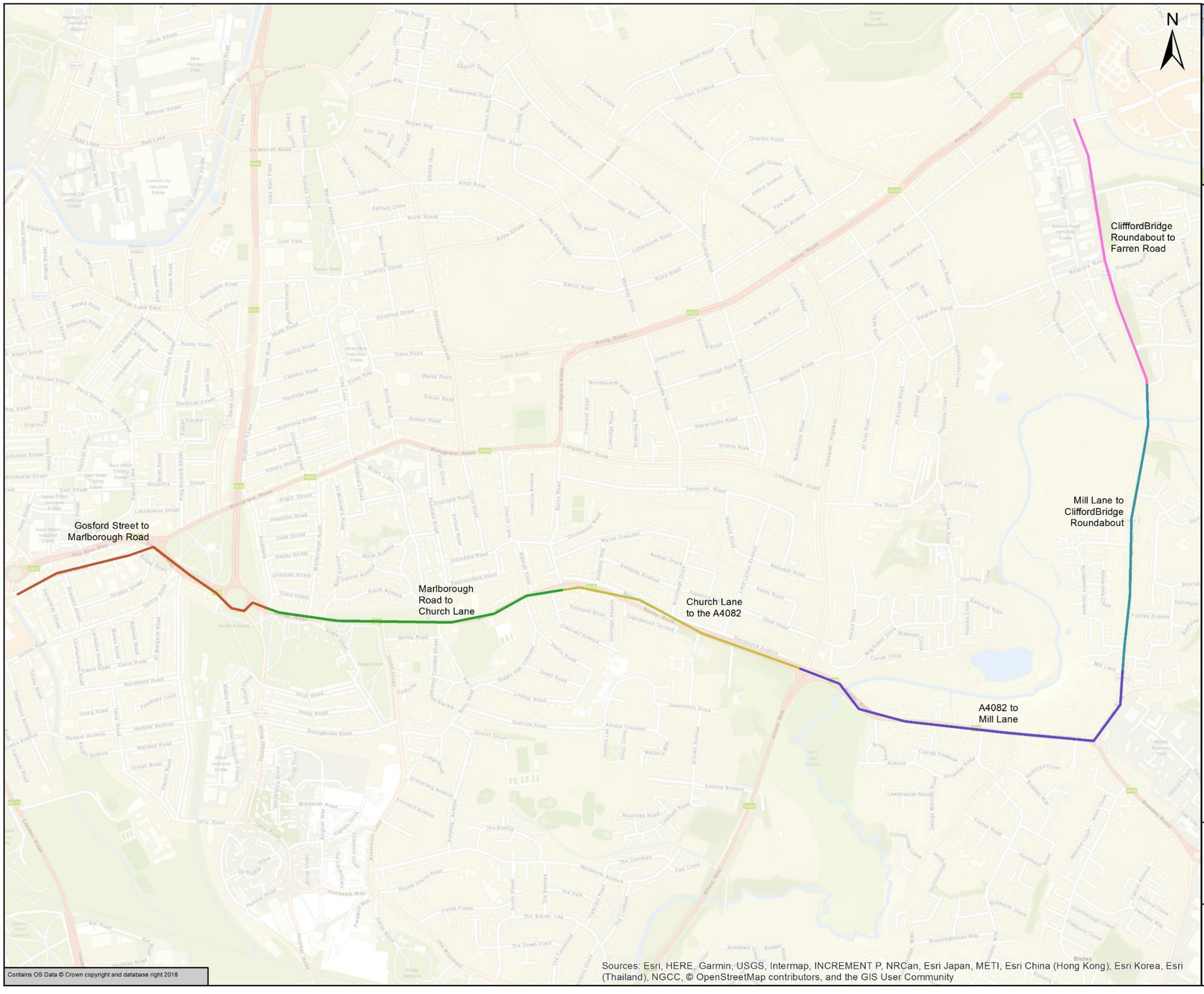

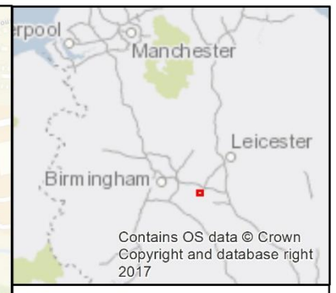

Coventry:

University to the Hospital - Route Sections

1. Gosford Street to Marlborough Road
2. Marlborough Road to Church Lane
3. Church Lane to the A4082
4. A4082 to Mill
5. Mill Lane to CliffordBridge Roundabout
6. CliffordBridge Roundabout to Farren Road

Kilometers

0 0.125 0.25

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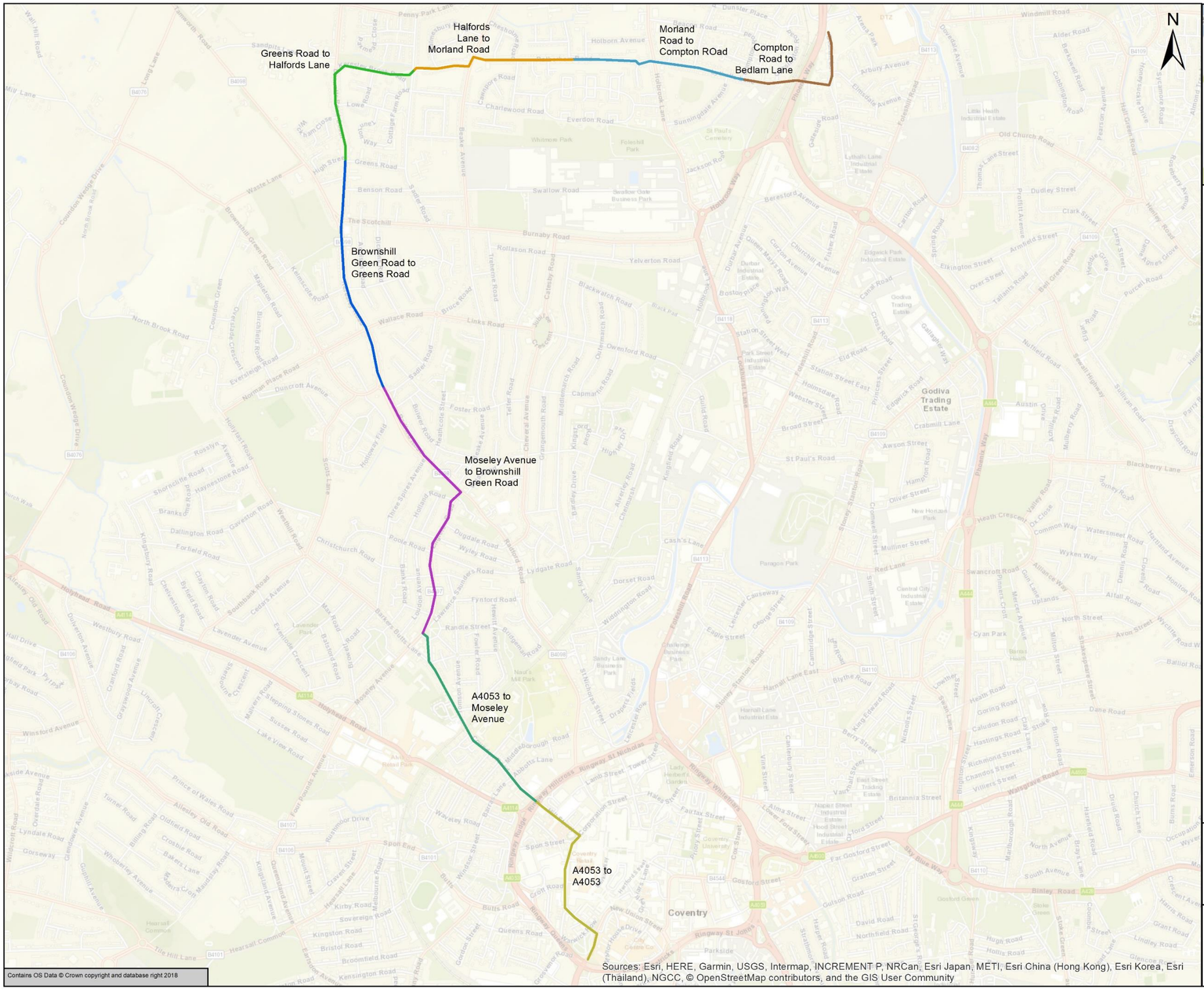

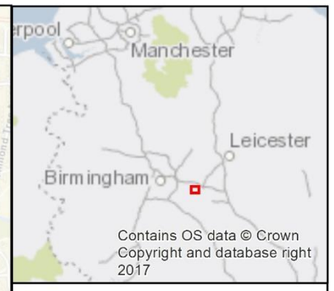

Coventry:

City Centre to Holbrooks - Route Sections

1. A4053 to
2. A4053 to Moseley Avenue
3. Moseley Avenue to Brownshill Green Road
4. Brownshill Green Road to Greens Road
5. Greens Road to Halfords Lane
6. Halfords Lane to Morland Road
7. Morland Road to Compton Road
8. Compton Road to Bedlam Lane

Kilometers

0 0.175 0.35

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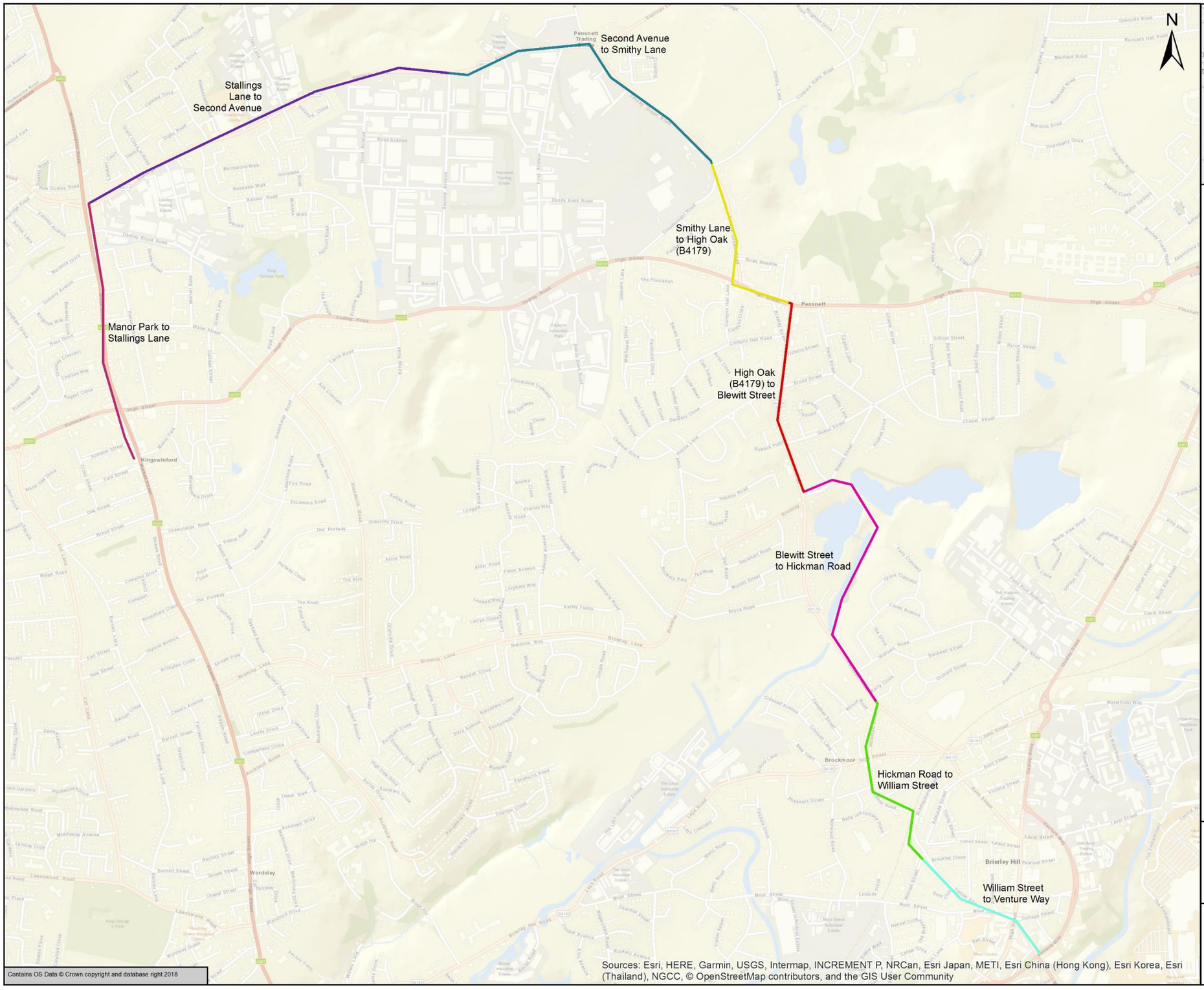
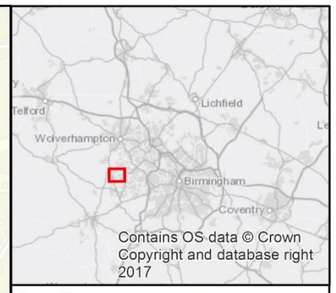
Member of the SNC-Lavalin Group





Dudley:

Kingswinford to Brierley Hill - Route Sections

1. Manor Park to Stallings Lane
2. Stallings Lane to Second Avenue
3. Second Avenue to Smithy Lane
4. Smithy Lane to High Oak (B4179)
5. High Oak (B4179) to Blewitt Street
6. Blewitt Street to Hickman Road
7. Hickman Road to William Street
8. William Street to Venture Way

Kilometers

0 0.175 0.35

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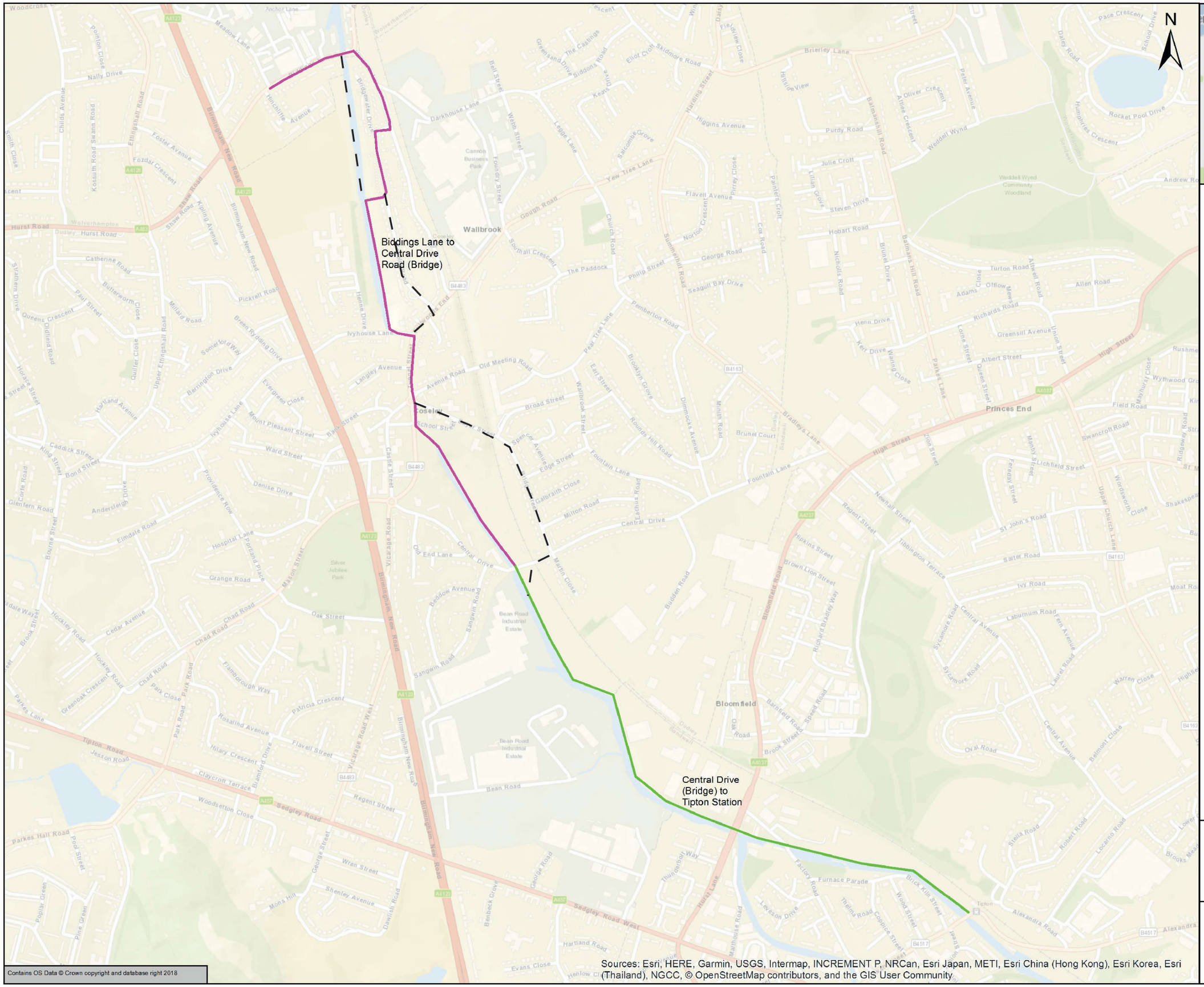
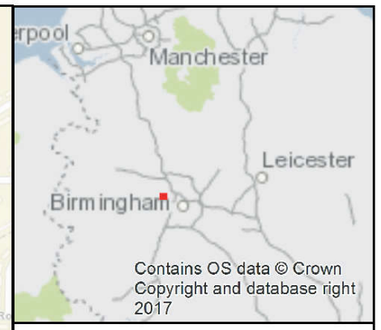




Dudley:

Coseley to Tipton via the NCN81 - Route Sections

1. Biddings Lane to Central Drive Road (Bridge)
2. Central Drive (Bridge) to Tipton Station

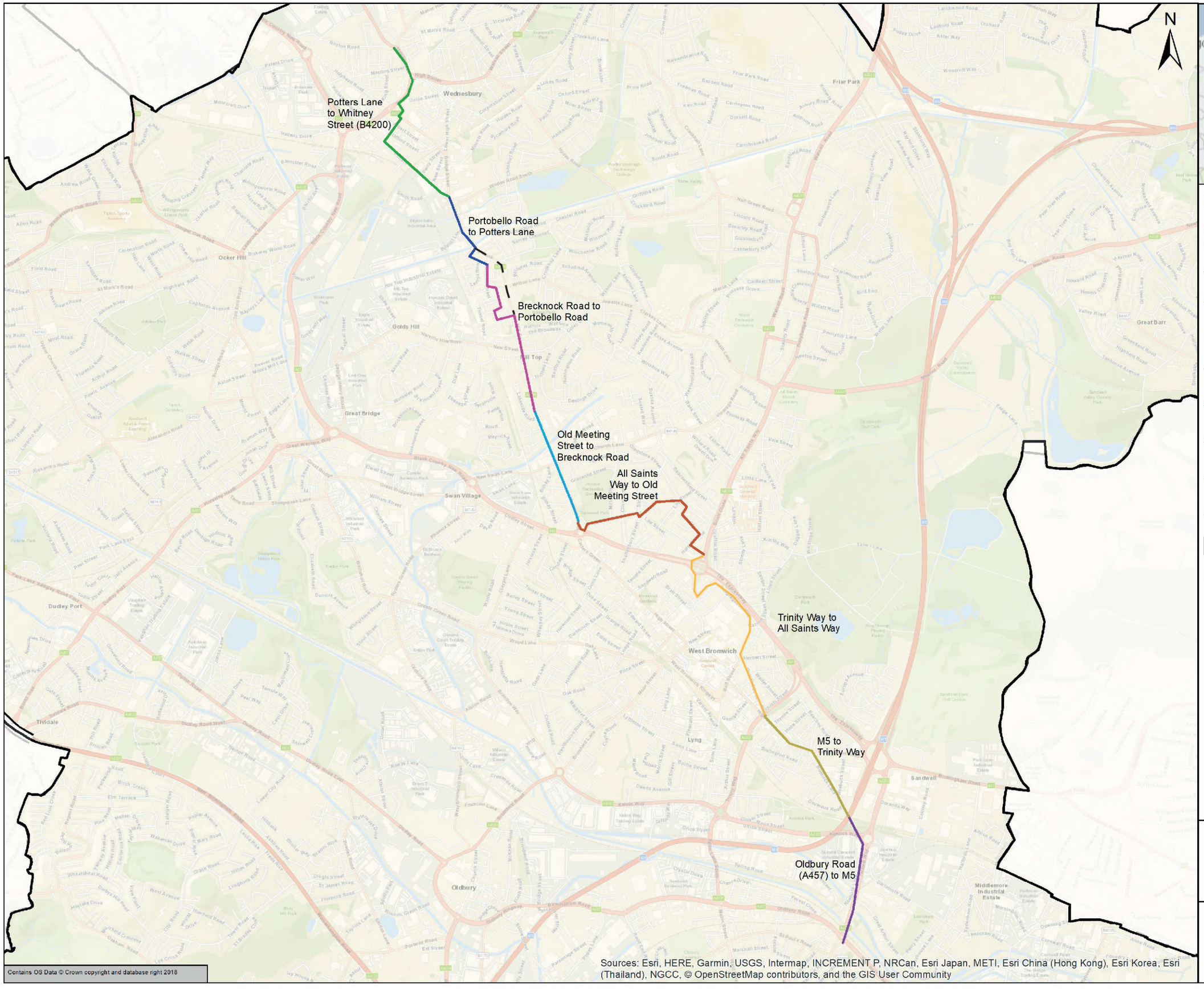
Identified as a potential alternative route

Kilometers

0 0.125 0.25

ATKINS

Member of the SNC-Lavalin Group



Sandwell:

West Bromwich to Wednesbury - Route Sections

1. Oldbury Road (A457) to M5
2. M5 to Trinity Way
3. Trinity Way to All Saints Way
4. All Saints Way to Old Meeting Street
5. Old Meeting Street to Brecknock Road
6. Brecknock Road to Portobello Road
7. Portobello Road to Potters Lane
8. Potters Lane to Whitney Street (B4200)

District Boundary

Identified as a potential alternative route

Kilometers

0 0.375 0.75

ATKINS

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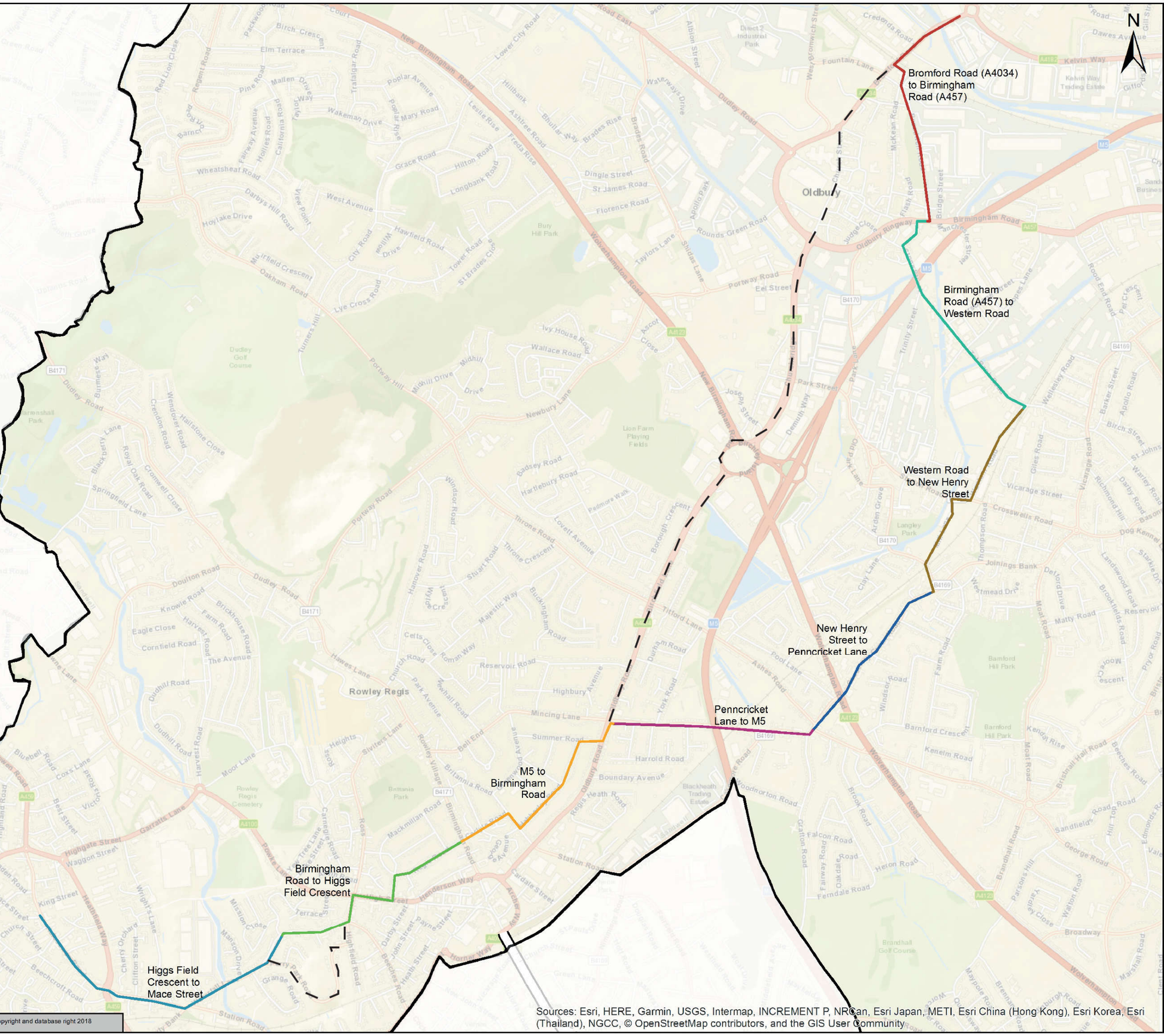

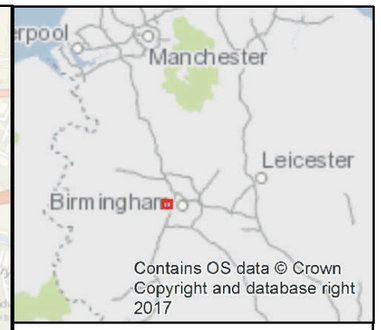

Sandwell:

West Bromwich to Cradley Heath - Route Sections

- 1. Bromford Road (A4034) to Birmingham Road (A457)
- 2. Birmingham Road (A457) to Western Road
- 3. Western Road to New Henry Street
- 4. New Henry Street to Penncricket Lane
- 5. Penncricket Lane to M5
- 6. M5 to Birmingham Road
- 7. Birmingham Road to Higgs Field Crescent
- 8. Higgs Field Crescent to Mace Street
- District Boundary
- Identified as a potential alternative route

Kilometers

0 0.25 0.5

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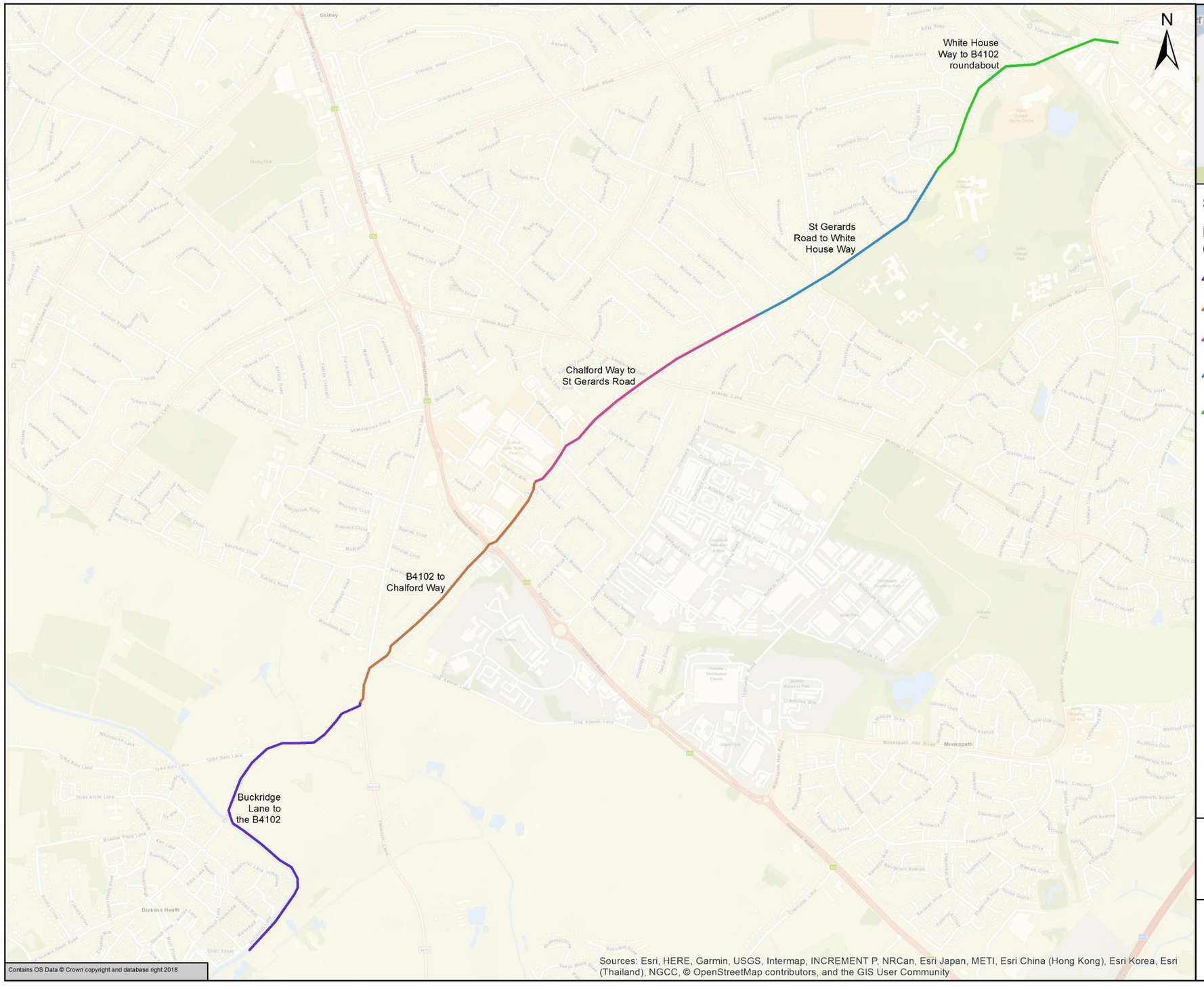
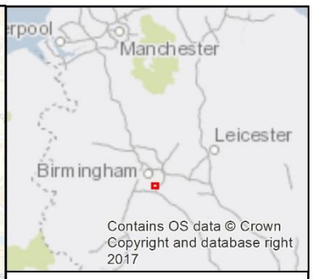
Member of the SNC-Lavalin Group





Solihull:

Dickens Heath to Solihull Centre - Route Sections

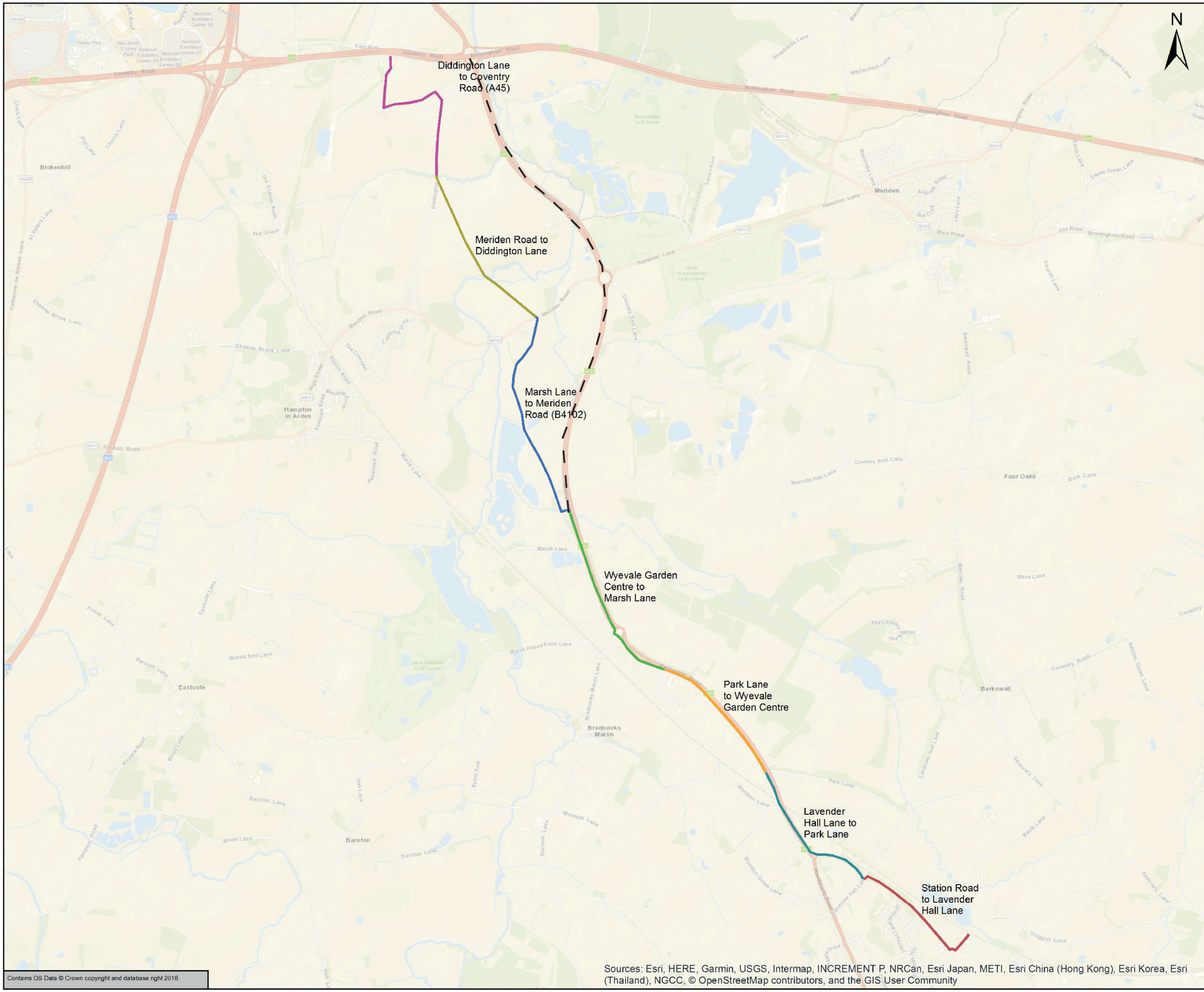
1. Buckridge Lane to the B4102
2. B4102 to Chalford Way
3. Chalford Way to St Gerards Road
4. St Gerards Road to White House Way
5. White House Way to B4102 roundabout

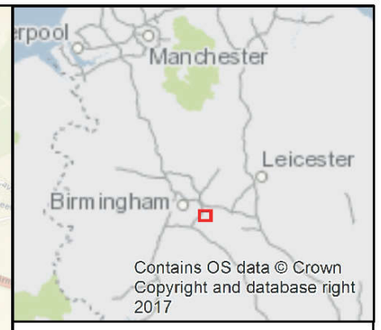
Kilometers

0 0.2 0.4

ATKINS

Member of the SNC-Lavalin Group





Solihull:

Balsall Common to Stonebridge - Route Sections

1. Station Road to Lavender Hall Lane
2. Lavender Hall Lane to Park Lane
3. Park Lane to Wyevale Garden Centre
4. Wyevale Garden Centre to Marsh Lane
5. Marsh Lane to Meriden Road (B4102)
6. Meriden Road to Diddington Lane
7. Diddington Lane to Coventry Road (A45)

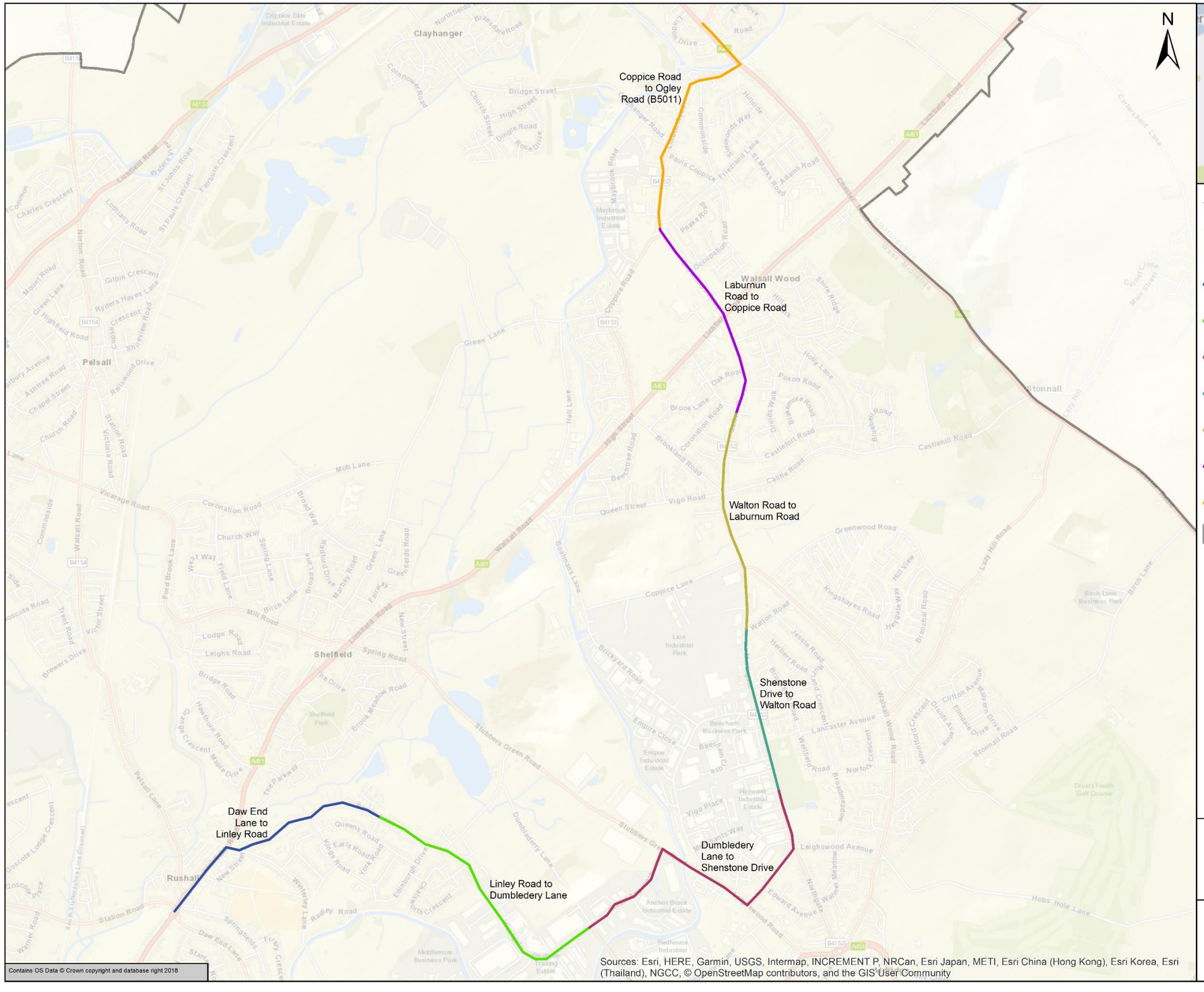
Identified as a potential alternative route

