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Sandwell Metropolitan Borough Council

Sandwell Cycling and Walking Infrastructure Plan

SCWIP

January 2020

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1 January 2020

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	05/09/2019	Anna Newey	Anna Watt	Colin Harwood	First Draft
B	22/09/2019	Anna Watt	Anna Newey	Chris Sibthorpe	Final further to client feedback

Document reference: 404789 | B

Information class: Standard

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Executive summary

Mott MacDonald was appointed by Sandwell Metropolitan Borough Council (SMBC) to prepare a Local Cycling and Walking Infrastructure Plan (LCWIP) to support mode shift to active modes across the authority.

The process undertaken conformed to the Department for Transport (DfT)'s defined six-stage LCWIP process. The geographical scope was the whole of the authority's boundary. A policy and data led analysis was carried out to establish areas of highest cycle and walking demand. These areas were then reviewed by SMBC's Transport Planning (TP) team to select those which aligned with SMBC's policy objectives. These included: air quality improvement areas, regeneration corridors, proximity to secondary schools, proximity to transport hubs (mainly Metro and rail rather than bus), current and planned 20mph zones. A map of the selected cycle network and Core Walking Zones (CWZs) can be found in Appendix A.

The LCWIP process is new and it is accepted by DfT that it is not practical to carry out audits of all walking and cycling across an authority. Therefore, it is necessary to prioritise where to focus auditing effort on the areas with the greatest opportunity to affect mode shift towards active transport modes and that fit with the authority's policy objectives.

15 cycle routes and six walking zones were selected for auditing purposes. Auditing produced an analysis of existing conditions and recommendations for improvements. On some cycle routes there are opportunities for large scale interventions such as roundabout remodelling to allow for and prioritise cycling, and for walking, some larger scale public realm schemes could be considered. Visualisations of the interventions can be found in Section 4.

For the purposes of this process, costings were produced excluding major scheme interventions but focussed on delivering the essential interventions for both walking and cycling. Initial costings were drawn from Manchester's Cycle Design Guidance which provides a range of costs by intervention type, and was understood, at the time of preparing the SCWIP, to provide the most comprehensive costed guidance available in England and Wales in terms of the range of infrastructure interventions it covers. However, these costings provide a low to high range and were therefore felt to be too indicative. SMBC's highways team therefore undertook a high-level costing exercise. These costs and the low-end range of the Manchester Design Guidance costs were then averaged to provide a cost of £9.4m for the 15 cycle routes and £2.8m for the 6 Core Walking Zones interventions.

Differing approaches to prioritisation were considered and an accessible approach was decided upon for the 15 cycle routes focussing on 18 policy criteria using Yes/No ratings, with deliverability and cost as additional ranking factors (on a scale of 1-3). The prioritised list can be found in Section 5, Table 5.1.

The LCWIP report and associated outputs (network map and prioritised list of interventions) will be presented at Scrutiny Committee in October 2019 and, subjection to approval, published on SMBC's website. The LCWIP will be integrated with other walking and cycling strategies and used on an ongoing basis to shape the cycling and walking implementation plans. The LCWIP will be refreshed in 2024 incorporating new routes and walking zones, with improved data including school data from the Propensity to Cycle tool, 2021 Census data and more detailed data to support walking interventions.

1 Introduction

Mott MacDonald has been commissioned by Sandwell Metropolitan Borough Council (SMBC) to develop a Local Cycling and Walking Infrastructure Plan (LCWIP). The Sandwell LCWIP (SCWIP) builds on work already done as part of the West Midlands LCWIP at a regional level.

SMBC aims to increase the number of trips made by foot or by cycle and so has developed SCWIP. The SCWIP is in line with the Department for Transport (DfT)'s process for developing LCWIPs which is designed to support the Cycling and Walking Investment Strategy (CWIS) with the aim of increasing opportunities to walk and cycle, normalising journeys being taken actively within the borough and increase potential for future funding.

The SCWIP is a Sandwell wide review of the cycle network and the walking routes across Sandwell. It incorporates the four strategically relevant cycling corridors put forward as part of the West Midlands LCWIP, the Black Country cycling and walking vision and strategy as well as Cradley Health railway station as a core walking zone; the Cycling Supplementary Planning Document (SPD) and the Sandwell Rights of Way Improvement Plan (ROWIP) as well as identifying gaps in the network.

> *"SMBC's ultimate aspiration is to have a prioritised plan for the local network within Sandwell, which coordinates with the existing plans for the Black Country and for these to be integrated with the plans that are already in place for the West Midlands strategies for planning and transport."*

The plan in place enables a long-term approach to develop walking and cycling infrastructure across the borough. The West Midlands LCWIP approach is to include and consider each of the Local Authorities' existing strategies and policies in relation to cycling and walking and to identify and prioritise a list of schemes for cycling and walking infrastructure which are strategically relevant. This SCWIP mirrors this approach for Sandwell.

The SCWIP aims to:

- Assist the implementation of the West Midlands Strategic Cycle Network
- Identify the local networks within Sandwell with a prioritised plan for delivery
- Coordinate the plan with existing plans for the Black Country and the West Midlands to ensure a consistent and aligned approach to delivery
- Integrate this plan into a clear planning and transport policy document and delivery plan, taking into consideration the overarching West Midlands strategies for planning and transport

With the outcomes being:

- A network plan for walking and cycling identifying preferred routes and core zones for further development
- A prioritised programme of infrastructure improvements for future investment
- An evidence based SCWIP to be used as a supporting document for a local plan

The key challenges, identified by SMBC, to walking and cycling within the borough currently include:

- Severance due to Sandwell sitting in the centre of the motorway network and the local conurbation meaning the landscape is dominated by local highway networks

- Development in Sandwell tends to create more car trips encouraging an over dependence on motorised modes of transport
- 34% of Sandwell residents have no access to a car (Census 2011)
- Strong cross-border movements to nearby neighbouring attractors in Birmingham, Dudley, Walsall and Wolverhampton as reported in the regional transport strategy

1.1 Scope of the work

The scope of the work will cover all areas within the Sandwell boundary and include 15 cycle routes and six core walking zones.

The scope of the work Mott MacDonald was commissioned to deliver was:

- To gain a thorough understanding of the remit of the project, SMBC's programme and analytical needs
- To review all plans already in process with WMCA and ensured the SCWIP will be in line with the wider Black Country
- Produce an evidence based SCWIP as a supporting document for the local plan.

The outputs required include:

- A publication of a local cycling route network plan, which includes a prioritised plan for delivery of cycling infrastructure improvements including a methodology and assessment criteria
- A publication of a local walking route network plan, which includes a prioritised plan for delivery of cycling infrastructure improvements including a methodology and assessment criteria
- An implementation report plan divided into three, five and ten years for both cycling and walking
- A Strategic Outline Case and implementation plan for Cycling and Walking Network Proposals

1.2 LCWIP process

The SCWIP follows the standard process and practice of DfT LCWIP Guidance ensuring that the outcomes align with other constituent Local Authorities and West Midland Combined Authority's (WMCA) LCWIPs. DfT guidance is outlined in Table 1.1 with the rest of this report following each stage, excluding Stage 1.

Table 1.1 The DfT LCWIP process

Stage	Name	Description
1	Determining Scope	Establish the geographical extent of the LCWIP, and arrangements for governing and preparing the plan.
2	Gathering Information	Identify existing patterns of walking and cycling and the potential new journeys. Review existing conditions and identify barriers to cycling and walking. Review related transport and land use policies and programmes.
3	Network Planning for Cycling	Identify origin and destination points and cycle flows. Convert flows into a network of routes and determine the type of improvements required.
4	Network Planning for Walking	Identify key trip generators, core walking zones and routes, audit existing provision and determine the type of improvements required.
5	Prioritising Improvements	Prioritise improvements to develop a phased programme for future investment.

Stage	Name	Description
6	Integration and application	Integrate outputs into local planning and transport policies, strategies and delivery plans

2 Gathering Information

To ensure the SCWIP is coordinated with existing plans already in place for the Black Country and West Midlands a review of all National, Regional and Local Plans has been carried out. In addition, existing walking and cycling infrastructure, planned transport infrastructure schemes including those in Local Plans, any housing and employment sites identified in Local Plans, existing public transport networks, including railway and Metro, existing highway network, West Midlands Bike Share Scheme, were also reviewed.

2.1 Policy context

2.1.1 National policy

This section identifies the appropriate elements of national planning and transport policies relevant to cycling and walking.

2.1.1.1 National Planning Policy Framework (NPPF) (2019).

The NPPF (2019) formulates the government's planning policy objectives for England and how these should be applied. Guidance within the document relevant to the SCWIP development is provided below:

- Paragraph 91: *"Planning policies and decisions should aim to achieve healthy, inclusive and safe places which… enable and support healthy lifestyles, especially where this would address identified local health and well-being needs – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling"*
- Paragraph 102: *"Transport issues should be considered from the earliest stages of plan-making and development proposals, so that… opportunities to promote walking, cycling and public transport use are identified and pursued"*
- Paragraph 104: *"Planning Policies should: provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans)"*

2.1.1.2 Cycling and Walking Investment Strategy (CWIS) (2017)

The CWIS was published by the Department for Transport (DfT) to help build upon the successes from previous investment in in cycling and walking across the UK. The government's ambition is to "make walking and cycling the natural choices for shorter journeys, or as part of a longer journey".

The Strategy's objectives, by 2020, 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
- Increase the percentage of children aged 5 to 10 that usually walk to school

Relevant sections of the strategy include:

- Paragraph 3.32 *"In order to help local bodies that are interested in increasing cycling and walking in their local areas, we have published guidance on the preparation of Local Cycling and Walking Infrastructure Plans. The guidance will enable local bodies to take a more strategic approach to improving conditions for cycling and walking in order to support increases in travel on foot and by cycling, by:*
  - *understanding existing and future travel patterns, and the barriers and enablers to increasing cycling and walking*
  - *identifying and mapping a recommended cycling network and core walking zones that will become the primary focus for infrastructure improvements*
  - *creating a prioritised pipeline of enhancements to ensure infrastructure effectively supports growth in cycling and walking, and contributes towards meeting broader local goals."*

The SCWIP will focus on supporting cycling and walking by identifying the areas where most potential for walking and cycling exists, and by identifying safe cycling and walking infrastructure to support this potential. The first phase of the SCWIP will not specifically seek to identify measures to support walking to school although where schools are located in areas of high potential for commuting, the requirements for schools will be incorporated. In addition, having a school within the area of high potential also has the potential to increase the relative priority of such locations compared to locations without schools.

2.1.1.3 LCWIP Guidance (2017)

LCWIPs are a cornerstone of the CWIS developed to provide a new, strategic approach to identifying cycling and walking infrastructure improvements required at the local level. The LCWIP guidance states that "cycling and walking coexist within complex transport systems". It provides technical guidance on the process and tools used to support the development of a cycling and walking infrastructure plan. The technical guidance proposes using a demand-led approach to developing networks and routes where infrastructure improvements can be made to support an increase in cycling and walking, generally over a 10 year period. There are three defined outputs from the LCWIP:

- A network map for walking and cycling
- A prioritised list of investments over the lifetime of the LCWIP
- A report setting out the process undertaken to derive the LCWIP

The process guidance provided by the Department for Transport (DfT) should be used to guide the development of the SCWIP. The outputs of the SCWIP will be in line with LCWIP guidance.

2.1.2 Regional policy

This section of the report identifies the relevant elements of regional policies to enable a coherent understanding of whether Sandwell's policies reflect current regional policies and if there are any areas which may benefit from alignment at a regional level.

2.1.2.1 Strategic Economic Plan (SEP) (2017)

The SEP is the guiding strategy for the West Midlands Combined Authority (WMCA), which sets out the vision for improving the quality of life in the West Midlands.

Although the SEP does not mention walking and cycling specifically, there are a number of WMCA's objectives of improving accessibility to jobs, narrowing the health gap and reducing CO_2 emissions from transport.

The SEP identified three core channels to focus effective delivery including:

- People, including a focus on skills, employability, communities and public services
- Business, including competitiveness
- Place, including sites, housing and connectivity

The development of the SCWIP is directly supportive of improvements to place, in particular its focus on connectivity.

2.1.2.2 West Midlands Movement for Growth (2017)

Movement for Growth is the West Midlands Strategic Transport Plan, developed by WMCA. This is a supporting document for the SEP. Walking and cycling play a pivotal role in the Local Tier of the transport plan.

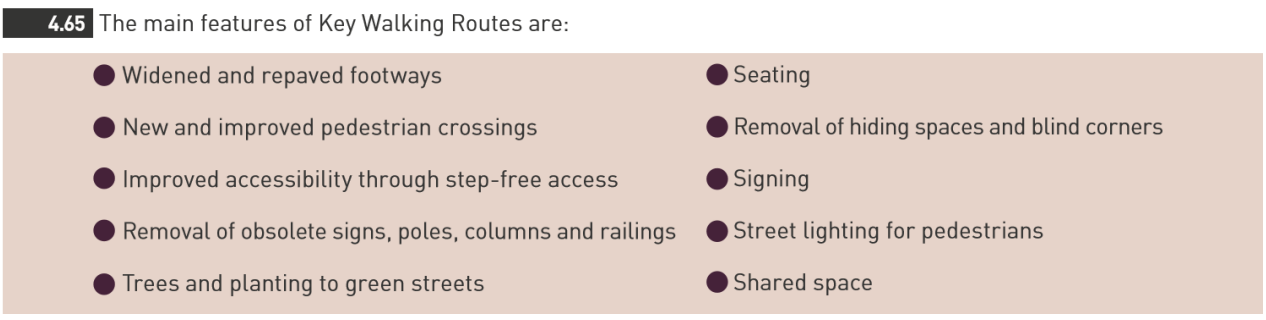
The policy's objectives aim to tackle public health issues such as the high obesity levels and diabetes, reducing these through encouraging modes of active travel (such as walking and cycling). To support the transport vision, cycling and walking strategies need to be a safe and attractive alternative for short journeys.

One of the strategies for implementation, with making better use of the existing transport capacity, and aims to meet: "*increased demand by providing higher quality public transport, better conditions for walking and cycling and new public transport capacity, rail freight capacity, and cycling and walking capacity"* (Paragraph 4.6)

Paragraph 4.61 states: *"There is a need for this tier to bring the asset condition across the West Midlands to a decent modern standard for all highway and footway infrastructure, improve road safety and encourage walking and safer cycling in attractive local street environments and on comprehensive local cycle networks."*

The main features of Key Walking Routes are shown in Figure 2.1. The SCWIP will support the development of a cycle network and identify and recommend improvements on Key Walking Routes.

Figure 2.1: Movement for Growth extract: Key Walking Routes



2.1.2.3 2026 Delivery Plan for Transport (2017)

The 2026 Delivery Plan for Transport is a supporting document for the Movement for Growth, providing the progress updates in achieving the plan. This delivery plan focuses mainly on

capital schemes and is divided into key priority tiers. Local cycle network development and key walking routes are both priorities under the Local Tier.

The cycling priority aims to achieve a 5% cycle mode share for all journeys in 2023, aided by the development of a strategic cycle network across the region, linking both constituent and non-constituent members. This strategic cycle network will integrate with local cycle networks.

Key walking routes improvements are integral elements of schemes for city, town and suburban district centres. To encourage walking, improvement to the current conditions will be delivered through district and city centre public realm, local area enhancements and the promotion of walking to school.

The development of the SCWIP will provide SMBC with a framework of infrastructure improvements to support the aims of the 2026 delivery plan and the overarching Movement for Growth policy aims.

2.1.2.4 West Midlands Cycle Charter (2017)

The West Midlands Cycling Charter, issued by WMCA, aims to grow cycling in the West Midlands by making it easier and safer for more people to cycle. There are key principles that all partners (i.e. the constituent authorities of WMCA including SMBC) which will enable the West Midlands to deliver a step change in cycling are noted as:

- *"Leadership and Profile: Effective and high-profile leadership on cycling has acted as a catalyst for change in places such as London and Bristol and will be the key to delivering an increase in cycling across the West Midlands.*
- *Cycling Network: We need significant changes in the planning, design and maintenance of the West Midlands transport network if we are to increase cycling levels.*
- *Promoting and encouraging cycling: The co-ordinated, effective and efficient delivery of cycle training, safety and marketing will play a significant role in increasing cycling across the West Midlands."*

This charter aims to provide a detailed action plan to increase cycling by 400% in the next 10 years i.e. to 5% of all trips from the 1% baseline to 2023, and to 10% of all trips by 2033. The SCWIP could seek to align its aims and objectives to those that SMBC is supporting through the Cycle Charter.

2.1.2.5 Town centre regeneration plan (2018)

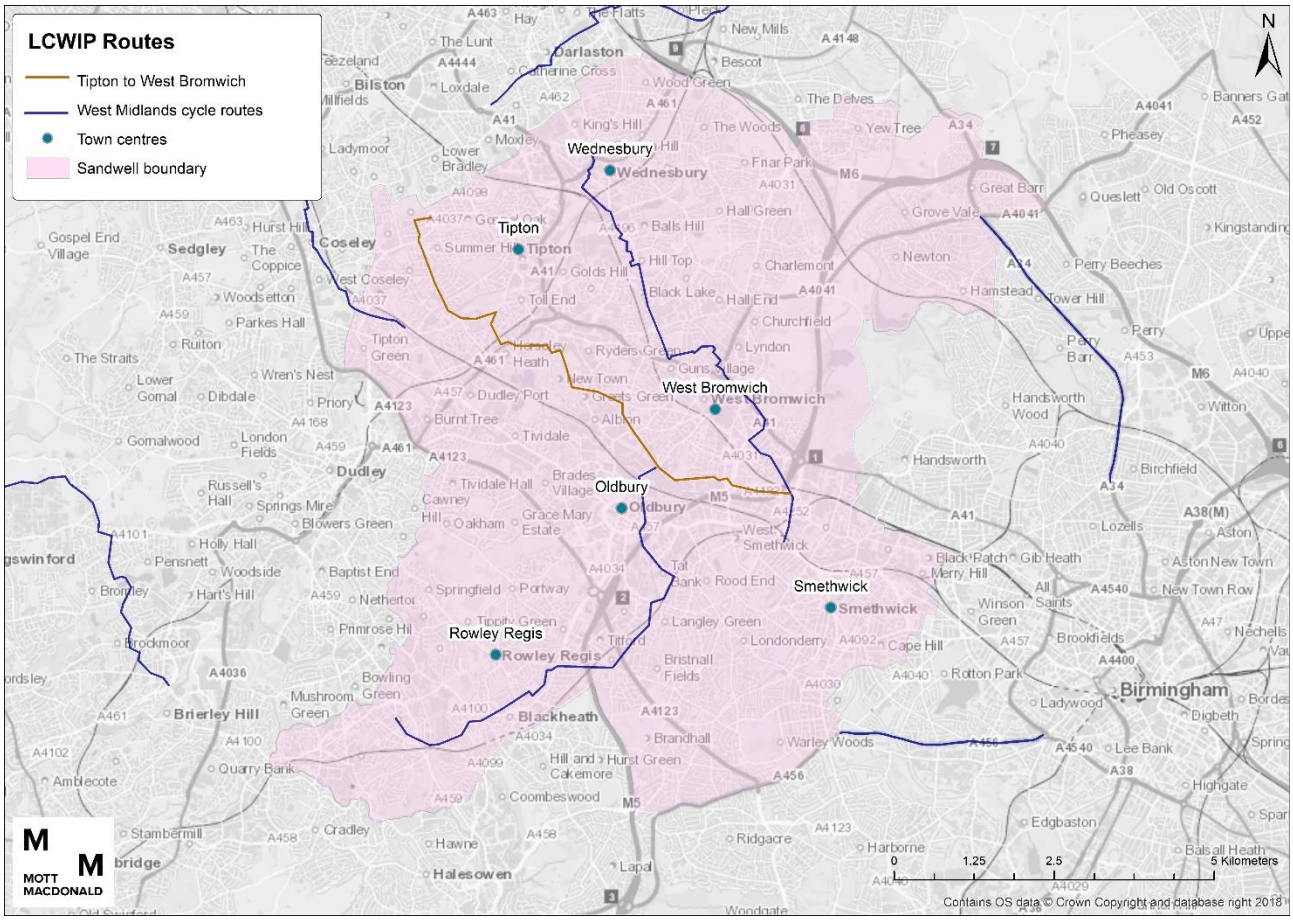
New town centre plans for Bilston, Dudley, Birmingham, Walsall and West Bromwich have been agreed by the WMCA Housing and Land Delivery Board. These plans will unlock funding and support from the WMCA and are to be delivered by each local authority. These plans are currently in development, with each town centre having an individually tailored plan.