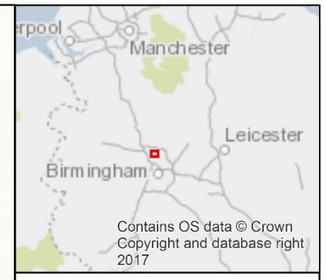
Kilometers

0 0.25 0.5

ATKINS

Member of the SNC-Lavalin Group





Walsall:

Rushall to Brownhills - Route Sections

- 1. Daw End Lane to Linley Road
- 2. Linley Road to Dumbledery Lane
- 3. Dumbledery Lane to Shenstone Drive
- 4. Shenstone Drive to Walton Road
- 5. Walton Road to Laburnum Road
- 6. Laburnun Road to Coppice Road
- 7. Coppice Road to Ogley Road (B5011)
- District Boundary

Kilometers

0 0.25 0.5

ATKINS

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N

Heath Road to Gower Street

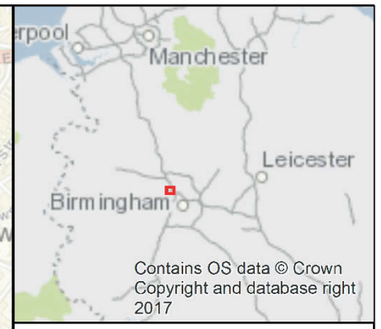
A462 to Heath Road

Sandwell Ave to the A462

Gower Street to Bescot Crescent

Bescot Crescent to Caldmore Road

Caldmore Road to Freer Street



Walsall:

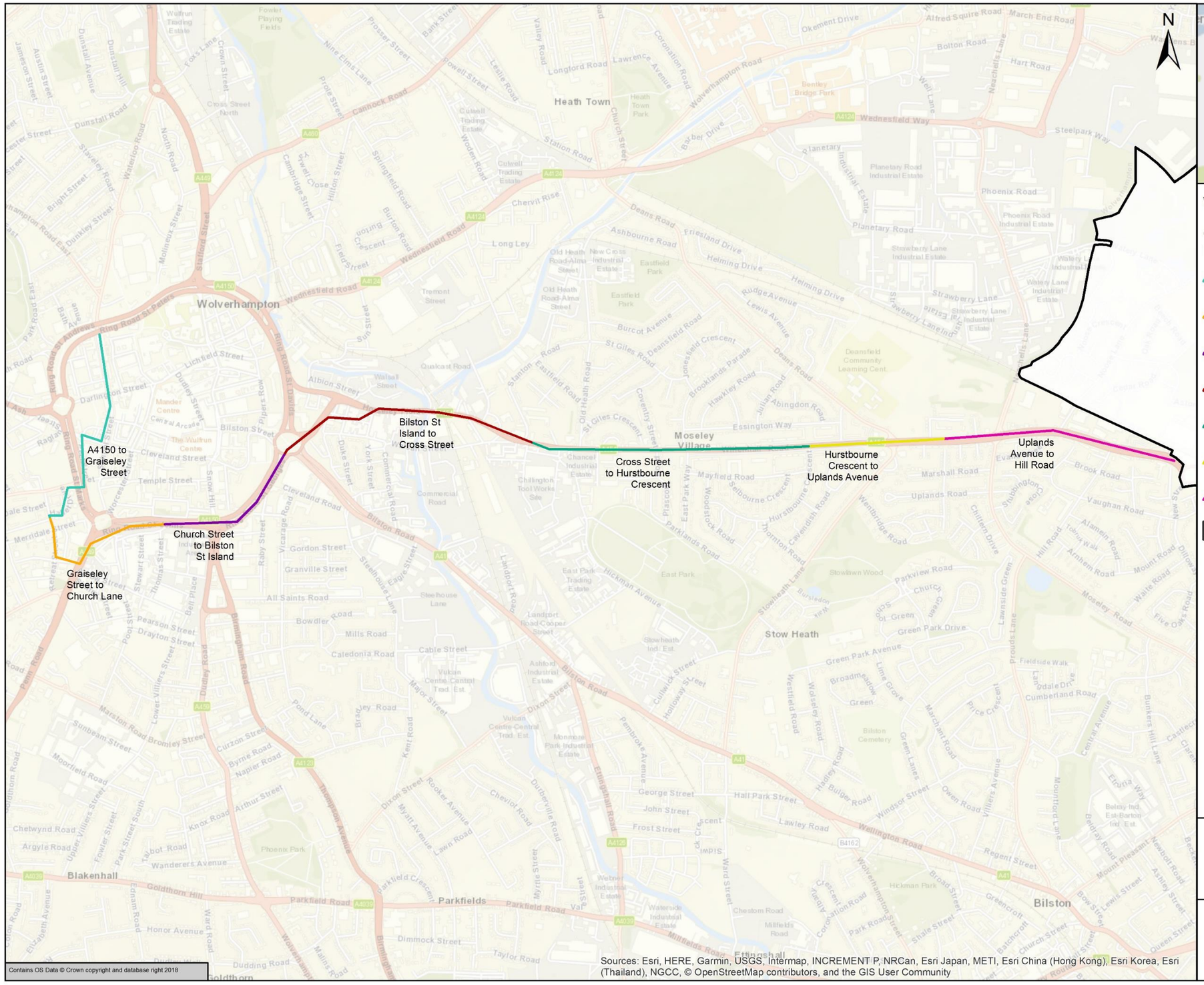
- 1. Sandwell Ave to the A462
- 2. A462 to Heath Road
- 3. Heath Road to Gower Street
- 4. Gower Street to Bescot Crescent
- 5. Bescot Crescent to Caldmore Road
- 6. Caldmore Road to Freer Street
- District Boundary
- Identified as a potential alternative route

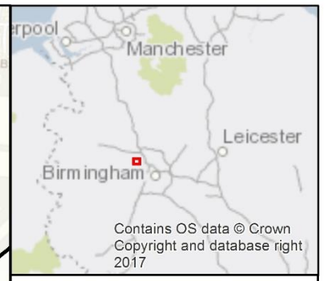
Kilometers

0 0.225 0.45

ATKINS

Member of the SNC-Lavalin Group





Wolverhampton:

City Centre to Portobello - Route Sections

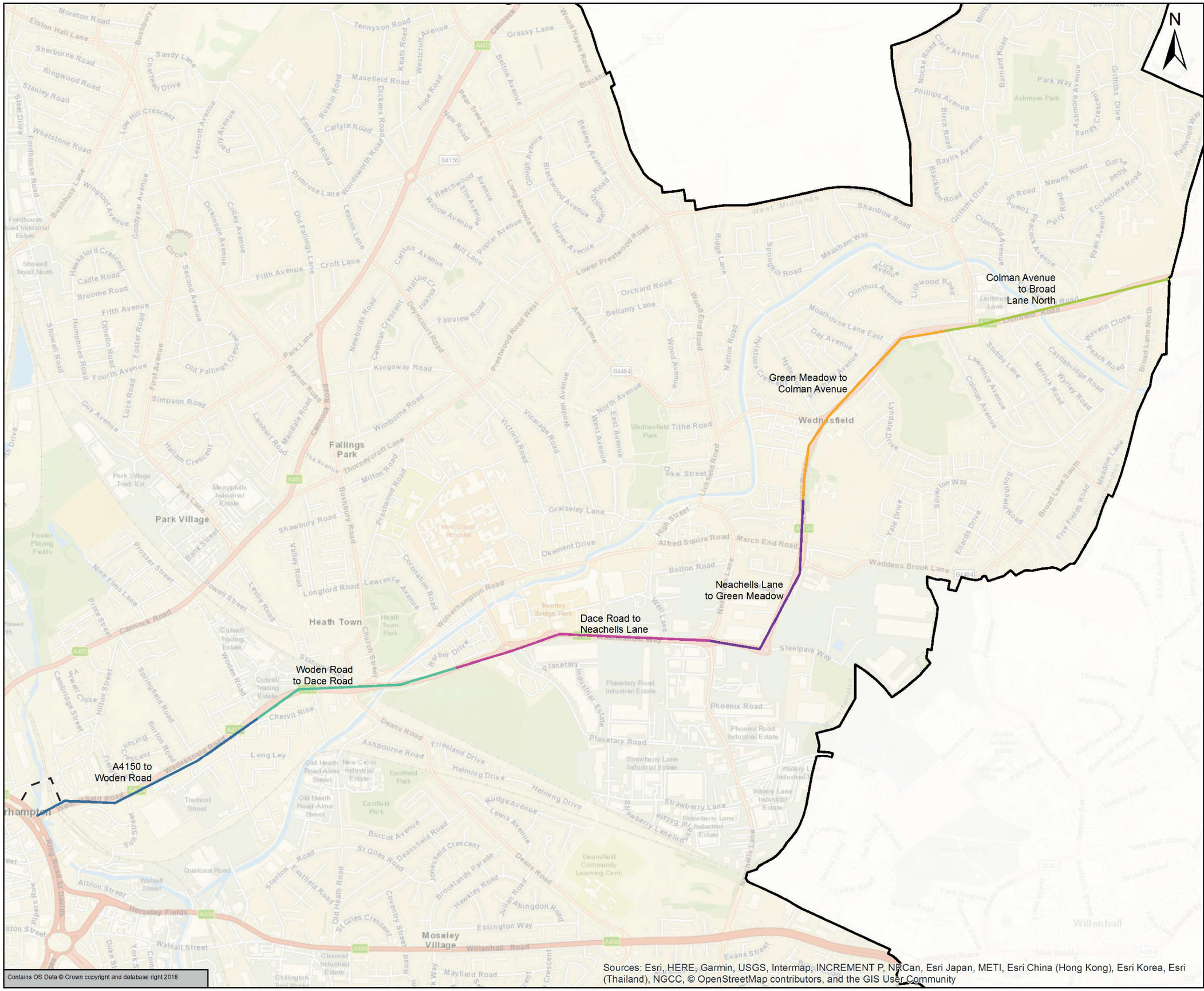
- 1. A4150 to Graiseley Street
- 2. Graiseley Street to Church Lane
- 3. Church Street to Bilston St Island
- 4. Bilston St Island to Cross Street
- 5. Cross Street to Hurstbourne Crescent
- 6. Hurstbourne Crescent to Uplands Avenue
- 7. Uplands Avenue to Hill Road
- District Boundary

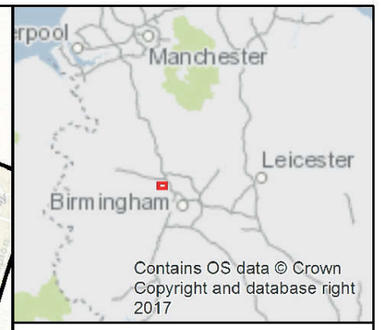
Kilometers

0 0.15 0.3

ATKINS

Member of the SNC-Lavalin Group





Wolverhampton:

City Centre towards Walsall along A4124 - Route Sections

- 1. A4150 to Woden Road
- 2. Woden Road to Dace Road
- 3. Dace Road to Neachells Lane
- 4. Neachells Lane to Green Meadow
- 5. Green Meadow to Colman Avenue
- 6. Colman Avenue to Broad Lane North
- District Boundary
- Identified as a potential alternative route

Kilometers

0 0.175 0.35

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Appendix B. Cycle Audit Sheets

Corridor:	A34 Perry Barr Extension
Local Authority	Birmingham City Council

Existing Characteristics:

The A34 North from Heathfield Road to A4041 (Scott Arms Junction) currently has limited facilities for cycle infrastructure. The A34 is a key commuter route from North Birmingham and Birmingham City Centre. This section of the A34 provides a link between Birmingham City Centre and suburbs such as Great Barr and Perry Barr. The A34 between Birmingham City Centre and Great Barr experiences congestion in both the AM and PM peak periods.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- High traffic flows
- Currently poor quality cycle provision
- Number of busy junctions including Birchfield Road/A4040 and Perry Avenue/A34/Church Road
- Constrained highway capacity between Heathfield Road and Cliveden Avenue
- In view of the above, a challenging route for cyclists, limiting opportunities for less confident cyclists

Constraints:

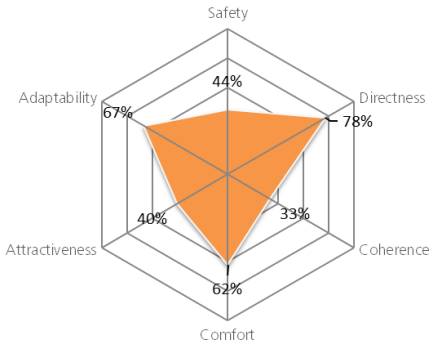
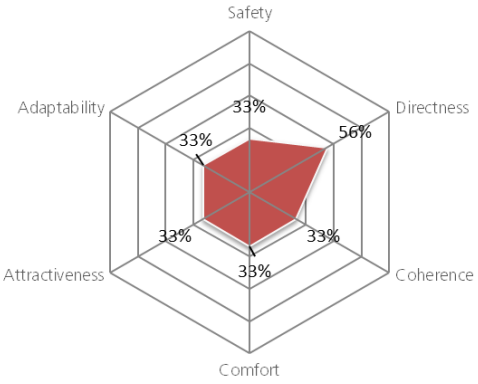
Section 1 Heathfield Road to A4040 – Currently there is limited highway space between Heathfield Road and the A4040. This section consists of two lanes with one lane designated as a bus lane. There is limited scope to increase highway capacity due to the A34 flyover and properties in close proximity to the highway. There is significant kerbside activity including bus stops, CCTV cameras and bins.

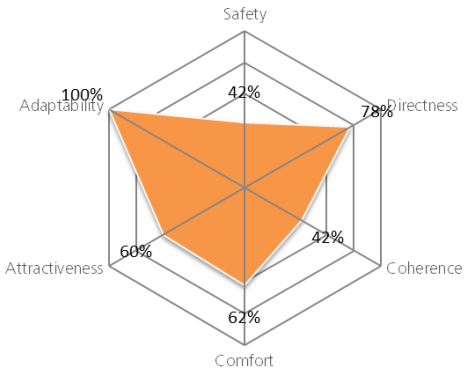
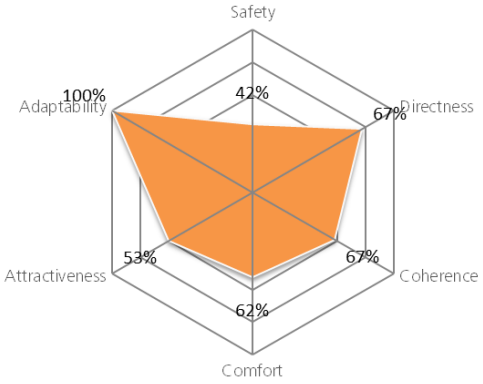
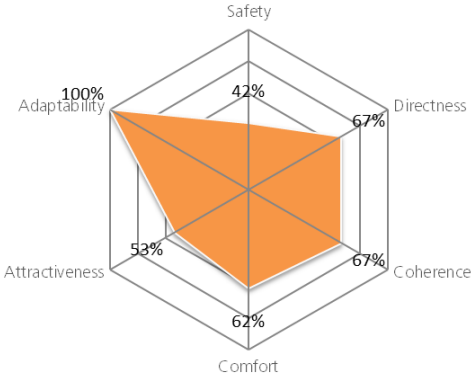
A major constraint is the limited highway and footway space on the approach to the Birchfield Road/A4040 junction. Currently there is limited highway and footway capacity which does not provide opportunities for significant improvements to the highway to accommodate cycling infrastructure. There is existing loading activity that occurs for the retail unit approaching the roundabout.

Section 2 A4040 to Cliveden Avenue – There is limited opportunity for cycling infrastructure along this section of the A34, particularly between the Birchfield Road/A4040 junction and the One Stop Shopping Centre. There is limited highway capacity along Birchfield Road which currently consists of 2 lanes with limited footway capacity. There are a number of potential conflict points for vehicle and cyclist movements along this section of the A34 corridor, with two access points into the One Stop Shopping Centre presenting a constraint for cyclists travelling along the A34 travelling northwards.

Section 3 Cliveden Avenue to Perry Avenue – There are less constraints along this section of the A34 due to more highway capacity allowing for allocation to cycling infrastructure. Due to the road layout, there are issues with traffic speeds combined with significant traffic flows. Parking bays are present along this section of the A34 which has the potential to impact on implementing cycling infrastructure.

Section 4 Perry Avenue to Dyas Avenue - The bus lane combined with car parking on the exit of the A34/Rocky Lane junction (despite red route restrictions) currently provides limited scope for cycling infrastructure. Parking bays are present throughout this section of the A34 which has the potential to impact on implementing cycling infrastructure. There is highway/footway capacity along this section of the A34 to provide adequate provision for cyclists however, capacity is constrained where the A34 passes over the Tame Valley Canal where there is limited highway and footway capacity.
Section 5 Dyas Avenue to A4041 (Scott Arms Junction) – Car parking bays are present throughout this section of the A34 which has the potential to impact on implementing cycling infrastructure. There is highway/footway capacity along this section of the A34 to provide adequate provision for cyclists however, vegetation in the form of a grass verge and trees (impacting on capacity for a contraflow cycle lane) could be a constraint adjacent to Harris Drive. The Bus lane on the northbound approach to Scott Arms Junction is a potential constraint for cycle infrastructure due to limited footway capacity for cycling infrastructure reallocation.

Existing Level of Service (LoS) Assessment:	
Section 1 Heathfield Road to A4040	
Section 2 A4040 to Cliveden Avenue	

Section 3 Cliveden Avenue to Perry Avenue	
Section 4 Perry Avenue to Dyas Avenue	
Section 5 Dyas Avenue to A4041 (Scott Arms Junction)	
Opportunities:	
Summary Opportunity: The opportunity outlined below considers the potential for a two-way segregated cycle track on the northbound approach to A4041	

Section 1 Heathfield Road to A4040

- Limited opportunities to provide cycling infrastructure along this section of the corridor
- Potential to allocate footway to two way segregated cycle track on the west side of the carriageway (although space is limited, and carriageway capacity may need to be sacrificed)
- Potential to build out bus stops along this section of the corridor to allow for continuity of cycle track
- Opportunity to move cyclists off the carriageway on approach to Birchfield Road/A4040 junction and remove subway (outside of One Stop Convenience store) to allow continuity of cycle track and provide safe crossing of junction through toucan crossing
- Opportunity to connect into cycle route currently being constructed, south of Heathfield Road to the City Centre, and continue the off-carriageway provision north

Section 2 A4040 to Cliveden Avenue

- Very constrained section of the corridor with limited opportunities for cyclists
- Due to limited footway capacity, option on Birchfield Road would be to reduce highway to one lane and provide a dedicated two way cycle track
- Consider limiting left hand movements for vehicles accessing One Stop Shopping Centre
- Opportunity to consider footway allocation along Walsall Road to reallocate to cycle infrastructure.
- Increased capacity between Regina Drive and Cliveden Avenue – potential to allow cyclists to travel within the bus lane corridor or to introduce a segregated cycle track.

Section 3 Cliveden Avenue to Perry Avenue

- Remove parking bays along this section of the corridor to increase capacity
- Use the increased capacity to provide a dedicated two way segregated cycle track
- Street lighting and other kerbside activity will be required to move to allow for continuity of cycle track
- Island bus stops along this section of corridor to allow continuity of cycle track
- Consider the use of bus lane on approach to Perry Avenue, potential to reallocated to cycling infrastructure or continue to allow cyclists to travel within the bus lane. Further option would to remove grass verge and associated vegetation to allow cyclists to travel alongside bus lane.

Section 4 Perry Avenue to Dyas Avenue

- Remove parking bays along this section of the corridor to increase capacity
- Use the increased capacity to provide a dedicated two-way segregated cycle track
- Reduce highway capacity on approach to Rocky Lane/A34 junction to allow for cycle infrastructure. On approach to the junction there is parking bays which could be allocated to cycling infrastructure however, highway capacity would need to be reallocated at the junction to allow for continuity of the cycle track.
- Limited capacity over Tame Valley canal, consider shared use approach to allow for cycle provision to continue.

Section 5 Dyas Avenue to A4041 (Scott Arms Junction)

- Remove parking bays along this section of the corridor to increase capacity
- Use the increased capacity to provide a dedicated two-way segregated cycle track
- Consider the use of bus lane along this section of the corridor for a potential reallocation to cycling infrastructure or to allow cyclists to continue using the bus lane up to the Scott Arms Junction.

Recommendations for Further Assessment

Whilst there are constraints along the A34 Perry Barr (particularly within section 1-2) there are opportunities to implement high quality cycle infrastructure to connect to the existing A34 cycling scheme currently under development. It is recommended that a full feasibility study is undertaken on the A34 Perry Barr to identify the opportunities to implement a scheme of similar consistency to that which is currently being developed. The site visit has identified that there is sufficient space along the A34, whilst acknowledging a number of pinch points particularly in close proximity to One Stop Shopping Centre.

Further assessment recommendations will need to be subject to flexibility as masterplanning for the One Stop Shopping Centre and Perry Barr Railway Station come forward.

Photographs

Photo 1 – A34 / Heathfield Road junction looking south towards construction of the current A34 off-carriageway cycle route

Photo 2 - The approach to the Birchfield Road/A4040 Junction

Photo 3 – Constrained footway and carriageway outside Perry Barr station, looking north

Photo 4 – Existing advisory cycle lane on the outside of parking bays on the A34 north of Cliveden Avenue

Photo 5 – Existing advisory cycle lane and verge/vegetation on A34 north of Stanford Avenue

Photo 6– Footway approach to Scott Arms junction A34 / A4041, looking north

Corridor:	**A456 Hagley Road**
Local Authority	**Birmingham City Council**

Existing Characteristics:

The A456 Hagley Road is a busy dual carriageway providing access into Birmingham City Centre from the west. This route covers the area from the junction with of A4030 / A456 (Bearwood) in the west, to the junction of A456 / A4540 / Harborne Road, (Five Ways) on the west edge of Birmingham City Centre. Currently there is no cycle infrastructure in place with only small sections of shared use footway on approach to Five Ways and the city centre. The A456 Hagley Road experiences significant tidal congestion in the peak hours. The existing carriageway has limited capacity with limited options for reallocation to cycle infrastructure.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- Constrained highway network and heavily used bus route
- Significant traffic flow throughout the day, particularly in the AM and PM peak periods
- Limited cycle infrastructure at present
- Cyclists in regular interaction with motorised vehicles due to lack of segregation and high frequency of side roads
- Due to significant traffic flow and HGV movements, the A456 Hagley Road is not an attractive cycle route for cyclists, particularly those with little experience or confidence.

Constraints:

Section 1 A4040 to Sandon Road – This section of the Hagley Road has limited space to provide cycle infrastructure. There are four lanes of traffic along this section with limited options to reduce highway capacity to provide cycle infrastructure. There is a narrow footway on either side of the carriageway which is not suitable for shared use cycle/footway. There are residential properties in close proximity to the carriageway on both sides, therefore there are limited options to increase the highway capacity to allow for cycle infrastructure on the eastbound (EB) or westbound approach (WB)**.** Kerbside activity includes bus stops and residential accesses which will need to be considered with any proposal to include cycle infrastructure along this section.

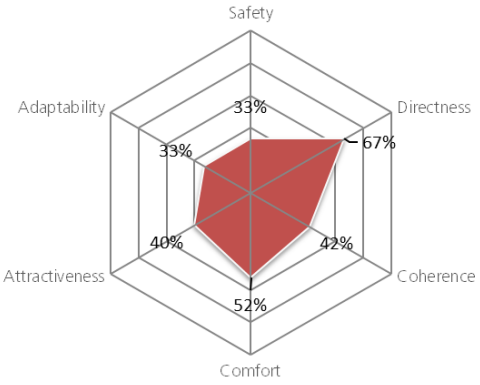
Section 2 Sandon Road to Manor Road - This section of the Hagley Road has limited space to provide cycle infrastructure. The Hagley Road/Sandon Road Junction consists of 5 lanes with a dedicated right-hand turn lane for vehicles entering Sandon Road. Whilst there is adequate highway capacity to include some form of cycling infrastructure, the inclusion of the right-hand turn movement limits the ability to implement a cycle facility on either approach of the Hagley Road. Other constraints along this section include a pinch point over the Harborne Walkway which passes underneath the A456. Throughout this section of the Hagley Road residential and commercial properties are in close proximity with the highway with some sections of minimal footway width. There are several bus stops along this section of the corridor.

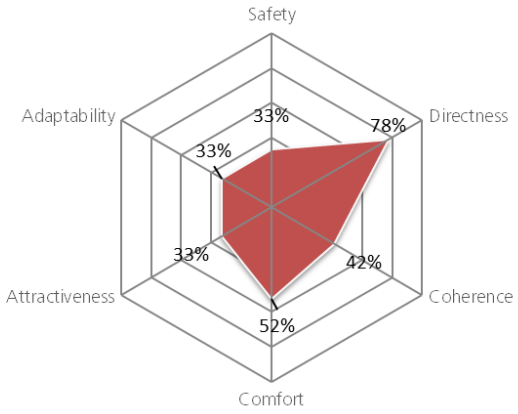
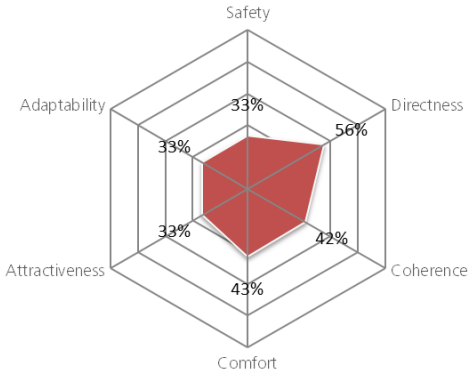
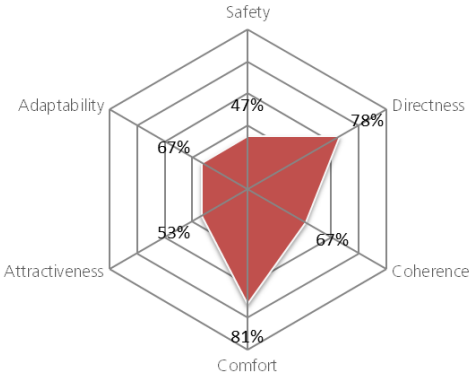
Section 3 Manor Road to Portland Road (B4125) – This section of the Hagley Road, again has very limited space to provide cycle infrastructure. There are four lanes of traffic along this section with limited options to reduce highway capacity to provide cycle infrastructure. There is good footway width provision on either side of the corridor which is currently being used by some cyclists as an alternative to cycling on the carriageway. Hagley Road/Rotton Park Road junction has a lack of provision for cyclists with no infrastructure in place to protect or prioritise cyclists or pedestrians over motorised vehicles.

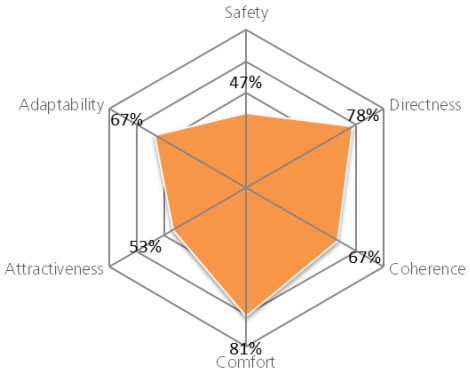
Section 4 Portman Road to Plough & Harrow Road (B4532) – There is some potential for cycle infrastructure to be included within this section of the Hagley Road corridor by reallocating highway capacity to allow for cycling infrastructure. The number of traffic lanes fluctuates across this section of the corridor with 4 lanes of traffic on a small section of the corridor adjacent to Stirling Road, increasing to 7 lanes of traffic at the Hagley Road/Monument Road junction. Three key junctions exist along this section of the corridor which do not currently provide adequate provision for cyclists. Lane mergers exist along this section of the corridor where lane provision decreases which increases the potential for conflict between cyclists and motorised vehicles.

Section 5 Plough & Harrow Road to Five Ways Roundabout – This section of the corridor consists predominantly of a 4-lane carriageway however, on approach to the major junctions at Plough and Harrow Road and Five Ways Roundabout the highway capacity increases to allow for up six lanes. There is limited highway capacity on this section of the Hagley Road however there is significant footway capacity on the WB side of the carriageway. The access into Morrisons Supermarket is a potential conflict with cyclists if cycling on the shared use path. The shared use path, on the south side of the carriageway, does have pinch points where the width is reduced due to bus stops and other kerbside activity.

Existing Level of Service (LoS) Assessment:

Section 1 - A4040 to Sandon Road	

Section 2 - Sandon Road to Manor Road	
Section 3 - Manor Road to Portland Road (B4125)	
Section 4 - Portland Road to Plough & Harrow Road (B4532)	

Section 5 Plough & Harrow Road to Five Ways Roundabout	

Opportunities:

Section 1 to 3 A4040 to Sandon Road – Portland Road: Limited opportunities to implement cycle infrastructure along sections one to three of the corridor due to the lack of capacity. Existing conditions along this section of the Hagley Road are constrained with no available space to reallocate to cycle infrastructure. The only option would be to reallocate one lane of traffic to cycle infrastructure to allow a two way segregated cycle track however, this is likely to have a significant impact on traffic flow and journey reliability. An alternative option would be to invest in a parallel route as described below.

Section 5 Portman Road to Five Ways Roundabout - Due to the additional highway capacity along this section of the Hagley Road, an option would be to reduce vehicle capacity by removing vehicular lanes to increase available highway width for cyclists. However, it should be noted that the current proposals to incorporate SPRINT on this route would limit the feasibility reallocating highway space. Another option would be to alter or narrow footway configurations on the westbound side of the carriageway from Five Ways Roundabout where there is significant footway capacity. Reducing the footway capacity to allow for more formalised cycle infrastructure (in the form of a two way segregation cycle facility) would limit the requirement to reduce highway capacity. The most suitable option would be to implement a two way cycle facility through reducing footway capacity on the WB approach on the Hagley Road from Five Ways Roundabout to Portland Road. Where pinch points exist, it is likely that reallocating highway capacity by removing/reducing vehicular lanes will be required.

Alternative Route – An alternative route which could be adapted to reconnect to Hagley Road at various side roads, would consist of implementing cycle infrastructure along a parallel (predominately residential) route to Hagley Road. A potential alternative route would begin on Meadow Road connecting to Woodbourne Road/Augustus Road/Harborne Road with a number of options to connect back on to Hagley Road. This route is subject to an existing speed limit of 20mph. Whilst there is sufficient width to implement some form of cycle facility along the majority of this route, to implement a segregated/light segregated facility the following options would need to be considered.

- Designate this alternative route as a one way system which would allow for one vehicular lane to be turned into a segregated cycle route
- Remove any parking facilities and implement double yellow lines, reallocate carriageway space
- Formalise/restrict parking to one side of the carriageway
- Limit use by large vehicles to achieve narrow lane running for general traffic
- Alter or narrow footway configurations as appropriate to provide a designed cycle facility (ideally 2 way segregated facility)
- Reduce vehicle speeds/enforce speed limit by installing traffic calming such that links require less segregated cycling infrastructure
- Provide priority exit and access for cyclists from and onto Hagley Road

Recommendation for Further Assessment

Due to the constrained conditions on the Hagley Road at current, it is suggested that the parallel route identified above is explored in more detail with a feasibility study undertaken to identify the opportunities and potential constraints along this parallel route. The study should identify the merits of implementing cycle infrastructure along the corridor between Meadow Road and Harborne Road and the type of cycle facility which is most suitable. With increased capacity between Portland Road and Five Ways Roundabout, the parallel route has potential to link back to the Hagley Road at Portland Junction.

Photographs

Photo 1 – A456 Hagley Road / A4040 Lordswood Road Junction (Bearwood) looking westbound

Photo 2 - Mature trees on the south side of A456 near junction with Barnsley Road, looking westbound

	
Photo 3 – Narrow footway on south side of A456 carriageway between Hermitage Road and Westfield Road looking eastbound	**Photo 4 – Bus stops constraining footway width on south side of A456, looking west. Six traffic lanes and central reservation near to junction with Monument Road**
	
Photo 5 – A456 Hagley Road, looking west from existing pedestrian crossing outside Morrison's supermarket	**Photo 5 – Existing shared footway/cycleway on westbound side of A456 close to Five Ways junction**

Corridor:	**Coventry University to University Hospital (Binley Road/Clifford Bridge Road)**
Local Authority	**Coventry City Council**

Existing Characteristics:

This route provides a link between Coventry University and the University Hospital in the north-east of the city. This route also provides a link to/from Coventry City Centre and the A46 passing through residential areas such as Stoke and Binley. This route is a mixture of single carriageway and dual carriageway, with pedestrianisation towards Coventry University.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- Significant traffic flow particularly in AM and PM peak
- Currently the cycle lanes along Binley Road do not provide protection from motorised vehicles.
- Busy junctions along Binley Road with limited infrastructure in place for cyclists.
- Limited opportunities to provide segregated cycle infrastructure on either side of the carriageway

Constraints:

Section 1 Gosford Street to Kingsway – Gosford Street to Coventry University has been pedestrianised with shared use space, low traffic speeds and priority provided to pedestrians through zebra crossings. The layout provides opportunities to include high quality segregated cycle infrastructure. Whilst there is minimal highway capacity (due to encouraging walking) there is sufficient footway capacity to accommodate dedicated cycle infrastructure.

Far Gosford Street to Binley Road operates a one way system with a tight geometry which limits the opportunities for dedicated cycle infrastructure. Far Gosford Street has retail units on both sides of the carriageway with on street parking available on both lanes. Bus services also operate along Far Gosford Street therefore, various vehicle movements take place along the road which causes potential conflict with cyclists.

Binley Road (between Far Gosford Street and Gulson Road) to Kingway requires cyclists to either negotiate Sky Blue Way (a six lane carriageway) and Binley Road/A444 junction or use off shared use facilities through Gosford Park and Gosford Green. There is sufficient space to redesign the junction to accommodate cycle infrastructure such as a Dutch style roundabout. If an off-road solution is preferred, there is sufficient space to accommodate improved cycle infrastructure in close proximity to the junction.

Section 2 Kingsway to Church Lane – Between Kingsway and Marlborough Road the geometry of the carriageway tightens with residential properties in close proximity to the highway. Currently there are cycle lanes on either side of the carriageway however, they do not provide adequate protection from motorised vehicles and are not to national or regional standards.

Between Marlborough Road and Brays Lane the highway capacity does not increase therefore, minimal cycle infrastructure is present through insufficient cycle lanes on either side of the carriageway. Whilst highway capacity is limited, there is significant footway capacity particularly on the outbound approach

towards the University Hospital. On either side of the carriageway there is green space which could be partially utilised. Due to the vast space available along this section of the corridor, there is potential for dedicated cycle infrastructure.

Between Brays Lane and Church Lane the cycle lanes continue There are a number of retail units along this section of the corridor with side access creating potential conflict between motorised vehicles and cyclists. Along the carriageway there are central hatchings and railings which reduces the highway capacity however, there is still adequate highway and footway capacity to provide dedicated cycle infrastructure.

Section 3 Church Lane to Allard Way (A4082) – Between Church Lane and Binley Road/A4082 junction there is currently a mixture of bus and cycle lanes. The cycle lanes provided are below the standard set out within the Transport for West Midlands Design Guidance. The cycle lanes are narrow and provide no segregation or protection from motorised vehicles.

There are no major constraints along this section of the corridor, there is sufficient space to allocate towards high quality cycle infrastructure. Currently highway capacity varies between Church Lane to Allard Way with sections of the corridor accommodating up to five lanes of traffic, particularly at key junctions such as Binley Road/Brindle Avenue. There are no pinch points along this section of the corridor which would prevent a dedicated cycle facility such as a segregated cycle track.

A constraint to provide quality infrastructure off carriageway is the kerbside activity present including mature trees which are present across this section of the corridor.

Section 4 Allard Way (A4082) to Mill Lane - The A4082/Binley Road is a busy junction with high traffic flows and is currently unappealing for novice cyclists. The junction however does have space to provide high quality cycle infrastructure.

The corridor has a slight pinch point where Binley Road passes over the River Stowe where the carriageway narrows and there is little opportunity to reallocate highway/footway capacity for cycle infrastructure. A constraint to provide quality infrastructure off carriageway is the kerbside activity present including mature trees which are present across this section of the corridor (particularly between Brookvale Avenue and Princethorpe Way). Between Brookevalue Avenue and Ebro Crescent there is sufficient space across the carriageway and footway to provide some form of dedicated cycle infrastructure.

The major constraint along this section of the corridor is Binley Road/Brinklow Road junction where the geometry of the junction does not provide opportunities for cycle infrastructure in its current form. The available space is currently maximised to provide highway capacity with minimum footway provision.

Section 5 Mill Lane to Clifford Bridge Roundabout – Mill lane to Clifford Bridge Roundabout travels along Clifford Bride Road which has less highway capacity compared to Binley Road but is a key corridor travelling to University Hospital. There are two lanes for motorised vehicles with little width to accommodate cyclists. There are a number of side roads providing access to residential properties which could cause issues with various movements taking place between motorised vehicles and cyclists. There is no infrastructure in place to support cyclists undertaking right turn movements at junctions.

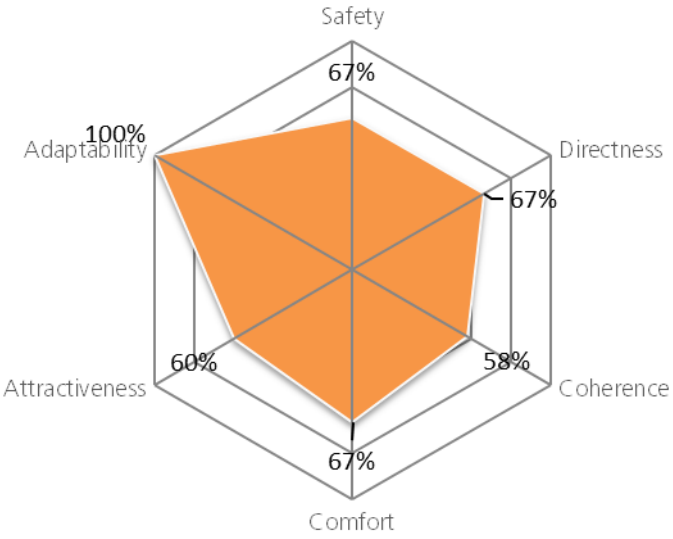
On street parking is present along Clifford Bride Road which presents potential conflict between cyclists and cars parking/departing. On Street parking limits footway/highway capacity therefore, reducing the potential for dedicated cycle infrastructure.

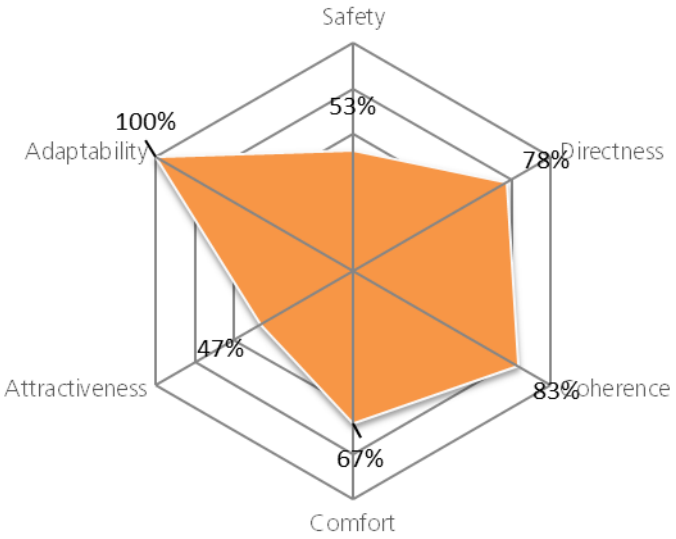
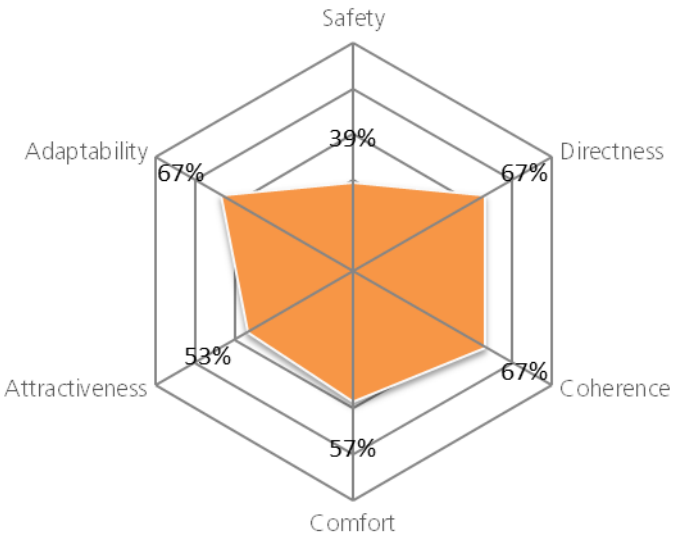
There are two roundabouts present along this section of the corridor which would require improvements to provide provision for cycling however, there is also sufficient space off carriageway to provide a two way segregated cycle track (possible that junction capacity would need to be reduced)

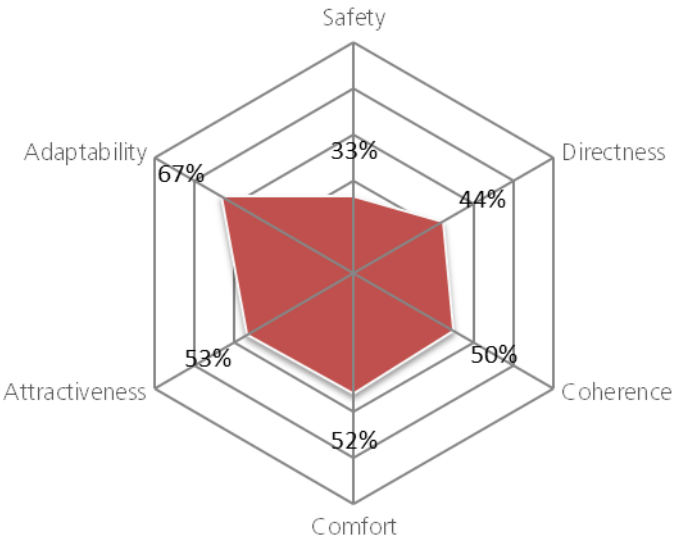
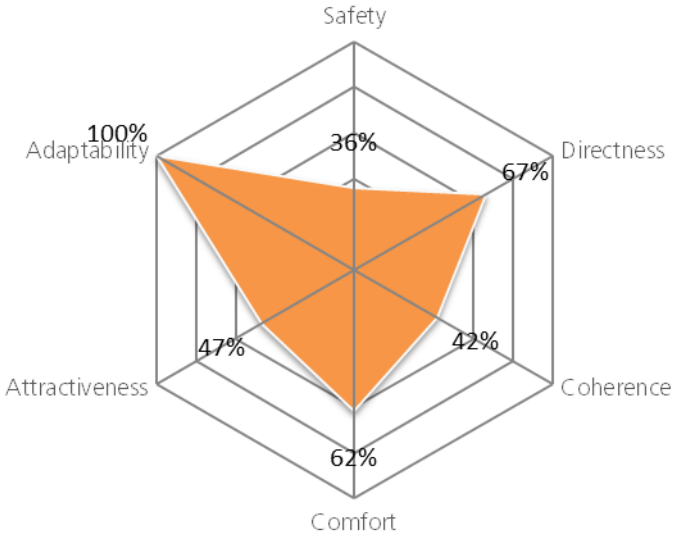
Section 6 Clifford Bridge Roundabout to Farren Road – Busy section of the corridor with limited highway capacity.

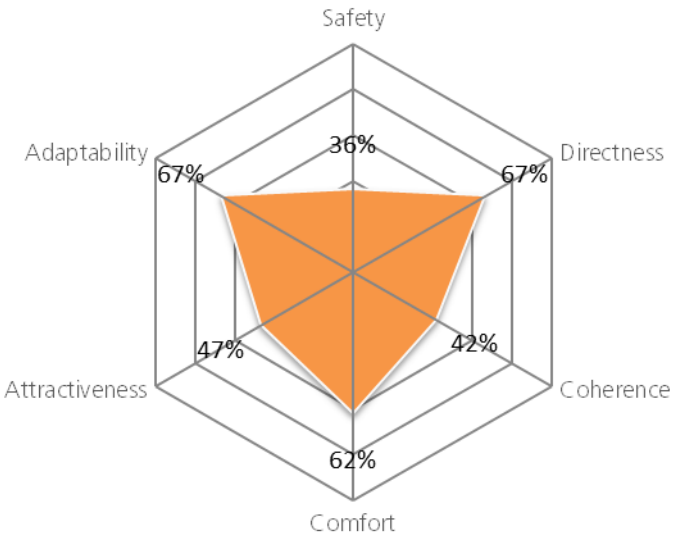
Due to an off-road cycle facility and footway capacity on the outbound approach (from the city centre) there is potential to upgrade the existing facility without impacting on existing highway capacity. Mature tress is an issue along this section of the corridor which could restrict the potential to improve the existing off carriageway facility.

Existing Level of Service (LoS) Assessment:

Section 1 - Gosford Street to Marlborough Road	

Section 2 - Marlborough Road to Church Lane	
Section 3 - Church Lane to the A4082	

Section 4 - A4082 to Mill Lane	
Section 5 - Mill Lane to Clifford Bridge Roundabout	

Section 6 - Clifford Bridge Roundabout to Farren Road	

Opportunities:

Section 1 Gosford Street to Kingsway (opportunity based on outbound approach from the city centre)

- Upgrade the existing off route facilities along Gosford Green and Gosford Park to connect to Coventry City University.
- Upgrade Binley Road/A444 junction to accommodate cyclists. Ambitious scheme could include a Dutch style roundabout
- Remove on street parking along one side of Far Gosford Street which would provide adequate space to allocate to a two-way dedicated cycle track
- Reallocate small section of shared use space on Gosford Street to provide cycle infrastructure. Due to the area accommodating shared use space currently, it is possible that no further infrastructure is required.

Section 2 Kingsway to Church Lane

- Between Kingsway and Marlborough Road, remove the inbound (towards Coventry City Centre) cycle lane and realign the carriageway to provide opportunities for cycle track on the outbound lane
- Between Marlborough Road and Brays Lane, maximise on the opportunities provided through increased footway capacity and existing green space to provide two way dedicated cycle track
- Between Brays Lane and Church Lane, consider providing a bus island to allow dedicated cycle track to travel behind the bus stop.
- Remove on street parking to provide adequate space for cycle track to continue to Church Lane
- Alternative option would be for the cycle track to travel behind on street parking to provide a buffer from moving motorised vehicles.

Section 3 Church Lane to Allard Way

- Between Church Lane and Bromleigh Drive, there is significant off-carriageway capacity to provide two way segregated cycle track.
- Option would be to remain footway capacity but to remove a proportion of the grass verge to accommodate two way movement for cyclists travelling to/from Coventry City Centre.
- Between Bromleigh Drive and Allard Way (A4082 Junction) there is opportunity to remove a section of the grass verge and remove a small section of highway capacity from residential streets adjacent to Binley Road (Momus Boulevard and Swinburne Avenue) to continue cycle track
- An alternative option would be to consider removing highway capacity.
- Currently there is limited cycle infrastructure in place to accommodate cycling at the A4082 junction, consider staged lighting/toucan crossing to provide priority for cyclists continuing along Binley Road or accessing Hipswell Highway/Allard Way.

Section 4 Allard Way (A4082) to Mill Lane

- Between Allard Way and Brookvale Avenue, considering removing the grass verge in the middle of the carriageway to provide further capacity to allow for continued two way cycle track
- At Brookvale Avenue consider removing right hand turn lane in and allow for ‘exit only’ from Brookvale Avenue. This would help to realign the carriageway and provide adequate space for cycle track.
- Between Brookvale Avenue and Princethorpe Way, remove on street car parking and consider reducing highway capacity to two lanes
- Alternative option would be to narrow the carriageway and reduce footway capacity to minimum provision to identify potential opportunity for continuation of cycle track.

- Binley Road/Brinklow Road/Junction is a constrained section of the network with minimal provision for pedestrians and cyclists. Consider reducing right hand turn from Bricklow Road to Binley Road to one lane and realign the carriageway. This could allow for sufficient space to continue cycle track on outbound approach.

Section 5 Mill Lane to Clifford Bridge Roundabout

- Between Mill Lane and B4082 junction, consider removing on street parking on outbound approach to free up capacity for two way cycle track
- Potential constraint along this section would be the removal of mature trees. Limited highway capacity to reallocate to cycle infrastructure, off carriageway capacity needs to be utilised.
- Between B4802 and Clifford Bridge Roundabout, increase capacity and improve surfacing on existing off road cycle facility.

Section 6 Clifford Bridge Roundabout to Farren Road

- Improve existing off road cycle facility to two way segregated cycle track
- Provide cycle priority at Clifford Bridge Road/Belgrave Road Junction, consider either a toucan crossing at the junction or bring cyclists back onto carriageway to allow for direct route (without delay at junction) to University Hospital and beyond
- Between Belgrave Road and Farren Road consider narrowing carriageway to utilise footway capacity to continue cycle track.

Recommendation for Further Assessment

A more detailed assessment is required to determine the feasibility for a dedicated cycle track between Coventry University and University Hospital via Binley Road. It is recommended that the cycle track is on the outbound approach from the city centre. The initial audit has identified a number of opportunities outlined above including maximising on available space along Binley Road and removing street parking on several pinch points.

Photographs

Photo 1 – Coloured surfacing at the junction of Gosford Street and Far Gosford Street looking west to Coventry University

Photo 2 - Constrained carriageway width and on-street parking on Far Gosford Street

Photo 3 – Existing off-carriageway segregated footway/cycleway to the south of the Sky Blue Way/A444/Binley Road roundabout junction

Photo 4 – Start of existing mandatory cycle lane on the west end of Binley Road near the junction with Kingsway

Photo 5 – Wide carriageway and existing mandatory cycle lanes on both sides of Binley Road

Photo 6 – Wide verges on A428 Binley Road and parallel residential access road (Swinburne Avenue)

Photo 7 – Potential for off-carriageway cycle provision on verge, may require reduction of carriageway width

Photo 8 – On-street parking bays on Clifford Bridge Road

Photo 9 – Constrained footbridge on Clifford Bridge Road, crossing the River Sowe

Photo 10 – Mature trees on the verge of Clifford Bridge Road may constrain alignment of cycle provision

Corridor:	Coventry City Centre to Holbrooks (on approach to Ricoh Arena)
Local Authority	Coventry City Council

Existing Characteristics:

This route connects the City Centre to the areas of Keresley Heath and Holbrooks in the north of the city. It crosses Coventry Rings road via an existing footbridge and passes through residential areas to the north of the city as well as connecting to the Coventry Arena station and Arena Park Shopping Centre to the east of the A444.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- Significant traffic flow particularly in AM and PM peak
- Several constrained sections along the route particularly within Coventry City Centre and between Green Road to Halfords Lane (particularly during school run)
- A4053 Coventry Ring Road a constraint in terms of providing high quality infrastructure, potentially unappealing for cyclists to travel above the A4053

Constraints:

Section 1 – Warwick Road to A4053 (City Centre)

This section of the corridor is based within the perimeter of the Coventry Ring Road which is dominated by significant traffic flow with two lanes of Traffic along Warwick Road increasing to up to four lanes along Greyfriars Road with space for on-street parking. Queen Victoria Road is a busy city centre road with access to key retail sites such as Ikea.

Whilst there is sufficient space for cycling infrastructure, the highway has been developed to accommodate significant traffic flow for commuter and retail use. Currently the significant traffic flow with wide carriageways is unaccommodating for inexperienced cyclists. Hill Street on approach to the A4053 is a narrow residential street with little room to accommodate cycle infrastructure. Two way traffic flow is permitted along Hill Street which does increase potential conflict between cyclists and motorised vehicles.

There are currently no significant issues with surface quality and the gradient will provide little issue for experienced or unexperienced cyclists.

Section 2 – A4053 to Moseley Avenue

A major constraint along this section of the corridor is the bridge above the A4053, whilst it does allow for cyclists and pedestrian access to/from the city centre, it is potentially an unattractive option for cyclists and could be a deterrent for cyclists for a number of reasons include personal security and ‘route attractiveness’

Upper Hill Street (on approach to Coundon Street) is a narrow residential street however, the road does have sufficient space for two lanes of traffic. The road has little opportunity for cycle infrastructure in its current layout due to on street parking present on both sides of Upper Hill Street.

Coundon Road has residential properties in close proximity on either side of the carriageway which limits the potential to introduce cycle infrastructure. Due to the residential properties along Coundon Road, on street parkins is present along this section of the corridor. The rail crossing between Coundon Road and Barkers Butts Lane provides further challenges to provide dedicated cycle infrastructure.

Barkers Butts Lane predominantly consists of two lanes of traffic (increasing to three along certain sections) there is sufficient highway space along this section of the corridor to provide cycle infrastructure. Key constraints along this section of the corridor include mature trees on the city centre approach and on street parking on either side of Barkers Butts Lane.

Section 3 – Moseley Avenue to Brownshill Green Road

Mosley Avenue/Engleton Road are wide residential roads with space for four lanes of traffic, there is currently only two lanes of traffic utilised due to on street parking, mature trees are present on either side of the carriageway which limits opportunities for increasing the footway width. Moseley Avenue/Poole Road has good visibility and tight geometry which reduces the potential for conflict between motorised vehicles and cyclists.

Engleton Road/Radford Road is a busy junction however, advance stop lines are present for cyclists which does provide a certain level of priority and safety for cyclists. There are no major constraints along Radford Road due to the significant highway space and underutilised verge/footway.

Section 4 – Brownshill Green Road to Greens Road

Brownshill Green Road/A4098 has limited opportunities for cycle infrastructure due to the tight geometry of the junction due to the proximity of residential properties. Whilst there are residential properties in close proximity on either side of the carriageway along Keresley Road, there is sufficient space to accommodate cycle infrastructure. On street parking is present along either side of the carriageway.

Kersley Road/Wallace Road/Norman Place Road is a busy junction with significant traffic flow. The junction has a wide geometry which has the potential for increased traffic speed and therefore a major deterrent for cyclists. Sufficient space continues along Kersley Road until Kersley Road/The Scotchill Roundabout.

Kersley Green Road to Greens Road is a narrow two-lane carriageway with limited opportunities to introduce cycle infrastructure at present. Narrow footway width also provides a further constraint.

Section 5 – Green Roads to Halford Lane

Bennetts Road South (between Greens Road and Lowe Road) is a narrow residential road with two lanes of traffic. There is little opportunity for cycle infrastructure in the form of a dedicated cycle track or lane, footway width is also limited which restricts the potential reconfiguration of the footway/highway to allow for some form of cycle infrastructure.

Continuing on Bennett's Road South (between Lowe Road and Kersley Brook Road) highway space remains restricted. A major constraint for cycle infrastructure along this section of the corridor is the traffic around school periods due to the nearby school. Significant on street parking reduces footway and highway space leading to an unattractive environment for pedestrians and cyclists.

On street parking remains an issue on Keresley Brook Road on approach to Halford Lane however, there is significant green space to reallocate to cycle infrastructure.

Section 6 – Halford Lane to Morland Road

Glentworth Avenue (on approach to Beake Avenue) has no major constraints due to sufficient highway space for some form of cycle infrastructure as well as significant footway/verge width. On street parking is present along Glentworth Avenue which does cause potential conflict between motorised vehicles and cyclists.

Beake Avenue/Rotherham Road junction has no cycle infrastructure in place to provide priority or to allow for safe movement for cyclists however, there is sufficient space to improve conditions with the potential for a holding lane for cyclists or an off-road facility.

Rotherham Road to Morland Road is a residential road with two lanes of traffic, speed calming measures are present along Rotherham Road which reduces overall traffic speed. On street parking is present on both sides of the carriageway

Section 7 – Morland Road to Compton Road

Rotherham Road to Holbrook Lane remains consistent with the previous section of Rotherham Road. Two lanes of traffic are present however, the carriageway does narrow along several sections particularly where speed humps are present. Footway width increases along this section of the corridor which does provide opportunities to reallocate space for cycle infrastructure. Whilst there is sufficient footway width, it is currently used for on street parking or cars parked fully on the footway.

Whilst Rotherham Road/Holbrook Lane junction is signalised, there is no dedicated cycle infrastructure in place to provide segregation, priority or holding areas for cyclists to undertake a safe movement, particularly for right hand turns.

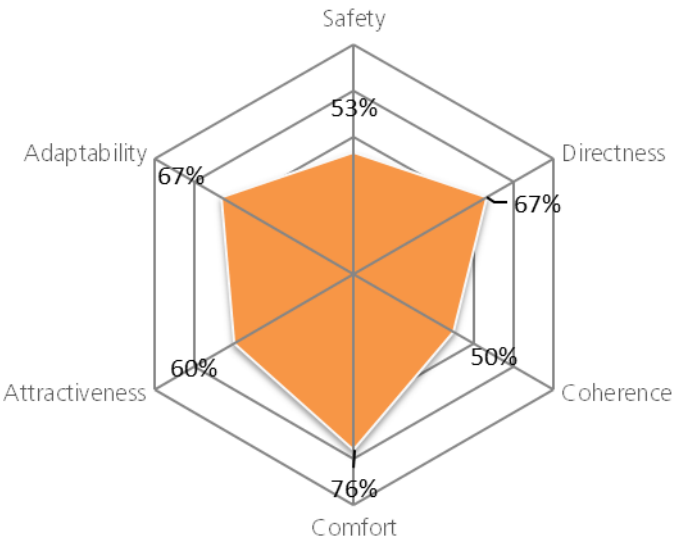
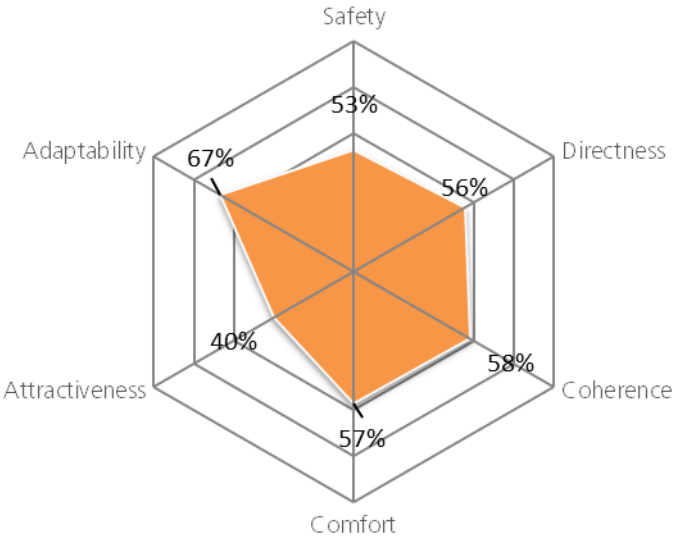
Lythalls Lane on approach to Compton Road consists of two lanes of traffic with pinch points present which reduces highway capacity. On street parking is present along Lythalls lane with on footway parking also present. Mature trees are present along the carriageway which also provides a further constraint in terms of reallocating the footway for cycle infrastructure.

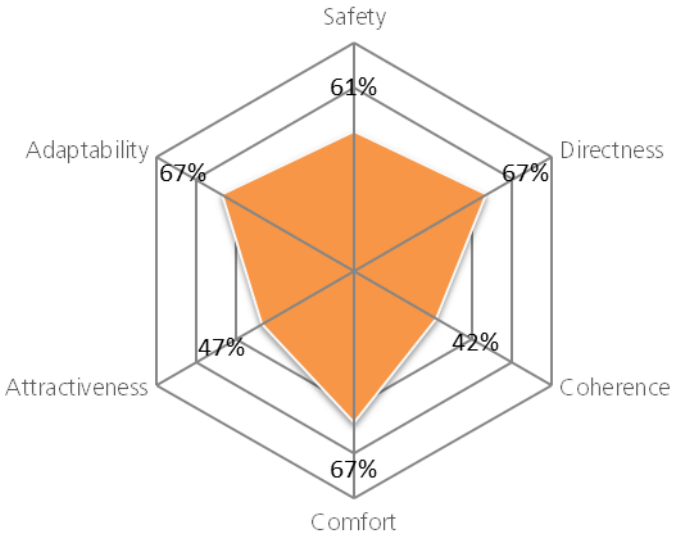
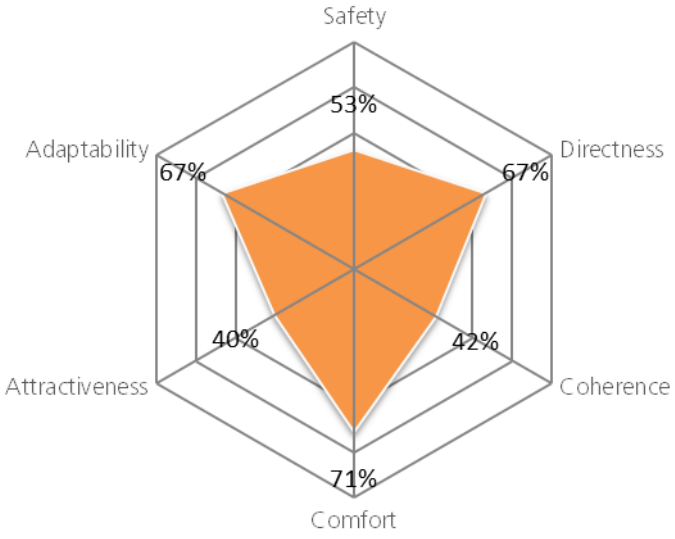
Section 8 – Compton Road to Bedlam Lane

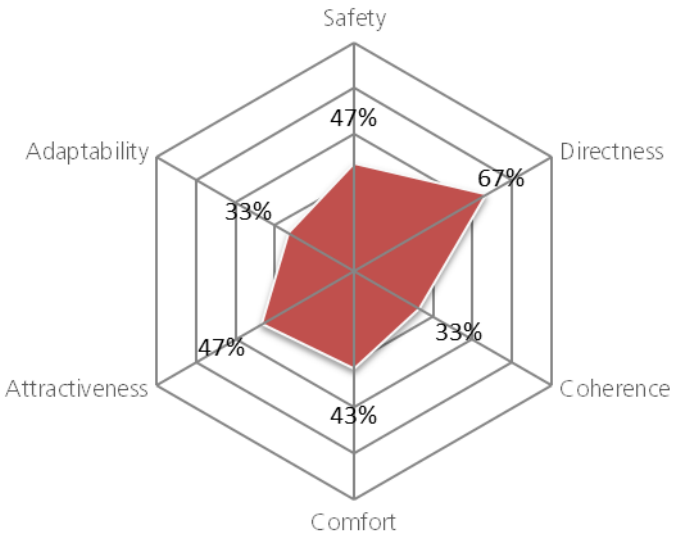
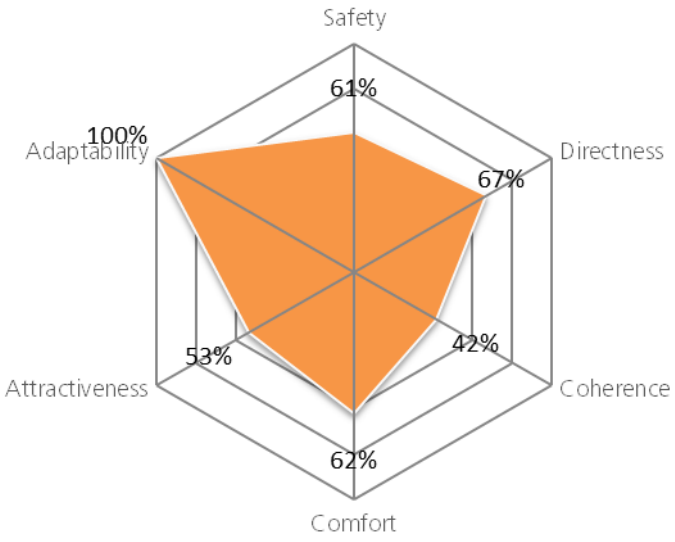
The major constraint along this section of the corridor is the bridge over Jimmy Hill Way, the potential for cycle infrastructure along the bridge is limited due to the lack of highway/footway space which could be reallocated for cycling.

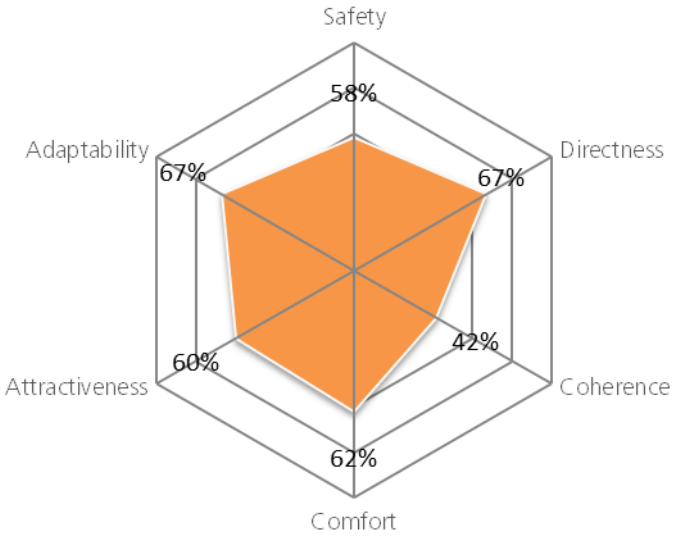
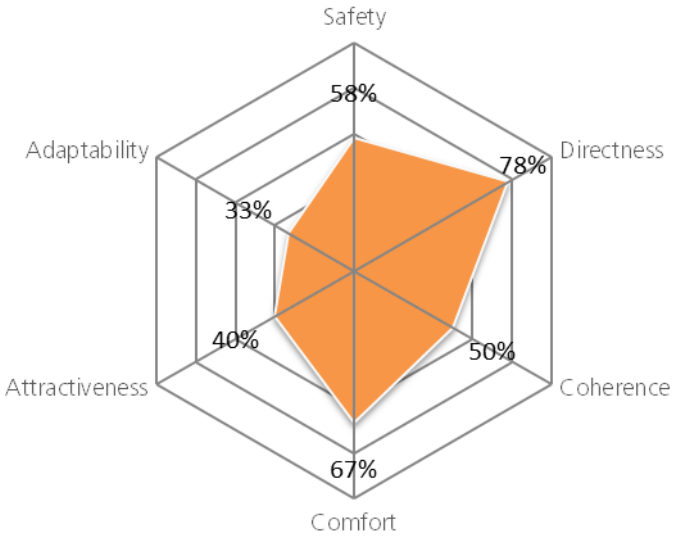
Prior to accessing the bridge (on approach to Bedlam Lane) there is potential for cycle infrastructure however, a reconfiguration of the highway/footway would be required to reallocate space for cycle infrastructure.

Bedlam Road is a residential cul-de-sac with two lanes of traffic however, on street parking is present which predominantly restricts Beldam Lane to one lane of traffic. Whilst there is little existing highway width there is green space which could be used for some form of cycle infrastructure.

Existing Level of Service (LoS) Assessment:	
1- A4053 to A4053, City Centre	
2- A4053 to Moseley Avenue	

3- Moseley Avenue to Brownshill Green Road	
4 - Brownshill Green Road to Greens Road	

5 - Greens Road to Halfords Lane	
6 - Halfords Lane to Morland Road	

7 - Morland Road to Compton Road	
8 – Compton Road to Bedlam Lane	

Opportunities:

Section 1 Warwick Road to A4053

- From Warwick Road provide off road link to One Friargate (where Coventry City Council are based) and further onto Coventry Railway Station
- From Warwick Road to Greyfriars Road, upgrade the existing off road facility within Greyfriars Green
- Along Greyfriars Road, reduce highway capacity and restrict on street parking to allow for segregated cycle facility on either side of the carriageway.

- Along Queen Victoria Road, reduce highway capacity and restrict on street parking to allow for segregated cycle facility on either side of the carriageway.
- Consider a touch crossing in close proximity to Hill Street to allow for safe right hand turn movement from Queen Victoria Road to Hill Street
- Consider a one way system along Hill Street which would allow for a two way cycle track preferably on the outbound (from city centre) approach

Section 2 A4053 to Moseley Avenue

- Limited options to improve bridge over A4053, consider widening access onto Bridge and improving personal security through lighting.
- Along Upper Hill Street consider restricting on street parking, this could offer space to introduce some form of cycle infrastructure. A possible option would be to provide a two way cycle track on the outbound approach however, as this is a quiet residential road, little infrastructure is required.
- Along Coundon Road there is limited highway/footway width, reconfiguration of the highway may allow for some form of cycle infrastructure however, unlikely to be a segregated cycle facility
- On approach to Barker's Butts Lane, allow cyclists to travel under the bridge (below the railway crossing) and remove access for motorised vehicles.
- Sufficient highway space is available along Barker's Butts Lane, narrow carriageway to provide dedicated cycle track (potential for either side of the carriageway or consider two way outbound approach to provide consistency where possible)
- There is potential for the route to continue onto Thamley Road however, parking would need to be prohibited on one or both sides of the carriageway. Potential options include two way light segregation on one side of the carriageway (to allow for parking on other side of the carriageway) or no dedicated cycle facility due to residential context of the road.
- Route would then continue through Crampers Field connecting onto Moseley Avenue.

Section 3 Moseley Avenue to Brownshill Green Road

- Sufficient highway width along Moseley Avenue to provide dedicated two way cycle track along either outbound or inbound approach to the city centre (ideally outbound approach to remain consistent with previous sections) alternatively, there is space on the highway for segregated cycle facility either side of the carriageway. Restricting/prohibiting on street parking will need to be considered
- Sufficient highway width along Engleton Road to provide dedicated two way cycle track along either outbound or inbound approach to the city centre (ideally outbound approach to remain consistent with previous sections) alternatively, there is space for segregated cycle facility either side of the carriageway. Restricting/prohibiting on street parking will need to be considered
- Consider off road solution at Engleton Road/Radford Road to prevent potential conflict at junction. Option to use a small section of Radford Common for an off road cycle route.

- Utilise one way system along Radford Road to provide cycle lane in both directions, prior to this section consider continuing cycle route within Radford Common with a toucan crossing for cyclists travel inbound

Section 4 Brownshill Green Road to Green Road

- Brownshill Green Road/Kersley Road/Sadler Road is a tight junction with little option to redesign for cycle infrastructure, option to consider would consist of utilising the green space on the outbound approach to provide an off road solution, a toucan crossing would be required to cross Brownshill Green Road.
- Kersley Road on approach to Kersley Road/Wallace Road/Norman Place Road Junction consists of four lanes of traffic which provides potential for cycle infrastructure through reducing highway capacity. Removing on street car parking on both sides of the carriageway would provide opportunities for cycle infrastructure on the inbound and outbound approach. To keep cyclists on the same side of the carriageway, the outbound approach should be prioritised.
- Kersley Road/Wallace Road/Norman Place Road Junction has potential for an on road facility however there is sufficient footway width which could be utilised to provide an off road solution which would require a toucan crossing. A further option would be to signalise the junction with advanced stopping lines for cyclists.
- Kersley Road on approach to Kipley Road has significant highway width therefore, provides potential for cycle infrastructure through reducing the width of the highway. Removing on street car parking on both sides of the carriageway would provide opportunities for cycle infrastructure on the inbound and outbound approach. To keep cyclists on the same side of the carriageway, the outbound approach should be prioritised with a two way segregated cycle track.
- Kersley Road (continuing from Kipley Road) to Kersley Green Road/The Scotchill Roundabout has sufficient space to continue with a dedicated two way cycle track on the outbound approach
- Whilst there is sufficient space along this section of the corridor for cycle infrastructure on both sides of the carriageway, due to constraints on previous sections of the corridor, a two way cycle track on the outbound approach from the city centre would seem most suitable.

Section 5 Green Road to Halfords Lane

- Between Green Road and Halfords Lane there is limited space available on the highway and footway, this provides a major constraint for introducing dedicated cycle infrastructure along this section.
- In AM and PM peaks including the school run, significant on street and footway parking is present which further reduces the highway capacity and provides further conflict between motorised vehicles and cyclists

- An option to consider would be to utilise local residential streets to bypass the school. Cyclists could be diverted onto Benson Road and Halford Lane and reconnecting to the proposed route at Glentworth Avenue

Section 6 Halfords Lane to Morland Road

- At Halford Lane on approach to Glentworth Avenue, utilise footway width and grass verge to provide off road or two way segregated cycle track facility.
- At the Halford Lane/Glentworth Avenue junction consider introducing signals to provide a stage turn for cyclists turning right. Further option would be to provide a toucan crossing which would require increased footway width on the outbound approach along Glentworth Avenue.
- Along Glentworth Avenue, consider reallocating the grass verge to cycle infrastructure and restrict on street parking on the outbound approach.
- On the outbound approach along Beake Avenue, utilise the footway width to introduce cycle infrastructure and introduce a toucan crossing to allow cyclists to access Rotherham Road.
- Rotherham Road up to Morland Road has sufficient space for cycle infrastructure on both sides of the carriageway however, there is significant on street and footway parking present and therefore it would be advised that a two way cycle track is focused on the outbound approach.

Section 7 Morland Road to Compton Road

- Rotherham Road on approach to Holbrook Lane has sufficient space to introduce cycle infrastructure however, a reconfiguration of the highway and footway will be required.
- Currently there is sufficient footway width on both sides of the carriageway which could be reallocated to introduce some form of cycle infrastructure.
- On street and footway parking is present along this section of the corridor and would need to be restricted/prohibited to allow for some form of cycle infrastructure to be implemented.
- It is suggested that the footway on the inbound approach is narrowed with the road layout reconfigured to allow for space to implement two way cycle track on outbound approach.
- Rotherham Road/Holbrooks Lane will need further infrastructure to improve conditions for cyclists, options to consider include advanced stopping lines, holding lane for cyclists turning right and staged signals to provide priority for cyclists.
- Lythalls Lane to Compton Road is a constrained section of the corridor due reduced highway and footway space combined with increased kerbside activity including on street and footway car parking and mature trees. Options include increased speed calming measures and keeping cyclists on the carriageway or consider reducing footway width on inbound approach with a reconfiguration of the road layout to increase capacity on the outbound approach for some form of cycle infrastructure.

Section 8 – Compton Road to Bedlam Lane

- Along Lythalls Lane on approach to the railway bridge crossing Jimmy Hill Way, there is potential to introduce some form of cycle infrastructure however, kerbside activity on both sides of the carriageway is an issue. A redesign of the road layout is required to allow space for a two way cycle track on the outbound approach
- At the railway bridge, there is little opportunity for providing cycle infrastructure, potential to reduce traffic speed on approach to the bridge and for cyclists to re-enter the carriageway.
- Bedlam Lane is a quiet residential road, little required on this section although important that signage is improved to ensure cyclists are aware of the link to the Ricoh Arena.

Recommendation for Further Assessment

The audit has identified that the route has a variety of characteristics and a number of challenges including pinch points, crossing the A4053 and limited space along several sections. A detailed feasibility study is required to develop an intervention which will provide a consistent high quality approach for cyclists travelling between Holbrooks and Coventry City Centre. The audit has identified that a potential solution would be a high quality cycle track on the outbound approach (from Coventry City Centre) however several junctions would require improvements to allow for such an intervention to be implemented.