West Bromwich is within SMBC's boundary and therefore SCWIP infrastructure plans and the town centre plans will need to be aligned.

2.1.2.6 West Midlands Local Cycling and Walking Infrastructure Plan (LCWIP) – forthcoming

A LCWIP has been developed for the West Midlands region, led by the Cycle Charter team at Transport for West Midlands (TfWM). Sandwell's officers have been involved in its development and an overview of schemes which fall within Sandwell's boundary is shown in Figure 2.2.

Figure 2.2: West Midlands LCWIP routes within Sandwell



2.1.3 Local policy

Existing documents were reviewed to provide the assurance that the SCWIP is coordinated with the existing plans already in the Black Country and West Midlands.

2.1.3.1 Local Plan

The Local Plan for Sandwell is constructed of six documents each of which is described below:

- Black Country Core Strategy (BCCS)
- Black Country Walking and Cycling Strategy and Implementation Plan
- Site Allocations and Delivery Development Plan Document (SADDPD)
- West Bromwich Area Action Plan (WBAAP)
- Smethwick Area Action Plan (SAAP)
- Tipton Area Action Plan (TAAP)

2.1.3.2 Black Country Plan (Formally Black Country Core Strategy (BCCS))

The Black Country Plan is a planning and regeneration plan for the whole of the Black Country and is signed up to by the four Black Country Councils (Dudley Metropolitan Borough Council, SMBC, Walsall Council and City of Wolverhampton Council). The Black Country Plan continues the from the BCCS and the Strategy is currently under review.

Within the Black Country Plan several aims are related to walking and cycling including:

- Protecting the environment: This includes the improvement and development of environmental areas, networks of open spaces, and walking and cycling routes to serve new developments.
- Keeping the Black Country Connected: Providing an overarching transport strategy to ensure all new developments are accessible by a range of transport modes.
- People's health and wellbeing: Planning for peoples' active lifestyles, safety and wellbeing and supporting people to live in good health throughout the Black Country.

The Black Country Plan provides a consistent environment for the SCWIP development with multiple aims which can help shape the development of suitable infrastructure in areas that need it most.

2.1.3.3 Black Country Walking and Cycling Strategy and Implementation Plan (2016)

This Black County wide strategy has taken an LCWIP approach to network delivery. Schemes are developed to a higher degree for cycling than walking. Most walking elements still require auditing to develop a suite of improvements, whereas the main cycling schemes have been developed to Strategic Outline Business Case level. Cycling schemes appear to have, by default, followed the most direct route without direct use of the Route Selection Tool (RST) as recommended in the LCWIP technical guidance issued by the DfT in 2017. However, it may have been evident that on-road schemes delivering direct routes along key corridors were possible therefore not requiring the iterative nature of the RST process. Two of the area wide schemes fall within Sandwell:

- West Bromwich triangle
- Wednesbury to Darlaston - a small element of this scheme falls within Sandwell's boundary

2.1.3.4 Site Allocations and Delivery DPD (SAD DPD) (2012)

The SAD DPD identifies sites and areas to meet the Borough's housing and employment needs, whilst protecting the Borough's historic buildings and green infrastructure.

This document sets out sites allocated in the Local Plan, along with their capacity (residential units or Gross Floor Area for non-residential land uses) along with other relevant details for each site. This information will be analysed during the network planning phase of the SCWIP to establish whether there is any additional cycling and walking infrastructure that may already be planned; and where there is potential for Section 106 contributions which could assist in the delivery of schemes in the vicinity of the site.

2.1.3.5 West Bromwich Area Action Plan (AAP) (2012)

The AAP includes policy on walking and cycling infrastructure, stating that the SMBC will promote pedestrian and cycling accessibility through new, major developments which aim to reduce the reliance on car usage.

The AAP identifies that there is a disconnect in pedestrian access through the area, within the centre, with the centre almost fully pedestrianised but the connections to the wider area are a limiting factor. Residential areas to the north are also cut off through a busy dual carriageway with insufficient cycling and pedestrian infrastructure in place to access the town. Within the AAP a public realm and streetscape strategy has been identified (2007)[1], which intends to

[1] www.sandwell.gov.uk/download/downloads/id/3269/west_bromwich_streetscape_strategy.pdf

create strong pedestrian links and more specific proposals have been identified to ensure future connectivity.

The Council have also identified that introducing a 20mph zone for the whole town centre will improve safety for all modes of transport, particularly walking and cycling. The Council will promote pedestrian and cycle accessibility by requiring new major developments to incorporate a series of measures to reduce the dominance of a car such as:

- *"Giving priority to pedestrian movement between key uses and public transport provision through appropriate design, location and access arrangements.*
- *Creating more direct, safe and secure pedestrian and cycle links through improved lighting, the use of surface level crossings and wider pavements*
- *Using opportunities provided by development to redesign the road space to provide a greater focus on pedestrian and cycle movement*
- *Ensuring that new development, particularly within the town centre core, provides activity at street level through active frontages*
- *Ensuring that new development, addresses the needs for all population groups to be able to access and use facilities*
- *Ensuring new development makes provision for cycle facilities such as cycle parking, kit lockers, changing facilities and showers."* Pg. 32

2.1.3.6 Smethwick Area Action Plan (2008)

The AAP provides guidance for more sustainable future developments. Within this document there are references to green transport modes including underused areas which could provide new infrastructure to improve the pedestrian and cycling infrastructure in the area. Cycling and walking consideration is also accounted for in new developments, through designing street layouts to avoid the conflict between different modes. There are no specific schemes identified within the AAP which aim to improve walking and cycling infrastructure.

2.1.3.7 Tipton Area Action Plan (AAP) (2008)

Walking and cycling are promoted within the AAP which encourages these modes, alongside buses, as forms of sustainable transport. One of the strategic objectives of the AAP is to improve transport accessibility, which involves improving walking and cycling provision to the District Centre and local open space as a result of new residential developments. It has been agreed that there is no requirement for major transport infrastructure schemes, however, any residential development is required to contribute to ease of movement.

2.1.3.8 Sandwell Vision 2030 (2017)

Sandwell Vision 2030 is a document which demonstrates the ten ambitions of the area to be addressed by 2030. This plan does not directly target walking and cycling but focuses on health and making Sandwell better connected through its public transport links.

- *"Ambition 2: Sandwell is a place where we live healthy lives and live them for longer, and those of us who are vulnerable feel respected and cared for.*
- *Ambition 6: We have excelled and affordable public transport that connects us to all local centres and to jobs in Birmingham, Wolverhampton, the airport and the wider West Midlands."*

2.1.3.9 Sandwell Cycling Strategy (1992/3)

Sandwell's Cycling Strategy was developed to support conditions to make cycling easier and simpler in Sandwell. Through more people taking up cycling as a preferred mode of transport, it is anticipated that there would be a significant contribution to reducing energy use, air pollution, noise and traffic congestion. This policy document explains how this will correlate with government guidance, at the time of publishing, with information on why people do not cycle, and what can be done to improve this within Sandwell.

Surveys were undertaken in 1992, to ask commuters why they don't cycle to work, with the most frequent response 'danger from other traffic' at 66%. Of the 1,474 commuters surveyed, 676 said they would be interested in cycling to work.

Since the publication of the cycling strategy, there has been a policy shift towards sustainable travel, along with demographic travel behaviour changes e.g. higher rail usage (71% since 1995/97[2]) and lower car ownership in younger people (decrease in 19% of 17-20 year olds holding licences[3]). Central government guidance has been updated since the publication of this strategy and therefore this strategy should be aligned.

Sandwell's current cycling strategy contains a cycle network map showing cycle provision within the area as at 1992. The SCWIP will be used to update this network map.

2.1.3.10 Sandwell Walking Strategy (2015)

Sandwell Walking Strategy was adopted in 2015 to support an increase in walking by targeting resources and delivering improvements and enhancements to the walking environment over a five-year period. Current walk rates stated in the strategy are the 203 of 923 trips per year per person made on foot, with 52% of trips made in the borough being less than 1 mile.

The walking strategy has four main outcomes:

- Increased number and length of walking trips
- Improved health of the population through encouraging healthy lifestyles
- Reduced fear of anti-social behaviour (ASB) on walking routes
- Reduced pedestrian casualties

The last two points reflect on the future prioritisation of schemes within the SCWIP process. Through addressing these outcomes, the SCWIP will build upon the Sandwell Walking Strategy to develop a robust approach and improving the walking infrastructure they should be tackled accordingly.

The walking strategy delivery group is constructed of eight different groups:

- Physical Activity Board
- Local Access Forum
- Centro
- Safer Sandwell Partnership
- Canal and River Trust
- The Ramblers
- Living Streets

[2] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/458422/how-people-travel-rail.pdf
[3] https://info.uwe.ac.uk/news/uwenews/news.aspx?id=3754

- Other partners

The objectives of Sandwell's Walking Strategy fit with current regional policies. The strategy contains information on the existing walking network and plans for developing and maintaining quality walking routes and connections. During the lifetime of this walking strategy, it is expected that some of the plans set out will be delivered, and new plans will be developed. The SCWIP can provide a walking network map and a prioritised list of interventions to support walking within the borough.

Within this strategy, there is the assurance that Sandwell's walking strategy meets the demand of all users, including those with disabilities and mobility impairments. Where demand is sufficient, infrastructure will be developed (alongside Centro, now Transport for West Midlands) to aid disabled access and better pedestrian access to vehicles.

2.1.4 Summary

A summary of how the SCWIP supports the policies in Section 2.1 can be seen in Table 2.1.

Table 2.1: Policies summary

Policy Title	Key Themes	How the SCWIP Supports These
National Planning Policy Framework (NPPF) (2018)	• Enabling and supporting healthy lifestyles • Promoting walking, cycling and public transport use • Providing high quality walking and cycling networks and supporting facilities	• The SCWIP aims to increase opportunities to walk and cycle within the borough, therefore encouraging and enabling healthy lifestyles and transport modes • The plan involves developing and improving walking and cycling infrastructure and networks which will promote walking and cycling as an attractive alternative to private car use
Cycling and Walking Investment Strategy (CWIS) (2017)	• Increasing cycling and walking activity • Improving the safety of cyclists • Identifying safe cycling and walking infrastructure	• The SCWIP aims to increase opportunities to walk and cycle • Safety of walking and cycling routes and are taken into account and planned in the infrastructure SCWIP
LCWIP Guidance (2017)	• Developing networks and routes where infrastructure improvements can be made to support an increase in cycling and walking	• The SCWIP involves a prioritised programme of infrastructure improvements and aims to increase walking and cycling opportunities
Strategic Economic Plan (SEP) (2017)	• Improvements in connectivity	• The walking and cycling plans enable improvements in connectivity in active travel within the borough
West Midlands Movement for Growth (2017)	• Reducing public health issues through encouraging modes of active travel • Ensuring cycling and walking strategies are a safe and attractive alternative for short journeys • Setting out key features of main walking routes	• Improving the walking and cycling routes will make active travel modes more attractive, particularly for short journeys, which should have a positive impact on the borough's health • The SCWIP needs to ensure the plans for walking routes are in line with the key features specified within West Midlands Movement for Growth
2026 Delivery Plan for Transport (2017)	• Aiming to achieve a 5% cycle mode share for all journeys in 2023 • Improving key walking routes to encourage walking • Promoting walking to school	• The SCWIP improvements to cycle routes should encourage a modal shift towards cycling and walking and so supports targets set in the Delivery Plan • Improvements will be made to key walking routes which should encourage walking • Many of the SCWIP routes are planned around schools to allow modal shift in favour of active modes of travel to school

Policy Title	Key Themes	How the SCWIP Supports These
West Midlands Cycle Charter (2017)	• Growing cycling in the West Midlands by making it easier and safer for more people to cycle • Promoting and encouraging cycling	• The SCWIP improvements to cycle routes should make cycling easier and safer • By providing convenient and safe routes the SCWIP will be encouraging cycling as a mode of transport
Town Centre Regeneration Plan (2018)	• Unlocking funding and support from the WMCA	• West Bromwich has been identified to benefit from this project. The SCWIP infrastructure and West Bromwich town centre plans are aligned to ensure maximum benefit and funding opportunities.
West Midlands Local Cycling and Walking Infrastructure Plan (LCWIP) (forthcoming)	• Providing cycle route schemes and plans	• The SCWIP is aligned with the cycle route schemes from the West Midlands LCWIP which fall within Sandwell's boundary to ensure a joined up and coherent network of walking and cycling infrastructure.
Black Country Core Strategy (BCCS) (in development)	• Improving and developing walking and cycling routes to serve new developments • Supporting health and wellbeing	• SCWIP improvements will be made to walking and cycling routes, ensuring accessibility for all developments and encouraging more healthy modes of travel
Black Country Walking and Cycling Strategy and Implementation Plan (2016)	• Providing schemes for cycling and walking routes	• Two of the schemes fall within Sandwell's boundary, so the SCWIP is aligned with these to ensure a joined up and coherent walking and cycling network
Site Allocations and Delivery DPD (SAD DPD) (2012)	• Setting out allocated sites, including cycling and walking infrastructure that may already be planned	• The SCWIP is aligned with these existing plans and involves plans for further infrastructure developments for walking and cycling
West Bromwich Area Action Plan (AAP) (2012)	• Promoting pedestrian and cycling accessibility to reduce the reliance on car usage • Improving safety for all modes of transport, particularly walking and cycling • Ensuring new development makes provision for cycle facilities	• Improvements to walking and cycling routes made through the SCWIP should encourage a modal shift towards sustainable transport methods and reduce reliance on cars • Walking and cycling improvements will involve safety considerations
Smethwick Area Action Plan (AAP) (2008)	• Improving pedestrian and cycling infrastructure • Designing street layouts to avoid conflict between different modes, for cycling and walking consideration	• The SCWIP involves improvements to walking and cycling infrastructure • The walking and cycling improvements will take layouts into consideration to avoid such conflicts
Tipton Area Action Plan (AAP) (2008)	• Improving and promoting walking and cycling provision	• The SCWIP aims to improve walking and cycling routes
Sandwell Vision 2030 (2017)	• Focusing on good health	• The improvements to walking and cycling routes should encourage healthy modes of transport
Sandwell Cycling Strategy (1992/3)	• Supporting conditions to make cycling easier and simpler	• Improving cycling routes should enable easier access for cyclists
Sandwell Walking Strategy (2015)	• Delivering improvements and enhancements to the walking environment • Encouraging healthy lifestyles • Ensuring the walking strategy meets the demand of all users, including those with disabilities and mobility impairments	• The SCWIP involves improving walking routes and therefore the walking environment, encouraging healthy modes of travel • The SCWIP considers the needs of a variety of individuals, including those with disabilities, who can benefit from walking strategies

2.2 Population Health

This section of the report highlights health reasons to invest in cycling and walking as active modes of transport which can support increases in health and wellbeing. The information is discussed in more detail in the Strategic Outline Case which can be found at Appendix H.

SMBC has a 2030 Vision of Sandwell being:

"a place where we live healthy lives and live them for longer."

Sandwell has been ranked as the 13th most deprived local authority in the 2015 Index of Multiple Deprivation. There is evidence to suggest people living in deprived areas are twice as likely to be physically inactive as those living in more prosperous areas[4].

Sandwell's level of activity as shown in Sandwell's trends information publication[5] shows physical activity levels whereby:

- just over half of the population (54.7%) are classified as 'active' (150+ minutes of exercise per week) – 7 percentage points lower than the national average; and
- one third (33.3%) as 'inactive' (less than 30 minutes of activity per week) - 8 percentage points more than the national average.

Obesity is also higher than national averages:

- 8 percentage points for children in Year 6 (42% classified as overweight or obese), and
- 7 percentage points for adults (70% overweight or obese).

In addition to activity and obesity issues, external sources of poor health outcomes exist in the form of air pollution. Sandwell borough was declared as an Air Quality Management Area in 2005 due to the amount of NO2 emissions entering the atmosphere at several locations exceeding the annual mean concentration. 'Hot spots' have been identified and continuous monitoring of six locations within the borough takes place to assess how successful the air quality action plan is.

Sandwell has developed and updated its Air Quality Action Plan[6] and is committed to promoting walking, cycling, car sharing and public transport initiatives and to undertake additional health promotion campaigns. The issue of air quality has become even more visible politically since the announcement of a climate emergency within the West Midlands[7] at the end of June 2019. This declaration states that there is a moral responsibility to tackle climate change and re-states the commitment to becoming a zero emissions region by 2030.

[4] https://www.gov.uk/government/publications/health-matters-getting-every-adult-active-every-day/health-matters-getting-every-adult-active-every-day

[5] www.sandwelltrends.info/physical-activity

[6] http://www.sandwell.gov.uk/downloads/file/26079/air_quality_action_plan_2018_-_2023

2.3 Data

Our approach has been, where relevant, to compile a geo-spatial analysis of data utilising Geographical Information Systems (GIS). Therefore, any of the above data local to Sandwell which have been available as Geographical Information Systems (GIS) layers, have been incorporated into a GIS analysis. Data utilised throughout the LCWIP includes:

- Census 2011 – Journey to Work data for journeys into, out of and through SMBC's boundaries.
- Census 2011 – Workplace populations
- Transport hubs: existing and planned Metro stops (MM GIS layer)
- Office of Rail and Road boarders and alighters data for 2017-18 (ORR)
- Metro boarders data for 2018 (SMBC)
- Current and forecast (to 2032) trains per hour (TPH) at rail stations within the authority boundary from the "A 30-year Rail Investment Strategy 2018-2047" Appendices by (West Midlands Rail Executive)
- Working population within a 20 minute cycle ride. The methodology for deriving these numbers was done by allocating each MSOA to its nearest public transport node and was run once for just rail stops and once for rail and Metro stops and uses the centroid of each MSOA. This was done to prevent double counting of potential usage. In addition, MSOAs outside the SMBC boundary were excluded. This can lead to some results which appear counter-intuitive and therefore the context of the analysis should be borne in mind when examining the results.
- Attractors were sourced from Open Street Map. Data cleansing was required to streamline the categorisation as similar attractors had categories with slightly different names but were essentially the same attractor type.
- Park and Ride face to face surveys carried in rail stations in late 2017 (TfWM) were used to provide:
  - Cycle and walking mode share to relevant rail stations
  - % of population within 2km of relevant rail station
  - % of population within 5km of relevant rail station (a 20 minute cycle ride)

3 Network Planning for Cycling

Desk based assessments and the Route Selection Tool (RST) were used to plan the cycling network for the SCWIP. This section explains the process behind the desk-based assessment and RST and how the identified routes performed. It also illustrated the routes with the recommended infrastructure improvements.

3.1 Desk based assessments

The following section describes several analyses carried out to establish the greatest areas of demand for cycling.

3.1.1 Journey to work

Using the Journey to Work Census 2011 data from the above list, straight line journeys in, out and through SMBC at MSOA level that were under 5km and 10km were plotted from the centroids of each MSOA. The two distances were selected as being currently cyclable distances both for cycles and e-bikes which offer the opportunity for longer journeys to be more achievable.

These journeys were then ‘snapped to a network’ i.e. assigned to the network (bearing in mind that all journeys would originate and terminate at the centroid of the MSOA). The road network excluded motorways as non-cyclable roads and was ‘cleaned’ to remove small residential roads as when the process was initially run with all roads available for route planning it produced a confused picture.

The results of these are shown below.