Photographs

Photo 1 – Potential for off-carriageway segregated provision through Greyfriars Green

Photo 2 - Existing wide carriageway and footway but with parking bays on Queen Victoria Road

Photo 3 – Existing pedestrian and cycle bridge crossing the ring road between Hill Street and Upper Hill Street

Photo 4 – Existing pedestrian and cycle bridge crossing the ring road between Hill Street and Upper Hill Street

Photo 5 – Railway level crossing and alternative underbridge at Coundon Road and Barker's Butts Lane

Photo 6 – High levels of on-street parking and constrained carriageway width on Thamley Road

Photo 7 – Central verge providing space to re-allocate for cycle facilities on Keresley Road

Photo 8 – Parking across footway and constrained carriageway on Bennetts Road South

	
Photo 9 – Constrained width across railway and road bridge on Lythalls Lane	**Photo 9 – Existing cycle connection to Arena Park Shopping Centre from Bedlam Lane**

Corridor:	Kingswinford to Brierley Hill
Local Authority	Dudley Metropolitan Borough Council

Existing Characteristics:

This route runs through largely residential areas between Kingswinford and Brierley Hill, passing through Pensnett, Bromley and Brockmoor. The route mainly follows B roads and residential side roads, with one proposed off road section between Bromley and Brockmoor which utilises local Public Rights of Way. The route passes town centre locations in Kingswinford and Brierley Hill and some industrial development, particularly around Stalling's Lane.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- Narrow traffic lanes throughout the corridor provides limited space for cyclists and creates conflict with motorised vehicles
- Several busy junctions which would be unappealing for the majority of cyclists
- HGV traffic particularly between Stallings Lane and Smithy Lane
- Significant traffic in AM and PM peaks, unappealing environment for cyclists.
- Railway overbridges pose barriers to access and the provision of cycling infrastructure

Constraints:

Section 1 – Manor Park to Stallings Lane (along A4091)

Between Manor Park and A4101/Market Street Junction, the carriageway is constrained with very little space for cyclists and motorised vehicles. Whilst the junction is signalised, there is no staged turning for cyclists and there are no advanced stopping lines to support cyclists.

Between A4101/Market Street Junction and Back Road, the carriageway remains narrow with two lanes of traffic and residential properties in close proximity to the carriageway. There are a number of access points onto Moss Grove (A4091) including side roads and residential proprieties which could create a number of conflicts. Kerbside activity includes street lighting.

Between Back Lane and Stallings Lane, the width of the carriageway does not increase sufficiently and therefore conditions for cyclists continue to be unappealing with motorised vehicles and cyclists sharing a narrow carriageway. Along this small section of the corridor there are hatchings in the middle of the carriageway which do limit the current movement of both cyclists and motorised vehicles. The Moss Grove/Stallings Lane junction is currently signalised but does not provide further infrastructure for cyclists to allow a safe and comfortable movement across the junction.

Section 2 – Stallings Lane to Second Avenue (via B4175)

Between Moss Grove/Stallings Lane junction and Courtland Road via B4175, the carriageway remains narrow with limited space for both motorised vehicles and cyclists. This section of the corridor has several competing movements particularly with access to Lidl, Morrisons and other retail units, this has the potential to cause conflict between users.

Between Courtland Road and Second Avenue there remains limited space on the highway, due to industrial units located on this section of the carriageway there is a significant presence of HGVs which could be intimidating for inexperienced and experienced cyclists. There are small footpaths on either side of the carriageway but they are currently insufficient for shared use.

Section 3 – Second Avenue to Smithy Lane

Between Second Avenue and Stallings Lane/Oak Lane/Tansey Green Road junction via the B4175 continues to have limited highway and footway space. Currently cyclists and motorised vehicles are interacting with limited opportunities for motorised vehicles to overtake cyclists. HGVs access/exit onto B4175 provides a further conflict issue with cyclists. Stallings Lane/Oak Lane/Tansey Green Road junction does not currently have infrastructure in place to support cyclists however, the junction has a tight geometry and therefore traffic speeds are restricted.

Between Stallings Lane/Oak Lane/Tansey Green Road junction and Smithy Lane the carriageway continues to be constrained with two lanes of narrow traffic. Limited footway width is also present on both sides of the carriageway.

Section 4 - Smithy Lane to High Oak (B4179)

Smithy Lane to Tansey Green Road/High Street (A4101) junction follows Tansey Green Road which is a residential street with limited highway and footway width. On street parking was present during the audit which provides a further constraint for cyclists as both cyclists and motorised vehicles have to reposition themselves within the carriageway. Due to the close proximity of the residential properties, there is limited opportunity to increase either highway or footway width to provide some form of cycle infrastructure.

High Street (A4101) is a busy main road with three lanes of traffic, high volumes of traffic are experienced throughout the day with limited space for cyclists with no protection from motorised vehicles. During the site audit, construction work was taking place as part of the A4101 Major Junction Improvement Scheme. There is currently a holding lane for all users wanting to turn right from High Street onto High Oak (B4179) however there is no dedicated infrastructure in place for cyclists.

Section 5 – High Oak to Blewitt Street

Between High Street/High Oak Junction and Tiled House Lane along the B4179, there is a two lane carriageway with limited space. Footway width along this section of the corridor is constrained with residential properties in close proximity providing a further constraint. On street parking is also present on the B4179 which further reduces space.

Between Tiled House Lane and Blewitt Street, highway width slightly increases along the two lanes of traffic however, footway width increases significantly as residential properties are set back from the carriageway. On street parking was evident during the audit which further reduces space on the highway and creates potential conflict between cyclists and motorised vehicles.

Section 6 – Blewitt Street to Hickman Road

This section of the corridor is predominantly off road, the route diverts off Blewitt Street and follows a dirt track behind Grove Pool which re-joins the B4179 prior to the junction at Wallows Road. The off road route does not provide a direct link and is deemed an unnecessary diversion therefore it is advised that the route continues along the B4179 for the entirety of this section.

The B4179 between Wallows Road and Hickman Road has sufficient highway and footway width with the potential to increase space for cycle infrastructure.

Section 7 – Hickman Road to William Street

Hickman Road is constrained by residential properties either side of the carriageway, however the carriageway and footways are of sufficient width to accommodate some form of cycling infrastructure. There are bus stops along this link so that could impede ease of access for cyclists.

There are signalised crossings on B4180 but no dedicated stopping areas marked out on the carriageway. There is a cross verge to the east of Hickman Road which could increase space but the junction currently doesn't accommodate cyclist movements

There is space on Station Road due to the wide carriageway and wide footways on the western side. The footway on the eastern side is limited due to narrower width and residential properties directly fronting the carriageway. The main constraint on this section is the on street parking, with some vehicles mounting the footway. South of Pheasant Street the footway narrows on the western side with properties fronting the carriageway.

Despite road markings, the Gortsy Avenue side junction has wide geometries which could encourage vehicles to approach/exit at speed. The route is more constrained south of Gortsy Avenue with narrow carriageway, relatively narrow footways, properties fronting the carriageway and on street parking.

The major constraint on this section is the railway overbridge adjacent to Fenton Street/Bradleymore Rd. The carriageway narrows with a blind bend reducing visibility. The footway on the southern side of the carriageway narrows and bends sharply to the right, restricting visibility and limits ease of access. There is no footway on the northern side.

Highway space is greater on Fenton Street, with relatively wide carriageway and the footway on the western side of the carriageway widens after the railway overbridge. There is on street parking on the eastern side which limits space for cycling infrastructure, as well as mature trees and properties on both side of the carriageway.

Section 8 – William Street to Venture Way

Fenton Street is largely uphill from William Street to Moor Street which could deter some cyclists.

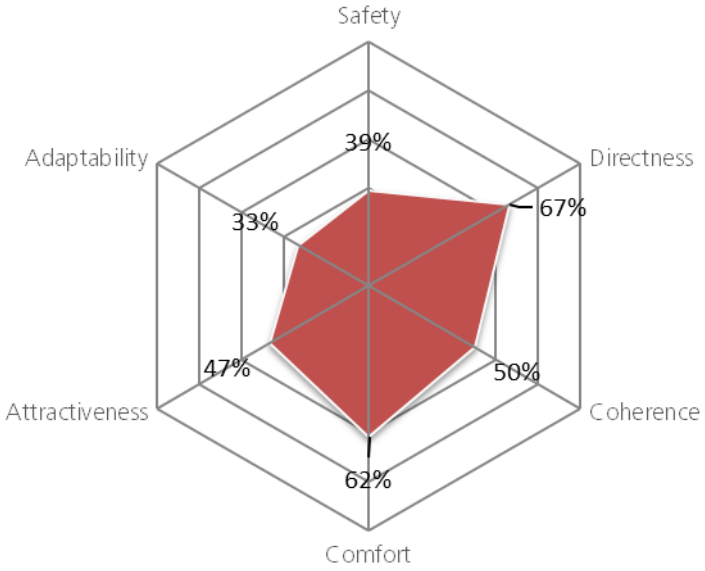
Brockley Close has wide junction geometries which could encourage vehicles to approach/exit at speed.

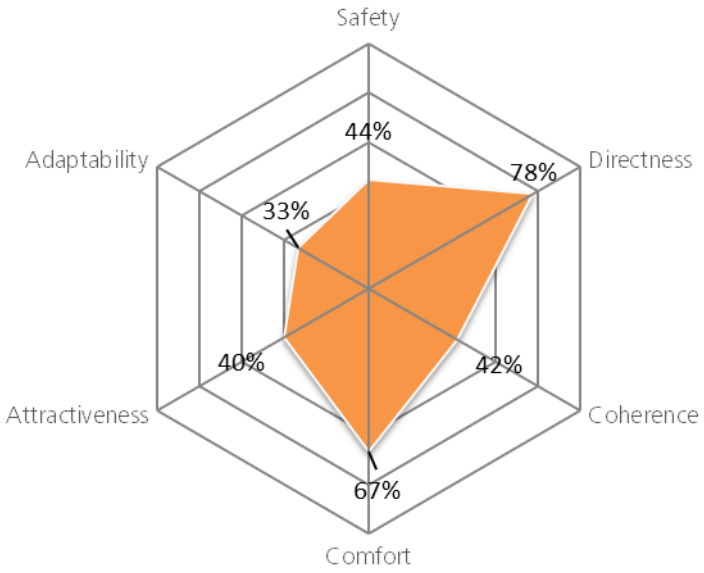
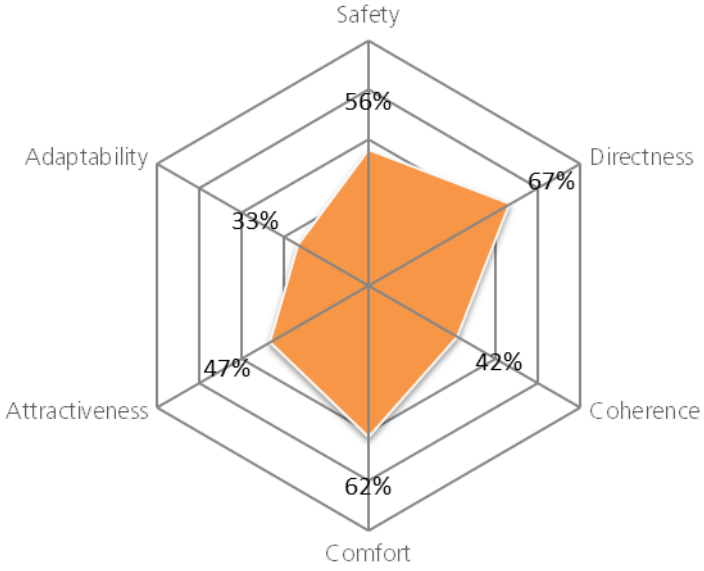
There are some opportunities on Fenton Street with relatively wide footways either side. Highway width is constrained by properties either side of the carriageway. The carriageway narrows south of Sion Close, with some on street parking and mature trees either side of the carriageway. Space is restricted between Sion Close and Moor Street, however there is a grass verge on the northern side of the carriageway which could add increased opportunities for cycle infrastructure.

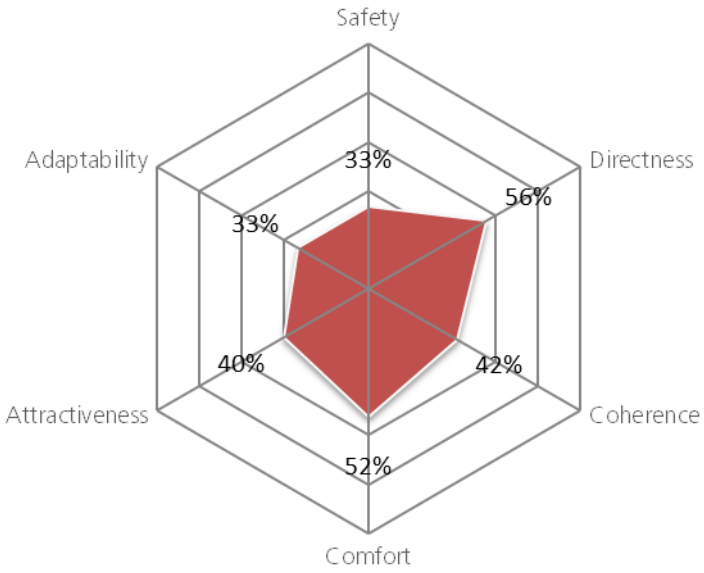
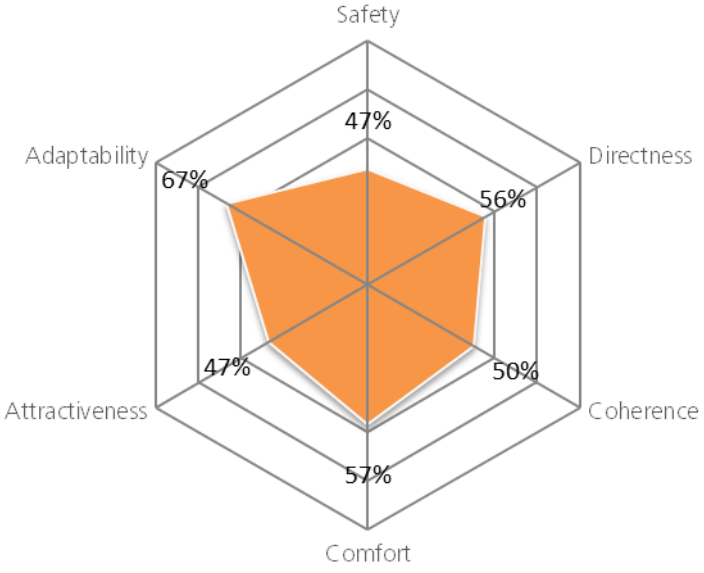
Moor Street continues uphill to High Street, with limited space due to multiple lanes of traffic and properties fronting the carriageway. The westbound lane is less constrained due to width. The footways are largely constrained by width and kerbside activity which would limit ease of access for cyclists. Steps and other landscaping features outside the Moor Shopping Centre are potential pinch points.

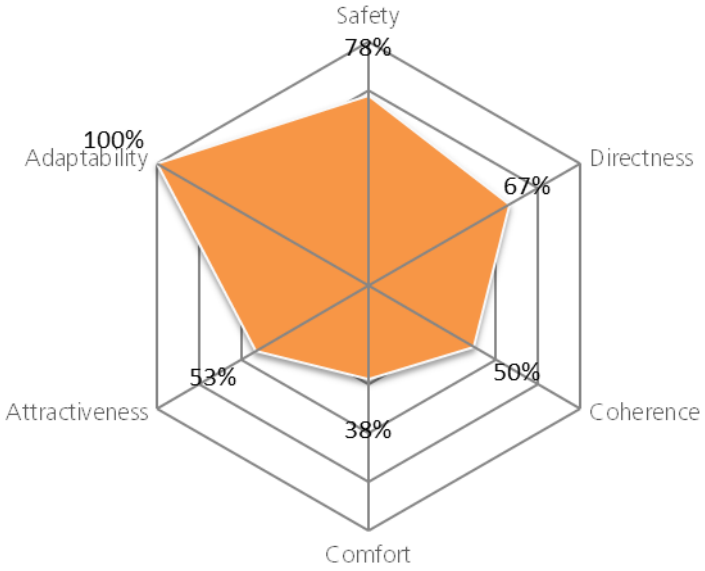
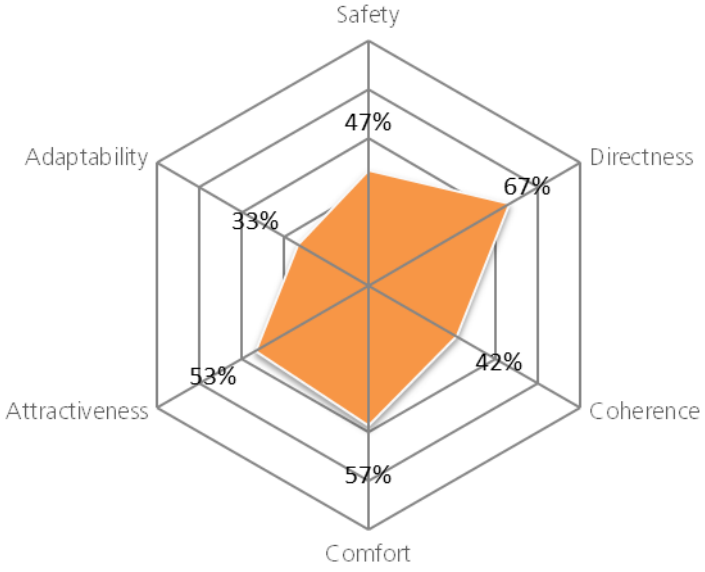
The junction between Moor Street/Cottage Street/Mill Street currently limits ease of access. The surrounding footways are narrow and kerbside activity currently limits space. Junctions do not have designated cycling stopping areas. Traffic volumes could deter some cyclists. Highway width is restricted on Mill Street due to properties either side of the carriageway, with relatively narrow footways and kerb side activity such as signposts, mature trees and bus stops. Buses could also impede ease of access.

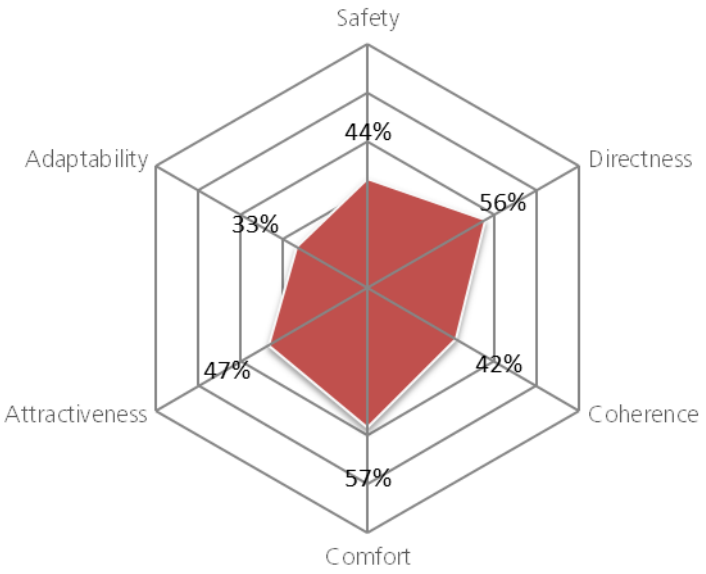
Existing Level of Service (LoS) Assessment:

Section 1 - Manor Park to Stallings Lane	

Section 2 – Stallings Lane to Second Avenue	
Section 3 – Second Aneue to Smithu Lane	

Section 4 – Smithy Lane to High Oak	
Section 5 – High Oak to Blewitt Street	

Section 6 – Blewitt Street to Hickman Road	
Section 7 – Hickman Road to William Street	

Section 8 – William Street to Venture Way	

Opportunities:

Summary Opportunity: Opportunities are limited in many sections, however there is the greatest potential for the provision of shared footway/cycleways

Section 1 – Manor Park to Stallings Lane (along A4091)

- Opportunities are restricted along this section due to limited space. Cycling infrastructure could be provided at junctions to accommodate cyclist movements.

Section 2 – Stallings Lane to Second Avenue (via B4175)

- Opportunities are restricted along this section due to limited space and presence of HGVs which presents a major barrier to cyclists. Junctions could be improved to accommodate cyclist movements

Section 3 – Second Avenue to Smithy Lane

- Opportunities are restricted along this section due to limited space. Cycling infrastructure could be provided at junctions to accommodate cyclist movements.

Section 4 - Smithy Lane to High Oak (B4179)

- Opportunities are restricted along this section due to limited space. Cycling infrastructure could be provided at junctions to accommodate cyclist movements.

Section 5 – High Oak to Blewitt Street

- Between High Oak and Tiled House Lane space is largely restrained, however there are opportunities to provide cycling infrastructure between Tiled House Lane and Blewitt Street, such as shared use footways/cycleways. Parts of the carriageway may be of sufficient width to allow for cycle lanes with adequate clearance from passing vehicles.

Section 6 – Blewitt Street to Hickman Road

- There is sufficient space along the majority of the B4179 to provide some form of cycling infrastructure, although there are a few pinch points in places such as properties fronting the carriageway and kerb side activity such as bus stops and mature trees. This route would offer a more direct route than the offline option. However, the offline option would allow for dedicated infrastructure and would avoid issues with traffic volumes.

Section 7 – Hickman Road to William Street

- There is some highway space on Hickman Road to provide at least shared footways. There is a cross verge adjacent to the B4180 junction which could be utilised to provide an offline cycleway which utilises the signalised crossing
- Opportunities are more limited south of the B4180. The railway overbridge presents a significant barrier to the provision of cycling infrastructure
- There are potential opportunities on Fenton Road to provide cycling infrastructure, particularly utilising the footway on the western side of the carriageway

Section 8 – William Street to Venture Way

- Opportunities are restricted on this section due to lack of space. Uphill sections could deter some cyclist. There is a grass verge on the approach to Moor Street from Fenton Street which could be utilised for dedicated cycling infrastructure

Recommendations for Further Assessment

The site visit identified limited opportunities for dedicated cycling infrastructure along the route. However, this route would benefit from footway improvements, particularly as traffic volumes are high in many sections which could deter cyclists from using the carriageway. We would recommend further assessment of footway provision along the corridor and a feasibility study into the provision of shared footways/cycleways along the route in combination with further assessments of potential light segregated facility where possible. Alternative routes could be considered for assessment around Section 7 to avoid the railway overbridge, which currently limits highway width. A feasibility study of removal on street parking could also be considered in order to increase highway space for cycle infrastructure.

Photographs

Photo 1 – Constrained carriageway with high vehicle flows on A491 near the Moss Grove / High Street / Market Street / Summer Hill junction

Photo 2 – Potential verges to accommodate cycling infrastructure on Stallings Lane, but constrained by trees in the verge

Photo 3 – Wide staggered signalised junction at A4101 High Street Pensnett / B4179, which has recently had improvement works

Photo 4 – Constrained carriageway and footway with on-street/footway parking on Commonside B4179

Photo 5 – Off carriageway footpath through Grove Pool and Middle Pool, potential to upgrade to cycle facilities

Photo 6 – Access to footpath through Grove Pool and Middle Pool. Less direct than the highway route

Photo 7 – Constrained carriageway and footway under railway bridge on Station Road / Fenton Street

Photo 8 – Approach to Brierley Hill High Street from Fenton Street / Moor Street junction

Corridor:	**Tipton to Coseley NCN Route 81**
Local Authority	**Dudley Metropolitan Borough Council**

Existing Characteristics:

This route follows the canal towpath for the majority of the route between Tipton and Coseley, following the NCN Route 81. It routes through the residential area of close to Coseley Railway Station.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- Significant level changes and steep gradient from canal to Coseley
- Poor quality towpath surface on the southern parts of the route
- Un-cycle friendly constrained access points to the canal on some sections
- Limited existing off-carriageway cycle provision

Constraints:

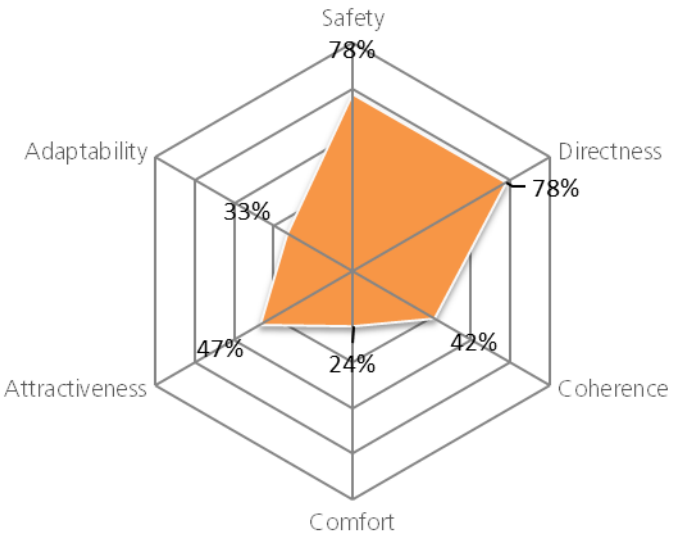
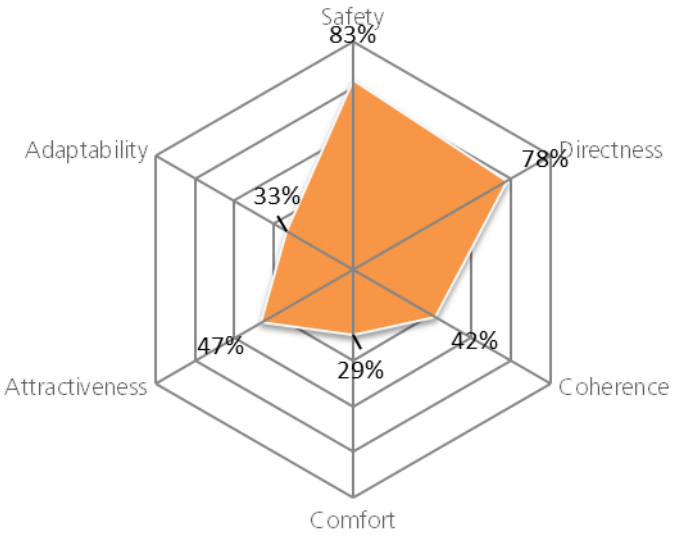
Section 1 – Biddings Lane to Central Drive Road

- This section has narrow carriageway and footways on Biddings Lane and particularly constrained across the bridge over the canal. Carriageway and footway space is also constrained along Havacre Lane.
- There is limited wayfinding and signage.
- The towpath has been upgraded on the northern section of the route, but is poor quality and overgrown in some areas.
- Significant level change and retaining walls between the towpath and Coseley
- No lighting on the towpath, and varying levels of personal security

Section 2 – Central Drive to Tipton Station

- Poor quality, narrow, overgrown towpath in area
- Limited access points onto towpath
- Low bridges (below minimum design standards for cycle routes) on the towpath
- No lighting on the towpath, and varying levels of personal security

Existing Level of Service (LoS) Assessment:

Section 1 - Biddings Lane to Central Drive Road	
Section 2 - Central Drive to Tipton Station	
Opportunities:	

Summary Opportunity:

- Access onto the canal close to the Biddings Lane bridge could be considered
- Existing access points to the canal towpath, and towpath itself could be improved
- The Coseley Canal tunnel could provide an alternative route. It is wide enough and high enough to provide a cycle track though it, which would avoid the significant level changes. However, this would have high cost implications and would not connect with the trip attractors of Coseley and the railway station.
- Kenelem Rd offers an alternative quite residential road access to the towpath with a reasonable gradient.

Recommendations for Further Assessment

Whilst the canal network and towpaths offer opportunities for cycle routes, they have issues of connectivity issues with limited access points. This route would benefit from improvements to what forms the existing NCN Route 81, and feasibility of upgrading the Coseley tunnel could be explored.

We would recommend further assessment of the feasibility of providing more accesses onto the towpath and a study into improving the alternative route to access Coseley, using Bridge Street and Bayer Street should be considered.

Photographs

Photo 1 – Biddings Lane, bridge over canal

Photo 2 - Canal towpath looking south from Biddings Lane Bridge

Photo 3 – Residential road (Bridgewater Drive) providing access to Towpath

Photo 4 – Existing narrow footway

Photo 5 – Significant level change and narrow access points to towpath, south of Coseley Tunnel

Photo 6– Low bridges on Hurst Lane

Corridor:	**Smethwick to West Bromwich and Wednesbury**
Local Authority	**Sandwell Metropolitan Borough Council**

Existing Characteristics:

This route provides a link between Wednesbury, West Bromwich and onto Smethwick. The route passes through industrial areas, residential streets and skirts West Bromwich town centre. Following consultation with Sandwell Metropolitan Borough Council, connections to Smethwick Rolfe Street and Galton Bridge railway stations have been considered in this assessment sheet.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- Access is a constraining factor on many sections of this route. This is mainly due to high levels of kerb side activity and instances of on road parking, particularly in residential and industrial areas where the route would utilise narrower side roads and many properties front the carriageway.
- Some sections of the route particularly near to West Bromwich town centre have existing high quality provision, but this is not consistent of continuous.
- Certain sections of the route are not suitable for cyclists; these consist of dual carriageways with high traffic volumes and speeds and no cycling infrastructure provided.
- The route is often convoluted, with lots of turning movements resulting in an indirect route. The cycle route often utilises dense residential areas, which may be hard to navigate and would allow limited space for dedicated cycling infrastructure

Constraints:

Section 1 Smethwick Rolfe Street to M5

- Cyclists have to cross multiple lanes of traffic outside Smethwick Rolfe Street railway station, although a signalised crossing is provided. The current pedestrian signalised crossing is segregated which could cause delay to cyclists.
- There is no footway or cycleway infrastructure on the A457, but cycle road markings and share footway/cycleways are provided on the parallel B4169. There are high levels of kerb side activity along this section, with many shop frontages, lampposts, and bus stops which could conflict with cycle movements.
- On street parking is present and bus stops which could impede access for cyclists. Highway space is limited by shop fronts to the south and a boundary wall and the A457 to the north. Cyclists could be subject to high traffic volumes on the A457 which runs close to the B4169
- A shared footway/cycle way is provided onto the A457 south of the Telford Way roundabout. Width is generally good, but this section is limited by poor crossing facilities across access junctions and the approach/exit of the roundabout to/from Fenton Street. Here width and space is limited with no priority for cyclists.
- No infrastructure is provided on Telford Way however cyclists can utilise a cycle route that continues down Oldbury Road for a short section, crosses the canal prior to Smethwick Galton Bridge railway station and continues onto Roebuck Lane. The crossing of Oldbury Road is staggered which could cause delay to cyclists and limit ease of access.
- The canal crossing includes poor surface quality with excessive bollards and only a small section of dropped kerb to access the bridge (in order to stop vehicular access). Roebuck Lane is limited by on street parking, lack of lighting, narrow carriageway width and site access which could cause safety issues for cyclists and limit ease of access. Footways are generally poor, with narrow width

and raised kerbs which would limit ease of access. This section is relatively isolated which could cause personal safety concerns. The cycleway/footway then continues offline to Kenrick Way, which is generally narrow with lots of vegetation and steep gradients. The staggered crossing on Kenrick Way could cause delay for cyclists.

Section 2: M5 to Trinity Way

- The M5 underpass presents an unattractive environment for cyclists. Visibility is poor and could cause personal safety concerns. The underpass is relatively narrow and low. The footway/cycleway from Kenrick Way narrows on the approach to the underpass, which could limit ease of access.
- Roebuck lane has sufficient width to accommodate cycling infrastructure. The route is currently limited by on street parking, narrow footways and site access with HGV presence. Denser lighting could be provided.
- Highway width is relatively good on High Street; constraints on this section include on street parking, with some instances of vehicles parking on the footways, and side access junctions with poor crossing facilities. Highway space is more restrained on the approach to Trinity Way, with shop fronts either side and narrower footways.

Section 3 High Street, Overend Street to All Saints Way

- This section of the route has some sections of existing cycle provision, but it is not continuous, and varies from segregated and shared use. This creates a lack of clarity and continuity, deterring cyclist from using the route.
- Traffic flows on this section are high, and on-street parking limits space for continuous cycle provision.
- Provision of cycle parking and wayfinding to trip attractors of West Bromwich Town centre should be increased.

Section 4 All Saints Way to Old Meeting Street

- Existing high quality segregated footway / cycleway infrastructure is provided across the grade separated roundabout junction of A41 / All Saints Way / Cronehills Linkway.
- A segregated cycleway/footway is provided with a segregated crossing across All Saints Way. Cyclists will interact with multiples lanes of traffic and the current crossing could cause some delay
- Width could be improved on the footway to Hargate Lane. The section between Hargate Lane and Old Meeting Street is not intuitive and does not follow a straight line of travel. This route is also constrained by lack of highway space; property access; on street parking, including parking on the footway; and poor quality footway provision with lack of continuity onto other streets.
- Highway width is greater on Peel Street and Garratt Street, with wider footways and/or carriageways, however this section is still limited by lack of continuity, side junctions and property access which could limit ease of access and cause safety issues.
- More direct options should be considered.

Section 5 Old Meeting Street to Brecknock Road

- Highway space is generally good with wide footways. However, this section is constrained by property access and side junctions, on street parking, presence of HGVs/buses and high traffic
- The crossroad junction with the B4149 is lacking quality crossing facilities in places, particular on the New Swan Lane branch where pedestrian/cycle signals are not provided. Central islands and dropped kerbs are currently limiting highway space. This junction could cause delay to cyclists.
- Crossing facilities for site access and side junctions could be improved, including dropped kerbs, to allow continuity of movement

Section 6 Brecknock Road to Portobello Road

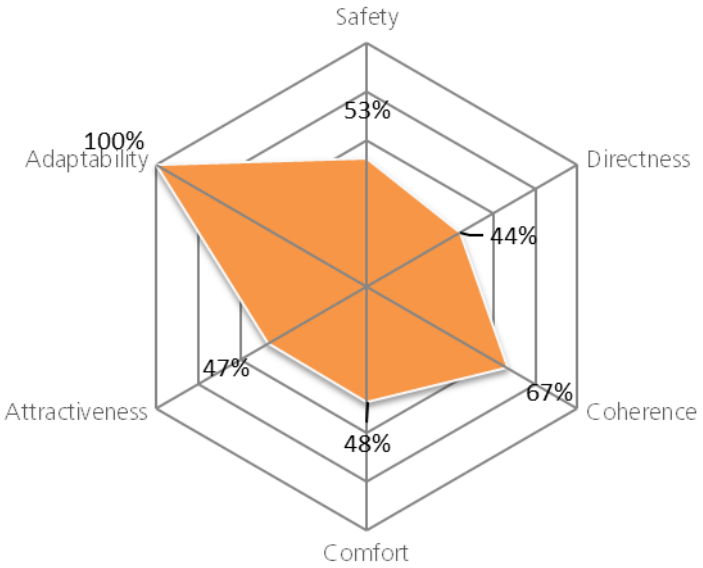
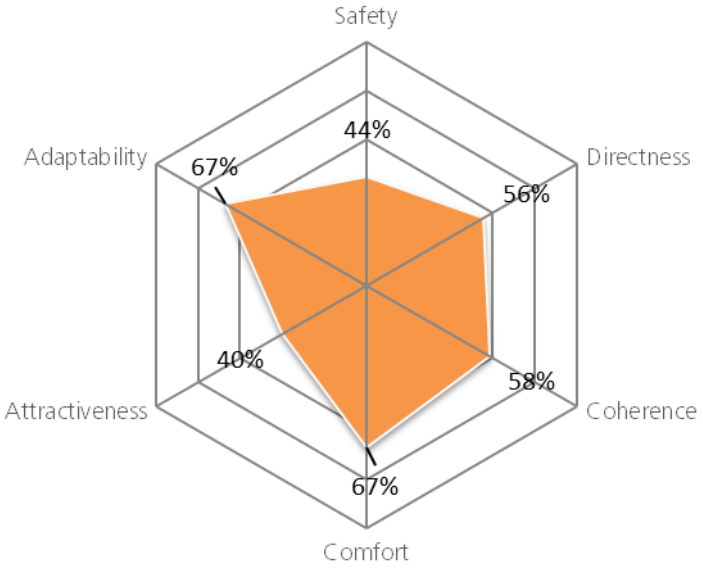
- There are similar constraints to Section 5 on this section. Vehicles accessing/egressing driveways and site entrances could cause safety issues and limit ease of access.
- Crossing facilities on New Street junction limit space and ease of access, with tight corners, mature tree plantings and possible delay to cyclists accessing Hill Top Road. To the north of New Street, highway width becomes more constrained with greater kerbside activity and shop fronts either side of the carriageway.
- There are steep sections on this route which may discourage cycling.
- The section from Melbourne Close to Portobello Road is not intuitive and does not follow a straight direction of travel. Space is generally constrained by narrow highway width, on street parking and residential access either side of the street.

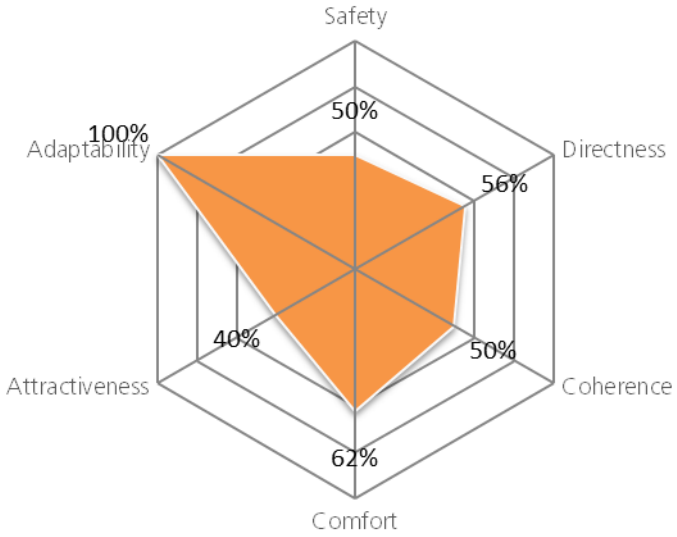
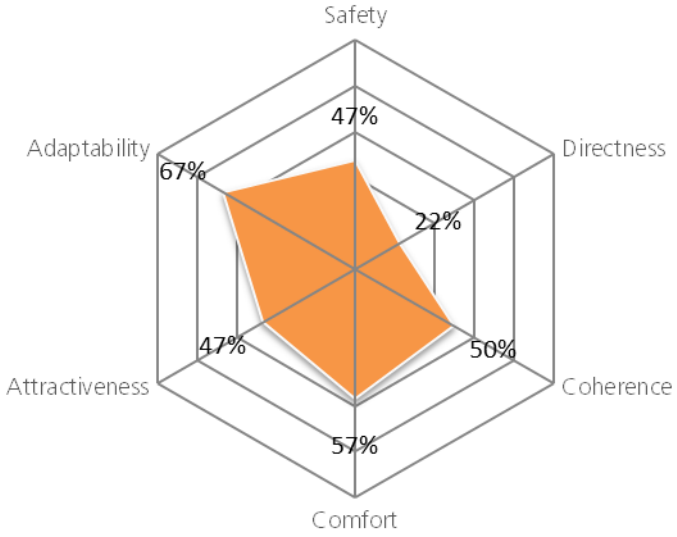
Section 7 Portobello Road to Potters Lane

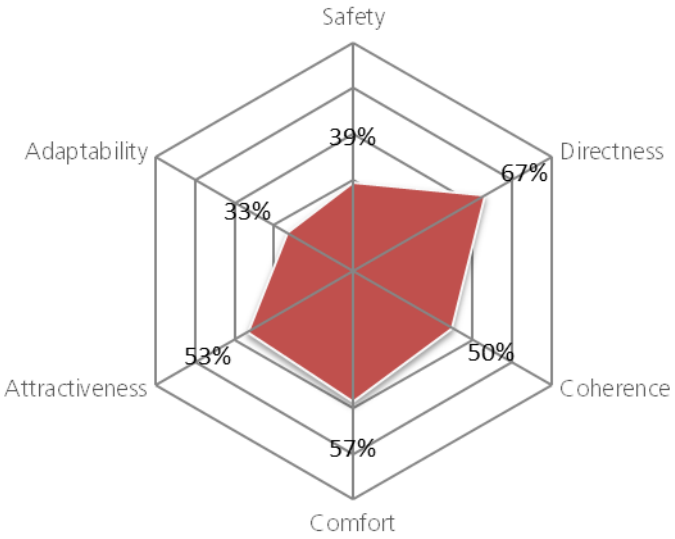
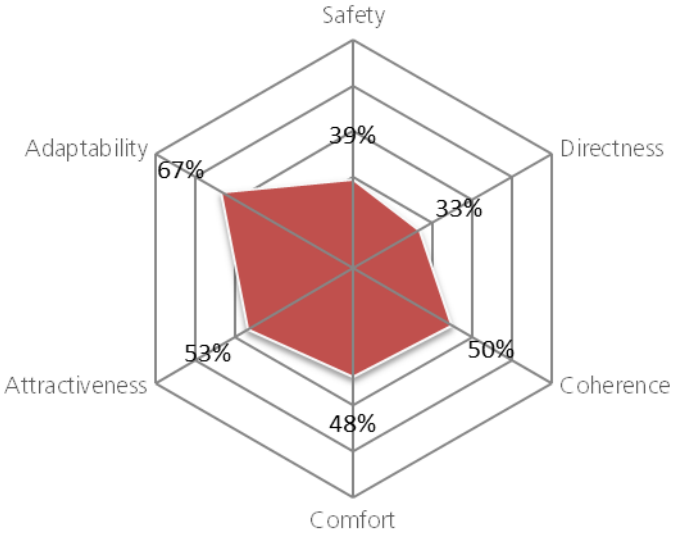
- Highway space constraints continue on Portobello Road due to narrow carriageway, on road parking – including parking on footways – and residential access on either side of the carriageway. This could limit ease of access. Highway space improves on Tame Street onto Holloway Bank. On Holloway Bank cycle lanes are provided on either side of the carriageway, however they do not provide sufficient clearance from passing vehicles. These could cause intimidation/safety concerns, particularly in the presence of HGVs
- Other constraints include on road parking, including parking on the footway, steep gradient on Holloway Bank and site access and side junctions. Poor quality footways are provided, with a lack of dropped kerbs in places, which could impede ease of access for cyclists. Denser lighting could be provided.

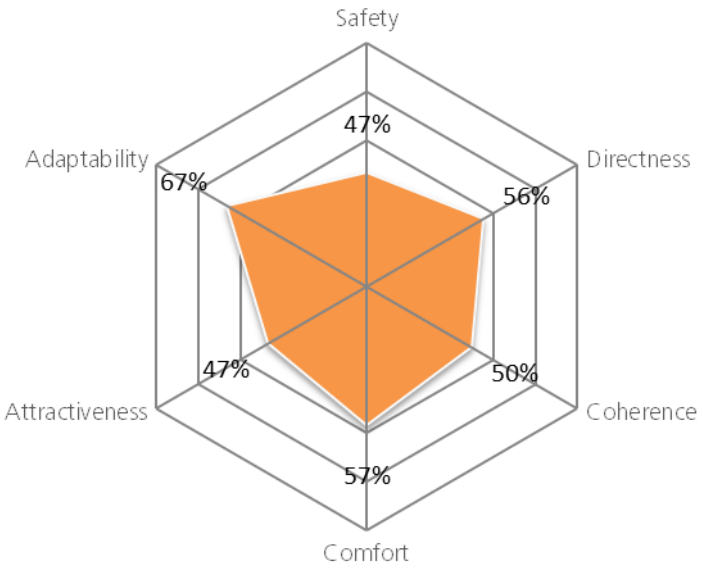
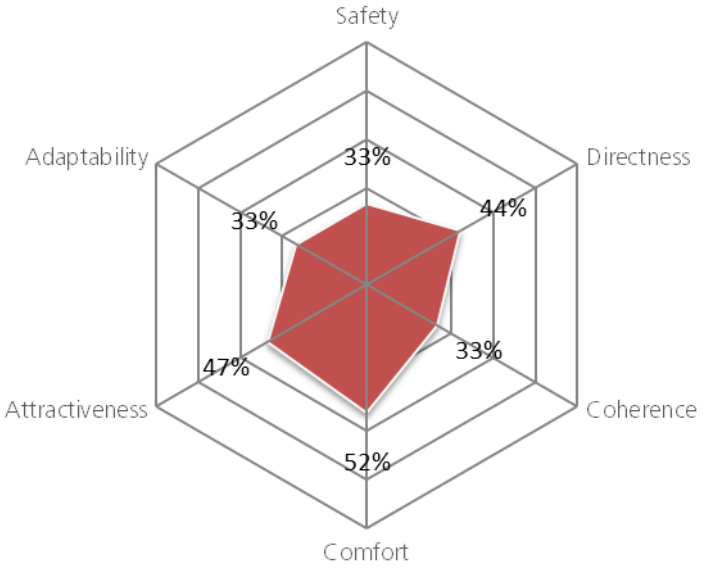
Section 8 Potters Lane to Whitney Street

- Highway space and quality of infrastructure on Potters Lane is generally poor. Between Holloway Bank and Perry Street there is a narrow footway (absent on one side in parts) with lots of on street parking. Site access and concealed entrances could limit ease of access and cause safety issues. Highway space improves north of Perry Street, although on street parking continues, with narrow footways and some side junctions. Lighting is generally poor. Similar conditions continue on Victoria Street
- Crossing facilities on Holyhead Road are currently limited with no priority given to cyclists. High traffic volumes and poor visibility on the approach to Holyhead Road could cause safety issues and delay to cyclists.
- Issues on Dudley Street include lack of crossing facilities on the car park entrance on high traffic volumes with lack of separation. Highway width is limited on this section. A signalised crossing is provided onto Trouse Lane, although this is segregated and could cause some delay
- Highway width is limited on Trouse Lane with kerb side activity including bus stops, car parking and shop fronts limiting ease of access. There is an entrance/exit from a petrol station which could cause safety issues for cyclists and limit ease of access.
- Alternative routing of Bridge Street and Holyhead Road should be considered.

Existing Level of Service (LoS) Assessment:	
Section 1 – Rolfe Street Railway Station to M5	
Section 2 – M5 to Trinity Way	

Section 3 – Trinity Way to All Saints Way	
Section 4 – All Saints Way to Old Meeting Street	

Section 5 – Old Meeting Street to Brecknock Road	
Section 6 – Brecknock Road to Portobello Road	

Section 7 – Portobello Road to Potters Lane	
Section 8 – Potters Lane to Whitney Street	

Opportunities:

Section 1 Smethwick Rolfe Station to M5

- There is a verge between the A457 and B4169 that could be utilised for cycle provision along parts of this section.
- National Cycle Route 5 from Roebuck Lane to the M5, runs adjacent to this section of the route, providing connectivity to other cycle routes. Other sections of NCR 5 could be utilised along the Birmingham Canal to connect with Rolfe Street railway station.
- There is space on this section to enhance existing infrastructure, including grass verges on the B4169. Opportunities are currently limited by lack of priority given to cyclists and poor quality footways/cycleways.

Section 2 M5 to Trinity Way

- The section between Kenrick Way and Roebuck Lane has recently been upgraded to high quality segregated provision.
- Roebuck Lane carriageway is wide.
- Good connections with National Cycle Network (NCN)
- The route is currently constrained by on street parking, property access and kerb side activity which would need to be managed.

Section 3 Trinity Way to All Saints Way

- Existing intermittent cycle provision on Congregation Way, Reform Street, and Cronehills Linkway
- Opportunities to connect this provision and provide continuous provision from High Street to All Saints Way. Routes via Overend Street should be considered.
- Consistent provision with clarity of route should be developed.
- Alternative routes through West Bromwich could also be considered.

Section 4 All Saints Way to Old Meeting Street

- Low vehicle speeds and flows on residential roads, but this section is convoluted and is limited by lack of through routes.
- Alternative routes could be considered to provide a more direct route.
- Connecting the existing high quality provision at All Saints Way and the underpass provision at Albion Roundabout.

Section 5 Old Meeting Street to Brecknock Road

- Footway width is generally good; improvements should focus on managing kerb side activity and improving crossing facilities to improve ease of access and safety for cyclists.

Section 6 Brecknock Road to Portobello Road

- Footway width is generally good; improvements should focus on managing kerb side activity and improving crossing facilities to improve ease of access and safety for cyclists.
- Alternative routes should be considered from Melbourne Close to Portobello Road to provide a more direct route, such as on Hill Top Road.

Section 7 Portobello Road to Potters Lane

- Highway width is sufficient on Holloway Bank, with cycle lanes either side of the carriageway. This could be replaced with shared footway/cycleway facilities. Management of kerb side activity, side junctions and site access, and on road parking could improve safety and ease of access for cyclists.

Section 8 Potters Lane to Whitney Street

- There are limited opportunities on Potters Lane, so alternative routes should be considered, such as a less convoluted route on Bridge Street and Holyhead Road to allow ease of access and maintain safety for cyclists.

Photographs

Photo 1 – Shared footway/cycleway between A457 and B4169 close to Smethwick Rolfe Street railway station

Photo 2 – Existing cycle logos, lots of kerbside activity, on-street and on pavement parking on B4169 High Street

Photo 3 – Narrow, overgrown shared footway/cycleway on the west side of Telford Way

Photo 4 – Existing segregated, off-carriageway provision between Kenrick Way and the M5 motorway underpass

Photo 5 – Shared footway/cycleway underpass, under M5	Photo 6 – Wide carriageway constrained by on-street parking
	
Photo 7 – Wide footways, carriageway and parking bays on High Street close to Hope Street	**Photo 8 – End of existing shared footway/cycleway on Congregation Way east of the Expressway overbridge**
	
Photo 9 – Segregated footway/cycle on bridge over The Expressway A41	**Photo 10 – Existing toucan crossings and segregated footway/cycleway a the All Saints Way / A41 junction**
	
Photo 11 – Garratt Street. Quite residential roads constrained by on-street parking.	**Photo 12 – Existing off-carriageway shared provision under the Albion Roundabout**

Photo 13 – Wide footway and verge on the A4196 Old Meeting Street

Photo 14 – On-street parking bays on A4196

Photo 15 – High traffic flows and constrained footways on High Bullen A461, Wednesbury

Photo 16 – Potential off-carriageway route near Wednesbury Bus Station, north of Holyhead Road

Alternative Route and Recommendation for Further Assessment

- Sections through Smethwick and West Bromwich currently have some high quality cycle provision. It is recommended that continuity and consistency of facilities are provided and improvements to route clarity and wayfinding are considered in more detailed studies. There are good foundations to work on between Smethwick and West Bromwich.
- It is also recommended that alternative routes are considered in Hill Top where the cycle route uses convoluted residential side streets. Further studies could be considered to assess the feasibility of removing cycle lanes on Holloway Bank and providing improve footway/cycleway facilities
- Alternative routes could also be considered in the vicinity of Potters Lane, where current infrastructure is poor and there are significant barriers to cyclist movements.

Corridor:	**Oldbury to Old Hill**
Local Authority	**Sandwell Metropolitan Borough Council**

Existing Characteristics:

This route provides a link between Oldbury, Langley Green, Blackheath and Old Hill. This route is single carriageway; large sections utilising side roads in residential and industrial areas, with limited sections on main roads. Much of the route passes through dense residential areas, with limited cycling infrastructure. There are steep sections of the route from Blackheath to Old Hill.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- The topography along sections of this route is a significant constraining factor, particularly on Station Road, Old Hill which has a steep gradient
- The route is convoluted, with lots of turning movements resulting in an indirect route
- Poor lighting and perceptions of personal safety on sections of this route such as Mill Lane, creating an unattractive route for cyclists
- Access is a constraining factor on many sections of this route. This is mainly due to high levels of kerb side activity and instances of on road parking, particularly in residential areas where the route would utilise narrower side roads and many properties front the carriageway
- There is a lack of crossing facilities in places, which could inhibit cyclist movements
- The cycle route often utilises dense residential areas, which may be hard to navigate and would allow limited space for dedicated cycling infrastructure
- Certain sections of the route are too steep for most cyclists and would be a major barrier to access

Constraints:

Section 1 Bromford Road to Birmingham Road

- Cycle road markings are provided on Bromford Road and there is sufficient carriageway width to provide cycling infrastructure, however there are instances of HGV movements which could deter some cyclists and pinch points on the road such as central traffic islands which could impede ease of access.
- There is some kerbside activity in the vicinity of Sandwell and Dudley Railway Station, with bus stops, light posts and information points that cause impede cycle movements. There is a wide footway on the western side of the carriageway as it passes under the railway overbridge, however the width is restricted on the eastern side.
- Two-way cycling infrastructure could be accommodated on McKean Road with one-way traffic flow and wide footway, however high levels of on-street parking were observed, even where double yellow lines are present. This could inhibit cyclist movements and would need to be adequately controlled
- Highway width is constrained along Broadwell Road, with boundary walls, property access and trees limiting width for cycling infrastructure. The footway may have an opportunity to be widened to allow shared use, with some kerb side activity such as light posts which could inhibit cycle movements. There are some instances of on road parking which could impede ease of access. Space is constrained on approach to Birmingham Road due to property access, on and off road parking and narrow footways. There is greater space to the west of the carriageway but vehicles accessing/egressing unit could impede access and cause safety issues.

- Throughout this section, side junction crossing facilities could be improved to allow ease of access and maintain safety of the route

Section 2 Birmingham Road to Western Road

- There is on street parking provision on Green Street and Stone Street on the eastern side of the carriageway, which could limit space for cycling infrastructure. Constraints on the western side are limited due to wide footway provision, although crossing facilities should be provided on Stone Street roundabout so as to not impede access.
- Space on Stone Street is currently constrained by properties either side. The main constrains on Tat Bank Road include on road parking and access to industrial units. This could restrict the provision of cycling infrastructure and impede cyclist movements. Parked vehicles appear to block large sections of the footway. Kerb side activity such as boundary walls, fencing and bollards also limit ease of access and space for cycling infrastructure. There are less constraints on the approach to Western Road, with wide footways and less kerb side activities.

Section 3 Western Road to New Henry Street

- Highway width is constrained on Western Road as there is no footway provision on the western side of the carriageway, although on the eastern side there may be enough space for shared use. Kerb side activity is limited accept in the vicinity of Langford Green railway station where cars are parked on the footway, which could impede cyclist access. The access junction to the railway station car park could also cause access and safety issues. Crossing facilities should be provided onto Station Road to allow safe access for cyclists.
- The quality of infrastructure on Mill Lane is currently in a poor condition, with abandoned land either side, limited street lighting, narrow discontinuous footways and restricted carriageway width.
- There is space on Langley Road with occasional kerb side activity such as light post and property access.

Section 4 New Henry Street to Penncricket Lane

- Highway width on the junction with Langley Road is currently constrained by narrow footways and property access. There is space on New Henry Street, however on road parking and property access may inhibit cyclist movements. Highway width is most constrained on the eastern side with limited footway width.
- Ease of access is currently limited on the crossing with the A4123/Wolverhampton Road due to a segregated signalised crossing, with limited space on the central island.
- There are wide footways on Causeway Green Road, although kerb side activity is high on this section of the route with many properties fronting the carriageway. This could inhibit ease of access for cyclists.

Section 5 Penncricket Lane to M5

- There is highway width on this section, however provision of cycling infrastructure is constrained by property access and on road parking between Grafton Road and Cakemore Road. There is greater highway width on the approach to Cakemore Road with wider footways and less properties. Space is constrained on Penncricket Road to the north of the Cakemore Road due to priority controlled traffic calming, on road parking with vehicles mounting the curb and light posts and bus stops which may limit ease of access. Highway width is constrained at the railway overbridge with minimal footway provision.

- On the western side of the M5, space is increased due to greater footway and carriageway width. However, property access and other kerbside activity such as on road parking and light posts

could impede access for cyclists. Mini roundabout junctions at Harrold Road, Hackett Road and York Road currently restrict ease of access for cyclists. From Hackett Road, space is restricted due to on road parking, property access, light posts and telegraph poles and narrower highway and footways.

Section 6 M5 to Birmingham Road

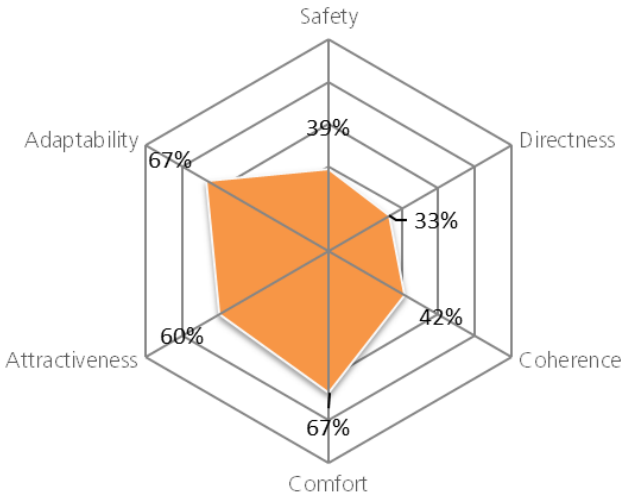
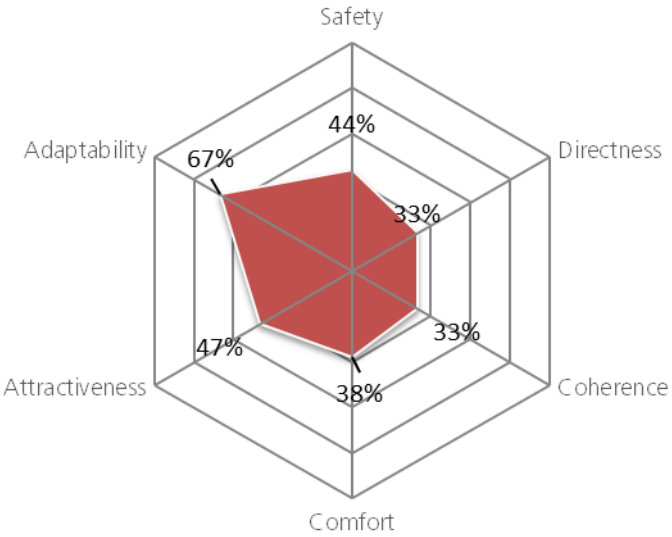
- Current constraints on Summer Road and Habberley Road include property access and other kerb side activity such as on street parking. There may be issues with ease of access on Britannia Road due to the school site to the east of the carriageway. There is a lack of crossing facilities along this section of the route, which should be required from Britannia Road to Carlyle Road for ease of access.
- Kerbside activity such as on street parking, property access and telegraph poles currently restrict space on Carlyle Road

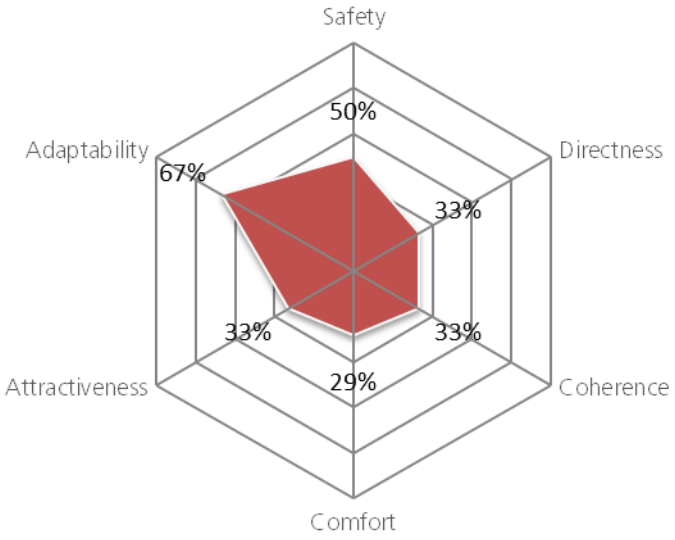
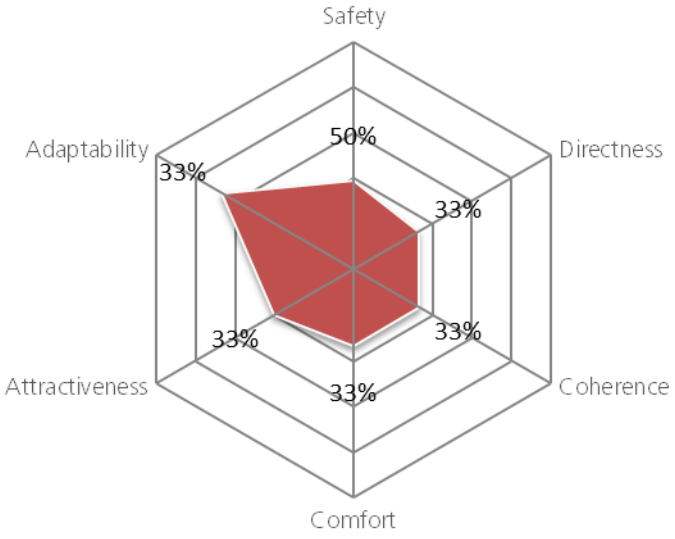
Section 7 Birmingham Road to Higgs Field Crescent

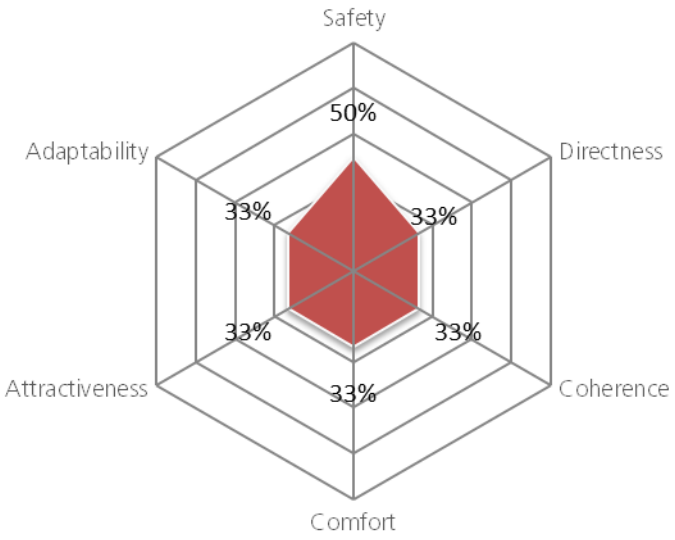
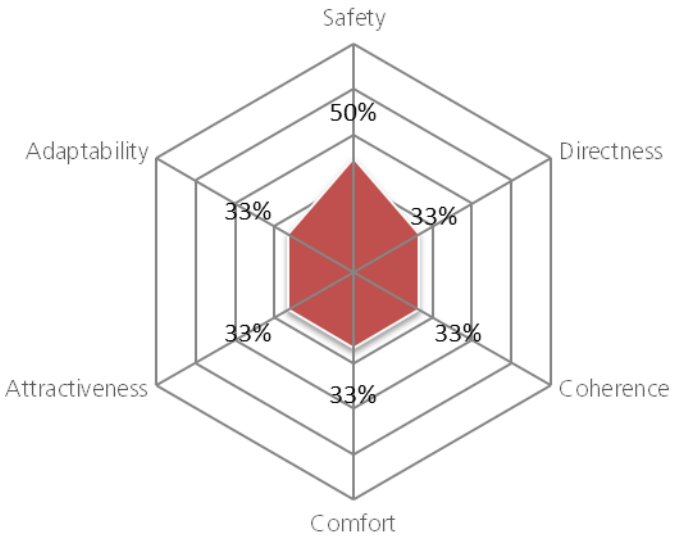
- Dedicated crossing facilities should be provided on Birmingham Road to allow ease of access for cyclists. Highway width is constrained on Regis Road due to on street parking, property access and other kerb side activity including mature tree planting which could restrict ease of access and what cycling infrastructure could be provided.
- There are restrictions on High Street and Holly Road due to high levels of kerb side activity, including on road parking and property access which could restrict ease of access.
- Waterfall Lane is not suitable for most cyclists due to a 15% incline on this road.

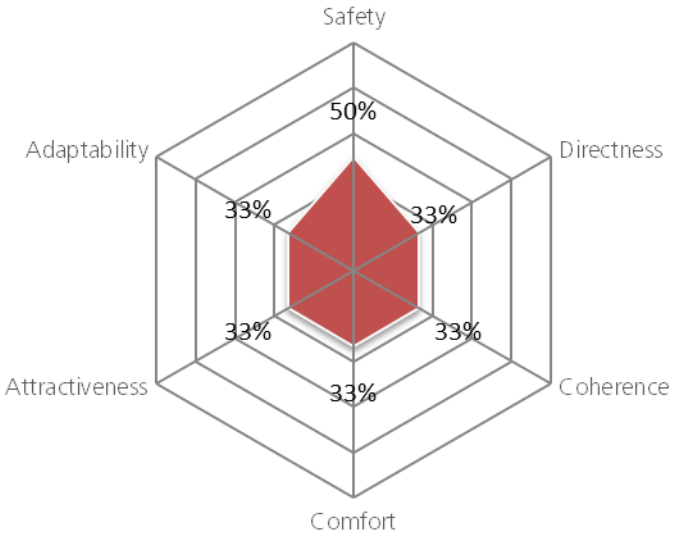
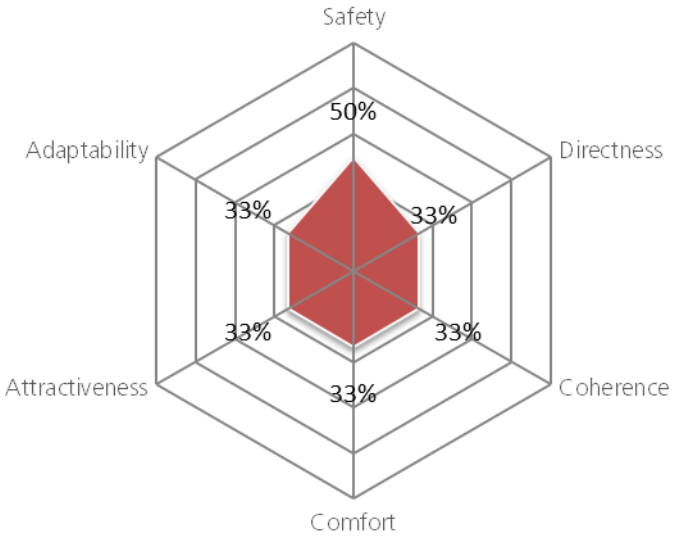
Section 8 Higgs Field Crescent to Mace Street

- Waterfall Lane is not suitable for most cyclists due to a 15% incline on this road.
- There is sufficient space on Waterfall Lane past Perry Park Road, with carriageway width that could support cycling infrastructure. There are high levels of kerb activity such as property access which could impede ease of access. Sections of the road are still quite steep which could deter some cyclists.
- There is adequate footway width on Station Road between Waterfall lane and Wrights Lane, however high levels of kerbside activity could impede cyclist movement. Highway width is more constrained past Wrights Lane due to properties fronting the carriageway, narrower footways and on street parking. There is a lack of crossing facilities on the Halesowen Road/Station Road/Heathfield Way roundabout, which could restrict ease of access and cause safety issues.
- Constraints continue on Halesowen Road with space restricted by on road parking and properties fronting the carriageway, which could restrict ease of access for cyclists

Existing Level of Service (LoS) Assessment:	
1 -Bromford Road (A4034) to Birmingham Road (A457)	
2- Birmingham Road (A457) to Western Road	

3- Western Road to New Henry Street	
4 - New Henry Street to Penncricket Lane	

5 - Penncricket Lane to M5	
6 - M5 to Birmingham Road	

7- Birmingham Road to Higgs Fields Crescent	
8 - Higgs Field Crescent to Mace Street	

Opportunities:

Section 1 Bromford Road to Birmingham Road

- There is limited highway space along this section, except on Bromford Road and McKean Road where dedicated cycling infrastructure could be provided.
- Instances of on road parking would need to be adequately controlled to allow ease of access.

Section 2 Birmingham Road to Western Road

- The large traffic island on Birmingham Road could provide space for a dedicated crossing. Along the remainder of this section, instances of on road parking would need to be adequately controlled to allow ease of access

Section 3 Western Road to New Henry Street

- There would seem to be sufficient highway space on Western Road and Langley Road to provide cycle infrastructure. Whilst current conditions on Mill Lane are inadequate for the provision of cycling infrastructure, redevelopment of the site could provide space for cycling infrastructure.

Section 4 New Henry Street to Penncricket Lane

- There is adequate highway width on Causeway Green Road to allow cycling infrastructure, however high levels of kerb side activity could impede ease of access for cyclists. Highway space is restricted on Penncricket Lane due to high levels of kerb side activity, which could limit opportunities for cycling infrastructure. Other local through roads could be investigated, such as Farm Road and Pound Road.

Section 5 Penncricket Lane to M5

- Highway space is restricted in places due to high levels of kerb side activity. Cycle routes could utilise nearby links such as Cakemore Road, which has lower levels of kerb side activity and sufficient highway width. This could also provide access to Rowley Regis Railway Station.

Section 6 M5 to Birmingham Road

- Highway space is restricted along this route due to high levels of kerb side activity. The use of narrow residential streets limits the ability to provide cycling infrastructure. Cycling routes could utilise nearby highway links such as the A4034 and the A4100, which may have better quality infrastructure, such as wider footways and dedicated crossings, and greater highway space that may allow for dedicated cycling infrastructure.

Section 7 Birmingham Road to Higgs Field Crescent

- There are major constraints to cycle access along this section of the route, including steep inclines which limits the suitability of the link. High levels of kerb side activity also limit highway space. The suitability of surrounding links should be accessed to determine whether there is a suitable alternative.

Photographs

Photo 1 – Narrow carriageway and footway with high levels of kerbside activity Halesowen Road in Old Hill

Photo 2 – Constrained Junction with Halesowen Road / A459 / Station Road

Photo 3 – Steep 15% incline with on-street parking on Waterfall Lane

Photo 4 – Narrow footway, poor lighting and derelict unattractive route on Mill Lane

Photo 5 – High levels of HGVs Kerbside activity overrun of footway on Station Road Old Hill

Photo 6 – Narrow carriageway and constrained footway on Broadwell Road

Alternative Route and Recommendation for Further Assessment
Given the constrained nature of the route and low scoring CLoS on many of the sections, it is recommended that an alternative route is considered. The topography of sections 7 and 8 make the provision of attractive cycle routes difficult and the indirect, convoluted routing of sections 2-5 would lead to a lack of route clarity. Therefore, it is recommended that an alternative route from Blackheath to Oldbury is included for consideration in further studies. This route (shown on the plan in Appendix A) is mainly a dual carriageway with a central reservation and verges, with possibilities to reallocate space to provide high quality cycling facilities with a direct route along the A4034.

Corridor:	**Dickens Heath to Solihull**
Local Authority	**Solihull Metropolitan Borough Council**

Existing Characteristics:

The route from Dickens Heath to Solihull via B4102 provides an arterial route into Solihull town centre, passing through Blossomfield, Shirley Heath, and dissects the A34 Stratford Road. There is some existing cycle provision in the form of advisory cycle lanes through Blossomfield, and shared footway/cycleways near to Dickens Heath in the south west of the route.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- Constraints to cycle routes due to limited highway space in residential areas in Section 1 to Section 3
- Improved crossing facilities are required on intersections and junctions to allow ease of access and maintain safety of cycling routes
- Infrequent issues with on road parking, particularly in Section 3 which could cause barriers to the provision of cycling infrastructure
- The railway overbridge adjacent to Solihull Railway Station limits highway width on part of the route impacting on potential cycle infrastructure

Constraints:

Section 1 Buckridge Lane to the B4102

- Existing step-free access onto the canal towpath, but with constrained geometries. Crossing facilities and the quality of towpath would need to be improved.
- Existing shared footway/cycleway on the west side of the carriageway, although lack of clarity of how to access this at the canal bridge, with overly complicated crossing provision to get cyclists back onto the carriageway.
- Residential development at the start of the route, with limited highway space due to properties fronting the carriageway and parking access. Provision of cycling infrastructure impeded by driveway access to properties. On road cycling infrastructure could be provided if traffic volumes are low.
- North of Brixfield Lane there are wide footways and a small grass verge on the eastern side of the carriageway, with some kerb side activity such as post boxes, light posts and trees.
- There is greater highway width on Dickens Heath Lane, with some grass verges that may allow for dedicated cycling infrastructure, despite kerb side activity such as light posts, signs, telegraph poles and property access/egress. North-east of Dickens Heath village, an overbridge restricts highway width, with a central island and fencing along the footways on both sides.
- Limited restrictions to the north of the overbridge, with wide shared footway/cycleway to the west of the carriageway, where existing cycle route begins/ends. Tythe Barn Lane access junction and occasional properties could inhibit ease of access and safety.

Section 2 B4102 to Chalford Way

- Limited highway space in places due to high levels of kerb side activity. However, provision of wide footways and some grass verge width could allow for provision of cycling infrastructure. The section of Blackford Road used for residential access to the north of Dog Kennel Lane could be utilised where highway space is limited.

- Road crossings will need to be improved to provide ease of access and greater levels of safety. These include at Tanworth Lane junction, Dog Kennel Lane roundabout and Stratford Road roundabout.
- There is a signalised crossing on Stratford Road to the north of the roundabout with Blackford Road, this is segregated which could reduce ease of access
- Footways narrow on the approach to Stratford Road roundabout, with kerb side activity such as signage, trees and light posts which could inhibit provision of cycling infrastructure.
- Poor quality crossing facilities on Stratford Road roundabout could impede access and cause safety issues. Crossing facilities will need to be upgraded to allow a continuous cycling route which can be accessed safely and efficiently. Cyclists could utilise the residential access road east of the roundabout, although current placement of steps is a barrier to access.
- The section of the route between Stratford Road and Chalford Road is constrained by on road parking, narrower footways and high levels of kerb side activity, including bus stops, light posts, property access and signage.

Section 3 Chalford Road to St Gerards Road

- There are limited crossing facilities on the Chalford Road roundabout; this would need to upgraded to improve ease of access and safety.
- There are high levels of kerb side activity between Chalford Road and Oakenshaw Road, including light posts, bus stops, fencing, post boxes and property access. The roundabout at Oakenshaw Road could impede ease of access.
- High levels of kerbside activity continue north of Oakenshaw Road, although there is sufficient highway width to allow for cycling infrastructure. There is on street parking on the south-eastern side of the carriageway which could inhibit ease of access.
- On street car parking on both sides of the B4102 north of Conway Road would inhibit provision of cycling infrastructure. This includes the provision of disabled parking. This continues for approximately 70m before on street parking ceases on the south-eastern side of the carriageway. This stretch of road could prove a pinch point with limited highway width to provide cycling infrastructure. Provision of on road car parking on alternate sides continues until Longmore Road. There are also bus stops provided without laybys which could inhibit provision of cycling infrastructure.
- On road cycling lanes are provided north of Longmore Road. There are limited constraints other than property access, access junctions to side roads, online bus stops and low clearance space left by vehicles which could deter some cyclists. However, there is central hatching which could be utilised to allow greater width.

Section 4 St Gerards Road to White House Way

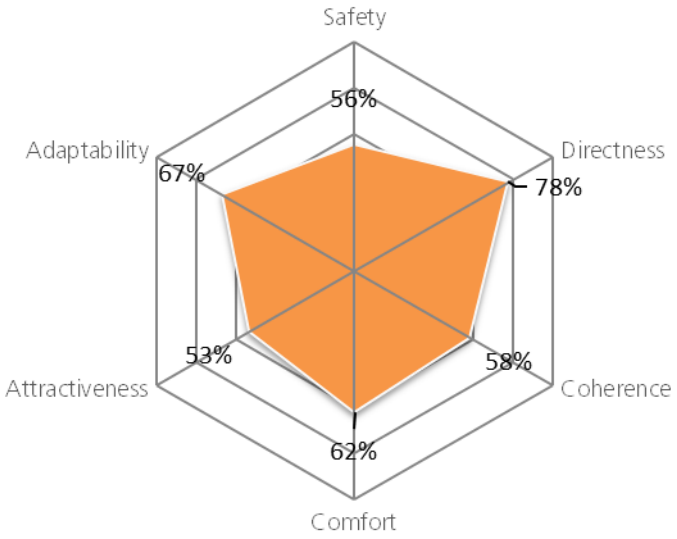
- On road cycle lanes are provided, although ease of access could be inhibited by side road access, property access and bus stop provision.
- In the vicinity of Alder Park Road, the usable carriageway width narrows with a traffic island and right land turning lane. This limits the amount of clearance vehicles can give cyclists, which could cause safety issues and deter some cyclists.
- Vehicles turning right sharply from the exit of Solihull College and University Centre and the provision of a traffic island limits the amount of clearance vehicles can give cyclists, which could cause safety issues and deter some cyclists.