Figure 3.1: Census 2011 Journey to work straight line journeys in, out and through Sandwell under 5km

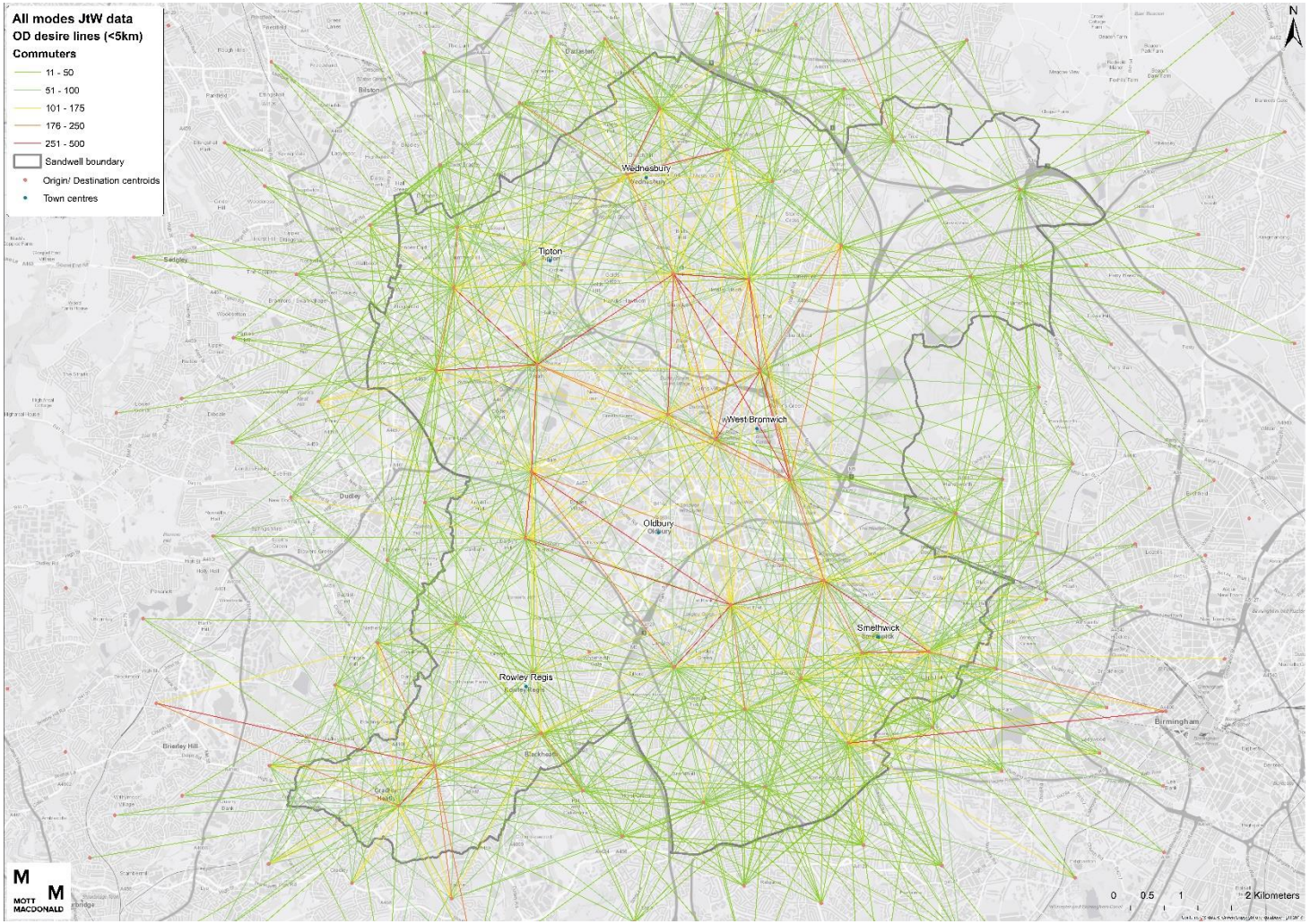


Figure 3.2: Census 2011 Journey to work journeys in, out and through Sandwell (Straight line) under 10km

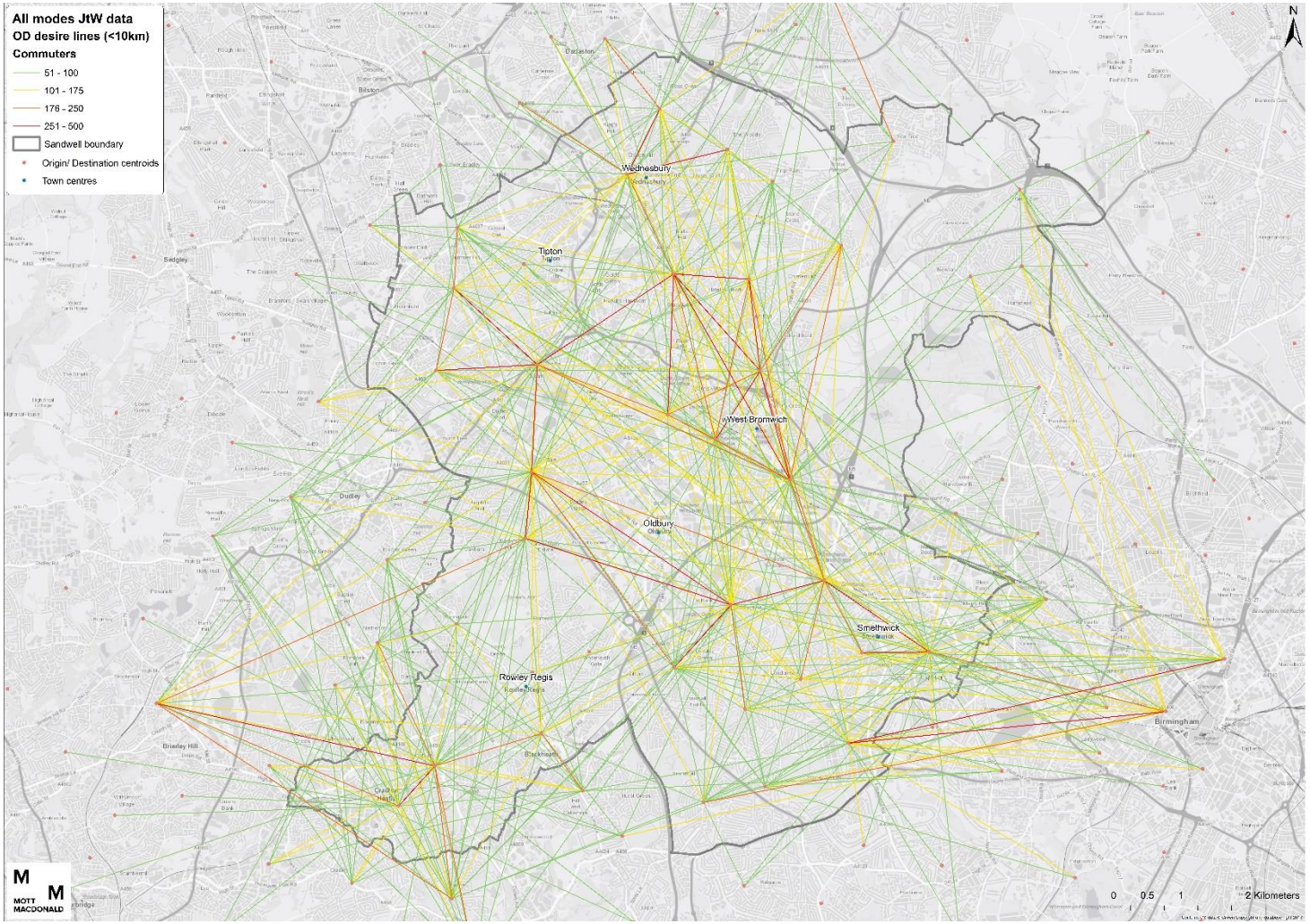
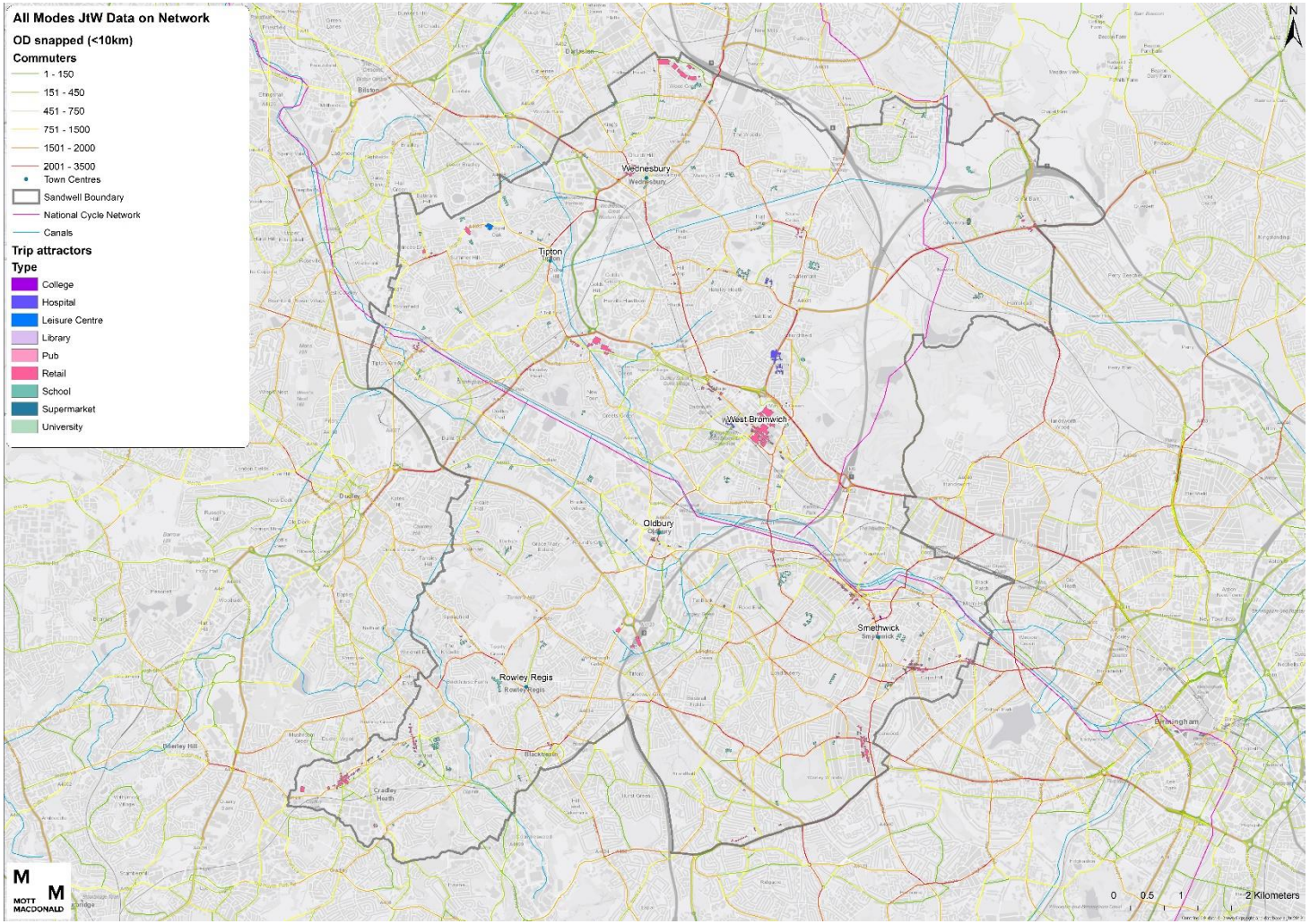


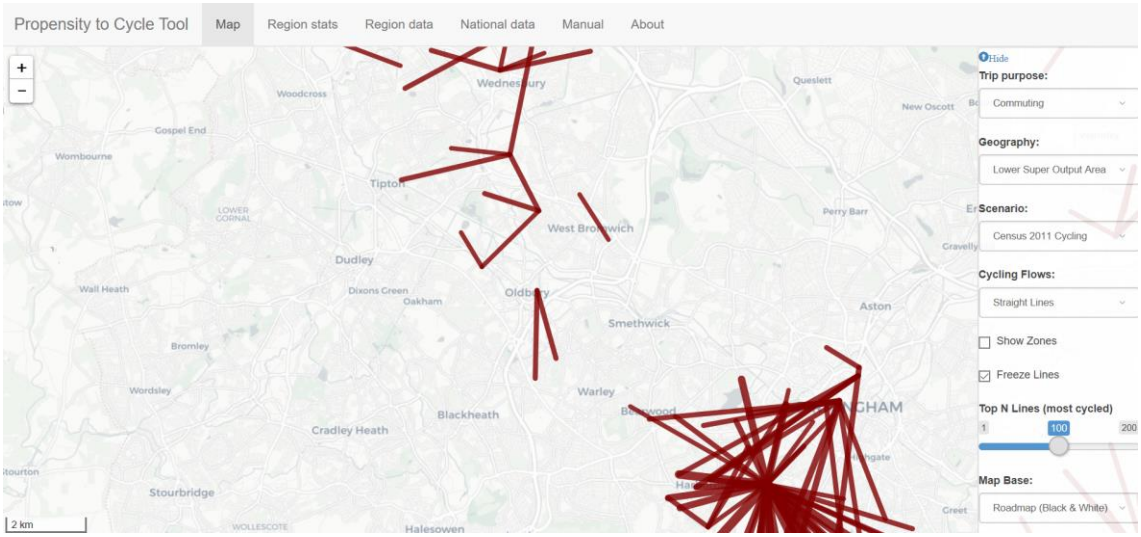
Figure 3.3: Census 2011 Journey to work journeys in, out and through Sandwell (on the network) under 10km



As might be expected, routes with the largest potential are in to the biggest regional centres including Smethwick and Wednesbury in particular, with clusters into Oldbury and West Bromwich.

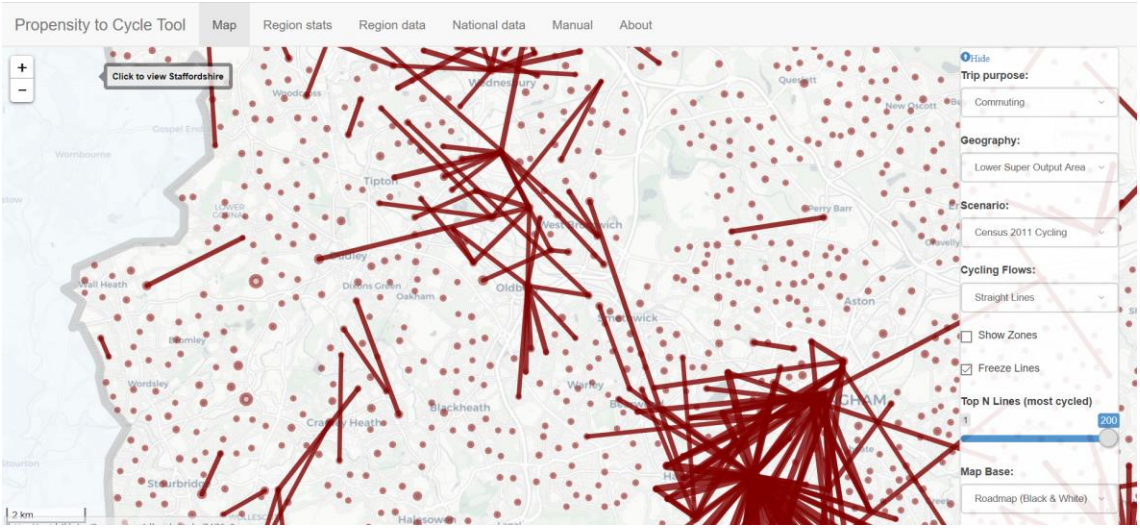
The Propensity to Cycle Tool (PCT) was used as a 'sense' check that highest demand areas selecting Government Target at both Top 100 and Top 200 volume lines. These images, as expected, reflect the GIS analysis as both are based on Census 2011 data.

Figure 3.4: Propensity to Cycle Tool: Top 100 lines



Source: Propensity to Cycle Tool

Figure 3.5: Propensity to Cycle Tool: Top 200 lines



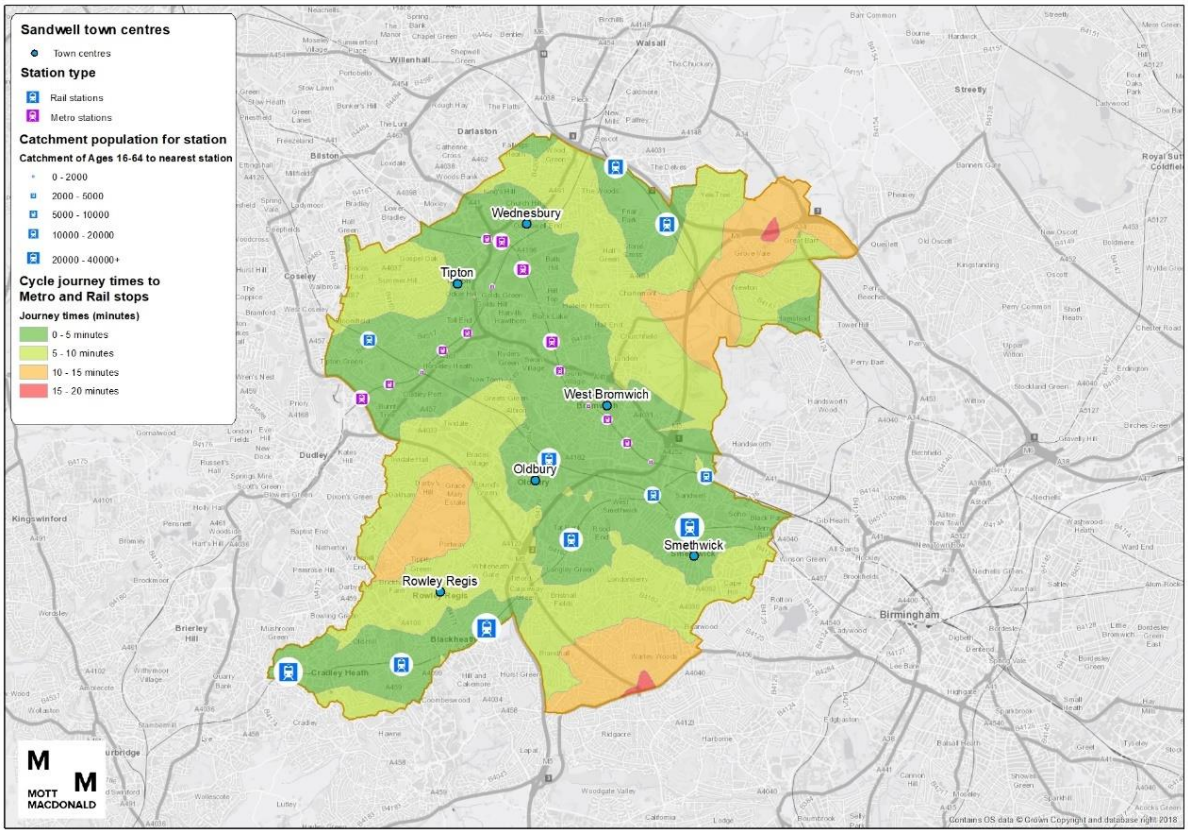
Source: Propensity to Cycle Tool

3.1.2 Cycle + rail / cycle + metro analysis

It is important to understand and incorporate end to end journeys as a part of the SCWIP to ensure barriers to first and last mile travel to transport nodes are overcome. An initial analysis of the working populations within cyclable distances to Metro (current and future) and rail stops

was carried out which can be seen in Figure 3.7. As noted in the data section above, populations were allocated to one transport node only to avoid double counting, however, this can lead to some results which seem counter-intuitive, particularly where there are nearby competing nodes. In addition, populations outside Sandwell were excluded, and where transport nodes are not very accessible e.g. the network is not very dense, and where they are in areas surrounded by lower population either due to industrial or park areas, population catchments can be low. These factors are illustrated in Dudley Port's catchment which intuitively should be higher than the methodology calculates.

Figure 3.6: Metro and rail station cyclability



An overview of issues and options was presented to the project group on 30 January 2019 (Appendix C) to show the cycle corridors identified and where the highest demand for cycling exists, both for Journey to Work and Cycle/Rail/Metro analysis.

This was then augmented further to feedback received from the meeting, pulling in Park and Ride mode share, ORR boarder and alighters, and Metro boarders. The results of this can be found at Appendix D.

It is acknowledged by the DfT that it is impractical from a time and cost perspective to audit every possible cycle and walk route in an authority and therefore a first cut of prioritisation is necessary within the LCWIP process. Additionally, although a whole cycle network may be identified at this stage in the process, auditing is a time intensive and costly exercise and therefore auditing effort also needs to be prioritised. The method for this will vary by authority – Sandwell's is described below.

This initial network was reviewed by SMBC's transport planning team, and routes which represented significant demand and/or met other policy criteria were selected for auditing purposes. Policy criteria included: links to existing and planned 20mph zones; air quality improvement area; areas of congestion; links to secondary schools; links to existing and planned cycle routes such as West Midlands LCWIP routes; and links to future transport schemes. These policy objectives are ones where encouraging movement towards active travel supports the policy objectives e.g. reduction in car trips will reduce congestion and improve air quality; encouraging cycling to school will reduce school escort trips in cars etc. A map of the routes can be found at Appendix A.