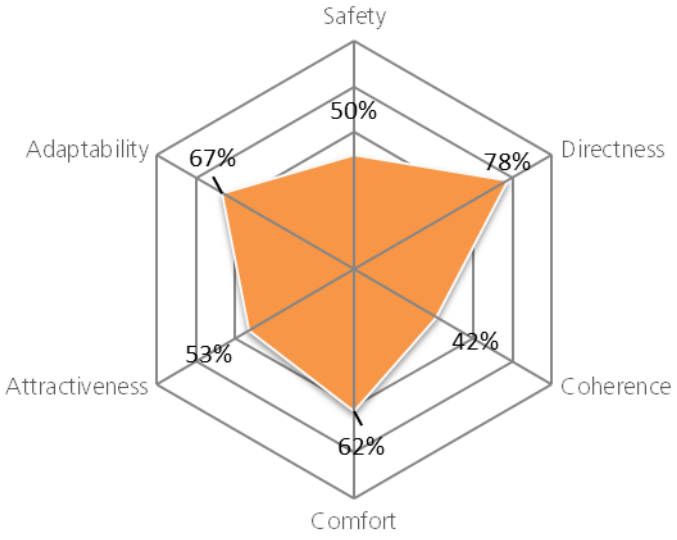
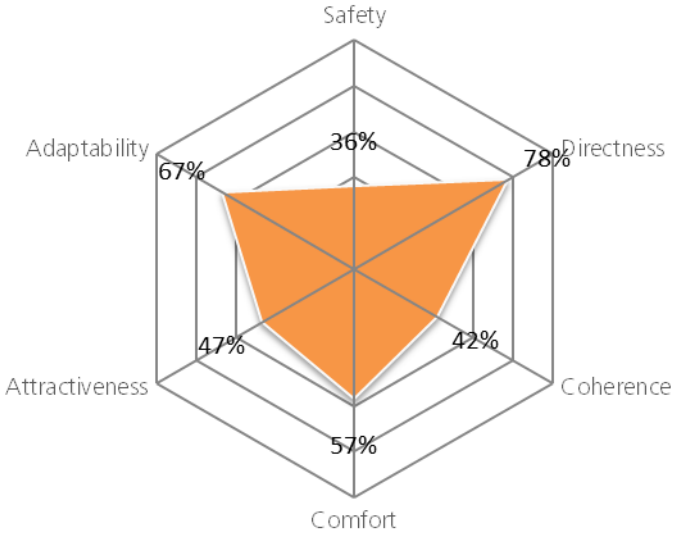
Section 5 White House Way to B4102 Roundabout

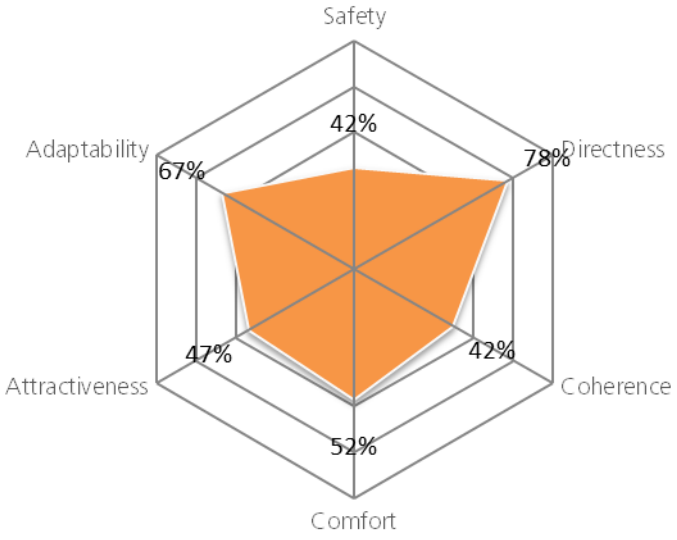
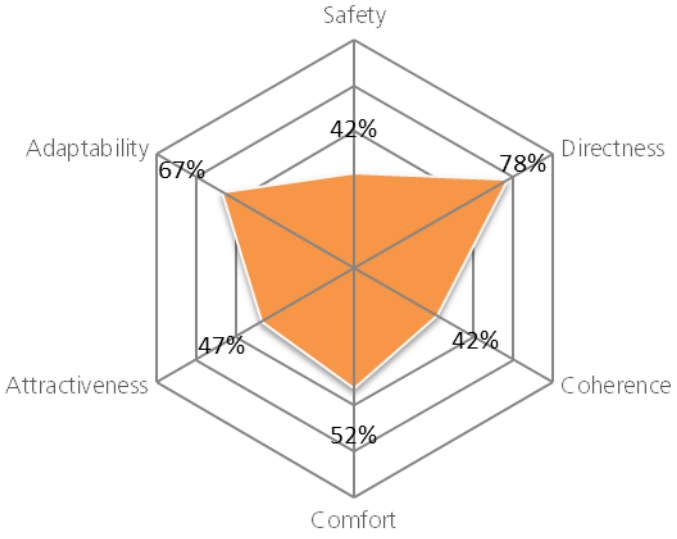
- On road cycle lanes are provided, although ease of access could be inhibited by side road access, property access and bus stop provision. Traffic islands could limit the amount of clearance vehicles provide to cyclists, which could cause safety issues and deter some cyclists.
- Highway space is restrained north of Dorchester Road due to the railway overbridge, which limits the provision of cycling infrastructure. On road cycle lanes end north of Dorchester Road with a signalised crossing to access offline cycle routes.
- Highway space is limited north of the railway overbridge due to the access junction for Solihull Railway station and properties either side of the carriageway. A segregated cycleway and footway is provided east of Station Approach on the southern side of the carriageway, although ease of access is limited between Station Approach and Dorchester Road due to limited highway space.

Existing Level of Service (LoS) Assessment:

Section 1 - Buckridge Lane to the B4102



Section 2 - B4102 to Chalford Way	
Section 3 - Chalford Road to St Gerards Road	

Section 4 - St Gerards Road to White House Way	
Section 5 - White House Way to B4102 Roundabout	

Opportunities:

Section 1 Buckridge Lane to the B4102

- Main constraints are through Dicken Heath village, with limited highway width, side roads, kerb side activity and property access points impeding ease of access and safety. There are opportunities to increase footway width and provide cycling infrastructure on roundabouts and grass verges which allow greater highway width. Removal of the central island on the overbridge and widening of footway could allow continuity of existing cycle route into Dickens Heath
- On road cycle lanes could be provided, although these may be constrained by highway width and on road parking.
- Limited constraints north of Dickens Heath village due to existing shared footway.

Section 2 B4102 to Chalford Way

- There are opportunities to utilise residential access roads to direct cyclists away from busy junctions and where highway space is limited. This includes Blackford Road north of Dog Kennel Lane and Stratford Road north-east of Blackford Road roundabout
- Crossing facilities will need to be upgraded to allow ease of access and maintain safety of the route. This includes at Tanworth Lane junction, Dog Kennel Lane roundabout and Stratford Road roundabout.
- High levels of kerb side activity could inhibit provision of cycling infrastructure in places, especially in the vicinity of the Stratford Road roundabout and between Stratford Road and Chalford Road. Opportunities including utilising existing footways, residential access roads and existing signalised crossings.
- Levels of on street car parking usage could be assessed between Stratford and Chalford Road. This could be removed on one side to allow provision of cycling infrastructure. Car parking will need to be managed at Dickens Heath Lane roundabout to ensure cars do not block the shared footway/cycleway.

Section 3 Chalford Road to St Gerards Road

- This section of the route is largely constrained by high levels of kerb side activity which could inhibit the provision of cycling infrastructure with limited highway space in places. On road parking could also pose an issue to ease of access and continuity of cycling routes. This is a particular issue between Conway Road and Longmore Road. Assessments of car parking usage could determine whether there is capacity to remove parking on one side of the road, however some of these spaces could be sensitive due to disabled and residential access. Removal could cause some issues with local residents.
- There are limited constraints north of Longmore Road and provision of on road cycling lanes could be utilised as part of this route.

Section 4 St Gerards Road to White House Way

- This section of the route is largely unconstrained due to carriageway width and provision of on road cycle lanes. Issues with ease of access and safety could result from side road junctions and traffic islands, which could limit the amount of clearance vehicles provide cyclists. Removal of traffic islands could improve provision of cycle routes.

Section 5 White House Way to B4102 Roundabout

- This section of the route is largely unconstrained from White House Way to Dorchester Road due to carriageway width and provision of on road cycle lanes. Issues with ease of access and safety could result from side road junctions and traffic islands, which could limit the amount of clearance vehicles provide cyclists. Removal of traffic islands could improve provision of cycle routes.
- Although highway width is constrained north of Dorchester Road until Station Approach, there are existing cycle routes to Solihull Town Centre which could be utilised. This includes the provision of a toucan crossing to the north of Dorchester Road which would allow ease of access.

Recommendation for Further Assessment

One of the main barriers and points of severance on this route is crossing the A34 Stratford Road. Further assessment of junction capacity and implications of relocating the signalised crossing point closer to desire lines should be undertaken. A study into the benefits of signalising the roundabout may also be beneficial.

A study of existing on-street parking behaviours should be undertaken to understand the implications of removing/restricting sections of on-street parking.

It is also recommended that a full feasibility study with detailed assessment of carriageway geometries is undertaken if this route is taken forward.

As a key link into Solihull Town Centre, high quality segregated cycle infrastructure is recommended where feasible.

Photographs

Photo 1 – Canal tow path looking east from Dickens Heath Road

Photo 2 - Existing shared footway/cycleway on the west side of Dickens Heath Road looking north

Photo 3 – Existing cycle provision crossing to the east side of the B4102

Photo 4 – Potential opportunity to utilise the residential access roads on the east side of B4102 Blackford Road

	
Photo 5 – B4102 / Stratford Road roundabout, no formal crossing points on the east arm of the junction	**Photo 6 – Constrained narrow footway with bus stop on the east side of Marshall Lake Road**
	
Photo 7 – Existing advisory cycle lane and wide carriageway on Blossomfield Road B4102 looking north	**Photo 8 – Constrained footways and 3 traffic lanes under the railway overbridge close to Solihull town centre**

Corridor:	Balsall Common to Stonebridge
Local Authority	Solihull Metropolitan Borough Council

Existing Characteristics:

This route runs between Berkswell Station and the A45 to the east of Birmingham International Airport. The route is a mixture of single carriageway, dual carriageway and private access roads. The majority of the route is rural in nature with limited development and existing infrastructure in place. However, there are segregated cycleways/footways provided in the vicinity of Balsall Common.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- Narrow carriageway and parking access in vicinity of Berkswell Station
- Roundabout crossings could inhibit ease of access and safety
- No cycling provision on the A452 currently
- Constrained highway width in some places, infrequently along the A452 and throughout the route section on Diddington Lane

Constraints:

Section 1 Station Road to Lavender Hall Lane

- Narrow carriageway, nearby properties and parking access in vicinity of Berkswell Station could impede cycling movements from the station access/egress to/from Station Road and Hallmeadow Road roundabout
- Inconsistent existing segregated footway/cycleway.
- Hallmeadow Road/Station Road roundabout crossing includes a refuge but could cause safety issues and impede access. There is enough carriageway width to accommodate improvements on Hallmeadow Road, although some kerb side activity including signs, signal boxes and light posts. Some on street parking (informal) south of Riddings Hill.
- Hallmeadow Road and Lavender Hall Lane roundabout crossings include refuges, but these could impede cycling movements and cause safety issues, especially on the exits of roundabouts. Updating these crossings could improve ease of access and safety.

Section 2 Lavender Hall Lane to Park Lane

- Existing segregated walkway/cycleway up until the Hallmeadow Road/A452 junction
- Hallmeadow Road and the A452 roundabout crossings include refuges, but these could impede cycling movements and cause safety issues, especially on the exits of roundabouts. Updating these crossings could improve ease of access and safety.
- There is sufficient highway space on the A452 to accommodate cycling infrastructure, however there is a lot of kerb side activity including bollards, trees, lampposts, signs and driveway access points. Access impeded by express car wash on western side and Wootton Lane junction. Very narrow footway north of Wootton Lane although grass verge will allow extra width.
- High traffic speeds could discourage novice cyclists.

Section 3 Park Lane to Wyevale Garden Centre

- Current layout of Park Lane/A452 junction and high level of kerb side activity (trees and foliage and one property fronting the carriageway) could limit provision of cycleway on the eastern side of the carriageway. Very narrow footway provision north of Wall Bros.
- The central verge does allow some highway space to accommodate cycleways, however there is a line of trees down the middle which could limit the extent to which the central verge is used. North of Wall Bros, there is an agricultural access track and narrowing of the central verge which could limit highway width.
- Narrow footway on the western side of the carriageway, though some grass verge is available to accommodate cycling infrastructure. Current constraints include a speed camera and farm and property access. The footway ceases just to the south of Wyevale Garden Centre, and highway width is constrained by a few properties set back from the carriageway.
- High carriageway speeds could discourage novice cyclists.

Section 4 Wyevale Garden Centre to Marsh Lane

- Current layout of the Wyevale Garden Centre access junction which could impact on implementing cycling infrastructure, with large flare lengths and high levels of kerb side activity including fencing, trees and foliage. Carriageway width is constrained by properties fronting the carriageway to the north of Wyevale Garden Centre, with limited central verge width to allow extra highway width. There are two further access junctions which could inhibit provision of cycling infrastructure.
- There is narrow footway provision on the eastern side of the carriageway, with narrow verge width which is constrained by foliage and trees. However, obstacles to cycle route provision are limited, with the ability to utilise central verge for extra highway space if necessary.
- At the Bradnocks Marsh Lane roundabout, cyclists would need to negotiate the Bradnocks Marsh Lane access/egress from the roundabout, which could inhibit safety and ease of access. This also includes the Aston Martin show garage adjacent to the junction. However, there are no junctions on the eastern side of the roundabout.
- There is footway provision on the eastern side of the carriageway north of Bradnocks Marsh Lane roundabout, although this is narrow, with some constraints in terms of verge width and kerb side activity such as speed cameras and trees/foliage. To access Marsh Lane, cyclists would need to cross the A452, which would require suitable crossing facilities.
- There is a narrow footway on the western side of the carriageway, and kerb side activity such as trees/foliage and infrequent property access could inhibit provision of cycling infrastructure.

Section 5 Marsh Lane to Meriden Road (B4102)

- This section of the route will require a crossing of Meriden Road to allow access for cyclists. Crossing facilities will also be required on Marsh Lane in the vicinity of the A452 junction. The current junction layout has limited visibility which could impede ease of access and cause safety issues.
- A footway joins the A452 with Marsh Lane south of the junction, which could be utilised. However, there is a truck stop on Marsh Lane which could cause issues in terms of ease of access, safety and intimidation
- Marsh Lane is used for private access only and could be used to provide dedicated cycling infrastructure. Current constraints include surface quality, isolation and lack of wayfinding and lighting facilities.

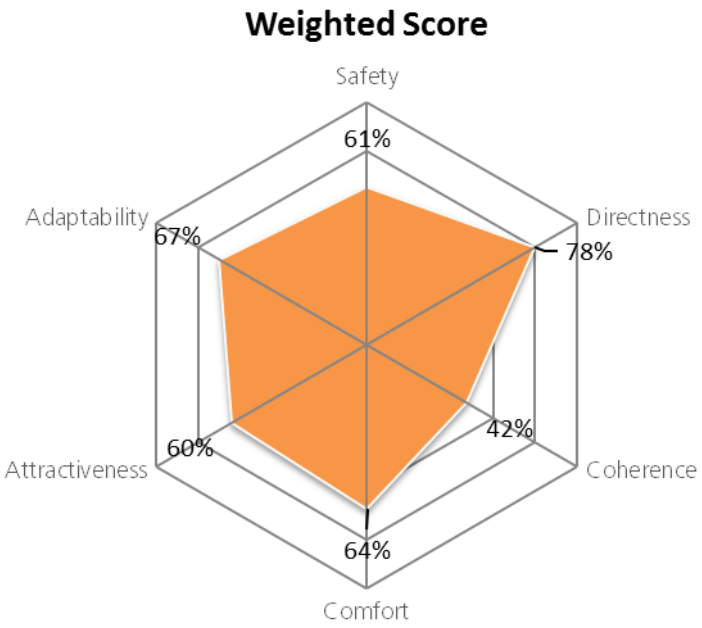
Section 6 Meriden Road to Diddington Lane

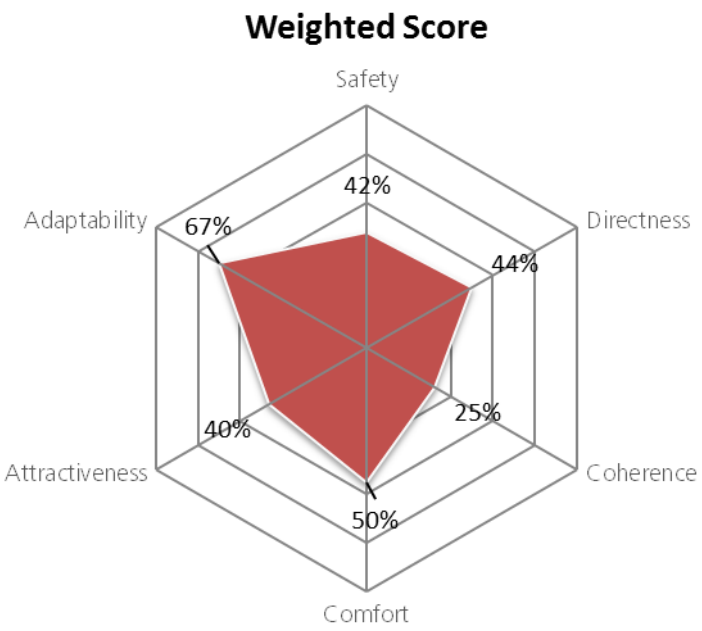
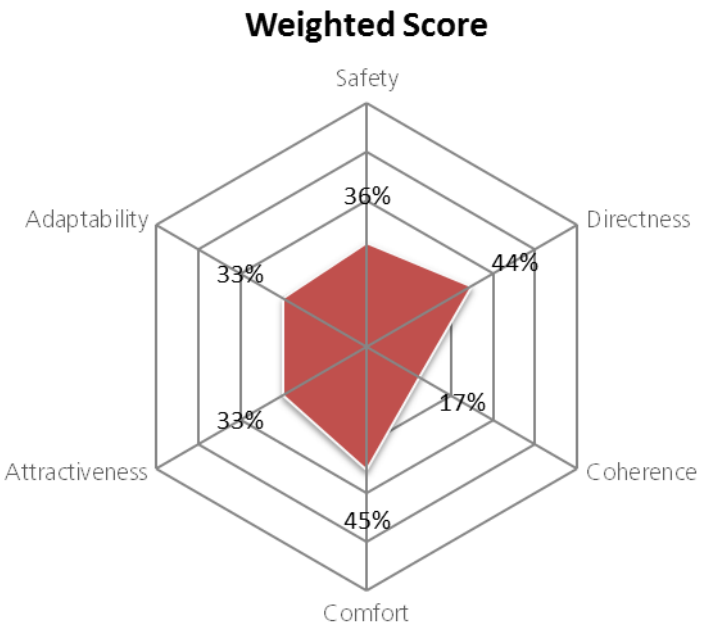
- It is understood that this route section could be utilised with the development of the High Speed 2 (HS2) railway line, which could facilitate the provision of cycling infrastructure. This section currently runs through farmland and there is no sustainable infrastructure available for cyclists.

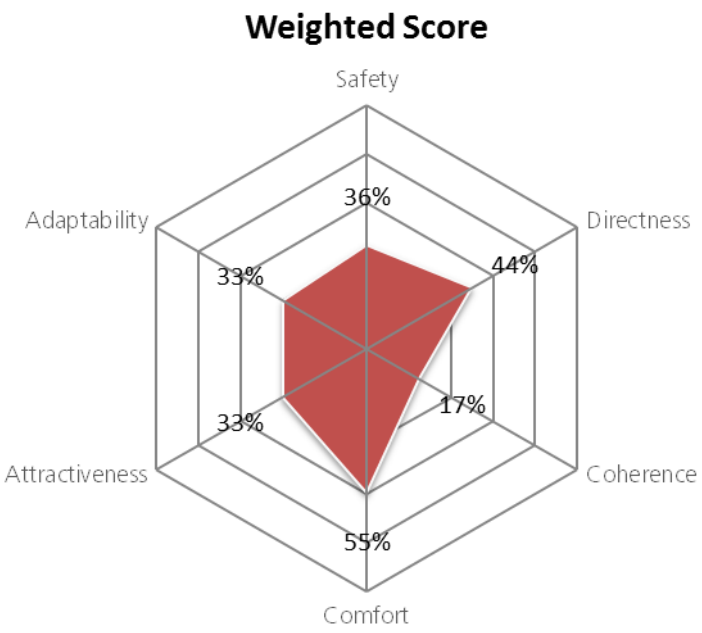
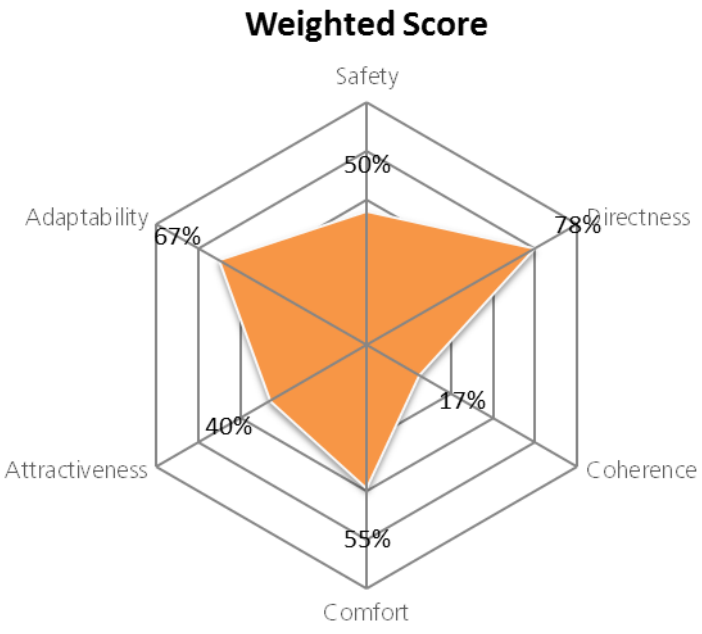
Section 7 Diddington Lane to A45

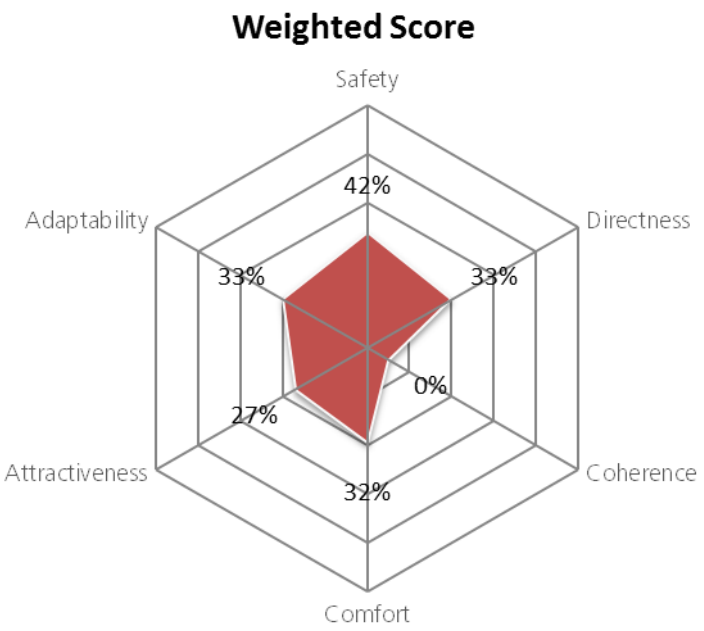
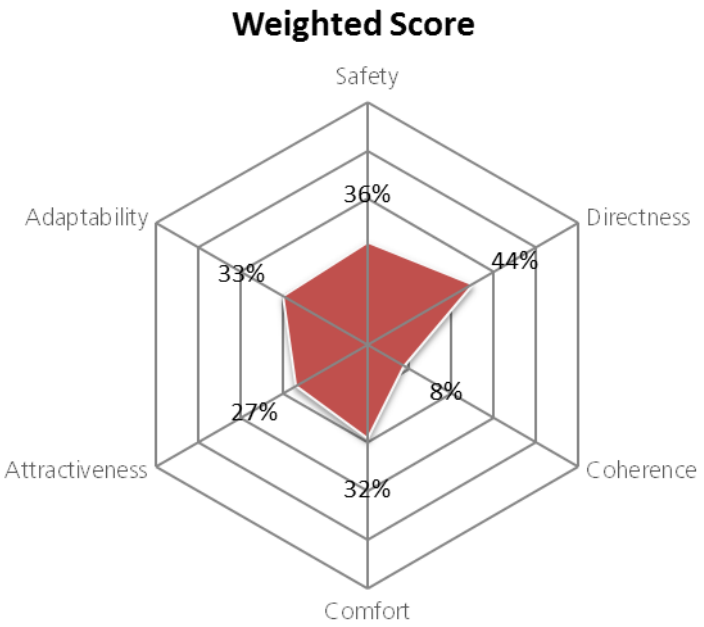
- Highway width is constrained by hedgerows on either side of the carriageway on Diddington Lane. Blind summits could also cause safety issues.
- High carriageway speeds could deter novice cyclists. Cyclists are not currently segregated from traffic which could cause safety issues
- A private access road is utilised to the north of Diddington Lane, which could facilitate dedicated cycling infrastructure. Current constraints include surface quality, isolation and lack of wayfinding and lighting facilities.

Existing Level of Service (LoS) Assessment:

Section 1 - Station Road to Lavender Hall Lane	

Section 2 - Lavender Hall Lane to Park Lane	
Section 3 - Park Lane to Wyevale Garden Centre	

Section 4 - Wyevale Garden Centre to Marsh Lane	
Section 5 - Marsh Lane to Meriden Road	

Section 6 - Meriden Road to Diddington Lane	
Section 7 - Diddington Lane to A45	

Opportunities:

Section 1

- Upgrading the crossing on Hallmeadow Road and Station Road roundabout to improve ease of access. Regulate on street parking on Hallmeadow Road if extra highway space is required
- Use of grass verge to upgrade existing cycling infrastructure Update crossing on Hallmeadow Road and Lavender Hall Lane roundabout to allow ease of access.
- Restrict on-street parking on shared footway/cycleway section.

Section 2

- Improve crossings on the Hallmeadow Road and A452 roundabout – could include carrying the route round the south and west of the roundabout to avoid crossing dual carriageway section of the A452 and utilise the existing footway on the A452 between Hallmeadow Road and Park Lane
- Alternatively, crossings could be provided across the Hallmeadow Road arm of the roundabout and new cycleway provision provided on the eastern side of the A452, which has less kerb side activity
- Route section not constrained by carriageway width – realignment of the grass verge in centre of the A452 could accommodate cycleway infrastructure. Management of kerb side activity is needed to allow provision of a continuous cycle track.

Section 3 Park Lane to Wyevale Garden Centre

- Improvements to the Park Lane junction could facilitate a cycleway, although there is limited highway space to accommodate cycling infrastructure. Less obstacles are present on the western side of the carriageway, although cycle infrastructure would be constrained by kerbside activity in the vicinity of Wyevale Garden Centre
- Realignment of the central verge could allow for extra width to accommodate a cycleway

Section 4 Wyevale Garden Centre to Marsh Lane

- Improvements to access junctions and Bradnocks Marsh Lane roundabout could facilitate a cycleway, although there are constraints to verge width in places. Use of the central verge could provide extra highway space to allow cycleway provision
- Marsh Lane runs parallel to the A452 just to the south of the Marsh Lane Junction, connected by footway. This section of Marsh Lane could be utilised to direct cyclists away from the busier A452.
- There are less obstacles on the eastern side of the carriageway however this option is constrained by the need to cross the A452 to access Marsh Lane

Section 5 Marsh Lane to Meriden Road (B4102)

- Cycling crossing facilities can be provided on the B4102 to allow for a continuous cycling route
- The current A452/Marsh Lane junction is constrained by lack of visibility, however there is a footway link to the south of the junction which links the A452 with Marsh Lane. This could be tied into new cycling infrastructure.
- There is a truck stop on Marsh Lane so HGV movements could impede cycle access, cause safety issues and deter novice cyclists from using the route. Use of Marsh Lane for cycling infrastructure would need to consider segregation or mitigation measures against HGV movements
- Marsh Lane is an abandoned section of highway used for private access only. Alternative opportunities could be provided on the A452 which runs parallel to this section.

Section 6 Meriden Road to Diddington Lane

- There is no infrastructure currently provided on this section. Opportunities to provide dedicated cycling infrastructure could be explored on the A452 which runs parallel to this section.
- It is understood that new infrastructure could be provided in this section in conjunction with the construction and operation of HS2, which may present opportunities to provided dedicated cycling infrastructure.

Section 7 Diddington Lane to A45

- This section of the route is constrained by limited highway space on Diddington Lane.
- Alternative opportunities could be provided on the A452 which runs parallel to this section. Infrastructure on the A452 could tie in to existing segregated and shared footways/cycleways in the vicinity of the A452/A445 junction

Recommendation for Further Assessment

- The main barrier to providing quality cycling infrastructure on this section is lack of existing infrastructure and space constraints on sections of the highway network. Some proposed sections of the route have no/limited infrastructure.
- It is recommended that alternative routes are identified along this corridor, particularly between Section 5 and 7, where the existing A452 route could be utilised (Shown on the plan in Appendix A). Further feasibility studies could be considered to assess the suitability of offline sections such as Marsh Road and the access road north of Diddington Lane
- It is recommended that any infrastructure improvements in relation to HS2 are included in further feasibility assessments of the proposed route. This is particularly relevant for Section 6, which currently has no infrastructure in place for cyclists.

Photographs

Photo 1 – Existing shared use footway, but with on-street/footway parking

Photo 2 – Existing light segregated footway/cycleway on Hallmeadow Road. Wide carriageway and verge, but with on-street parking

	
Photo 3 – Existing faded informal footway/cycleway crossing at the A452 / Hallmeadow Road junction	**Photo 4 – End of existing cycle provision on A452 Kenilworth Road**
	
Photo 5 – Footway and wide verge on west side of A452 dual-carriageway	**Photo 6 – Narrow footway without dropped kerbs on access to garage on A452**

	
Photo 7 – No existing pedestrian or cycle provision on access and egress to garden centre. High vehicle speeds, but wide central reservation to re-align carriageway and accommodate pedestrian/cycle provision	**Photo 8 – Disused carriageway, offering potential parallel off-carriageway route west of the A452 from Marsh Lane**
	
Photo 9 – Disused carriageway. No public access footpath, close to Patricks Farm accessed off Meriden Road	**Photo 10 – Access road to Pasture Farm, no public access or through route, between Diddington Lane and A45 Coventry Road**
Alternative alignment	

	
Photo 11 – Wide carriageway and verges on A452. Potential to provide more direct alternative cycle route	**Photo 12 – Existing isolated footway/cycleway provision on west side of A452/A45 junction**

Corridor:	**Rushall to Brownhills**
Local Authority	**Walsall Metropolitan Borough Council**

Existing Characteristics:

The B4152 linking Brownhills to Aldridge is the key focus of this corridor. The B4152 predominantly consists of a single carriageway which is busy during the AM and PM peaks. Due to a number of industrial units along the corridor, there is a HGV presence throughout the day which is a potential barrier for cyclists. Whilst there is small sections of shared use facilities and significant footway space, in some sections, there is no dedicated cycle infrastructure in place.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Parts of the route are in close proximity to National Cycle Route 5.

Problems & Barriers for Cyclists:

- Significant traffic flow particularly in AM and PM peak
- Little cycle infrastructure to provide protection for cyclists
- Constrained width along the B4152 between Lichfield Road/B4152 Lane junction and B4152/A452 junction.
- HGV traffic throughout the day which provides a significant constraint and safety issue for cyclists.

Constraints:

Section 1 – Daw End Lane to Linley Road

- Lichfield Road (between Daw End Lane and Winterly Lane) varies in highway capacity with some sections limited to two lanes of traffic
- Space is limited in Rushall town centre due to many lanes of traffic, narrow footways and high kerb side activity. Other pinch points on Lichfield Road include bus stops. Presence of HGVs could deter cyclists
- Lichfield Road has limited footway space which could be reallocated for cycle highway infrastructure
- Barns Lane to Linley Road is a residential street with two lanes of traffic with residential properties in close proximity to the highway. On street car parking further limits space for cyclists.

Section 2 – Linley Road to Dumbledery Lane

- Linley Road to Dumbledery Lane continues along Barnes Lane and Westgate with two lanes of traffic and little footway space.
- Due to a number of industrial units along Westgate, HGV traffic is frequent which provides a constraint and potential barrier for cyclists.

- On street parking is frequent along Barnes Lane and Westgate which further reduces space and provides potential conflict between motorised vehicles and cyclists.

Section 3 – **Dumbledery Lane to Shenstone Drive**

- Dumbledery Lane to Stubbers Green Road via Wharf Approach is consistent with Barnes Lane and Westgate with two lanes of traffic however, there is additional footway space along small sections which increases the overall highway/footway capacity.
- Deflection of the footway on Westgate/Wharf Approach creates pinch points and does not follow cyclist line of travel
- Due to a number of industrial units along Westgate, HGV traffic is frequent which provides a constraint and potential barrier for cyclists.
- Stubbers Green Road & Leighswood Road to Leighswood Avenue continues to have limited width with two lanes of traffic and limited footway space. On Leighwood Avenue, there are constraints in terms of kerb side activity – such as mature tree planting
- A further constraint is the bridge passing over the Daw End Branch, little space is available currently which results in cyclists travelling on the carriageway
- Leighwood Avenue is a residential street with housing in close proximity on both sides of the carriageway. On street parking is present which further reduces capacity.
- The B4152 up to Shenstone Drive has limited highway capacity with two narrow lanes of traffic however, there is grass verges on both sides which provides the potential to reallocate to cycling infrastructure. Footway quality is poor and side access road present safety risks from industrial units

Section 4 - **Shenstone Drive to Walton Drive**

- Shenstone Drive to Northgate Way has limited highway capacity with two lanes of traffic however, there is opportunity for footway capacity to be reallocated to cycle infrastructure due to underutilised grass verges on both sides of the carriageway.
- Northgate Way to Walton Road there is less capacity and opportunities to introduce cycle infrastructure due to residential, retail and industrial properties in close proximity to the highway.
- Kerbside activity is present along this section of the corridor including lighting, on street and footway parking and mature trees.
- There is poor quality footway provision, including lack of dropped kerbs in places

Section 5 – **Walton Drive to Laburnum Road**

- The B4152 between Walton Road and Coppice Lane consists of two lanes of traffic with limited capacity to allocate cycle infrastructure. There is footway capacity and green space on the outbound approach (towards Lichfield Road) which has the potential to be reallocated to cycle infrastructure.

- Between Coppice Lane and Castle Road along the B4152, constrained section of the corridor with very limited highway and footway capacity. Residential properties and industrial units are in close proximity to the carriageway which limits any opportunities to provide dedicated cycle infrastructure.

- Between Castle Road and Laburnum Road on the B4152, the carriageway remains constrained with limited highway and footway capacity. There is grass verge available between Castlefort Road to Laburnum Road on the inbound approach (towards Aldridge)

Section 6 – **Laburnum Road to Coppice Road**

- Between Laburnum Road and Beacon Way there is a grass verge on the inbound approach however, highway capacity is limited and footway capacity on the outbound approach is narrow.

- Between Beacon Way and Wolverson Road there is limited highway and footway capacity with residential properties in close proximity. Small sections of on street parking was present on site visit on the inbound approach which presents a further constraint for cycling

- Between Wolverson Road and Coppice Road there is limited highway and footway capacity. The B4152/Lichfield Road is a signalled junction but does not provide a staged crossing or priority for cyclists which could be an issue for cyclists turning right in particular.

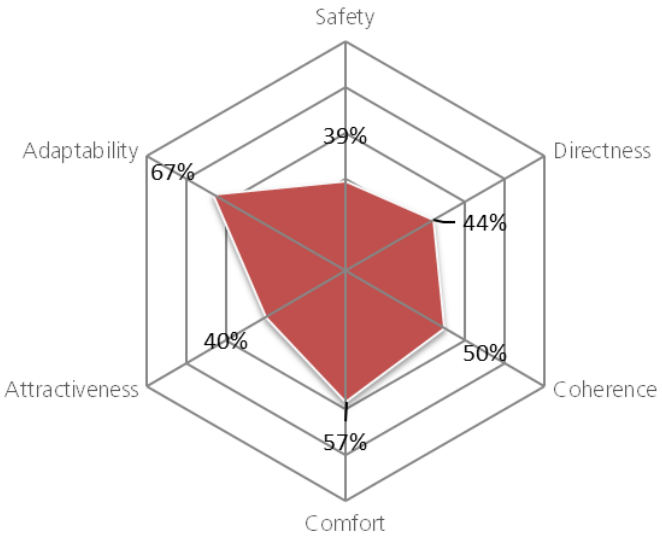
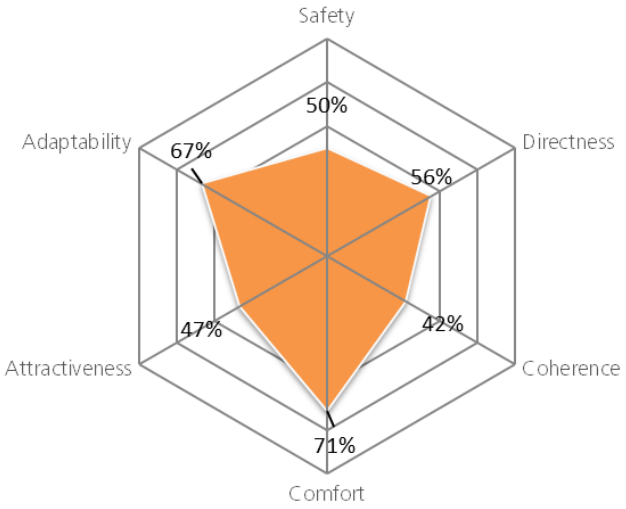
Section 7 – **Coppice Road to Ogley Road (B5011)**

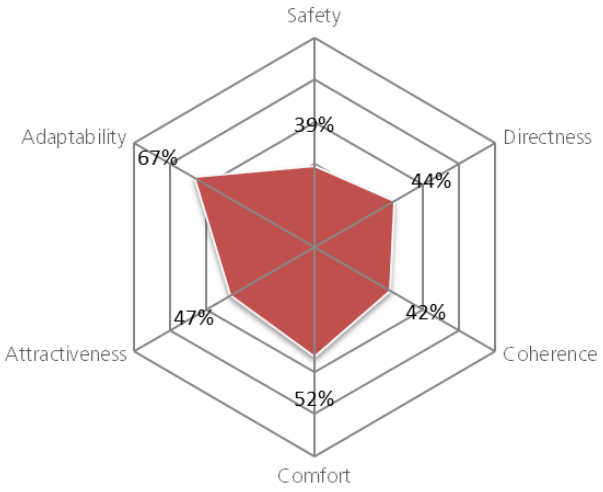
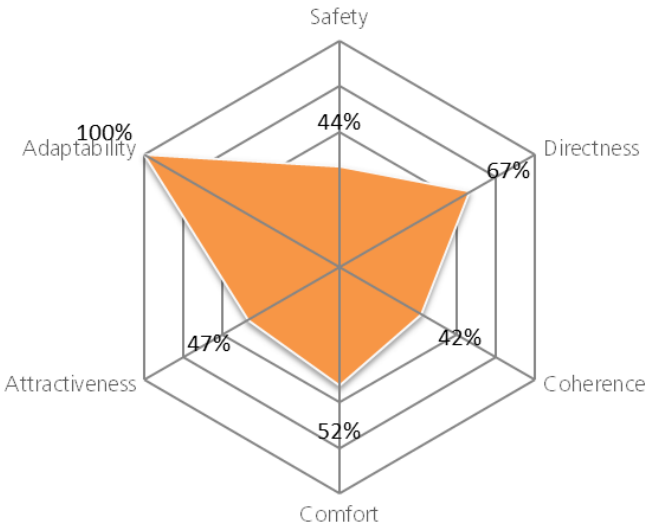
- Between Coppice Road and Paul's Coppice, highway capacity is constrained however there is a grass verge on the inbound approach which could be allocated to some form of cycle infrastructure.