Once the first tranche of auditing was completed (see below) the outputs of the auditing process were used as part of the main prioritisation in Stage 5 to inform an implementation plan.

3.2 Route Selection Tool (RST)

The RST tool enables a comprehensive review of existing conditions for cyclists - many of the scoring points are derived from Transport for London's (TfL) Cycle Level of Service (CLoS) tool. The initial factors in the RST assessment are desk-based with subsequent data collection and verification on site. The RST is designed to consider the most direct cycling routes and then also to compare assessments of alternative/parallel routes where the original direct route is considered unsuitable and its upgrade therefore unfeasible.

The RST allows the comparison of different cycle routes with and without design improvements. This considers five key cycle design criteria of directness, gradient, safety, connectivity and comfort with scores ranging from 5 (highest) to 0 (lowest) for each measure. Routes are divided into sections with similar characteristics and no more than 1km. The factors considered under each criterion are described below. In addition, 'critical junctions' along each route are recorded. These are defined as junctions with characteristics that are hazardous for cyclists, such as high traffic volumes with a lack of priority or segregation for cyclists, large roundabouts or inadequate crossings of high-speed roads.

- Directness
  - Comparison of the shortest distance if travelled by motor vehicle and the shortest distance if travelled by cycle
  - Lower score if the cycle route is less direct.
- Gradient
  - The maximum gradient within a route using a score calculated from a scoring table provided by the RST
  - Flatter sections have higher scores and sections where an incline is over a longer distance have lower scores than where this distance is greater
- Safety
  - Where existing traffic volume and speed data is available, this has been used in the assessment. Where speed data is not available, the speed limit has been used in accordance with LCWIP guidance
  - Scores have been assigned based on RST values
  - The above includes deductions for routes which are unlit or without passive surveillance
- Connectivity
  - Records the number of connections to the route per km
  - Routes with more connections suitable for cycling receive higher scores
- Comfort

- Score based on the surface type and width
- Higher scores for smoother surface materials and wider cycle facilities
- Where streets have mixed traffic, scores reflect traffic volume
- Shared use facilities receive a reduction where pedestrian flows are high

The number of 'critical junctions' are also recorded to enable high-level evaluation of both links and junctions. Route overview graphics are shown in the following pages.

3.3 Designing for cycling

When considering the recommended interventions for both cycling and walking, the concept of the user hierarchy has been formative in the approach. Manual for Streets (2007)[8] contains a user hierarchy (p28) which shows that the most vulnerable users' needs should be considered first above others. Therefore pedestrians, as the most vulnerable road users should be considered first, followed by cyclists, then users in motorised forms of transport.

Figure 7: Manual for Streets: User Hierarchy

Table 3.2: User hierarchy

Consider first	Pedestrians
↓	Cyclists
	Public transport users
	Specialist service vehicles (e.g. emergency services, waste, etc.)
Consider last	Other motor traffic

For cycling specifically, Local Traffic Note 2/08[9] shows a hierarchy of provision (p10) to cycle design which focusses on reduction in speed and volumes of motorised traffic. Highway redesign (junction treatments) then follow, with road space re-allocation being considered before shared space, which is viewed as the last option for design. A revision of the LTN 2/08 is expected imminently and it is understood that the principles will be similar in terms of favouring segregation over shared use space.

During the identification of interventions, the preferred (and costed) options are for segregated provision, demonstrating SMBC's commitment to providing high quality infrastructure for cyclists. During design phases it may not be possible to deliver this in locations, however it was

[8] https://www.gov.uk/government/publications/manual-for-streets

[9] https://www.gov.uk/government/publications/cycle-infrastructure-design-ltn-208

important during the planning phases to set the intention, priority and visibility for cycle infrastructure provision.

Figure 8: Local Traffic Note 2/08 Hierarchy of provision

Table 1.2 Hierarchy of provision

Consider first	Traffic volume reduction
↓	Traffic speed reduction
↓	Junction treatment, hazard site treatment, traffic management
↓	Reallocation of carriageway space
↓	Cycle tracks away from roads
Consider last	Conversion of footways/footpaths to shared use for pedestrians and cyclists

3.4 Cycle Route 1 Birmingham Canal – West Bromwich via Spon Lane

This route provides a direct link between Birmingham Canal and the outer edge of West Bromwich town centre and is approximately 1km in length. The route consists of three roads classified as two connector roads and one local road. The nature of the connector roads means there are high levels of vehicular traffic and the local road, which leads into an industrial estate, has high levels of heavy goods vehicles. The full length of Cycle Route 1 falls in a regeneration corridor and provides good connectivity to existing and planned cycle routes to create a cohesive cycle network:

- It crosses paths with SCWIP Cycle Route 3 (Spon Lane to Black Lake (Metro stop) Along Kelvin Way)
- There is an existing cycle route to the north on West Bromwich Ringway and Bull Street
- A planned WM LCWIP route lies approximately 150m to the north (also joining the existing route along Bull Street)

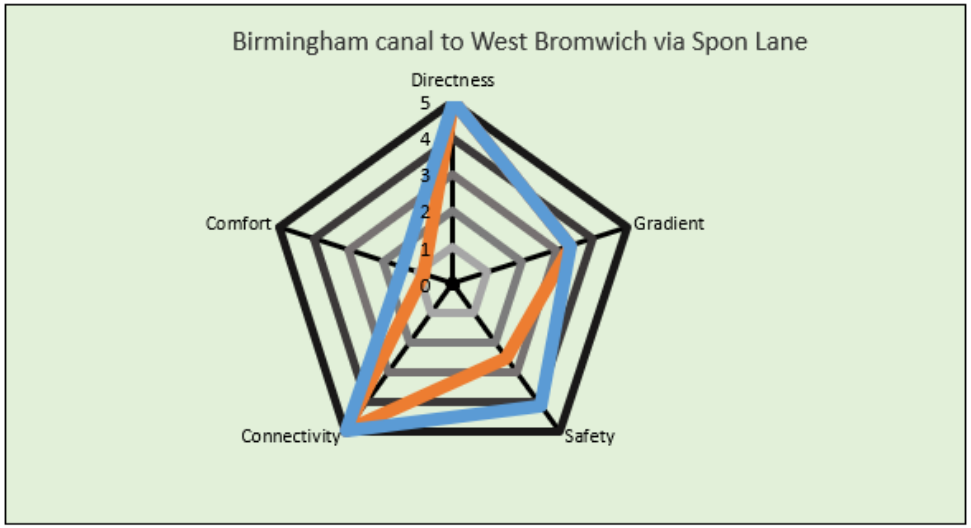
The results from the RST show that with the improved infrastructure the route:

- Scored well for directness, having a shorter distance to travel than by motor vehicle
- Gradient remained the same, with Spon Lane having a slight gradient
- Safety improved with segregated two-way track offering protection from motor vehicles on Spon Lane South and introducing an official quietway infrastructure and regulations on Grice Street and Spon Lane
- Comfort levels are improved with a segregated two-way track offering a traffic free route along Spon Lane South
- There will still be the need to cross the same number of critical junctions, however, official crossing points should be adopted to increase safety at these points

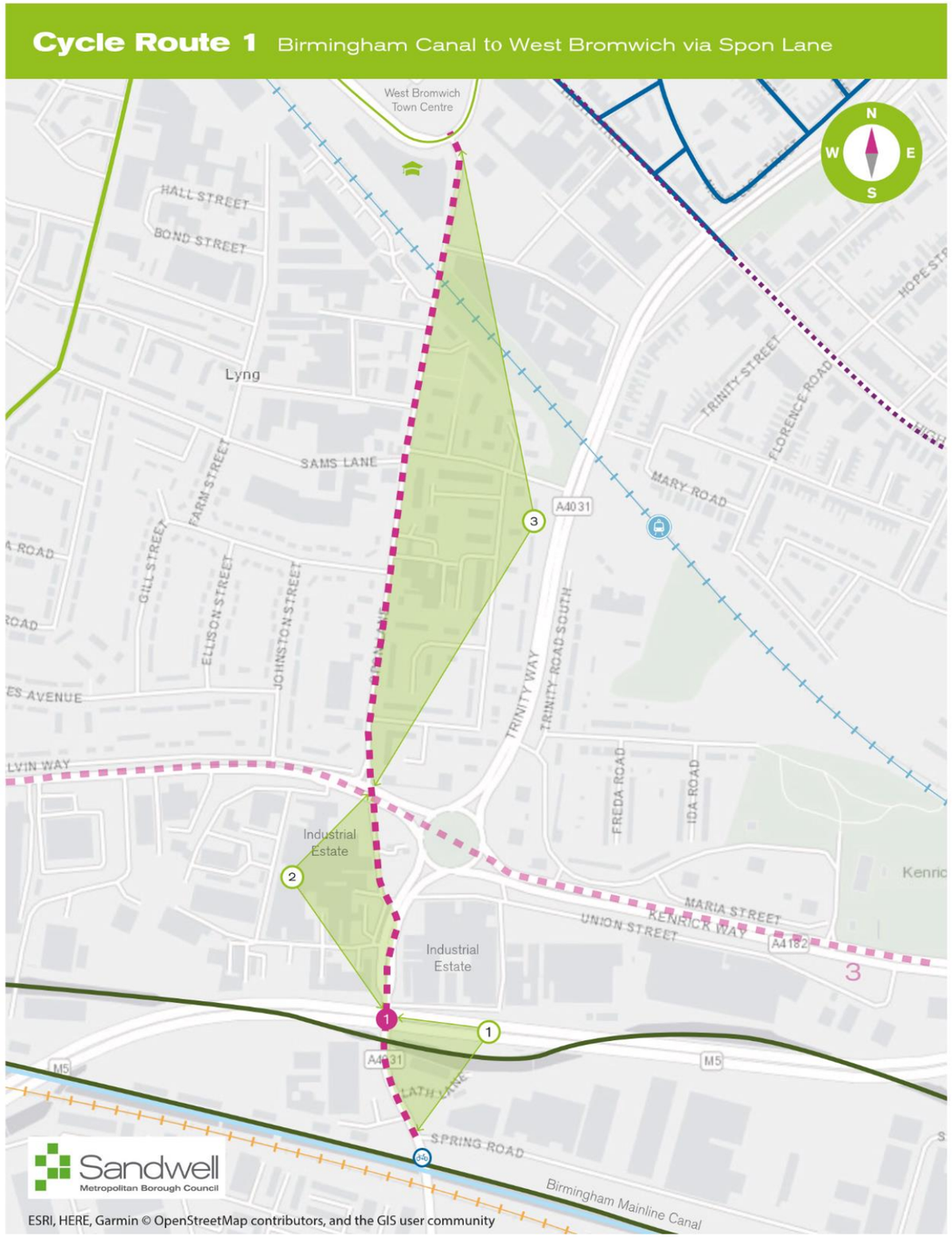
The planned SCWIP route runs along the same alignment as the existing route.

Figure 3.9 Route 1 RST scores

	Performance Scores	
Criterion	**Existing**	**Potential**
Directness	5.00	5.00
Gradient	3.36	3.36
Safety	2.50	4.12
Connectivity	5.00	5.00
Comfort	0.87	1.48



Number of Existing Critical Junctions/Crossings	7
Number of Potential Critical Junctions/Crossings	7



Key

- Cycle Route 1
- WM LCWIP
- Canals
- Canal access
- Off road cycle route
- Existing cycle route
- 20 mph zone
- Other SCWIP schemes
- Sandwell College
- Metro Line
- Rail Line
- Metro Stop

Junction 1
Provide a crossing facility

Section 1
Segregated two way track by reallocating space away from main carriageway.

Section 2
Quietway and crossing over Kelvin Way

Section 3
20mph zone and traffic calming measures.

3.5 Cycle Route 2 NCN Route 5 Improvements, linking to WMLCWIP route

Cycle Route 2 creates links to an existing network. It forms a part of the National Cycle Network (NCN) Route 5 and has connections to the West Midlands LCWIP routes. The length of the SCWIP route is approximately 1km. The link runs through a residential area consisting of a connecting road, a local road and segregated off road pathway. NCN Route 5 incorporates Sandwell Valley Country Park in the route and as such provides off carriageway cycling for leisure and transport purposes. The route does vary in terms of gradient, however, the distance of the gradient would not necessarily discourage people from using the route as it is not excessive. As such the SCWIP route was realigned from the existing route to provide a more direct connection to Sandwell Valley Country Park and take advantage of off-carriageway infrastructure. Approximately half of the route falls into a regeneration corridor and provides good links with existing and planned cycle infrastructure:

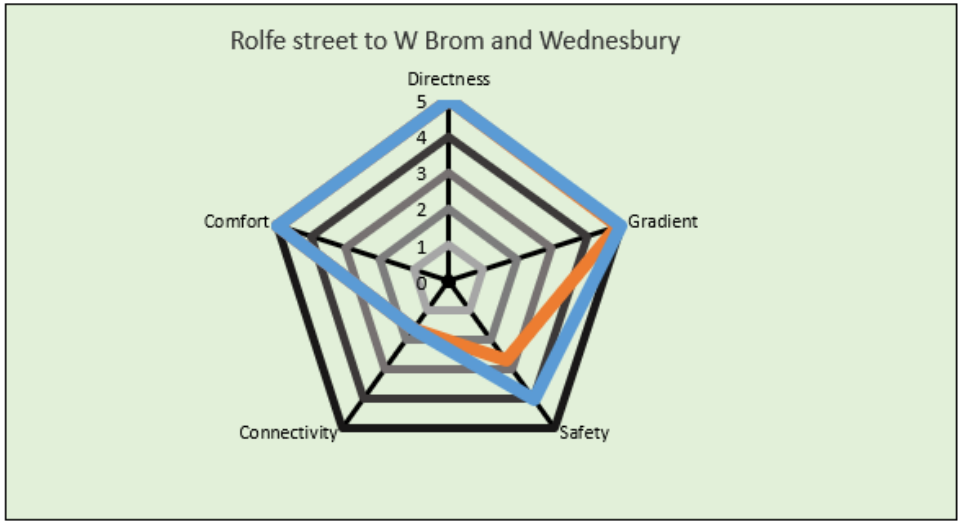
- Route 2 is part of NCN Route 5
- WM LCWIP considers improvements to the southern section of this scheme
- Connects to Sandwell Valley Country Park

The results from the RST show that with the improved infrastructure the route:

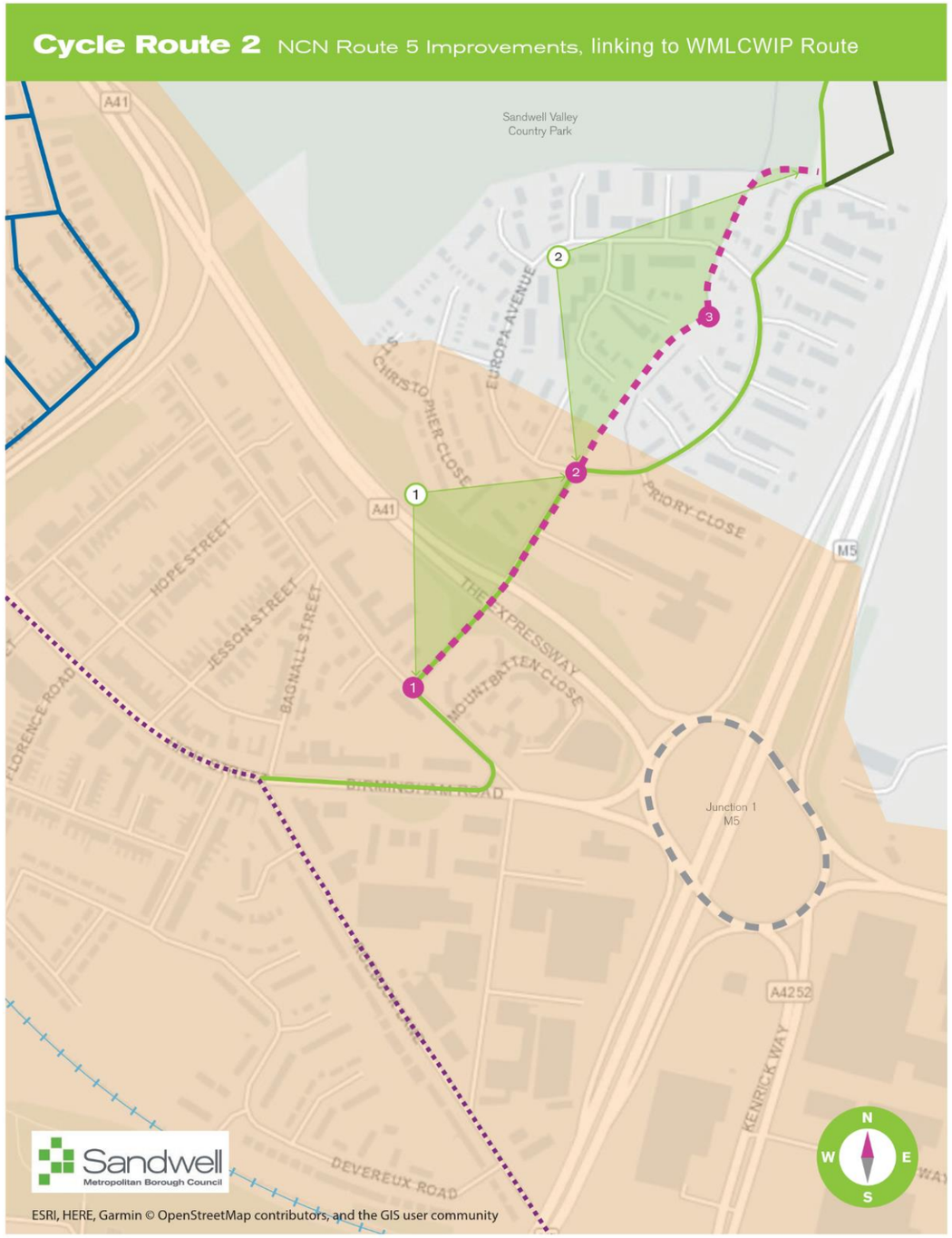
- Scored slightly better in directness, having shorter distance to travel than the original route
- Gradient scoring remained the same as re-routing the alignment made no significant difference to the score
- Scored much higher for safety which would naturally improve on comfort (although, as comfort previously scored high, this is not reflected in the RST scoring), due to segregating cyclists from motor vehicles for the entire route and improving infrastructure on potential conflict points such as junctions
- The score for connectivity remained the same as no new links were identified by realigning the route

Figure 3.10 Route 2 RST scores

	Performance Scores	
Criterion	Existing	Potential
Directness	5.00	5.00
Gradient	4.89	5.00
Safety	2.67	4.01
Connectivity	1.65	1.65
Comfort	5.00	5.00



Number of Existing Critical Junctions/Crossings	8
Number of Potential Critical Junctions/Crossings	0



Key

- Cycle Route 2
- WM LCWIP
- Off road cycle route
- Existing cycle route
- Future transport scheme
- Multimodal corridor KRN
- Regeneration corridor
- Metro line

1. **Junction 1**
   Change road priority.
2. **Junction 2**
   Tiger crossing.
3. **Junction 3**
   Raised table.

(1) **Section 1**
Two way track on north west side of road.

(2) **Section 2**
Widen pathway to create a segregated cycle path.