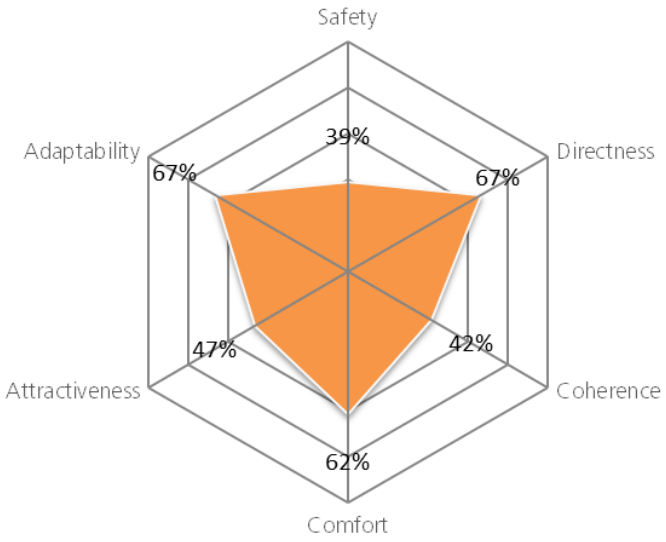
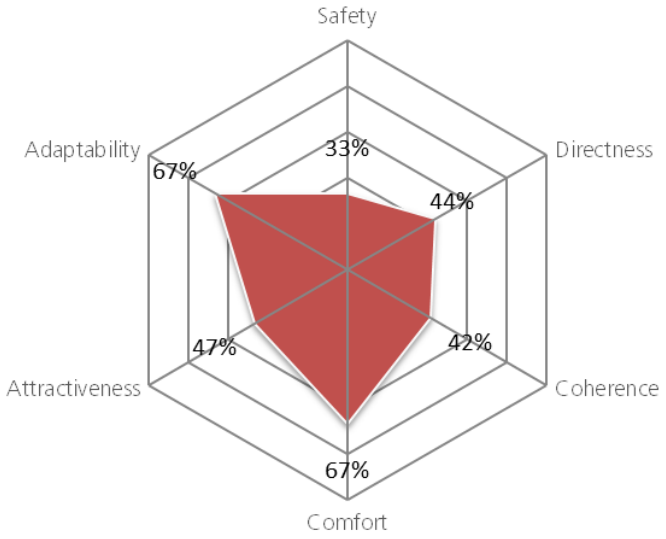
- Between Pauls Coppice and B4125/A452 junction, capacity remains constrained with little capacity to reallocate to cycle infrastructure. Residential properties are in close proximity to the highway providing limited opportunities to reallocate space to dedicated cycle infrastructure

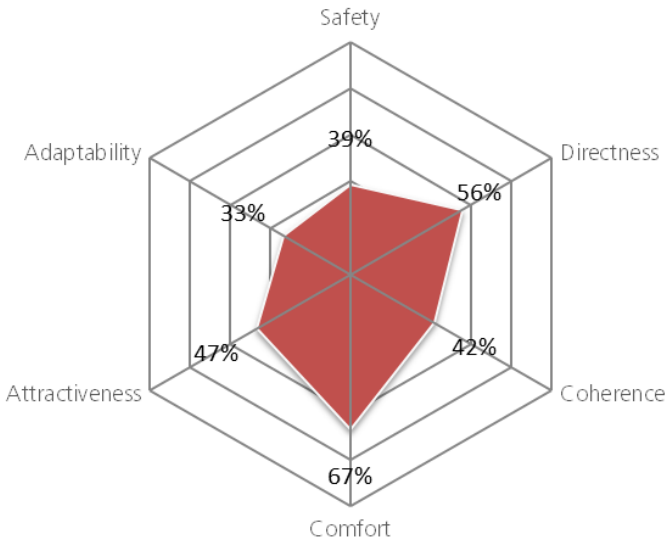
- Between B4125/A452 junction, there is limited highway capacity however there is the potential to remove or reduce the middle carriageway hatchings to realign the carriageway to allow for space for cycle infrastructure.

Existing Level of Service (LoS) Assessment:

Section 1 - Daw End Lane to Linley Road	
Section 2 - Linley Road to Dumbledery Lane	

Section 3 - Dumbledery Lane to Shenstone Drive	
Section 4 - Shenstone Drive to Walton Drive	

Section 5 - Walton Drive to Laburnum Road	
Section 6 - Laburnum Road to Coppice Road	

Section 7 - Coppice Road to Ogley Road	

Opportunities:

Section 1 Daw End Lane to Linley Road

- Limited opportunities along this section.
- On Lichfield Road, consider reducing highway and footway capacity to allow for dedicated cycle infrastructure on either side of the carriageway or consider increasing footway capacity on northbound approach to allow for shared use facility.
- Due to the residential context of this section of the corridor (between Barns Lane and Linley Road) it's unlikely that any dedicated infrastructure is required.
- It is possible that advisory cycle lanes would be adequate along this section of the corridor with improved traffic calming measures to ensure low traffic speeds.

Section 2 Linley Road to Dumbledery Lane

- Residential section of the corridor with limited capacity
- Due to low traffic volumes and speed, it is unlikely that dedicated cycle infrastructure is required
- It is possible that advisory cycle lanes would be adequate along this section of the corridor with improved traffic calming measures to ensure low traffic speeds.
- Another potential option would be to make the two access points onto Stubbers Green Road into a one way system which would allow for one lane of traffic to be converted to cycle infrastructure.

Section 3 Dumbledery Lane to Shenstone Drive

- Limited opportunities along Stubbers Green Road
- With current highway and footway capacity, there is insufficient space to adopt high quality cycle infrastructure

- Significant green space is found on the southern end of Stubbers Green Road which could provide sufficient space to accommodate cycle infrastructure however, this would be private property and discussions would be required to buy land.
- Due to the corridor providing direct access into Aldridge and several industrial units, it is recommended that a segregated track on either side of the carriageway on approach to Shenstone Drive is implemented if feasible.
- There is sufficient capacity on the B4152 between Leighswood Avenue and Shenstone Drive to provide segregated cycle provision.

Section 4 Shenstone Drive to Walton Road

- Potential to provide segregated track on inbound approach (into Aldridge)
- Segregated cycle track would utilise existing footpath where footway capacity is sufficient to allow cycle track and remain adequate footway provision
- Would need to consider removing grass verge in several sections to allow for cycle track
- Direct and logical route into Aldridge

Section 5 Walton Road to Laburnum Road

- Walton Road to Walsall Wood Road along the B4152, potential to remove grass verge on outbound approach (from Aldridge) to allow for highway reconfiguration. Removing the grass verge would provide the potential to implement segregated cycle facility
- Walsall Wood Road to Castle Road, limited capacity currently therefore option to consider would be buying land on either side of the carriageway. A further option would be to remove the grass verge on the outbound approach to provide further capacity for cycle infrastructure. Potential for high speeds along this section of the corridor therefore, segregation is recommended.
- Castle Road to Laburnum Road, the biggest opportunity would be to remove the grass verge on the inbound approach to allow for a reconfiguration of the highway to allow for cycle infrastructure.
- Along this section of the corridor, there are opportunities for cycle infrastructure however due to capacity constraints, it is unlikely that a high quality cycle track can be developed on both sides of the carriageway. A two way segregated cycle track would seem more feasible.

Section 6 – **Laburnum Road to Coppice Road**

- Laburnum Road to Lichfield Road, currently this section of the B4152 has limited capacity with residential properties in close proximity on either side of the carriageway. As a key corridor into Aldridge, segregation is required and a reconfiguration of the highway and footway is required to determine whether a segregated route is feasible

- Lichfield Road to Coppice Road constrained section of the corridor, limited opportunities to implement cycle infrastructure along this section of the corridor. Limited footway capacity to reallocate to cycling infrastructure, a reduction in highway capacity would seem the only option to implement cycle facility.

Section 7 – **Coppice Road to Ogley Road (B5011)**

- The entirety of this section of the corridor is highly constrained with limited footway and highway capacity with properties in close proximity.

- It is recommended that segregated infrastructure is provided for cyclists along the entirety of the corridor however this section will be difficult to deliver. A reduction in highway capacity would seem the most viable solution

Recommendation for Further Assessment

The study has shown that there is potential for cycling infrastructure along this corridor however, the capacity of the highway network fluctuates along the B4152 therefore, limiting opportunities for a consistent high quality segregated cycle track. The corridor provides a key link into Aldridge and therefore it is recommended that a segregated cycle track is provided, a more detailed feasibility study is required to identify opportunities along the B4152 and how to address key constraints particularly the northern section from the Lichfield Road Junction to Ogley Road.

Whilst the route has considered the link to Rushall, this does not have a strong regional strategic case as the route follows a number of residential streets linking to industrial units. It is recommended that the focus of the study is the link between Brownhills and Aldridge.

Photographs

Photo 1 – Wide carriageway but industrial area on Westgate with lots of HGVs and on-street parking

Photo 2 – Wide carriageway width near the junction of Wharf Approach and Stubbers Green Road, but level of HGV traffic is intimidating for cyclists. Segregation recommended

Photo 3 – High traffic flows, speeds and steep gradient on approach to canal bridge on Stubbers Green Road

Photo 4 – Existing traffic calming and 20mph speed limit on Leighswood Avenue, but constrained opportunity to provide cycle infrastructure due to on street parking

Photo 5 – Wide verges on both sides of B4152 Northgate, but constrained by trees close.

Photo 6 – Current works at junction of B4152 / Lichfield Road / Brownhills Road. Constrained geometries and lots of HGV movements

	
Photo 7 and 8 – Opportunity to continue cycle provision into the centre of Aldridge utilising residential access roads and existing parking bays	

Corridor:	**Darlaston to Walsall Town Centre**
Local Authority	**Walsall Metropolitan Borough Council**

Existing Characteristics:

This route provides a link between Moxley, Darlaston and Walsall Town Centre. The route is single carriageway standard, and partly follows the A4038, one of the main roads into Walsall town centre. The route runs through mainly residential areas, apart from Darlaston and Walsall town centres and industrial development between Darlaston and the M6 on the approach to Walsall. Cycling infrastructure is limited along this route.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- Significant traffic flow particularly in AM and PM peak
- Due to industrial sites along the corridor, there is heavy HGV presence particularly between Section 1 (King Street) and 2 (Heath Road)
- On road parking on approach to Walsall Town Centre creates potential conflict with cyclists
- The A4038 is generally a constrained network with limited cycle infrastructure which does not provide segregation for cyclists (except for small sections of share use path)

Constraints:

Section 1 King Street to Heath Road – Departing King Street heading east towards Avenue Road is constrained with limited width to introduce any form of cycle infrastructure. There are two lanes for vehicular use with adequate footway width. Within the centre of Darlaston there was evidence of cars parked on the footway which limits opportunities for the footway on approach to Avenue Road being used as a shared use footway. A pinch point exists over Victoria Park which has the potential for conflict between cyclists and motorised vehicles due to a narrowing of the carriageway.

Avenue Road on approach to Station Street is a residential street with on road parking present on both sides of the carriageway which is likely to cause issues for cyclists travelling in either direction. Whilst there is limited traffic flow along Avenue Road, on street parking and HGV traffic is a potential issue for cyclists. Station Street has no infrastructure in place for cyclists and HGV traffic is present due to a number of industrial sites along this section of the corridor. Surfacing is generally poor with a number of potholes and on street parking is present along sections of Station Street resulting in cyclists requiring to move further into the carriageway.

Section 2 Heath Road to Gower Street – Heath Road experiences significant HGV traffic flows with limited lane width to accommodate all users including cyclists and HGVs. There is no cycle infrastructure in place to allow for a safe movement between Heath Road and Kendricks Road. There is an industrial site on Kendricks Road with regular HGV movement during the day, this presents potential conflict with cyclists. Kendricks Road is very narrow on approach to Cemetery Road, limited width for cyclists and motorised vehicles with only 1 lane available. Personal security issues are a concern along Kendricks Road due to isolated nature of the route.

Between Bentley Mill Lane and Gower Street there are less constraints due to additional carriageway width and a shared use path (between the Globe Inn Pub and east of Hough Road) which provides a segregated cycle facility. Whilst there are sections of shared use facility along Darlaston Road, a lack of

consistency along this corridor results in cyclists entering the carriageway or cycling along a narrow footway which creates conflict with pedestrians.

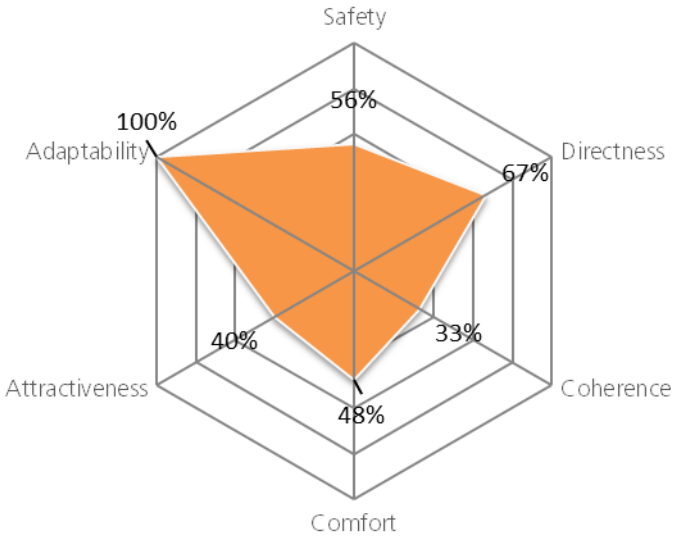
Section 3 Gower Street to Bescot Crescent – Between Gower Street and Old Pleck Street there is limited highway space which increases the potential conflict between cyclists and motorised vehicles. A number of bus stops are built out into the carriageway which create additional pinch points. On street parking and busy side roads create additional movements for motorised vehicles increasing safety issues for cyclists. Old Pleck Street/Wednesbury Road junction has advanced stopping line for cyclists however car users are stopping within this section.

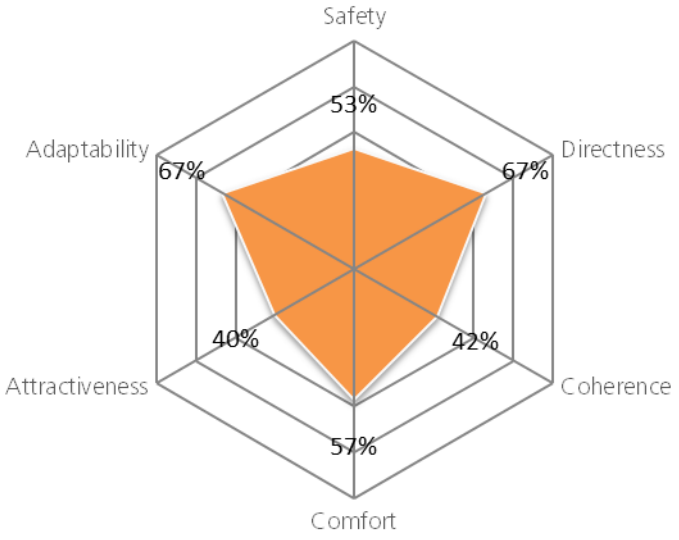
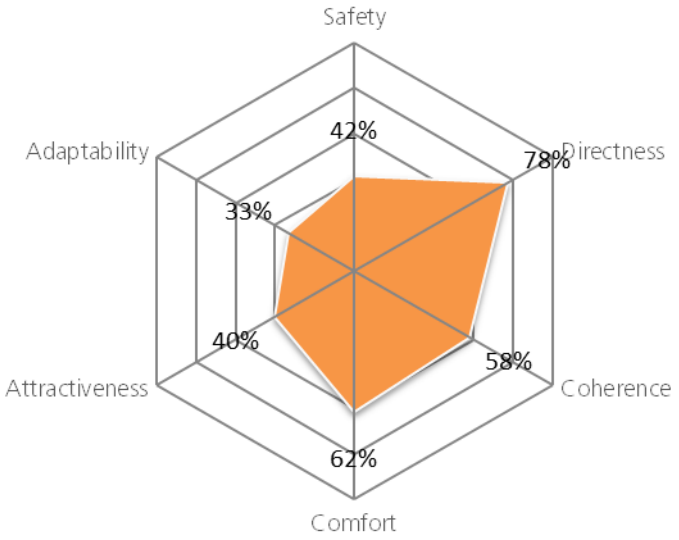
The main constraint between Old Pleck Street and Bescot Crescent is the Railway Bridge which creates a further pinchpoint for cyclists who choose to cycle on the carriageway.

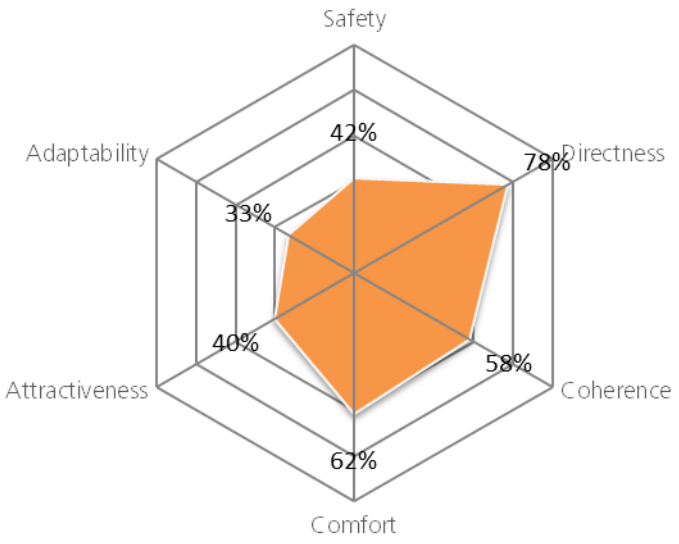
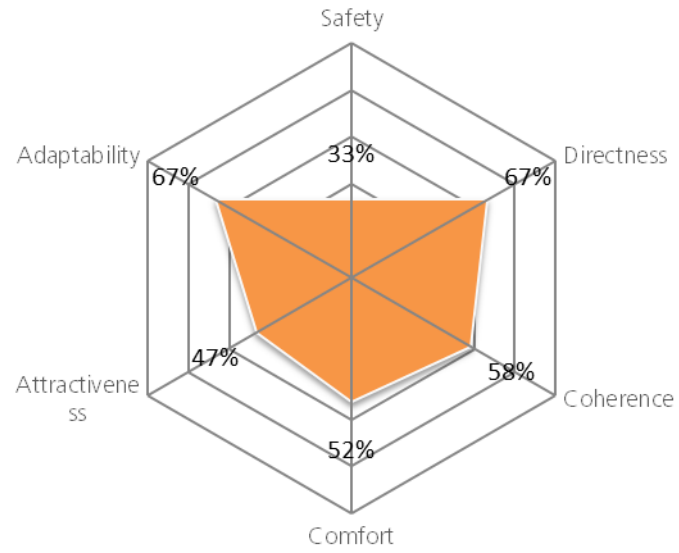
Section 4 Bescot Crescent to Mount Street - Significant on street parking between Millton Street and Corporation Street reduces highway space along this section of the corridor with potential conflict between cyclists and motorised vehicles. There is no infrastructure in place to protect cyclists turning right at Wednesbury Road/Corporation Street junction which would be a deterrent to novice cyclists.

Section 5 Glebe Street to Bridgeman Street – Significant on street parking exists along this section of the corridor. Bradford Street on approach to the Town Centre has sufficient highway width however the on street parking reduces highway space with potential conflict between cyclists and motorised vehicles. There are a number of busy side roads with no protection for cyclists which is a potential deterrent for less confident cyclists.

Existing Level of Service (LoS) Assessment:

1 – King Street to Heath Road	

2 – Heath Road to Gower Street	
3 – Gower Street to Bescot Crescent	

4 - Bescot Crescent to Caldmore Road	
5 - Caldmore Road to Freer Street	

Opportunities:

Section 1 King Street to Heath Road

- Corridor to utilise existing off road cycle route between Crescent Road (travelling through Victoria Park) and Station Street
- Off road cycle facility will need improve surfacing and lighting to ensure personal security is improved and good conditions for cycling.
- No major infrastructure required along station street due to low traffic flows. Consider traffic management including restricted HGV movements, speed reduction, speed humps etc.

Section 2 Heath Road to Gower Street

- Two-way light segregation facility on Heath Road is a potential solution due to available space on the carriageway
- A further option between Heath Road and Kendricks Road is to increase the footway width to provide a share use path.
- Kendricks Road to Cemetery Road is currently unsuitable for cyclists. Due to a parallel route for motorised vehicles, there is potential for this link to be restricted for cycle use only (acknowledging the requirement for access to employment site)
- Between Cemetery Road and Gower Street, there are opportunities to increase cycle infrastructure through a combination of reducing on street parking, narrowing the carriageway and reallocating the shared use facility to a segregated cycle facility.

Section 3 Gower Street to Bescot Crescent

- Limited opportunities between Gower Street and Sheridan Street due to lack of highway space. Restrict car parking along this section and consider opportunities to increase footway space to allow shared use facility
- Reduce traffic lanes at Old Pleck Road/Wednesbury Road to implement designated cycle infrastructure to allow priority for cyclists at busy junction
- Restrict on street car parking on Wednesbury Road up to Bescot Crescent to identify opportunities for reallocation to cycle infrastructure. Lack of available space is still a constraint without on street parking therefore options are limited (potentially to shared use facility)
- Cyclists to remain off road at pinch point across Railway bridge

Section 4 Bescot Crescent to Mount Street

- Remove residential parking to increase highway width between Bescot Crescent and Mount Street
- Option to consider would consist of a two way segregated cycle facility (on approach to Walsall Town Centre) which would require narrowing the carriageway
- A further option which would reduce the impact on the carriageway is to consider a shared use facility on either side of the carriageway.
- Consider staged signals to allow for right hand turn movement between Corporation Street and Wednesbury Road.

Section 5 Glebe Street to Bridgeman Street

- Restrict on street parking to allow for cycle infrastructure
- Limited opportunities along this section into the town centre due to narrow carriageway
- Full segregation on either side of the carriageway is unlikely
- Potential to include light segregation on one side of the carriageway however, narrowing of traffic lanes would be required.
- Shared use facility is a potential solution however kerbside activity including bus stops, lighting, car parking is significant along this section of the corridor.

Recommendation for Further Assessment

A detailed feasibility study will be required to identify a suitable solution on the corridor between Darlaston and Walsall Town Centre. The site audit has identified a number of constraints across the corridor which will need to be studied in more detail to determine whether a consistent and coherent scheme can be implemented.

The main considerations to be assessed as part of a feasibility study include

- The potential for a light/full segregated facility across the entire corridor
- The use of shared use paths to accommodate cyclists without impacting on the highway network
- Addressing major pinch points including key junctions and bridges
- The impact of removing on street car parking
- Improvements to off street cycle facility through Victoria Park
- The use of Heath Road and Fredricks Road to avoid Walsall Road.

Photographs

Photo 1 – Constrained carriageway and footway at the A4038 Pinfold Street / A462 Darlaston Road junction

Photo 2 - Opportunity to utilise off road route between Crescent Road and Avenue Road

Photo 3 – Existing off road route between Crescent Road and Avenue Road which could be upgraded	Photo 4 – Quiet location off Kendricks Road
	
Photo 5 – Constrained existing A4038 railway bridge	**Photo 6 – Alternative existing railway bridge on Kendricks Road**
	
Photo 7 – Existing shared footway/cycleway on Darlaston Road under M6	**Photo 8 – Existing segregated footway/cycleway on Darlaston Road**
	
Photo 9 – Constrained carriageway with on-street parking and parking obstructing footway on Wednesbury Road near Caledon Street	**Photo 10 – Footway width constrained by mature trees on Bradford Street on approach to Walsall Town Centre**

Corridor:	Wolverhampton: City Centre to Portobello A454
Local Authority	City of Wolverhampton Council

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This route starts in the City Centre within the ring road. Using the areas of existing segregated shared footway/cycleway around the south side of the ring road, it connects to the A454, which is a main arterial route east of Wolverhampton, passing through residential areas of Moseley and Portobello towards Willenhall.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- Provision of cycling infrastructure is mainly constrained by kerb side activity, on road parking and properties located on the carriageway, particularly in residential areas, city centre locations and where industrial units are present
- However, large sections of the route have wide footway and existing cycling infrastructure provided, with limited constraints to cycling access
- Major junctions involving segregated crossing and multiple lanes of traffic could impact on ease of access, desirability and safety of cycling routes.

Constraints:

Section 1 A4150 to Graiseley Street

- Highway space constrained on Waterloo Road, School Street and Salop Street due to on-street parking and bus stop provision, kerb side activity including signage, parking meters, bollards, light posts and post boxes. Signalised crossings are provided, although side street junctions could impede cyclist movements and cause safety issues. Wide footways are provided, however, bus stops, side road junctions and property access points could impede cyclist movements.
- There is greater highway space on Peel Street, however the Market Car Park exit and entrance could impede cyclist movements and cause safety issues. Footways could be improved to allow for cycling infrastructure.
- Highway width on Hallet Drive is constrained by on road parking and high levels of kerb side activity including fencing, bollards, light posts and property access. However, there are opportunities to utilise the existing footway or grass verges provided to enhance highway space.

Section 2 Graisley Street to Church Lane

- Graisley Street provides some opportunities with wide carriageways and footways, however side road junctions could impede cyclist movements and cause some safety issues. There are higher levels of kerbside activity on Retreat Street due to property fronting the carriageway, including industrial units. Although there are double yellow lines, there are some vehicles parked on the footways which could impede cyclist movements. Highway space is more constrained here due to boundary walls and properties that front the carriageway.
- There are high levels of on road parking on Mander Street which could impede cyclist movements and inhibit the provision of cycling infrastructure. Boundary walls and properties fronting the carriageway limit highway width. The side junction with Williamson Street could impede cyclist movement and cause safety issues, particularly if parked vehicles limit visibility. Footway width could facilitate shared use, however kerb side activity such as light posts could impede cycling access.

- A Toucan crossing is provided on Penn Road however this is a staggered crossing which could impact ease of access, with cyclists having to cross four lanes of traffic.
- Segregated cycleways are provided on the A4150, however the provision of light posts and sign posts in the centre of the cycling lanes could inhibit ease of access. Cyclists have to cross Church Lane which currently does not give cyclists priority.

Section 3 Church Lane to Bilston St Island

- The main constraint on this section of the route includes the junction with the A4150 and the A459 and Birmingham Road, which involves several segregated crossings spanning multiple lanes of traffic. This could inhibit ease of access and deter some cyclists.
- Shared footways/cycleways and wide footways are provided along the rest of the route, with occasional kerb side activity including sign posts and fencing which could impede cyclist movements, although there are limited constraints on the majority of this section.

Section 4 Bilston St Island to Cross Street

- A shared footway/cycleway is currently provided on Middle Cross, although some kerb side activity such as sign posts could impede cyclist movement. There are limited constraints on this section.
- Cycle provision under Bilston Street island.
- The junction with Ward Street could cause access and safety issues, with boundary walls and narrow footways limiting visibility. Ward Street is a no through road, although footways are narrow and there are properties fronting the carriageway, including access to industrial units. There are some instances of on street parking, despite restrictions. Bollards and raised kerbs in place on James Street currently limit through movements for cyclists onto Ward Street to/from the A454.
- Highway width is currently limited on Ward Street between James Street and Shakespeare Street due to properties fronting the carriageway, including access to industrial units, on street parking and narrow footways. There are similar issues on Shakespeare Street, although there is greater highway space due to wider footways and carriageway width.
- Barriers on the A454 include access to properties and some properties fronting the carriageway which limits highway space. There is intermittent on road parking and bus stops provision which could impede cyclist movements. Side road junctions could also inhibit ease of access and safety, with lack of pedestrian/cyclist infrastructure. The segregated signalised crossing on Lower Walsall Street could also impede cyclist movements.

Section 5 Cross Street to Hurstbourne Crescent

- There is some kerb side activity such as fencing, bus stops and sign posts which could impede cyclist movements. Side roads and car parking access could also restrict ease of access and cause safety issues. Properties infrequently front the carriageway from Cross Street to Coventry Street/Plascom Road, which could restrict provision of cycling infrastructure, as well as mature trees which are planted between Old Heath Crescent and Coventry Street/Plascom Road.

- There is a bus lane on the southern side of the carriageway that operates to/from Chillington Fields and East Park Way, which restricts highway space. It could be utilised when no buses are present, however it is not an ideal solution for mass cycling according to Transport for West Midland's Cycling Design Guidance. There is limited footway provision from East Park Way and on road parking which restricts highway space along this section of the route. However, there is provision of an on road cycle lane between East Park Way and Bromford Crescent, before re-joining a bus lane on the northern side of the carriageway.

- There are multiple properties fronting the carriageway between East Park Way and Hurstbourne Crescent which could inhibit the provision of cycling infrastructure. There are residential side

streets either side of the A454 which could be utilised, however possible constraints include on street parking, property access and side junctions. Bromford Crescent is already utilised by cyclists, with provision of wayfinding, so there is infrastructure already in place with limited constraints on this route other than those discussed above.

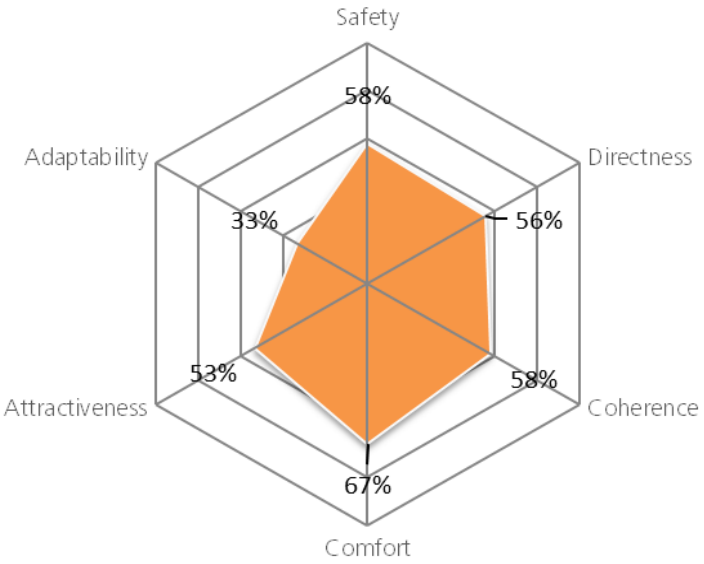
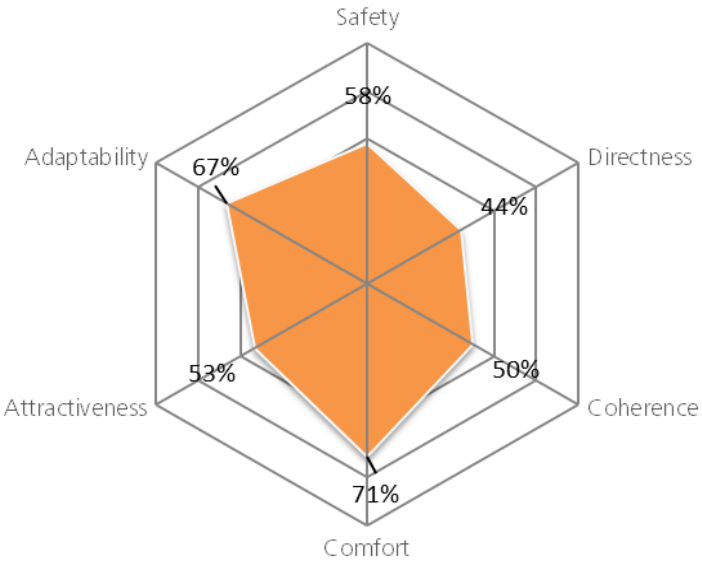
Section 6 Husbourne Crescent to Uplands Avenue

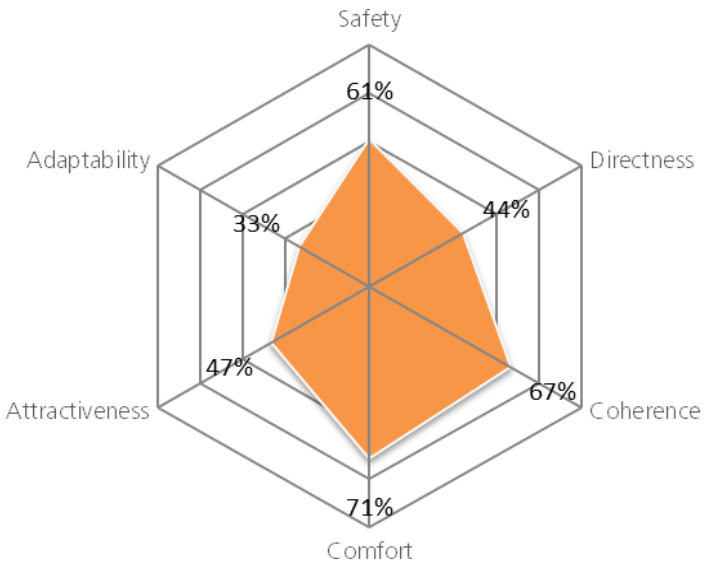
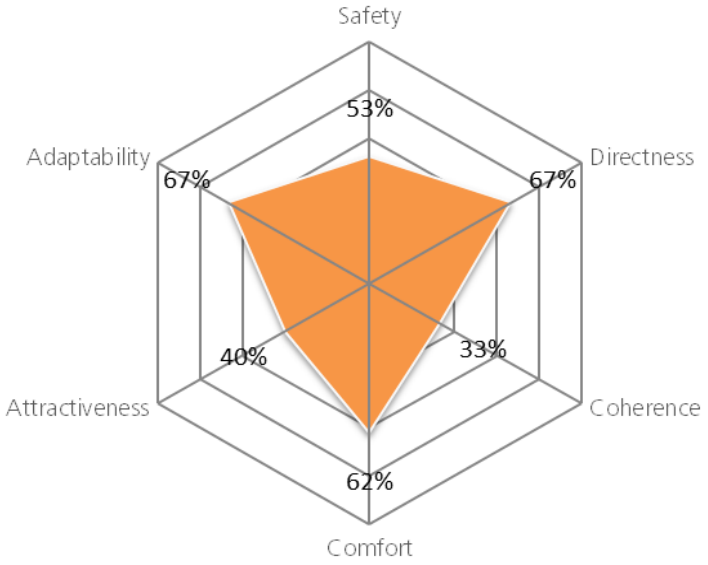
- There is limited highway width along this section of the A454 due to provision of a bus lane, bus stops and other kerb side activity including light posts and fencing. There is some central hatching which could provide more highway space, however there are pinch points along the highway where signalised crossings are provided.
- There are residential side streets either side of the A454 which could be utilised, however possible constraints include on street parking, property access and side junctions. Bromford Crescent is already utilised by cyclists, with provision of wayfinding, so there is infrastructure already in place with limited constraints on this route other than those discussed above.
- The junction with Stow Health Lane/Deans Road involves segregated signalised crossings across multiple lanes of traffic, which could inhibit ease of access. Kerb side activity such as fencing could restrict cyclist movements as they navigate the junction. On the northern side of the carriageway, there is an offline segregated footpath/cycle path which could be utilised, with limited constraints along this section. There is a wide footway provided on the southern side of the carriageway, however property access, side junctions and parking bays could restrict provision of cycling infrastructure.

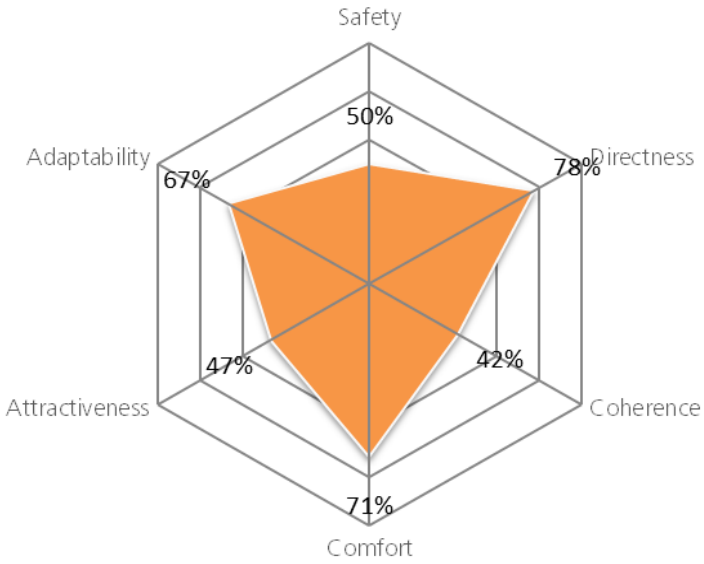
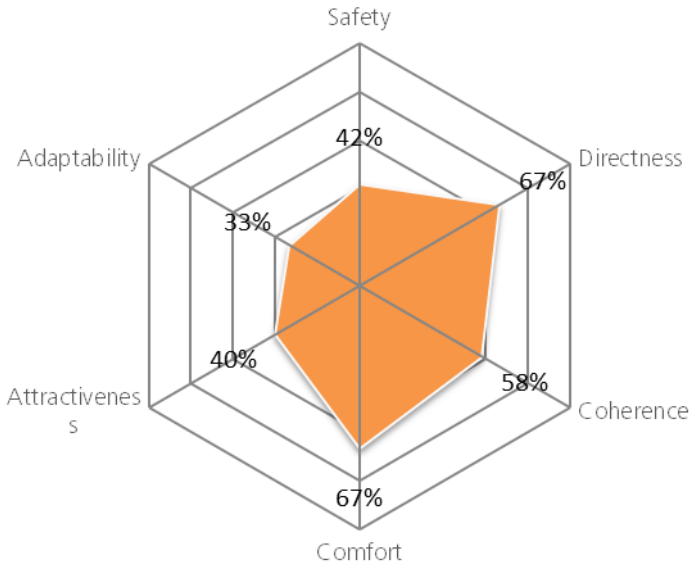
Section 7 Uplands Avenue to Hill Road

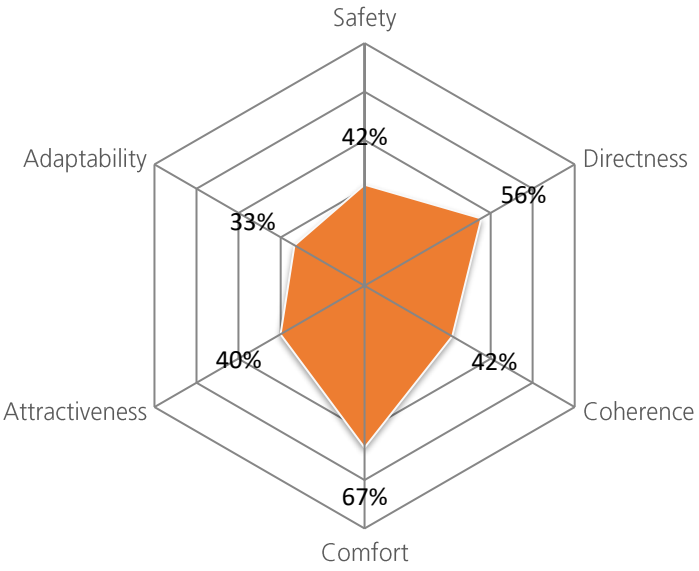
- Current constraints on the southern side of the carriageway include kerb side activity such as fencing, light posts, sign posts, bus stops, on street parking and property access which could inhibit the provision of cycling infrastructure. The majority of footways are wide enough that they could facilitate shared use, however there are some barriers that could limit ease of access. There are also instances of cars using the kerb to park, which would need to be controlled to allow cyclist movement. There is high traffic flow on this link, with limited highway space to provide cycling infrastructure
- There are similar issues on the northern side of the carriageway. Between Noose Lane and Hill Road there is a subway entrance provided, which could limit space for cycling infrastructure.
- The junction with Neachells Lane and Moseley Road could also pose a barrier to cycling access, with segregated signalised crossings spanning multiple lanes of traffic. Kerb side activity such as fencing and narrow traffic islands could inhibit cyclist movements.