3.6 Cycle Route 3 Spon Lane to Black Lake (Metro stop) Along Kelvin Way & Great Bridge

Cycle Route 3 links businesses, residential areas and a new school together along with links to Great Bridge High Street and Black Lake Metro stop. The route is approximately 6km in length. The route falls in a regeneration corridor and one area of the route is an air quality hot spot. There are areas along the route which are subject to 20 mph zones which naturally provide more pleasant cycling conditions for people joining the route. The route consists of three main arterial routes, two local roads, and two connector roads. There are several links to existing and planned improvements to the active travel network:

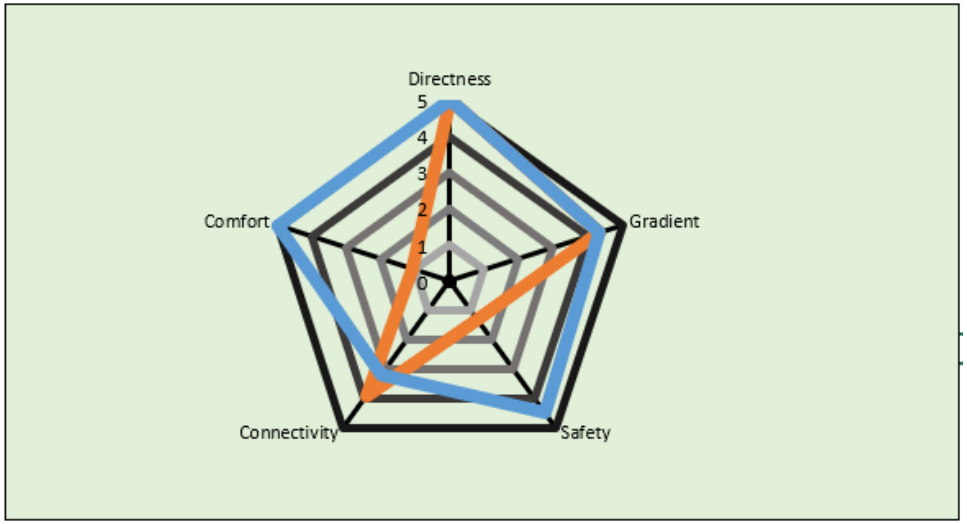
- It crosses paths with SCWIP Cycle Route 1 (Birmingham Canal – West Bromwich via Spon Lane)
- Two existing local cycle routes with existing infrastructure
- The route runs through Core Walking Zone 4, which is where the air quality hot spot lies
- There are direct links to NCN Route 81, along the Birmingham Canal
- There are further links to the Walsall Canal and River Tame

The SCWIP Route follows the same alignment as the existing route, the results from the RST show that with the improved infrastructure the route:

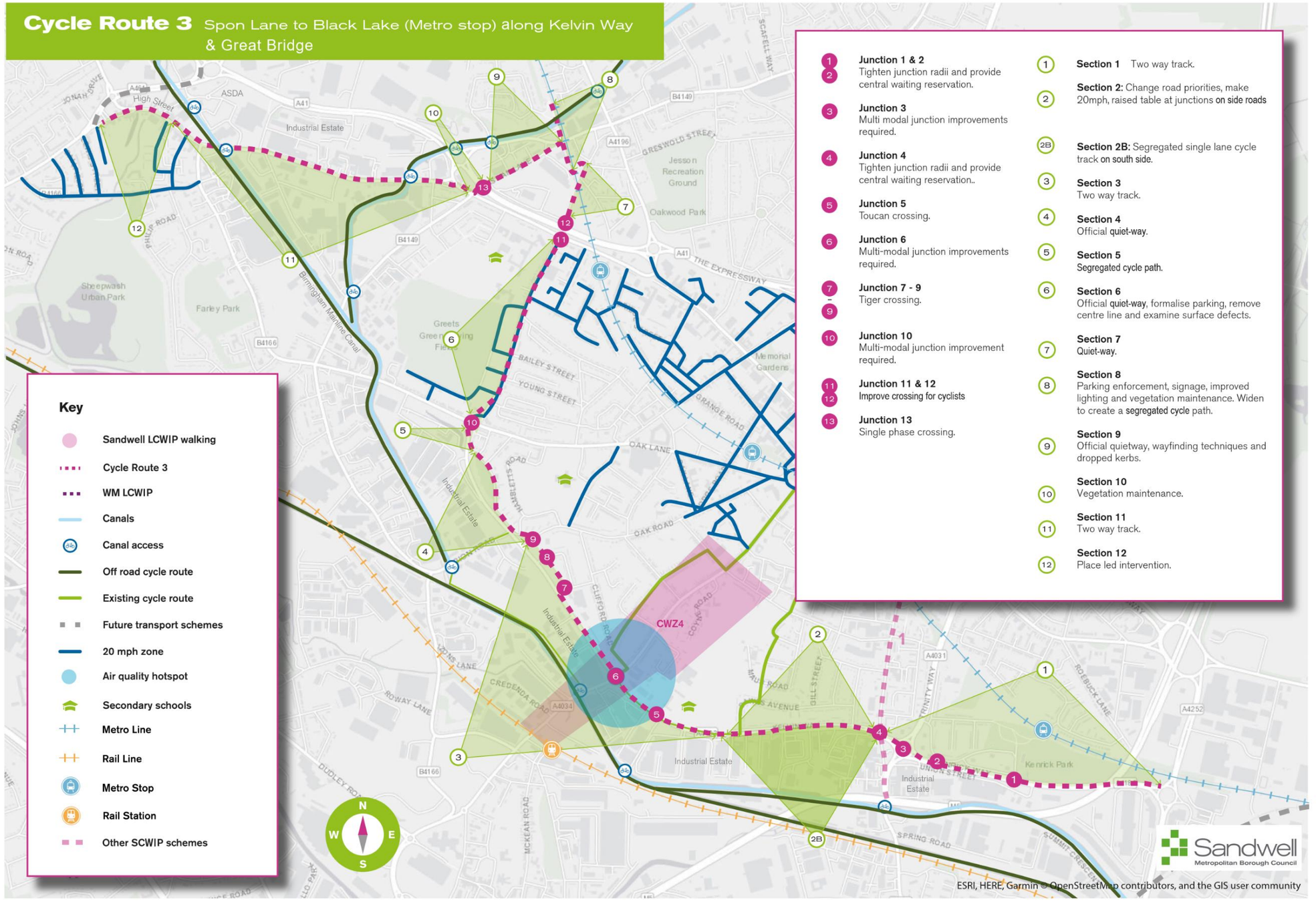
- Scored the same for directness due to being aligned to the existing route
- Increased on safety due to the segregated nature of improved facilities crossing points
- Increased comfort levels due to the separation from motor vehicles and quality of surfacing
- The score for connectivity is slightly lower as one turning may have to be sacrificed due to the side of the road the infrastructure will lie
- The number of critical junctions that cyclists encounter also dropped considerably due to improved infrastructure

Figure 3.11 Route 3 RST scores

	Performance Scores	
Criterion	Existing	Potential
Directness	5.00	5.00
Gradient	4.33	4.35
Safety	1.32	4.46
Connectivity	3.95	3.19
Comfort	1.08	5.00



Number of Existing Critical Junctions/Crossings	16
Number of Potential Critical Junctions/Crossings	4


Cycle Route 3 Spon Lane to Black Lake (Metro stop) along Kelvin Way & Great Bridge
Key
Sandwell LCWIP walking
Cycle Route 3
WM LCWIP
Canals
Canal access
Off road cycle route
Existing cycle route
Future transport schemes
20 mph zone
Air quality hotspot
Secondary schools
Metro Line
Rail Line
Metro Stop
Rail Station
Other SCWIP schemes
1 2 Junction 1 & 2 Tighten junction radii and provide central waiting reservation.
3 Junction 3 Multi modal junction improvements required.
4 Junction 4 Tighten junction radii and provide central waiting reservation..
5 Junction 5 Toucan crossing.
6 Junction 6 Multi-modal junction improvements required.
7 - 9 Junction 7 - 9 Tiger crossing.
10 Junction 10 Multi-modal junction improvement required.
11 12 Junction 11 & 12 Improve crossing for cyclists
13 Junction 13 Single phase crossing.
1 Section 1 Two way track.
2 Section 2: Change road priorities, make 20mph, raised table at junctions on side roads
2B Section 2B: Segregated single lane cycle track on south side.
3 Section 3 Two way track.
4 Section 4 Official quiet-way.
5 Section 5 Segregated cycle path.
6 Section 6 Official quiet-way, formalise parking, remove centre line and examine surface defects.
7 Section 7 Quiet-way.
8 Section 8 Parking enforcement, signage, improved lighting and vegetation maintenance. Widen to create a segregated cycle path.
9 Section 9 Official quietway, wayfinding techniques and dropped kerbs.
10 Section 10 Vegetation maintenance.
11 Section 11 Two way track.
12 Section 12 Place led intervention.
CWZ4
ASDA
Industrial Estate
Sheepwash Urban Park
Farley Park
Greets Green Playing Fields
Jesson Recreation Ground
Oakwood Park
Memorial Gardens
Kennick Park
Birmingham Mainline Canal
High Street
THE EXPRESSWAY
BAILEY STREET
YOUNG STREET
GRANGE ROAD
OAK LANE
OAK ROAD
CLIFFORD ROAD
COVE ROAD
GILL STREET
SPRING ROAD
CREDENDA ROAD
ROWAY LANE
DUDLEY ROAD
MCKEAN ROAD
ROEBUCK LANE
TRINITY WAY
N
W
E
S
Sandwell
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3.7 Cycle Route 4 Oldbury to Blackheath Town Centre

Cycle Route 4 gives a direct route between Oldbury and Blackheath town centre and is approximately 3.5km long. The whole route runs along arterial roads and as such the nature of these roads leads to comfort and safety implications as it currently stands. A key constraint of this cycle route is the Birchley Island Roundabout, which, at the time of writing this report, has a multimodal junction improvement scheme being considered, including a proposed Sprint route. This includes multi-modal improvements and as such any SCWIP infrastructure needs to align with that proposed within the existing scheme. The whole route falls in a regeneration area and there are several other developments and existing infrastructure which will benefit and link with this route:

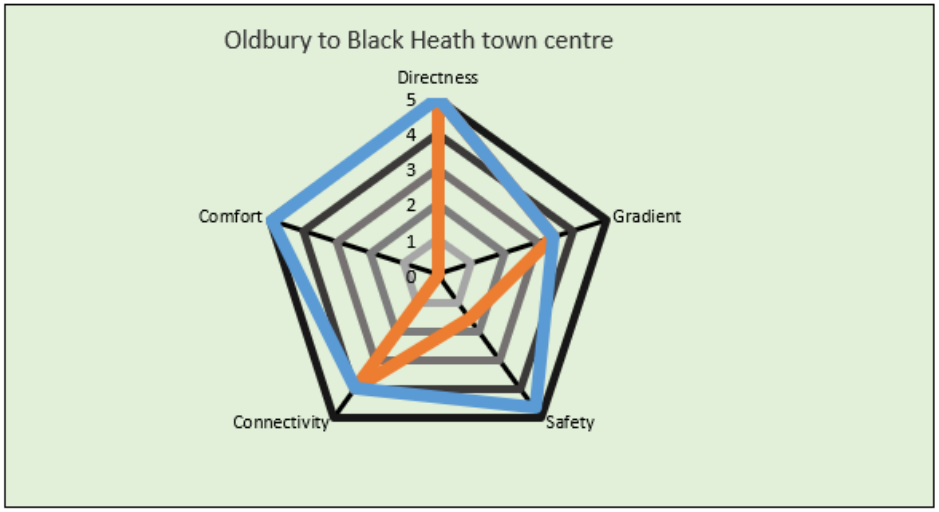
- Titford Canal connects with the route
- Lion Farm residential development will connect with the route
- The route runs through the north east of SCWIP Core Walking Zone 1
- Approaches from 20mph residential areas make more comfortable cycling conditions
- The route connects with WM LCWIP in Blackheath

Many of the constraints along the existing route are due to the nature of the arterial roads being heavily trafficked and having quicker speeds. The SCWIP route follows the same alignment as the existing route and the RST scores show improvements in the infrastructure being:

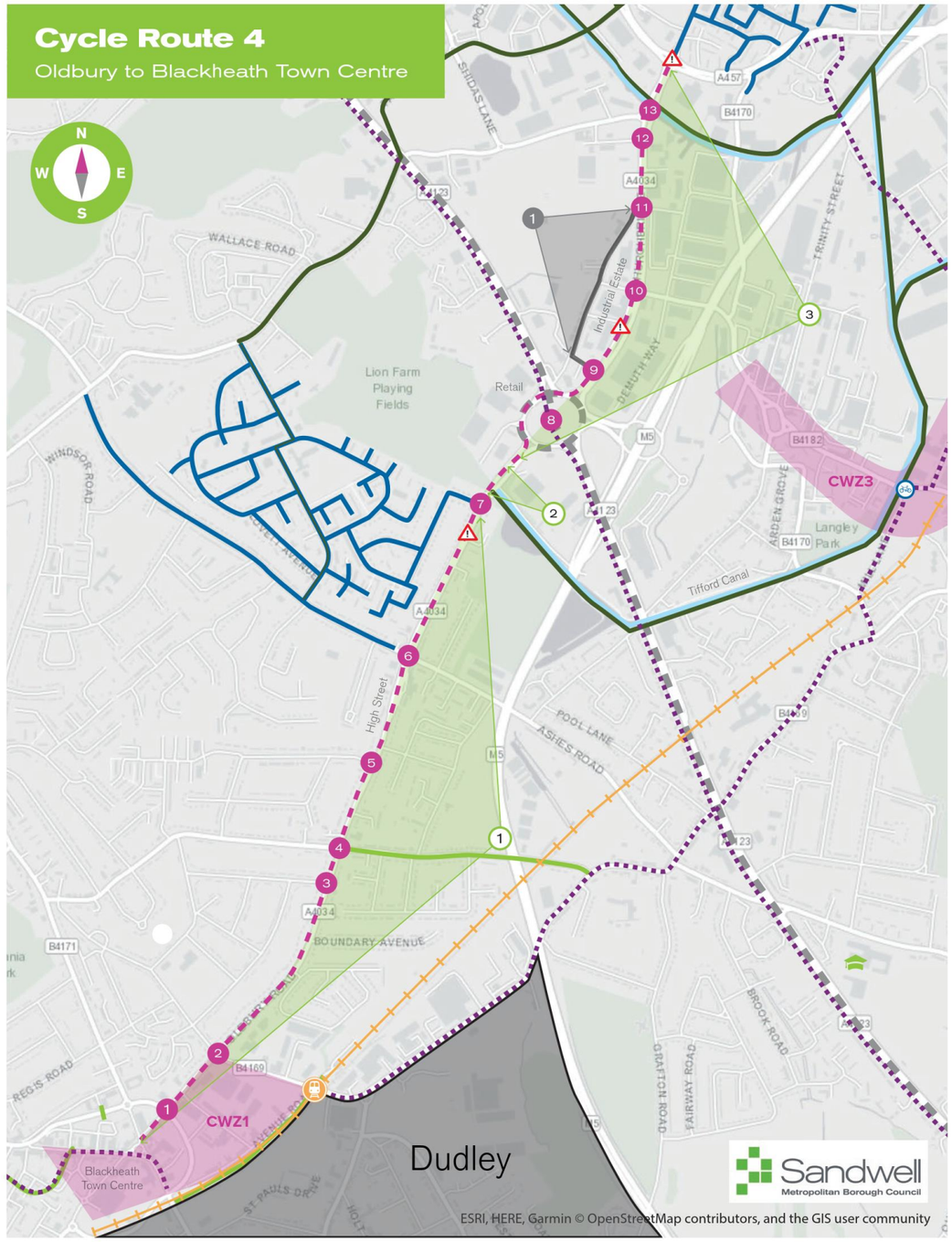
- Safety scored much higher on the proposed SCWIP route than the existing route, due to the proposed segregated two-way tracks, keeping motor vehicles away from cycling and reducing conflict
- The numbers of critical junctions have reduced, with infrastructure suggestions minimising conflict at junctions
- Comfort on the SCWIP route is largely improved due to the separation from other modes of transport
- Directness, gradient and connectivity remain the same due to the alignment not changing from the original route. This is the most direct route for cyclists

Figure 3.12 Route 4 RST scores

	Performance Scores	
Criterion	**Existing**	**Potential**
Directness	5.00	5.00
Gradient	3.44	3.44
Safety	1.53	4.68
Connectivity	3.98	3.98
Comfort	0.00	4.94



Number of Existing Critical Junctions/Crossings	14
Number of Potential Critical Junctions/Crossings	8



Key

- Sandwell LCWIP walking
- Cycle Route 4
- WM LCWIP
- Canals
- Canal access
- Off road cycle route
- Existing cycle route
- Future highway scheme
- 20 mph zone
- Secondary schools
- Traffic congestion
- Local authority border
- Rail Station
- Rail line

1 **Junction 1**
Multi-modal junction interventions to include crossing upgrades.

2 **Junction 2**
Raised table, toucan crossing, and way finding to the station.

3 **Junction 3**
Raised table, tiger crossing.

4 **Junction 4**
Cycle lane over junction, five second early cycle release.

5 **Junction 5**
Raised table, tiger crossing.

6 **Junction 6**
Multi-modal junction interventions

7 **Junction 7**
Raised table, tiger crossing.

8 **Junction 8**
Align design with Birchley Island highways improvements.

9 **Junction 9**
Raised table, tiger crossing.

10 **Junction 10**
Toucan Crossing.

11 12 **Junction 11 & 12**
Raised tables.

13 **Junction 13**
Set back a toucan crossing from main junction.
Tighten the incoming junction radii from the south.

Alternative route

1 **Section 1**
Two way track.
Assess parking and mitigation on section 3.

2 **Section 2**
30mph, parking restrictions, design in-line with WMLCWIP, Birchley Island improvements and local development

3 **Section 3**
Two way track.

3.8 Cycle Route 5 Oldbury to Bearwood with links to WMLCWIP Route

Cycle Route 5 creates a direct link between Lightwoods Park and House towards Langley Green Rail Station and is approximately 4km in length. The roads along the route are a mix of connector roads and local roads within a residential area. A lot of the road designs are long and straight, with evidence of speed reduction techniques in place to help control vehicular speeds. The design of the current roads lead to visibility blind spots and uncomfortable cycling surfaces. The residential nature of the roads offer benefits including:

- Parts of the cycle route falling into 20 mph zones and generally slower speeds of traffic
- Links to existing cycle routes
- Links to primary schools in the local area

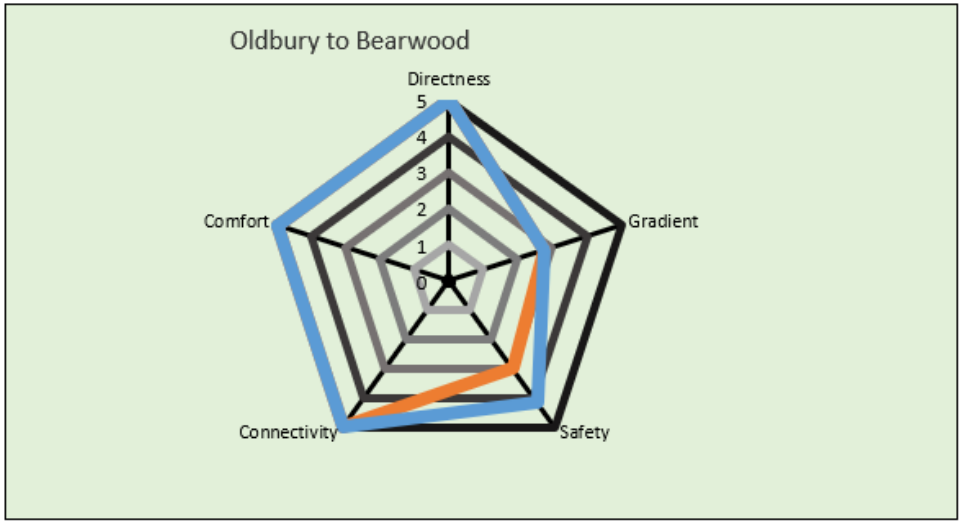
The cycle route lies west of an existing air quality hot spot and so offers a parallel quieter route for those cycling and wanting to avoid a main arterial road. The route also runs past the land identified for Sandwell's Aquatic Centre which is due to be constructed for the 2022 Commonwealth Games.

The SCWIP route aligns with the existing route, with the RST showing:

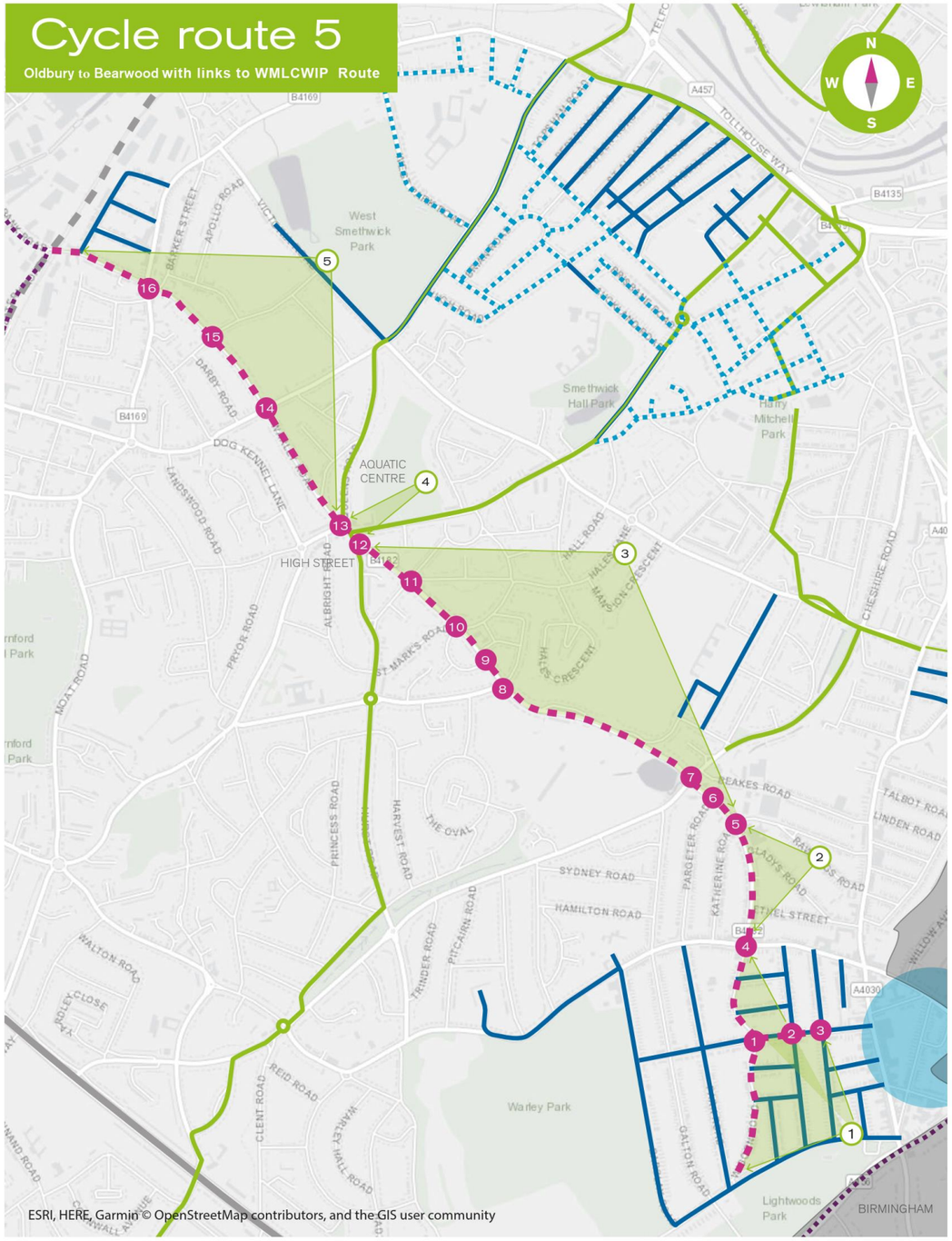
- Benefits mainly being to safety along the route. These benefits are provided through officialising quietways and providing a two-way segregated track cycling
- The directness, gradient, comfort and connectivity remain unchanged

Figure 3.13 Route 5 RST scores

	Performance Scores	
Criterion	Existing	Potential
Directness	5.00	5.00
Gradient	2.76	2.76
Safety	3.00	4.13
Connectivity	5.00	5.00
Comfort	5.00	5.00



Number of Existing Critical Junctions/Crossings	2
Number of Potential Critical Junctions/Crossings	2



Key

- Cycle Route 5
- WM LCWIP
- Off road cycle routes
- Existing cycle routes
- Future highway transport schemes
- 20 mph zone
- Proposed 20 mph zone
- Air quality hot spot
- Multimodal corridor KRN
- Local Authority Boundary

Junction 1, 2 & 3
Junctions are already raised tables no action required.

Junction 4
On demand early release for cyclists

Junction 5 & 6
Raised table, tiger crossing.

Junction 7
Roundabout, with multimodal junction improvement

Junction 8, 9 & 10
Two way tracks have priority across the junction.

Junction 11 & 12
Being designed by highways for Aquatic Centre.

Junction 13 & 14
Pedestrian and cycle priority at junction.

Junction 15
On demand early release for cyclists.

Junction 16
On demand early release for cyclists.

Section.1
Quiet-way.
Include parking enforcements and traffic calming.

Section 2
Two way track floating parking.

Section 3
Two way track

Section 4
Being designed by highways for Aquatic Centre.

Section 5
Official quiet-way, speed reductions and officialise parking.

3.9 Cycle Route 6 Oldbury to Galton Bridge Station

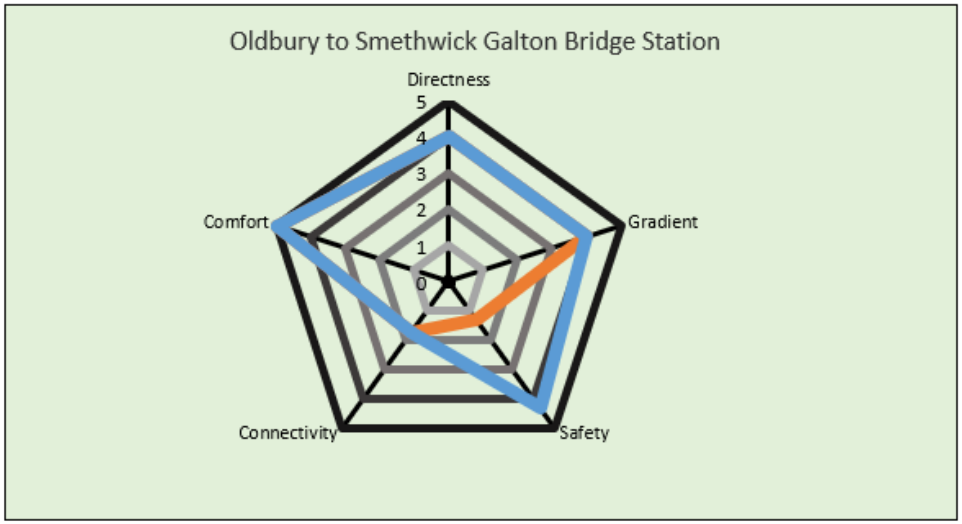
Cycle Route 6 falls within a regeneration area and creates a direct link between Oldbury and Galton Bridge Station and is approximately 2km in length. Improvements to cycle infrastructure along this corridor offers the potential for travel to work trips to shift away from private car and on to cycle and rail. The whole route is a main arterial route and as such does encounter high levels of vehicular movement. Along the route there are two air quality hot spots and areas of significant traffic congestion. Cycle Route 6 provides good connectivity to existing and planned cycle routes to create a cohesive cycle network. Connections to other cycle infrastructure include:

- WM LCWIP route to the west and east
- An existing local cycle route to the east
- Birmingham Canal lies parallel to the north
- SCWIP Cycle Route 1 and 3 (Birmingham Canal – West Bromwich via Spon Lane and Spon Lane to Black Lake (Metro stop) Along Kelvin Way & Great Bridge) are in close proximity to the north
- There is potential for further links to Midland Metropolitan Hospital

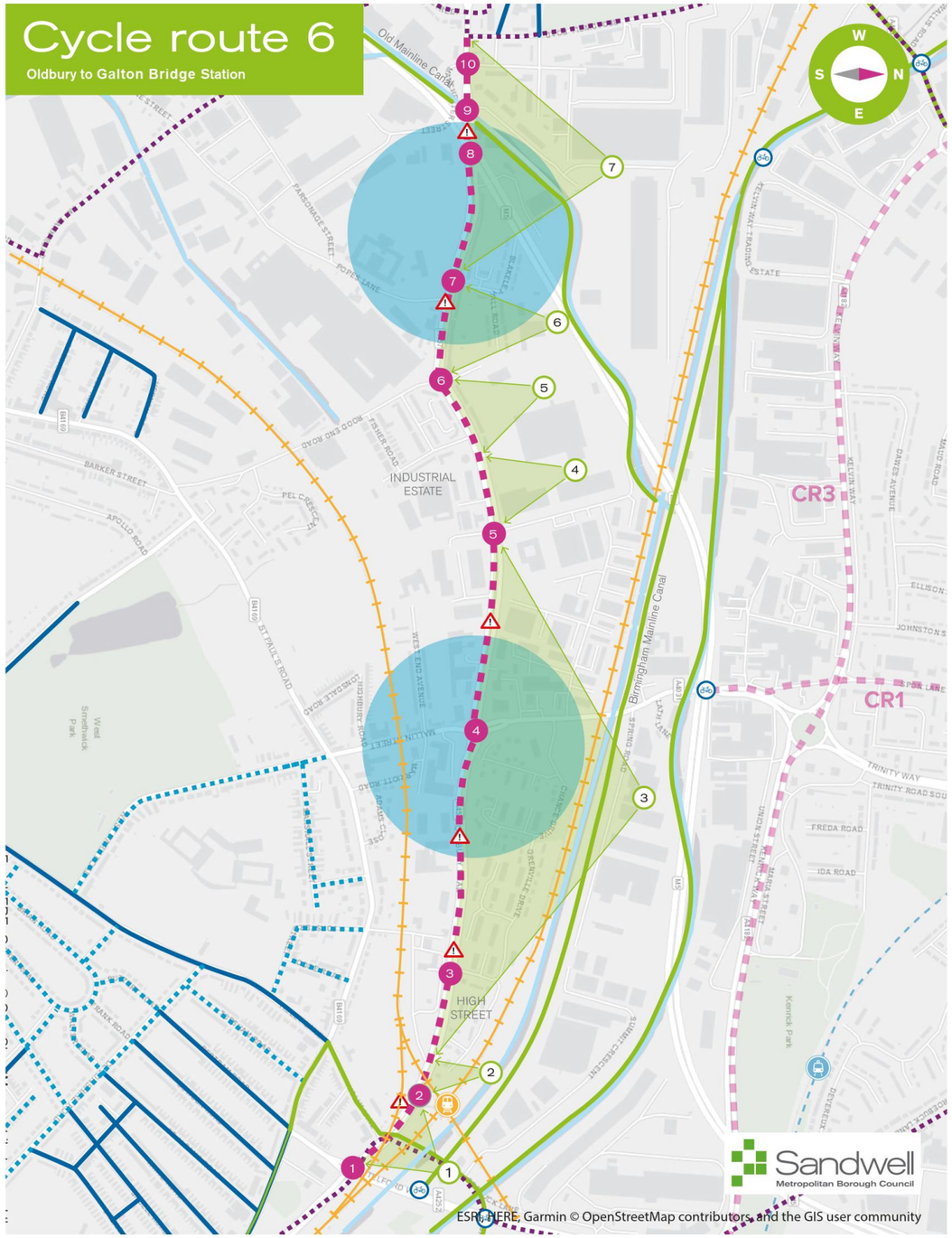
The benefits to implementing improved infrastructure, based on RST scoring, relate to safety improvement due to lowering speed limits to extend the 20mph zones and implementing segregated cycle infrastructure. This will also impact upon cyclists' comfort levels in a positive way, however, this isn't shown through the RST scoring.

Figure 3.14 Route 6 RST scores

	Performance Scores	
Criterion	**Existing**	**Potential**
Directness	4.00	4.00
Gradient	4.00	4.00
Safety	1.31	4.32
Connectivity	1.73	1.73
Comfort	5.00	5.00



Number of Existing Critical Junctions/Crossings	4
Number of Potential Critical Junctions/Crossings	4



Key

- Cycle Route 6
- WM LCWIP
- Canals
- Canal access
- Off road cycle route
- Existing cycle route
- 20 mph zone
- Proposed 20 mph zone
- Air quality hotspot
- Traffic congestion
- Other SCWIP schemes
- Metro line
- Metro stop
- Rail Line
- Rail station

1. **Junction 1** Multi modal upgrade
2. **Junction 2 new** Toucan crossing.
3. **Junction 3** Raised table, tiger crossing.
4. **Junction 4** Multi modal upgrade
5. **Junction 5** Walking & cycling priority junction improvements.
6. **Junction 6** Multi modal upgrade
7. 8 **Junction 7 & 8** Raised table, tiger crossing.
9. **Junction 9** Early release for cyclists.
10. **Junction 10** Walking & cycling priority junction improvements.

1. **Section 1** Two way track on opposite side of station.
2. **Section 2** Two way track.
3. **Section 3** Two way track & quiet-way
4. **Section 4** Two way track & quiet-way.
5. **Section 5** Two way track, speed reductions and officialise parking.
6. **Section 6** Two way track, speed reductions and officialise parking.
7. **Section 7** Two way track with walking & cycleway priority over side roads

3.10 Cycle Route 7 Stone Cross to Yew Tree via Tame Bridge Parkway Railway Station

Cycle Route 7 runs along a main arterial route (Walsall Road) and provides connections to Tame Bridge Parkway Railway Station. It is approximately 2km in length. The route provides a direct link from two residential areas to the railway station which offers the potential for multi modal commuter trips during peak times. The route currently has existing cycle infrastructure which is shared space walking and cycling paths, however, these have several pinch points where the pathway narrows, and cyclists are advised to dismount along the route. As the road is a main arterial route, it has high levels of fast flowing traffic. Cycle Route 7 has several connections with active travel routes:

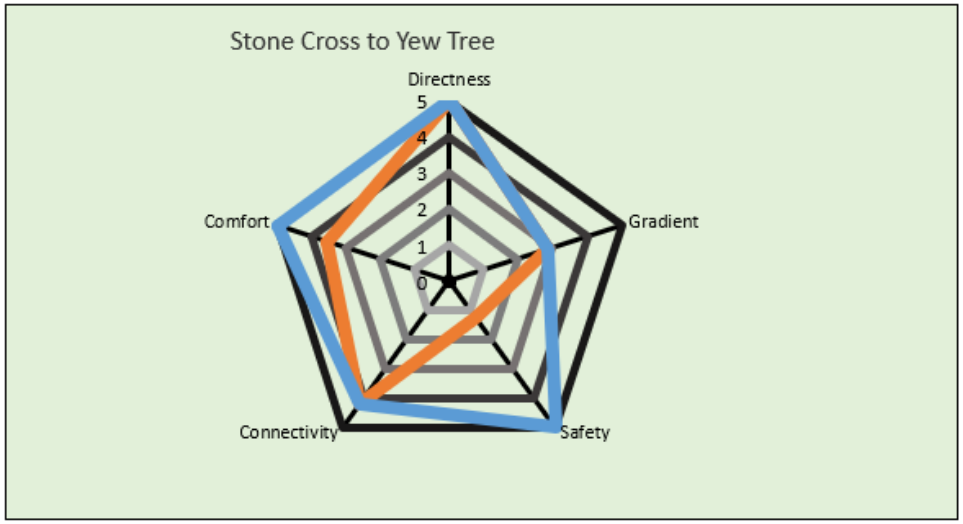
- It falls within SCWIP Core Walking Zone 6
- The Tame Valley Canal can be accessed from the route
- Access to Tame Bridge Parkway Railway Station has been addressed in SMBCs Rights of Way Improvements Plan
- The residential areas to the east and west are proposed 20mph zones or are already 20mph zones (respectively)
- The existing cycle route extends to the south of Cycle Route 7

Cycle Route 7 follows the same alignment as the existing route and the RST scores show the potential benefit from the suggested infrastructure:

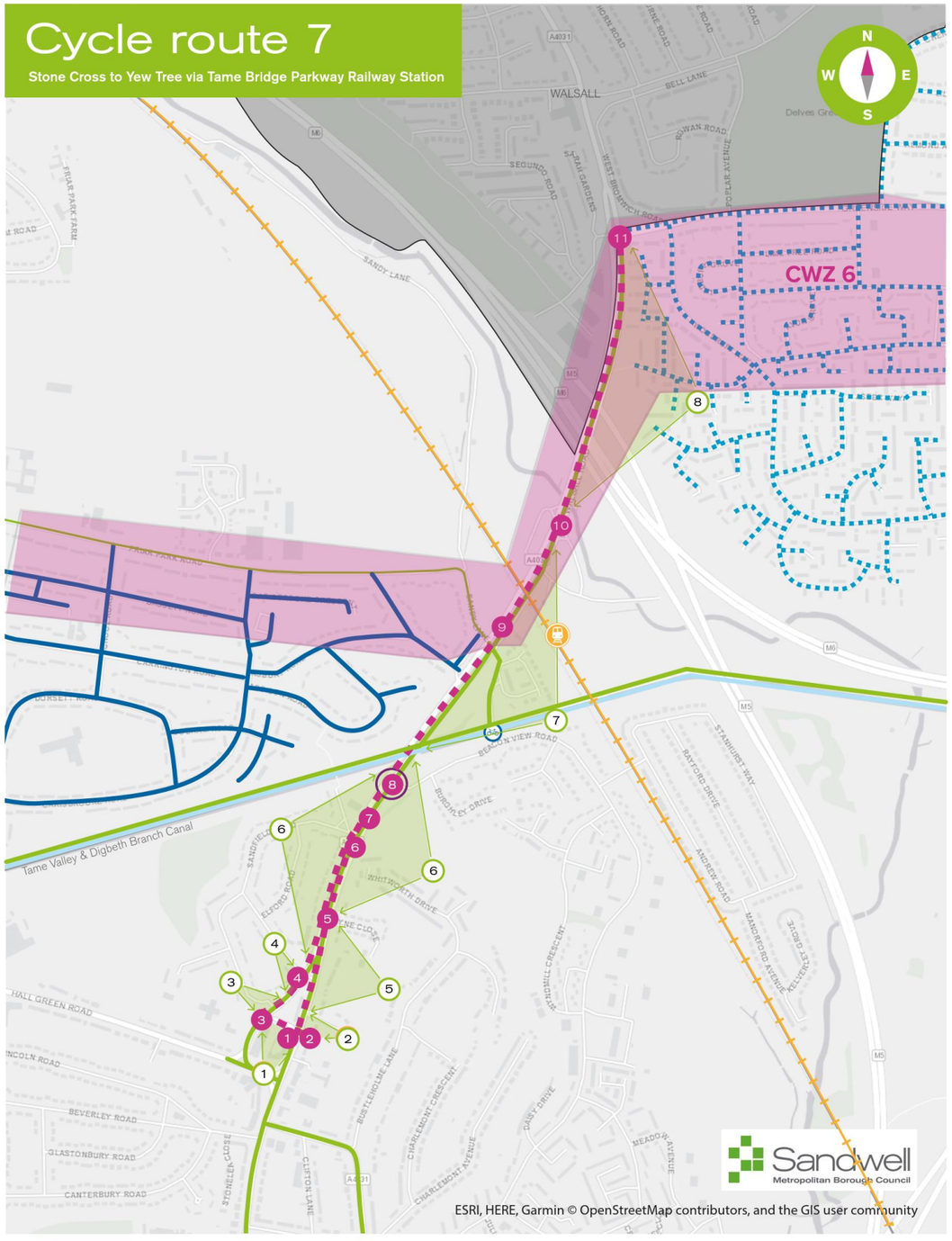
- Directness, gradient and connectivity remain the same as the existing route
- There are large benefits to safety as the segregated nature of the improvements offer separation from all other modes of transport and so less conflict
- The levels of comfort also significantly improve, by offering segregated facilities for the whole route

Figure 3.15 Route 7 RST scores

	Performance Scores	
Criterion	Existing	Potential
Directness	5.00	5.00
Gradient	2.85	2.85
Safety	1.23	5.00
Connectivity	4.23	4.23
Comfort	3.53	5.00



Number of Existing Critical Junctions/Crossings	2
Number of Potential Critical Junctions/Crossings	2



Key

- Sandwell LCWIP walking
- Cycle Route 7
- Canals
- Canal access
- Off road cycle route
- Existing cycle route
- 20 mph zone
- Proposed 20 mph zone
- Local authority boundary
- Barriers to cycling
- Rail line
- Rail station

1. **Junction 1** Upgrade to toucan crossing
2. **Junction 2** Upgrade to toucan crossing
3. **Junction 3** Upgrade to toucan crossing
4. **Junction 4** Raised table with a tiger crossing. Tighten the junction radii.
5. **Junction 5** Raised table with a tiger crossing.
6. **Junction 6** Raised table with a tiger crossing. Tighten the junction radii.
7. **Junction 7** Upgrade to toucan crossing
8. **Junction 8** Feed cyclists into right turn phase at signal junction
9. **Junction 9** Improve link to toucan crossing
10. **Junction 10** Consider as part of Bescot and Tamebridge development.
11. **Junction 11** One lane entry, 20mph, signalise & tighten junction radii as part of multi-modal junction improvement.