Existing Level of Service (LoS) Assessment:

Section 1 – A4150 to Graiseley Street	
Section 2 – Graiseley Street to Church Lane	

Section 3 – Church Lane to Bilston St Island	
Section 4 – Bilston St Island to Cross Street	

Section 5 – Cross Street to Hurstbourne Crescent	
Section 6 – Hurstbourne Crescent to Uplands Avenue	

Section 7 – Uplands Avenue to Hill Road	

Opportunities:

Section 1 A4150 to Graiseley Street

- Existing 20mph speed limits, conducive to on carriageway provision
- Footway width could allow provision for shared use, however as a city centre location there may be high levels of pedestrian activity and pedestrians accessing properties which could inhibit ease of access. Sufficient space would need to be provided to allow cycle movements.
- Carriageway width on Waterloo Street could allow for a dedicated on road cycle lane.
- Peel Street has greater highway space due to lower levels of kerb side activity. Footpaths could be improved to allow ease of access.
- Existing toucan crossings and segregated cycle ways could be utilised in the vicinity of the Ring Road and Sainsburys. Hallet Drive does provide some space with grass verges and on existing footpaths, however nearby roads such as Great Brickkiln Street could be utilised as there is existing cycling infrastructure in place.

Section 2 Graisley Street to Church Lane

- Existing cycling infrastructure is provided along much of this section, however provision of cycling infrastructure could be optimised, including improved crossing facilities and provision of sign posts and lamp posts so as to not impede cycling movements.
- The majority of the route has wide footways which could be upgraded to shared use, however there are some constraints including side road junctions, on road parking, vehicles parking on the footway and properties fronting the carriageway. There is the potential to provide on road cycle lanes, particularly on Graisely Street and Retreat Street due to carriageway width and prohibition of on road parking, although vehicles parking outside premises would need to be controlled.

Section 3 Church Lane to Bilston St Island

- There are limited constraints on the majority of this section due to the provision of wide footways and shared footways/cycleways. The main barrier to continuity of the route includes the crossing of the A459 and Birmingham Road, which involves crossing multiple lanes of traffic at segregated crossings. Enhancing the crossing facilities at this section could improve ease of access for cyclists.

Section 4 Bilston St Island to Cross Street

- Shared footways/cycleways are already provided on Middle Cross
- Enhancing the existing infrastructure on Ward Street and Shakespeare Street to allow through movements for cyclists is needed to allow continuity of the route. This includes addressing the bollards and raised kerbs on Ward Street. There are more constraints along this section due to on street parking, narrow carriageway and footway width and properties fronting the carriageway.
- There are opportunities to provide cycling infrastructure on the A454 due to highway width, with wide carriageway widths allowing for the provision of a dedicated cycle route, despite some barriers to access including properties fronting the carriageway, bus stop provision and existing junction layouts.

Section 5 Cross Street to Hurstbourne Crescent

- Despite some restrictions in this section of the route, there is some highway space to accommodate cycling routes. Highway width is restricted by bus lanes, properties and lack of footway provision between East Park Way and Hurstbourne Crescent, however there are residential side streets on either side of the carriageway which could be utilised. These do have instances of on road parking, however with lower traffic volumes there is an opportunity to provide cycling infrastructure on these links.

Section 6 Husbourne Crescent to Uplands Avenue

- Despite limits to highway space between Husbourne Crescent and Stow Heath Lane/Deans Road, residential side streets on either side of the carriageway could be utilised. These do have instances of on road parking, however with lower traffic volumes there is an opportunity to provide cycling infrastructure on these links.
- The main constraint on this section includes the junction with Stow Heath Lane/Deans Road. There is an offline segregated footpath/cycle path provided to the northern side of the carriageway which could be utilised.

Section 7 Uplands Avenue to Hill Road

- There is limited space on the highway due to the high number of residential properties, provision of on street parking, side junctions and kerb side activity such as fencing and bus stops. However, footways may be of sufficient width to allow for shared use.
- There is a toucan crossing that connects Vaughan Road with Willenhall Road, which allows cyclists to cross to the northern side of the carriageway. Provision of a cycling infrastructure between Vaughan Road and Stow Heath Lane/Deans Road could improve connectivity, which includes enhancing crossing facilities at Stow Heath Lane/Deans Road.

Recommendation for Further Assessment

This route has many sections of existing cycle provision but there would be many benefits unlocked by improving the continuity and clarity of the route.

Given that sections of this route are within the city centre, it is recommended that cycle and pedestrian movements are segregated due to the high pedestrian footfall.

It would create a more attractive cycle route if cycle crossings in the city centre were prioritised and kept at grade. We would recommend further assessment of the junction capacity of junctions where this route crosses the ring road, to ascertain the feasibility of incorporating toucan crossings.

If this is not possible, opening up what appears to be a former access on the south side of Penn Road Island should be investigated.

On the A454 corridor a study of on-street parking bays is recommended to understand the use of on-street parking bays, and assess the feasibility of removing these to provide space for a segregated cycle track.

Photographs

Photo 1 – Existing 20mph speed limit on Waterloo Road

Photo 2 - Existing crossing on Peel Street, parking area and ring road, requiring cyclist to dismount

Photo 3 – Existing segregated cycle lane on west side of the ring road

Photo 4 – Existing cycle provision under Penn Road Island, but provides an unattractive route

Photo 5 – Existing segregated cycle lane on south side of the ring road

Photo 6 – Existing cycle ramps cycle provision under the Bilston Street Island

	
Photo 7 – On-street parking on A454 Willenhall Road	**Photo 8 – Residential access road and parking on footways on the north side of Willenhall Road**

Corridor:	Wolverhampton City Centre to Wednesfield on A4124 towards Walsall
Local Authority	City of Wolverhampton Council

Existing Characteristics:

The route begins on the A4150, which links to National Cycle route 81. This route provides a link between Wolverhampton City Centre, Wolverhampton railway station, close to New Cross Hospital and Bloxwich, as well as suburbs such as Heath Town, Wednesfield and Ashmore. The route is mostly single carriageway with dual carriageway section along Wednesfield Way. The route is a mixture of residential and industrial and retail developments. There are sections of the route with existing cycling infrastructure provided, such as segregated footways/cycleways.

A plan showing the assessment route split into sections is provided in Appendix A. This should be viewed in conjunction with this datasheet.

Problems & Barriers for Cyclists:

- Highway space is generally good with limited constraints to the provision of cycling infrastructure, except for intermittent kerb side activity.
- Provision of cycling infrastructure on junctions and roundabouts is the main barrier to cycling movements on this route. Issues include lack of high quality crossing facilities and/or narrow footway/cycleways. In general, footway width and highway width is not a limiting factor along the majority of the route, except between Culwell Street and Sun Street and in the vicinity of Neachells Lane.
- This route provides continuous footway/cycleways along its length, except in the vicinity of Wolverhampton Road to the east of Tudor Road. This limits the continuity of the route on the northern side of the carriageway.

Constraints:

Section 1 A4150 to Woden Road

- Existing cycle lane on the exit from the A4150, however this ceases approximately 50 meters after the junction. Highway constrained by railway overbridge with raised footways either side. There is a concealed entrance to the south of the carriageway which could cause safety issues. Carriageway width under the bridge may allow for shared use footway/cycleway.
- A Shared footway/cycleway begins in the vicinity of Culwell Street junction on the northern side of the carriageway. However, space is somewhat limited due to kerb side activity such as bus stops, fencing and sign posts on both sides of the carriageway. A bus lane on the southern side of the carriageway currently restricts highway space.
- Between Sun Street and Woden Road, there are occasional side junctions and property access point which may inhibit ease of access and cause safety issues.
- There is an existing segregated footway/cycleway which runs adjacent to Wednesfield Road on the southern side between Sun Street and Inkerman Street, so there are limited constraints on this section of the route. This runs alongside a segregated bus lane, and cyclists are required to use the bus lane in the vicinity of Inkerman Street. Inkerman Street junction currently inhibits access with lack of high quality crossing facilities.
- Between Inkerman Street and Woden Street there are high levels of kerb side activity, such as bollards, sign posts, lamp posts, shop fronts and post boxes. There are incidents of vehicles parking on the footway on the northern side. However, this sufficient carriageway footway width that could accommodate cycling infrastructure. On the southern side of the carriageway, the footway runs offline on Chervil Rise, however the carriageway width is restrained with narrow footways provided.

Section 2 Woden Road to Dace Road

- There are limited constraints between Woden Road and Grove Street due to wide footways and carriageway width. Cyclist currently use the bus lanes on either side of the carriageway, however this is an ideal solution for mass cycling according to the Transport for West Midlands Cycling Design Guidance.
- Between Grove Street and Tudor Road/Deans Road here is increased kerb side activity including bus stops, bins, sign posts and a supermarket access junction which could limit ease of access. Crossing Dean Road to the south of the carriageway requires using a segregated crossing with multiple lanes of traffic. This limits ease of access and could deter some cyclists. Footway provision ceases on the northern side of the carriageway on the junction with Wolverhampton Road which currently limits the continuity of the route. There are less constraints to the east of Wolverhampton Road due to footway width and a grass verge which adds space for the provision of cycling infrastructure. A segregated cycleway/footway joins the carriageway to the east of the canal overbridge and continues on the northern side of the carriageway to Dace Road, with limited constraints on this section.

Section 3 Dace Road to Neachells Lane

- Crossing facilities on Dace Road access junction could be improved to allow ease of access and minimise safety risks. Dedicated segregated cycleway/footways and a toucan crossing is provided on New Cross Avenue onto Wednesfield Way, however, a signalised crossing is not provided on Bentleybridge Way, Backhouse Lane, Sidings Close and Well Lane, which currently impedes ease of access and could cause safety issues.
- The access junction at Sidings Close is a current pinch point with narrower footways and limited space for waiting pedestrians/cyclist. The wide junction geometry could encourage increase vehicle speed on the approach/exit of Sidings Close

Section 4 Neachells Lane to Green Meadow

- The segregated cycleway/footway continues along Wednesfield Way, with a signalised crossing on Neachells Lane. However, the footway width narrows to the east of Neachells Lane with limited visibility on the bend of the roundabout, which could impede ease of access. There is some kerb side activity such as fencing and light posts which could restrict cyclist movements. There is a segregated footway/cycleway on the southern side of the carriageway, although the same constraints apply on the side of the roundabout on Wednesfield Way.
- Both segregated footways continue along Wednesfield Way, with limited constraints on this section of the route between Neachells Lane and Steelpark Way
- The segregated footway ceases on Wednesfield Way to the north of Steelpark Way. Footways are reasonably wide on both sides of the carriageway; however ease of access is limited by property access points and side junctions. Highway space is constrained in parts due to boundary walls and fencing along the length of the carriageway
- Ease of access is currently restricted in the vicinity of Waddens Brook Lane and March End Road on the eastern and western side of the carriageway respectively, which would require cyclists to use segregated crossing across multiple lanes of traffic.
- There is a brief segregated cycleway/footway on the eastern side of the carriageway between Waddens Brook Lane and March End Road. Footways are reasonably wide on both sides of the carriageway, with space to provide cycling infrastructure, particularly on the eastern side. Side road junction currently restrict ease of access.

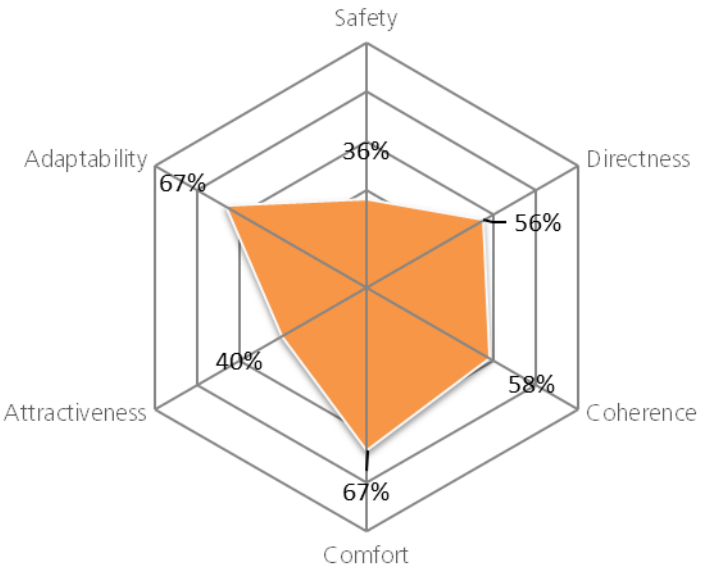
Section 5 Green Meadow to Colman Avenue

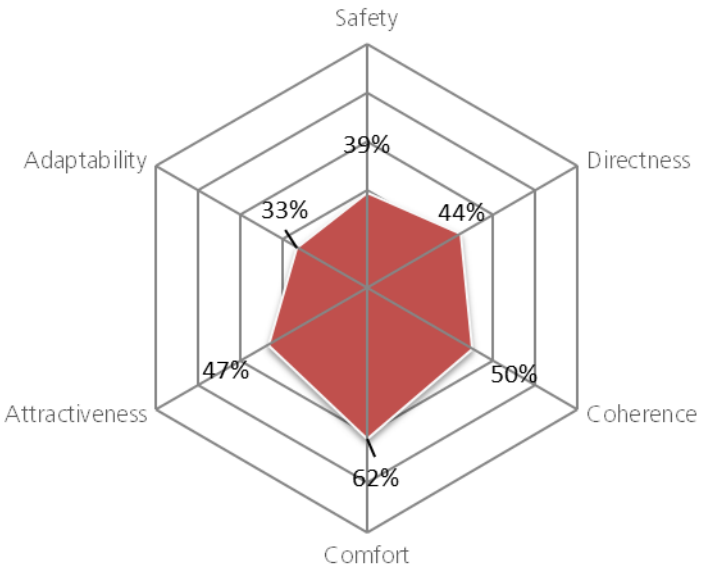
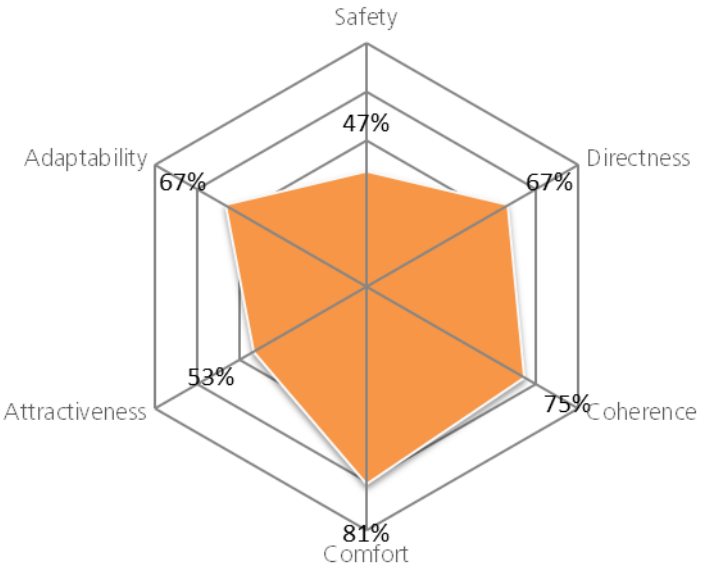
- There is sufficient carriageway width between Green Meadow and Lichfield Road, although mature trees that line the road currently restrict footway width on either side. Side roads to residential developments could also impede ease of access and cause safety issues.
- Ease of access on the western side of the carriageway is currently restricted in the vicinity of Lichfield Road/Hyde Road roundabout due to cyclists having to cross two roads on the approach to the roundabout. The eastern side provides a continuous footway from Lakefield Road to Lichfield Road, although footway width is restricted by foliage and fencing along the length of the carriageway.
- Shared footway/cycleways continue on Lichfield Road on either side of the carriageway. The main constraints include school access (eastern side), side junctions, property access points and kerb side activity including mature trees, bus stops and light posts. However, there is sufficient space to provide cycling infrastructure

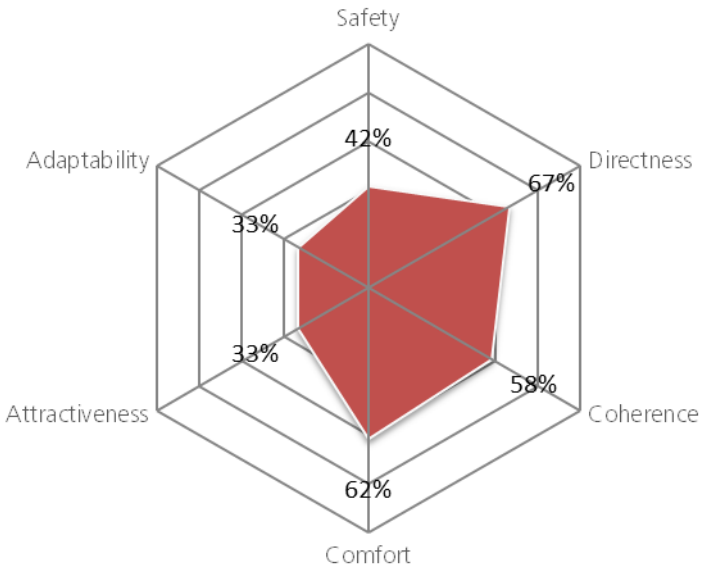
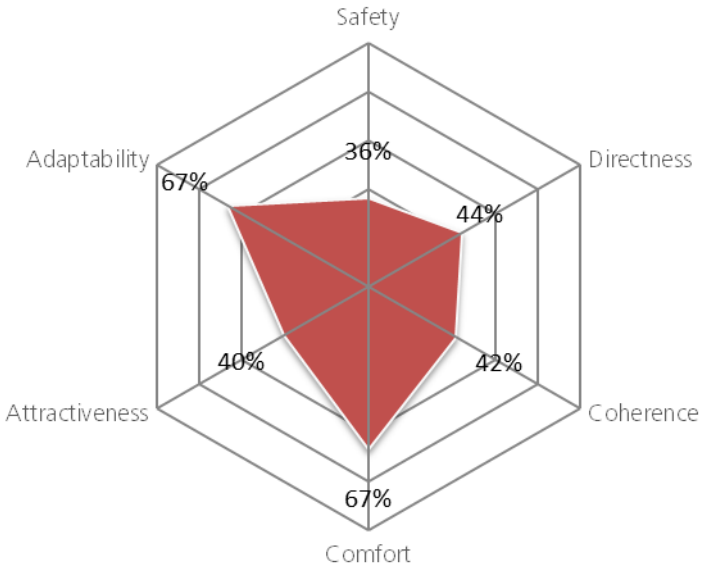
Section 6 Colman Avenue to Broad Lane North

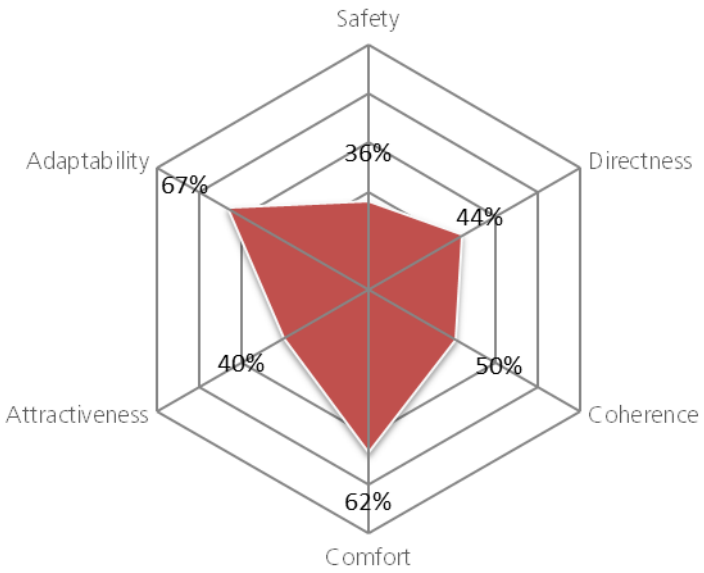
- There are shared footways/cycleways on either side of the carriageway, with similar constraints to the previous section including property access, side junctions and bus stops.
- Ease of access is currently restricted on the double mini roundabout between Linthouse Lane and Stubby Lane, with cyclists having to navigate un-signalised crossing on side roads.
- Between Stubby Lane and Broad Lane North there is sufficient highway width on this route to provide cycling infrastructure. The main constraints continue to be kerb side activity such as bus stops and tree plantings and side junctions and property access, particularly entrances/exits to businesses which do not provide high quality crossing facilities.

Existing Level of Service (LoS) Assessment:

Section 1 – A4150 to Woden Road	

Section 2 – Woden Road to Dace Road	
Section 3 – Dace Road to Neachells Lane	

Section 4 – Neachells Lane to Green Meadow	
Section 5 – Green Meadow to Colman Avenue	

Section 6 – Colman Avenue to Broad Lane North	

Opportunities:

Section 1 A4150 to Woden Road

- Provision of a cycling route between the A4150 and Sun Street would require increasing width of footways (for shared use) or reallocating space to cycle track which could be achieved by removing some kerb side activity such as fencing. Bus stops and limited footway width currently limit the opportunities along this section
- Between Sun Street and Inkerman Street there is existing cycling infrastructure that can be utilised on the southern side of the carriageway
- Between Inkerman Street and Woden Road, highway width would be increased by managing kerb side activity and improving crossings of side roads.

Section 2 Woden Road to Dace Road

- There is sufficient space on either side of the carriageway to provide shared facilities. Crossing facilities in the vicinity of the Asda supermarket would be required to maintain ease of access.
- There is a segregated footway/cycleway on the northern side of the carriageway to the east of Wolverhampton Road which could be utilised, however footway provision is not continuous in the vicinity of Tudor Road. The route could tie into this existing route via Deans Road to the south of the carriageway. Otherwise, improved junction facilities at Tudor Road/Wolverhampton Road could provide more ease of access.

Section 3 Dace Road to Neachells Lane

- Existing infrastructure can be utilised along this section and can enhanced by providing better crossing facilities on side road junctions.

Section 4 Neachells Lane to Green Meadow

- Improvements to the existing footways in the vicinity of the Neachells Lane roundabout could improve ease of access. Existing infrastructure can be utilised along this section of the route between Neachells Road and Steelpark Way. Footway improvements could be provided on the western side of the carriageway between Steelpark Way and Hart Road to allow ease of access, or footway width on the eastern side of the carriageway could allow for a shared use footway/cycleway, although a signalised crossing should be provided on Steelpark Way roundabout.

Section 5 Green Meadow to Colman Avenue

- Highway width is sufficient to allow for cycling infrastructure. Management of kerb side activity and side junctions is required to allow ease of access. There are residential access streets adjacent to the main carriageway on Lichfield Road which could be utilised as part of a dedicated cycle route. Improved crossing facilities should be provided on Lichfield Road/Hyde Road roundabout if utilising the western side of the carriageway. Crossing facilities could also be improved on March End Road and Waddens Brook Lane

Section 6 Colman Avenue to Broad Lane North

- Highway width is sufficient to allow for cycling infrastructure. Management of kerb side activity and side junctions is required to allow ease of access. There are residential access streets adjacent to the main carriageway on Lichfield Road which could be utilised as part of a dedicated cycle route.
- Improved access could be provided on the mini roundabout between Linthouse Lane and Stubby Lane to allow continuous movement of cyclists. Some property access junctions will need improvements to maintain safety and quality of the cycling route

Recommendation for Further Assessment

This route has sections of existing segregated off-carriageway provision, however, providing continuity and clear connections into the city centre and major trip attractors would unlock supressed benefits.

Given that this is a main arterial route into Wolverhampton, it is recommended that segregated off-carriageway cycle facilities are continued along the length of this route where possible.

It is recommended that the existing disjointed constrained cycle provision under the railway bridge shown in photos 1 and 2, should be removed, to support the clarity of higher quality alternative route via Lock Street and the park area off Little's Lane.

Photographs

Photo 1 – Existing constrained and unclear cycle provision on the A4124 close to the ring road approaching the railway bridge

Photo 2 – The constrained footway and carriageway under the railway bridge on A4124

Photo 3 – Existing provision, preferred route for cyclist via Lock Street adjacent to the east of the railway line

Photo 4 – Existing provision, preferred route for cyclist via Lock Street adjacent to the east of the railway line

	
Photo 5 – Existing segregated footway/cycleway on north side of A4124 Wednesfield Way	**Photo 6 – Opportunities to utilise existing grass verge for off-carriageway cycle provision on south side of Lichfield Road A4124**

Appendix C. Cycle Audit Sheets

				Birmingham City Council			Coventry City Council			Dudley MBC			Sandwell MBC		
Prioritisation Criteria	Factors	Description	Scoring	Hagley Road	Perry Barr	Sutton Coldfield to Birmingham	Coventry Uni to Hospital - Binley Road	Coventry City Centre to Holbrooks	Coventry City Centre to Warwick University	Kingswinford to Brierley Hill	Coseley to Tipton	Halesowen - Leasowes towards Oldhill	Old Hill, Blackheath to Oldbury	Smethwick to West Bromwich and Wednesbury	Princes End, Tipton to West Bromwich
Effectiveness	Current levels of cyclists using corridor	Current cycling usage across all journey purposes on the corridor	1 - The corridor currently has low levels of cycling 2 - The corridor currently has moderate levels of cycling with frequent use in the peak periods 3 - The corridor is well known as a corridor with high cycling use and there is regular/frequent use throughout the day	**2**	**1**	**1**	**2**	**1**	**2**	**1**	**1**	**1**	1	1	1
	the forecast increase in the number of cycling trips	Likely increase in usage for cycle journeys, based on improvement of scheme and growth factors such as housing, employment etc.	1 - PCT analysis identifies low levels of cycling increase (below 2%) 2 - PCT analysis identifies moderate levels of cycling increase (2-4%) or nearby development would suggest potential for moderate growth in cycling 3 - PCT analysis identifies high levels of cycling and/or increase (5%+) or large scale developments in close proximity would suggest opportunities for major growth for cycling	**3**	**2**	**2**	**2**	**1**	**3**	**1**	**1**	**1**	1	2	1
	Link to major trip generators i.e. residential developments	The corridors link to major trip generators including current and future developments. This will include direct access and major trip generators in close proximity.	1 - The corridor is predominantly rural with limited links to housing developments 2 - The corridor has links to small residential developments or is close to major development but no direct access 3 - The corridor has direct access to major housing developments (or other trip generators)	**3**	**3**	**3**	**3**	**2**	**2**	**2**	**2**	**2**	2	2	2
	Link to major trip attractors i.e. city centre, employment zones	The corridors link to major trip attractors including current and future developments. This will include direct access and major trip generators in close proximity.	1 - The corridor does not provide a link to any major trip attractors such as employment sites, railway stations etc. 2 - The corridor provides access to small trip attractors such as small/medium employment sites 3 - The corridor provides direct acceess to town/city centre and/or major employment sites etc.	**3**	**3**	**3**	**3**	**3**	**3**	**2**	**1**	**1**	2	3	2
Policy Alignment	Ability to achieve West Midlands Cycle Charter objective	Does the corridor through cycle infrastructure improvements have the ability to achieve a 5% mode share for cycling by 2023	1 - The scheme is unlikely to meet the cycle charter objective of 5% cycling on the corridor 2 - The scheme has the potential to meet the cycle charter of 5% cycling on the corridor 3 - The scheme is likely to meet the cycle charter of 5% cycling on the corridor	**3**	**2**	**2**	**2**	**1**	**3**	**1**	**1**	**1**	1	2	1
	Support key regional priorities	Does the corridor have the ability to support the Movement for Growth agenda including supporting sustainable economic growth?	1 - The scheme will not support the aspirations set out by TfWM Movement for Growth 2 - The scheme has the potential to support the aspirations set out by TfWM Movement for Growth 3 - The scheme is anticipated to support the aspirations set out by TfWM Movement for Growth	**3**	**3**	**2**	**2**	**2**	**3**	**2**	**1**	**1**	2	3	1
Safety and Environment	Addresses road safety	Do the infrastructure improvements on the corridor address any safety issues previously identified?	1 - scheme would not improve safety issues on corridor 2 - The corridor has moderate safety issues which the cycle improvement measures has the potential to improve 3 - The corridor has significant safety issues which the cycle improvment measures will seek to address	**3**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**1**	2	2	2
Integration to network	Link to existing cycle network	Does the corridor link to the existing cycle network therefore supporting a continous cycle journey?	1 - The scheme is isolated with no other cycle infrastructue in close proximity 2 - The scheme is located within a spare cycle network however, the scheme is not directly linked to other cycle infrastructure 3 - The scheme is part of a coherent local cycle network	**1**	**2**	**1**	**2**	**1**	**1**	**1**	**2**	**1**	1	3	2
	Ability to integrate into multi modal journeys	Does the corridor link to public transport, providing users an opportunity to undertake a multi-modal journey	1 - The corridor is not located near public transport links 2 - The corridor is close to public transport links 3 - The corridor provides a direct link to public transport links inc. railway stations, bus services etc.	**2**	**3**	**2**	**1**	**1**	**2**	**1**	**2**	**1**	3	3	2
Deliverability	Scheme feasibility/deliverability	Is the corridor feasible to deliver? Are there major constraints? Will it have a negative impact on the network?	1 - The corridor is highly constrained, a segregated cycle route is unlikely to be deliverable 2 - The corridor is constrained however, there is potential for a segregated facility 3 - The corridor has only minor/no constraints, there is good opportunities for cycle segregation.	**1**	**2**	**1**	**2**	**2**	**2**	**1**	**1**	**1**	1	2	1
			Total Score (out of 30)	**24**	**23**	**19**	**21**	**16**	**23**	**14**	**13**	**11**	**16**	**23**	**15**
			Notes on corridor	High propensity corridor with links to major trip generators and attractors. No main links to Railway Station at Five Ways. Highly constrained network so full segregation on Hagley Road is unlikely. Due to it's role as a key commuter corridor, it has the real potential to get people out of their cars and move to active travel modes. Scored maxium for safety due to the high traffic volumes and tight	Key corridor for TfWM to facilitate the Commonwealth Games. Low levels of cycling currently but with the current Perry Barr cycle scheme under development this could increase. Route would provide a direct link to Perry Barr Railway Station therefore, opportunities for multi modal journeys.	Route would follow a similar alignment to the cross city line providing opportunities for multi modal journey. Link is a key commuter route with significant journeys between North Birmingham and Birmingham City Centre in AM and PM peak. Scored a 2 for achieving TfWM aspirations as the corridor is already well served by public transport (although further mode shift away from car would be encouraged) highly constrained around Aston Expressway would be a challenge for deliverability.	Corridor with high propensity for cycling due to major trip attractors at either end of route. Student population along the corridor provides high propensity group for cycling. Exisiting cycle infrastructure already in place at busy junctions on approach to Coventry City Centre. No major public transport in close proximity to the route.	Route would provide a link into Coventry City Centre from small to medium residential areas. The PCT analysis shows that the northern section of the route has low propensity for cycling. The route is unlikely to achieve a 5% mode share for cycling. The route would however provide further transport choices for the new development proposed towards the northern section of the corridor.	Route would provide a high quality cycle link to a major trip attractor in Coventry. Warwick University has a high propensity for cycling due to the student population. PCT analysis identifies the scheme as having high propensity for cycling in the future (albeit on a different alignment) from what I can see the route would not be part of an existing cycle networt (the original alignment has some shared use facilities) the route would support regional aspirations by supporting mode shift at a key trip attractor.	The route would potentially provide further opportunities for cycling journeys however, the route does not link to any major town centres/employment zones (although the route does travel through medium/large residential areas) PCT analysis shows that propensity for cycling is low (cycling levels currently are low)	The route uses the canal towpath as an off carriageway route for the some sections of the route. It does potentially provide connections to Coseley Station, but is significantly constrained by topography and carriageway constraints. Therefore the PCT tool should limited potential for significant increases to cycling levels.	The route is predominantly off-carriageway, using public rights of way through Leasowes Park and the canal towpath. Whilst the route does serve some residential and employment areas, the route characteristics would limit the increase in daily cyclists and the PCT assessment does not identify a high propencity to increase levels of cycling.	The route would provide links between key residential areas and trip attractors in Blackheath and Oldbury, with significant new developments proposed in the Rowley Regis area. However, the PCT assessment suggests limited propocencity to cycle, and the route alignment is restricted by topographical and geometric constraints.	Parts of the scheme, namely the section from Smethwick to West Bromwich, have potential to provide high quality links to key trip attractors and would play a key role in providing missing links to the cycle network in that area. However, the Sections further north close to Wednesbury are more constrained (geometry and topography) with less likelyhood/propensity of attracting significant numbers of new cyclists.	This route would provide links from residential areas of Tipton and Princes End to trip attractors and employment areas of Oldbury and West Bromwich. However, existing levels of cycling are considered to be low and analysis of PCT does not indicate significant propencity to cycle. Other routes within Sandwell offer more logical options for high quality cycle routes to West Bromwich that provide clarity and support cycle charter objectives.

Solihull MBC			Walsall MBC			Wolverhampton City Council		
Dickens Heath to Solihull Town Centre	Balsall Common to Stonebridge	Shirley to Bentley Heath	Darlaston to Walsall Town Centre	Rushall to Brownhill	Bloxwich to Walsall Town Centre	Portobello to Wolverhampton City Centre	Wolverhampton City Centre to Walsall along A4124	Fordhouses to City Centre
1	1	1	1	1	1	1	1	2
2	1	2	2	1	2	2	1	2
3	2	2	2	1	2	2	2	2
3	3	2	2	1	2	3	3	3
2	2	2	2	1	1	2	2	2
3	2	2	2	2	2	2	2	2
2	2	2	3	2	2	2	2	2
1	1	1	1	1	1	2	2	2
3	3	1	1	1	2	1	1	1
2	2	2	2	1	2	2	2	1
22	19	17	18	12	17	19	18	22
The scheme would provide a key cycling facility on a commuter route into Solihull Town Centre, increasing employment opportunities and travel choices. PCT analysis has identified that growth in cycling mode share could be significant with investment. The route would provide a link to Solihull Railway Station increasing multi modal opportunities.	The route currently has low levels of cycling and PCT analysis does not identify the route as having propensity for cycling. The route does provide links to major attractors including NEC, Airport etc. the route also provides a link to Berkswell Railway Station which could provide multi modal opportunities connecting to NEC, Airport etc. Growth Aspirations/policies set by TfWM could be achieved by reducing commuting by SOVs to major trip attractors	The route has relatively low levels of cycling currently however, the PCT analysis has identified that the corridor could see increased journeys with investement. Whilst Shirley is not a major town centre, the centre of Shirley experiences heavy traffic flows with many local journeys undertaken. This route would support the aspirations of TfWM of reducing local journeys undertaken by SOVs. The route would need to consider providing a high quality link into Shirley Railway Station to ensure that multi modal opportunities are provided. Connecting the route to Shirley Railway Station would provide an active travel/public transport link into Birmingham City Centre.	The corridor currently has low levels of cycling with the PCT analysis identifying that this is a corridor with low propensity for cycling. There are opportunities for increased cycling trips along this route due to access into Walsall Town Centre from variously residential areas. A segregated cycle facility would address a signigicant safety concern (heavy HGV traffic) along this corridor	Route has very low levels of cycling currently. The PCT analysis outlines that there is low propensity for cycling in the future. There are no major trip generators or attractors along this corridor. The route cannot be considered as a key commuter corridor although there are small pocks of industrial/employment sites. Unlikely to be able to support WMCA Cycle Charter objectives along this corridor of 5% mode share.	The route currently has low levels of cycling and the PCT analysis does not expect this to increase. The route could connect to two railway stations at either end (Walsall and Bloxwich) which could support multi modal journeys. The route would link a number of medium/large residential areas to Walsall Town Centre providing opportunities for active travel commuter journeys.	The route would provide a key commuter corridor between residential sites between Portobello and Wolverhampton City Centre. Low levels of cycling exist on the corridor currently and the PCT analysis only identifies a moderate increase. There is existing facilities on the corridor which could be utilised as part of any improvement to the corridor. The route would need to address a number of key junctions which would have a beneficial impact on safety.	current low levels of cycling with PCT analysis identifying small growth in cycling with investment. The route would provide a link into Wolverhampton City Centre and would connect employment sites with large residential areas. Existing provision is in place and nearby pockets of cycling infrastructure are in place. The route would need to address some sigiinificant junctions to make sure route is safe for cyclists.	key commuter route into Wolverhampton City Centre. Moderate levels of cycling currently exist with some sections of shared use facilities along the A449. The PCT analysis identifies that there will be strong growth in cycling with investement in infrastructure. Route has potential to achieve a 5% mode share for cycling achieiving aspirations of TfWM by facilitating growth and reducing dominance of the car.

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