1. **Section 1** Segregated route
2. **Section 2** Segregated one way cycle track.
3. **Section 3** Segregated route
4. **Section 4** Segregated one way cycle track.
5. **Section 5** Two way track. floating parking.
6. **Section 6** Two way track.
7. **Section 7** Improve link from canal to station
8. **Section 8** Two way track.

3.11 Cycle Route 8 Tipton to Wednesbury Town Centre via Metro

Cycle Route 8 connects residential areas in Tipton to a variety of amenities in Wednesbury Town Centre via Wednesbury Parkway Metro stop and Wednesbury Great Western Street Metro stop. There are future plans to provide a new branch of the Metro line from Wednesbury Great Western Street station to provide links to Brierley Hill. Cycle Route 8 currently consists mainly of local roads and segregated cycle routes, in addition to a small distance on a main arterial route on Dudley Street. The route is approximately 4km long. The majority of Cycle Route 8 lies in a regeneration corridor, with the beginning of the route lying outside of this zone. As the route travels along mainly local and segregated routes, there are not generally high levels of vehicular traffic, however the route runs along Leabrook Road by Wednesbury Parkway Park and Ride, leading to higher levels of vehicular traffic on the local road. The existing route would also benefit from wayfinding improvements. The route also links to an LCWIP walking route in Wednesbury. Benefits of this route include:

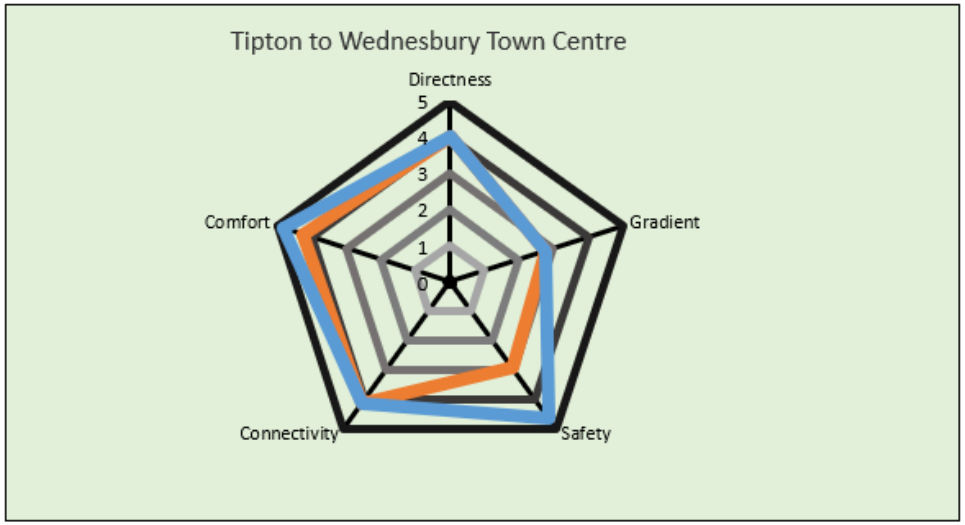
- Approaches from 20mph residential areas in Wednesbury make more comfortable cycling conditions
- The route passes through Walsall Canal
- Connections with an off-road cycle route in Tipton and an existing cycle route on Dudley Street
- Links with Wednesbury Parkway Metro stop
- Links to a variety of shops and workplaces in Wednesbury town centre

The results from the RST show that with the improved infrastructure the route:

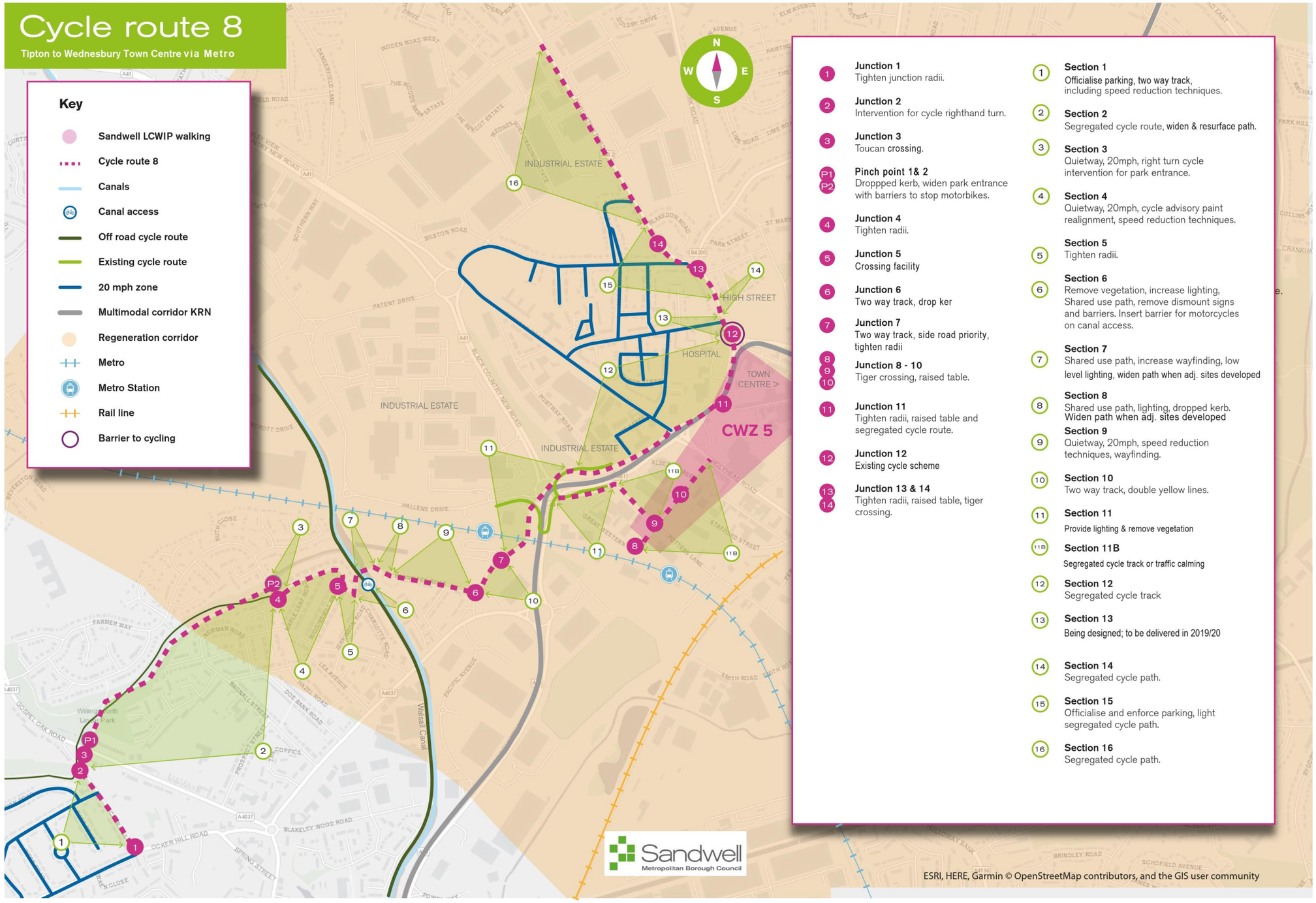
- Remain the same for directness, gradient and connectivity
- Improved largely with respect to safety
- Had slightly increased levels of comfort

Figure 3.16 Route 8 RST scores

	Performance Scores	
Criterion	**Existing**	**Potential**
Directness	4.00	4.00
Gradient	2.78	2.78
Safety	2.90	4.63
Connectivity	4.15	4.15
Comfort	4.26	4.84



Number of Existing Critical Junctions/Crossings	9
Number of Potential Critical Junctions/Crossings	9



Junction 1
Tighten junction radii.

Junction 2
Intervention for cycle righthand turn.

Junction 3
Toucan crossing.

Pinch point 1& 2
Droppped kerb, widen park entrance with barriers to stop motorbikes.

Junction 4
Tighten radii.

Junction 5
Crossing facility

Junction 6
Two way track, drop ker

Junction 7
Two way track, side road priority, tighten radii

Junction 8 - 10
Tiger crossing, raised table.

Junction 11
Tighten radii, raised table and segregated cycle route.

Junction 12
Existing cycle scheme

Junction 13 & 14
Tighten radii, raised table, tiger crossing.

Section 1
Officialise parking, two way track, including speed reduction techniques.

Section 2
Segregated cycle route, widen & resurface path.

Section 3
Quietway, 20mph, right turn cycle intervention for park entrance.

Section 4
Quietway, 20mph, cycle advisory paint realignment, speed reduction techniques.

Section 5
Tighten radii.

Section 6
Remove vegetation, increase lighting, Shared use path, remove dismount signs and barriers. Insert barrier for motorcycles on canal access.

Section 7
Shared use path, increase wayfinding, low level lighting, widen path when adj. sites developed

Section 8
Shared use path, lighting, dropped kerb. Widen path when adj. sites developed

Section 9
Quietway, 20mph, speed reduction techniques, wayfinding.

Section 10
Two way track, double yellow lines.

Section 11
Provide lighting & remove vegetation

Section 11B
Segregated cycle track or traffic calming

Section 12
Segregated cycle track

Section 13
Being designed; to be delivered in 2019/20

Section 14
Segregated cycle path.

Section 15
Officialise and enforce parking, light segregated cycle path.

Section 16
Segregated cycle path.

3.12 Cycle Route 9 Tividale to Dudley Port via Sheepwash Nature Reserve

Cycle Route 9 runs through a mixture of local parks, residential local roads and briefly on an arterial road. The route links the community around Tividale to Sheepwash Nature Reserve and Dudley Port rail station. The route currently has no cycle infrastructure however the residential areas offer areas of 20mph speed limits and pleasant conditions. The majority of the off-road route is unsurfaced and so creates uncomfortable conditions for cycling. The majority of Cycle Route 9 is contained within a regeneration corridor and is approximately 2km in length. The route passes over the Birmingham Canal and connects to the Dudley Canal, where it partially coincides with National Cycle Route 81 and leads to the nearby Dudley Port rail station. Further connections and benefits include:

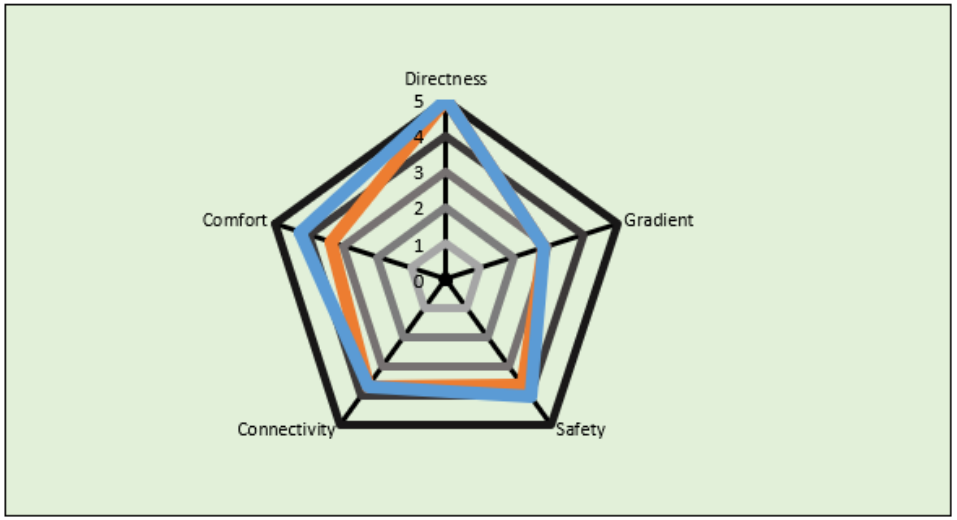
- Part of the route is subject to a 20mph zone which provides more pleasant cycling conditions
- Canal access and connections to an existing national cycle route along the canal
- Existing cycle infrastructure on the A4123
- Planned Sprint route along the A4123
- Planned Wednesbury – Brierley Hill Metro stop approximately 0.5km to the west of the route
- An existing tunnel under the Dudley Canal and railway tracks offers good opportunity for cyclists to cross these elements safely

The results from the RST show that with the improved infrastructure the route:

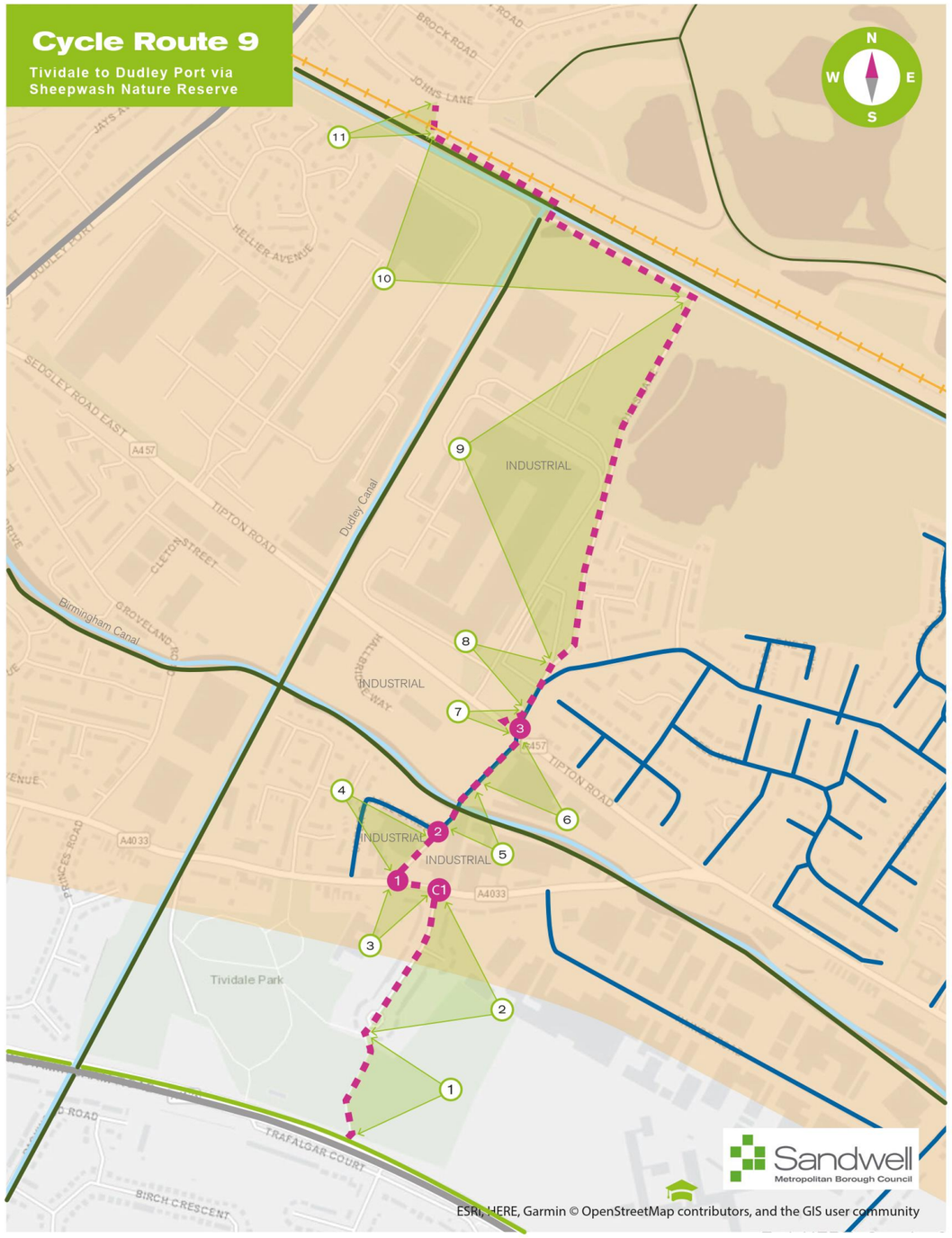
- Indicates the same scores in terms of directness, gradient and connectivity
- Safety levels improve due to officialising quietways and segregation in areas of high traffic counts
- Comfort levels increase due to resurfacing elements of the route

Figure 3.17 Route 9 RST scores

	Performance Scores	
Criterion	Existing	Potential
Directness	5.00	5.00
Gradient	2.85	2.85
Safety	3.63	4.03
Connectivity	3.69	3.69
Comfort	3.34	4.28



Number of Existing Critical Junctions/Crossings	3
Number of Potential Critical Junctions/Crossings	0



Key

- Cycle route 9
- Canals
- Off road cycle route
- Existing cycle route
- 20 mph zone
- Secondary schools
- Regeneration corridor
- Rail line
- Multimodal corridor KRN

C1 Crossing
Relocate crossing between Twydale Ave & Britannia St. Make junction a raised table toucan crossing.

1 2 3 Junction 1- 3
Tighten radii, 3 x toucan crossings

1 Section 1
Segregated cycle path including way-finding and lighting, double chicanes. Widen path

2 Section 2
Quiet-way, way-finding improvements, dropped kerb.

3 Section 3
Shared use path.

4 Section 4
Quiet-way, parking restrictions.

5 Section 5
Signalise bridge, consider segregated path, remove barriers to the canal, 20mph restriction.

6 Section 6
Quiet-way, parking restrictions, cycle warning signs.

7 Section 7
Light segregation on pathway. Upgrade crossing to a toucan.

8 Section 8
Extend 20mph zone and segregate cyclists.

9 Section 9
Resurfacing, way-finding and vegetation improvements.

10 Section 10
Re-establish Johns Lane tunnel. Create pathway to and through tunnel including lighting and signage . Create a pedestrian and cycle bridge over the brook on Sheepwash Nature Reserve. Resurface pathway to John's Lane.

11 Section 11
Shared use path. Widen to 3m.

3.13 Cycle Route 10 Cradley Heath to boundary with Dudley MBC, via railway station

Cycle Route 10 is approximately 1.5km long and provides a direct route to several key destinations including Cradley Heath Railway Station and Cradley Heath High Street. The route currently consists of two connector roads through the town centre and one arterial road, with no segregated cycle routes or lanes. Cycle Route 10 facilities access to a number of shops in the town centre as well as public transport links such as Cradley Heath railway station. The entirety of the route lies within a regeneration corridor and approximately half of the route lies within a WM LCWIP walking zone. This route provides:

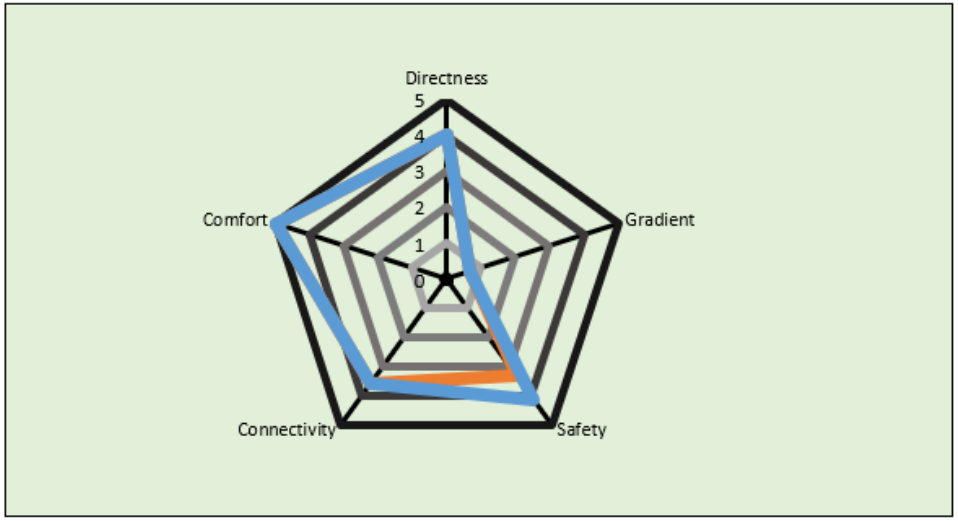
- Direct access to the railway station and high street for a number of amenities
- Connections to existing cycle routes along Prince Street and Corngreaves Road
- Connections to WM LCWIP and a walking zone
- Connections to proposed residential developments
- Potential future aspirations of Dudley to continue the route to Merry Hill Shopping Centre

The results from the RST show that with the improved infrastructure the route:

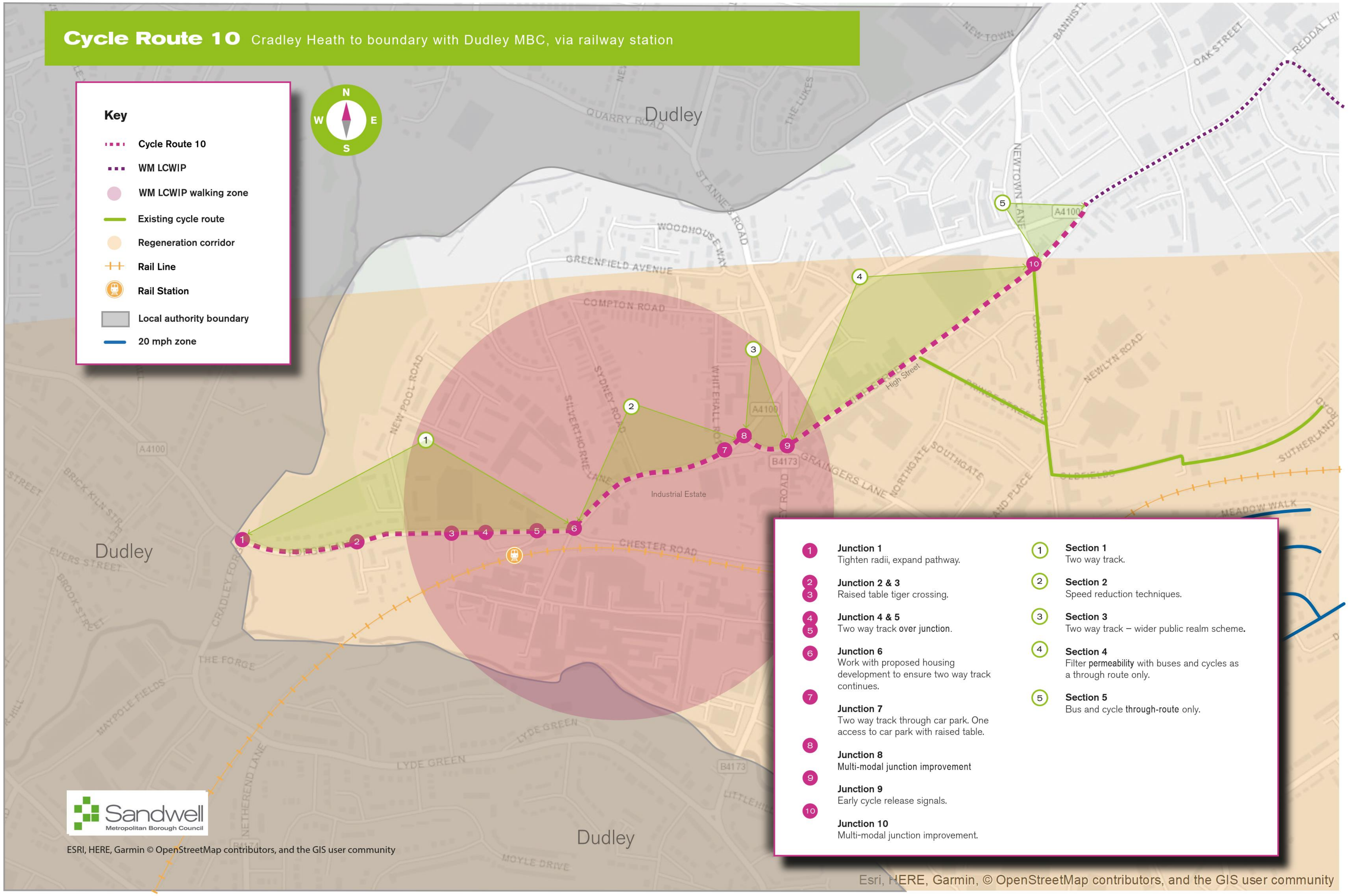
- Directness, gradient, connectivity and comfort scores do not change
- There are improved scores in terms of safety due to segregation, quietways and cycle priority
- There are reductions in the number of potential critical junctions/crossings

Figure 3.18 Route 10 RST scores

	Performance Scores	
Criterion	Existing	Potential
Directness	4.00	4.00
Gradient	0.66	0.66
Safety	3.29	4.13
Connectivity	3.58	3.58
Comfort	5.00	5.00



Number of Existing Critical Junctions/Crossings	4
Number of Potential Critical Junctions/Crossings	1


Cycle Route 10 Cradley Heath to boundary with Dudley MBC, via railway station
Key
Cycle Route 10
WM LCWIP
WM LCWIP walking zone
Existing cycle route
Regeneration corridor
Rail Line
Rail Station
Local authority boundary
20 mph zone
N
S
W
E
Dudley
Dudley
Dudley
Industrial Estate
High Street
Junction 1
Tighten radii, expand pathway.
Junction 2 & 3
Raised table tiger crossing.
Junction 4 & 5
Two way track over junction.
Junction 6
Work with proposed housing development to ensure two way track continues.
Junction 7
Two way track through car park. One access to car park with raised table.
Junction 8
Multi-modal junction improvement
Junction 9
Early cycle release signals.
Junction 10
Multi-modal junction improvement.
Section 1
Two way track.
Section 2
Speed reduction techniques.
Section 3
Two way track – wider public realm scheme.
Section 4
Filter permeability with buses and cycles as a through route only.
Section 5
Bus and cycle through-route only.
Sandwell
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3.14 Cycle Route 11 Cape Hill to Black Patch via Midland Metropolitan Hospital

Cycle Route 11 provides a route between residential areas in Cape Hill and Black Patch Park in Smethwick going through the Midland Metropolitan Hospital (MMH). The route is approximately 2km long. The route consists of a variety of roads which are mainly local residential roads, segregated cycle routes and canal towpath, with minimal interaction with traffic. The majority of the route lies within a regeneration corridor. Cycle Route 11 also provides cycle access to MMH. Cycle Route 11 allows for:

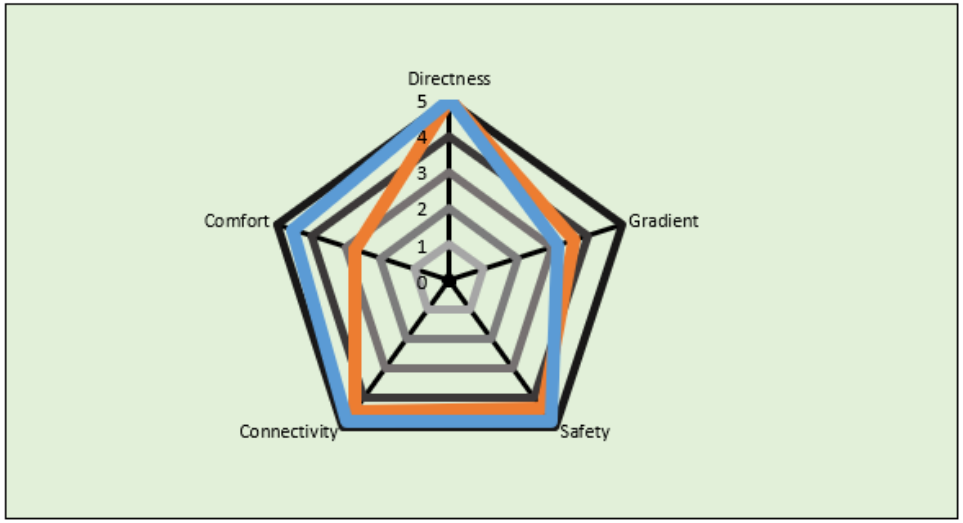
- Canal access
- Connections to off road cycle routes
- The route coincides and connects with several 20mph zones, creating safer cycling conditions
- Segregated cycle routes creating comfortable cycling conditions away from busy traffic
- Accessibility to SCWIP core walking zone 2

The route has been slightly realigned to avoid a major junction and to offer opportunity to access the canal towpath via a quieter route. The results from the RST show that with the improved infrastructure the route:

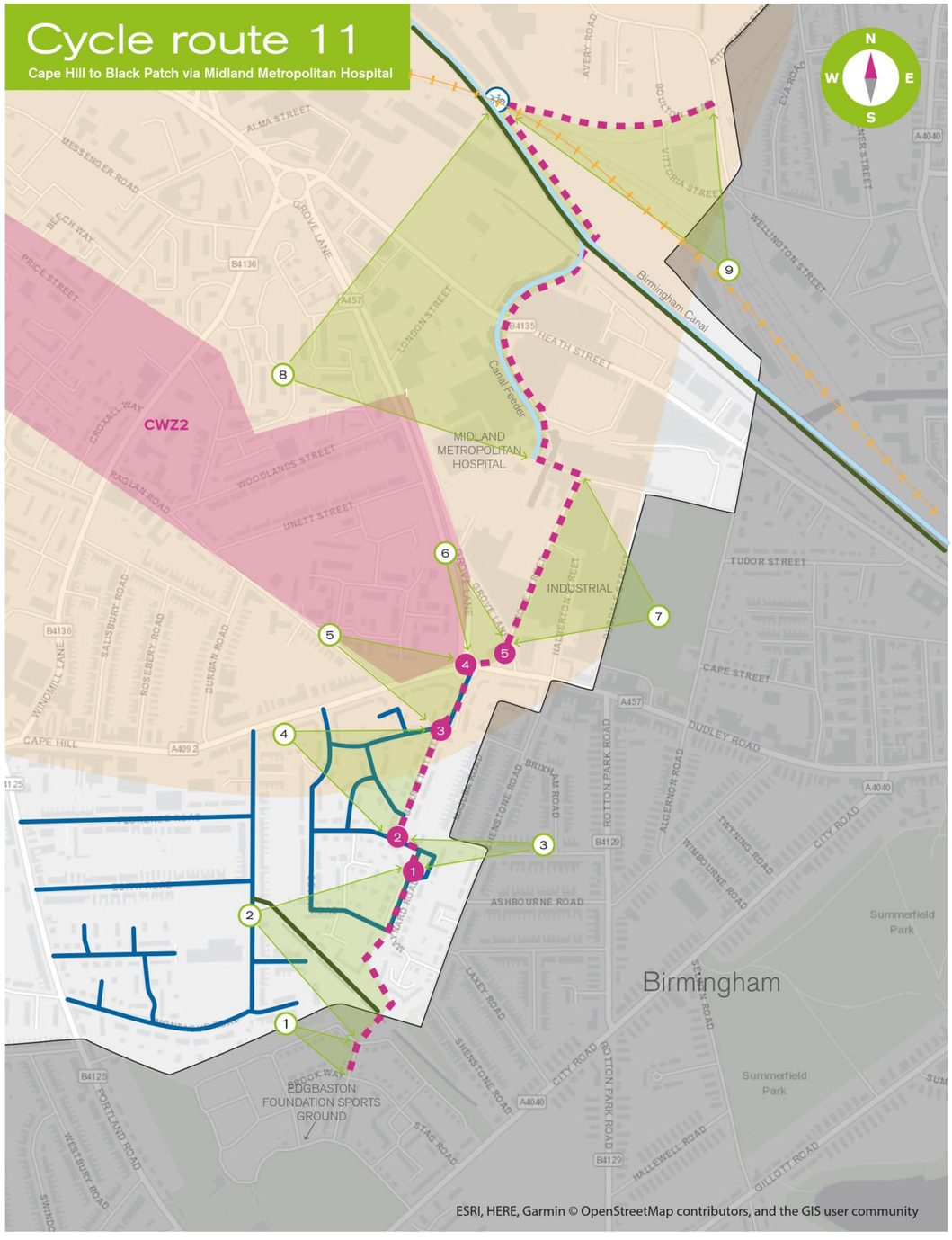
- Scores remained the same with regards to directness, with this category achieving the highest possible score
- Slightly worsened in terms of gradient due to the realignment
- Improved in terms of safety and connectivity due to the segregated nature of infrastructure recommended and official quietways suggested
- The route has large improvements in comfort in comparison to the old route
- The route avoids all critical junctions and crossings identified through realignment

Figure 3.19 Route 11 RST scores

	Performance Scores	
Criterion	Existing	Potential
Directness	5.00	5.00
Gradient	3.60	3.15
Safety	4.39	4.81
Connectivity	4.47	4.81
Comfort	2.74	4.57



Number of Existing Critical Junctions/Crossings	4
Number of Potential Critical Junctions/Crossings	0



Key

- Sandwell LCWIP walking
- Cycle route 11
- Canals
- Canal access
- Off road cycle route
- Rail line
- 20 mph zone
- Regeneration corridor
- Local authority boundary

1. **Junction 1**
   Improve way finding.
2. **Junction 2**
   Raise table.
3. **Junction 3**
   Wayfinding.
4. **Junction 4**
   Wayfinding to roundabout alternative to the east.
5. **Junction 5**
   Raised table tiger crossing.

1. **Section 1**
   Quietway, improve wayfinding.
2. **Section 2**
   Segregated cycle way.
3. **Section 3**
   Quietway, expand the red brick style.
4. **Section 4**
   Quietway, expand the red brick style, speed reduction techniques.
5. **Section 5**
   Segregated cycle route.
6. **Section 6**
   Segregate cycle path.
7. **Section 7**
   Quietway.
8. **Section 8**
   Re surface towpath. Create canal access.
9. **Section 9**
   Remove vegetation, improve lighting, provide segregated path

3.15 Cycle Route 12 Walsall canal to Birmingham canal through Tipton via Alexander High School

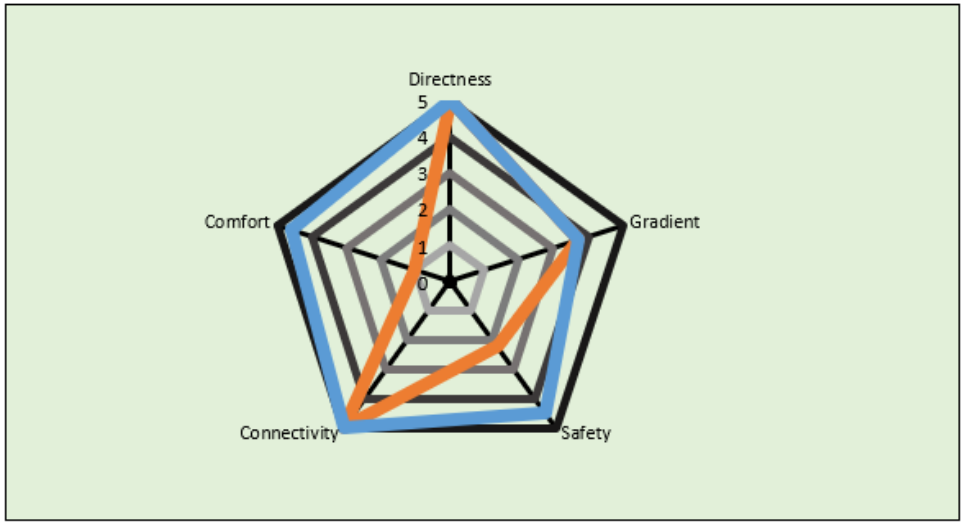
Cycle Route 12 provides a direct route between the Black Country Museum, Tipton High Street, Tipton Rail Station, Q3 Academy and the Walsall Canal. The route is approximately 4km long, the majority of which is in a regeneration corridor. A small amount of the route is based in Dudley to ensure the Black Country Museum benefits from the cycle route. The route provides access to two canal systems and so off-road cycle routes: Walsall Canal and the Birmingham Canal. The route runs close to both the proposed new Metro line from Wednesbury to Brierley Hill as well as crossing the proposed Sprint route along the A4123. This route currently consists of one main arterial road, three connector roads and two local roads. This route provides connectivity through:

- Providing access to existing and potential new rail and tram stations
- Provides access to leisure facilities such as the Black Country Museum, Tipton Leisure Centre and Tipton High Street
- Provides access to secondary education
- There is access to the off-road canal routes

The route currently has no cycle infrastructure, however, it is in close proximity to several 20mph zones which offer more comfortable conditions for cycling. The route follows the existing alignment and so the directness, gradient and connectivity remain the same as the existing route. However, RST scoring shows that comfort and safety perform a lot better with the infrastructure improvements suggested due to segregation and improving critical junctions / crossings.

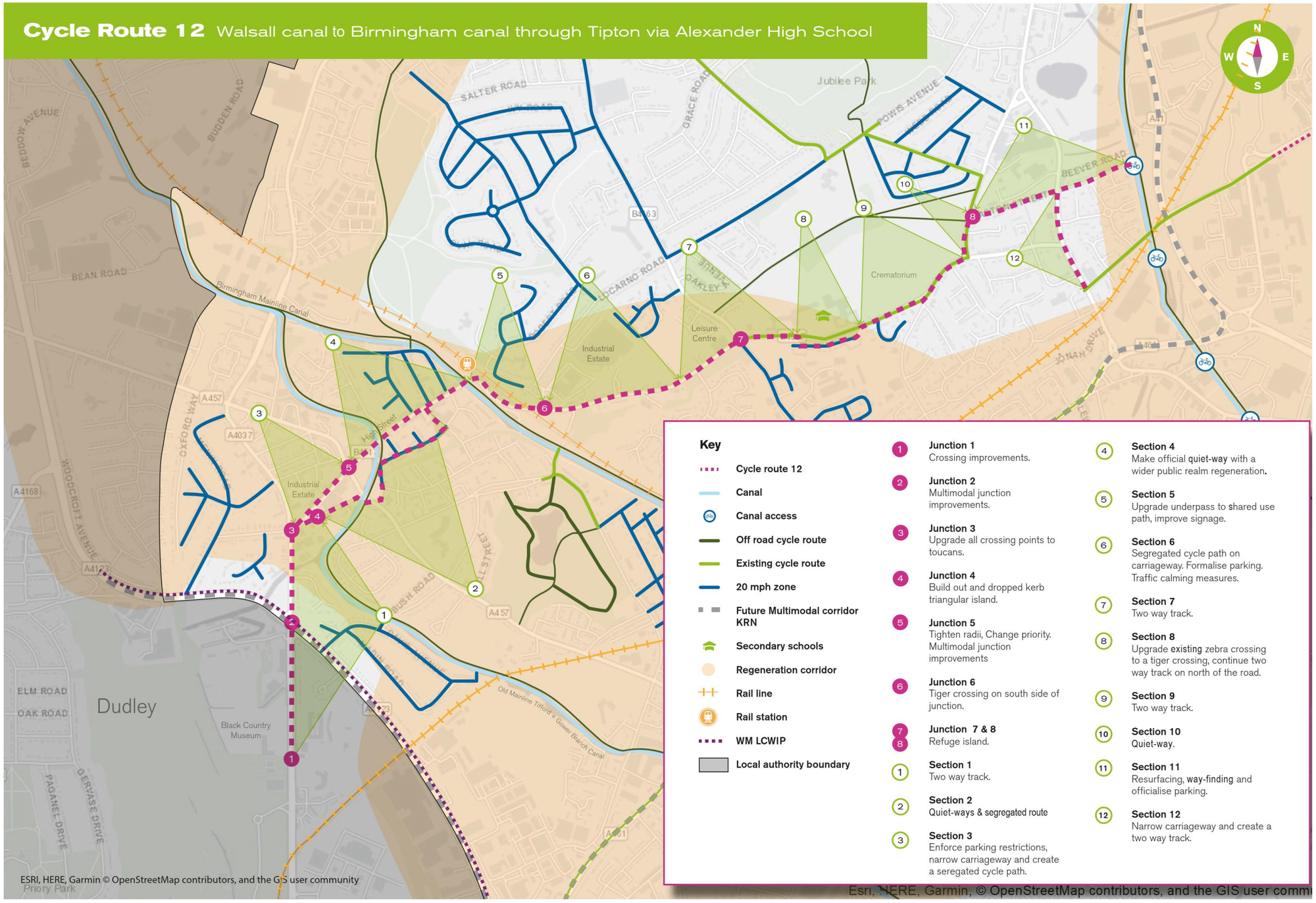
Figure 3.20 Route 12 RST scores

	Performance Scores	
Criterion	Existing	Potential
Directness	5.00	5.00
Gradient	3.73	3.73
Safety	2.21	4.50
Connectivity	5.00	5.00
Comfort	1.06	4.61



Number of Existing Critical Junctions/Crossings	6
Number of Potential Critical Junctions/Crossings	4

Cycle Route 12 Walsall canal to Birmingham canal through Tipton via Alexander High School



Key

- Cycle route 12
- Canal
- Canal access
- Off road cycle route
- Existing cycle route
- 20 mph zone
- Future Multimodal corridor KRN
- Secondary schools
- Regeneration corridor
- Rail line
- Rail station
- WM LCWIP
- Local authority boundary

1. **Junction 1** Crossing improvements.
2. **Junction 2** Multimodal junction improvements.
3. **Junction 3** Upgrade all crossing points to toucans.
4. **Junction 4** Build out and dropped kerb triangular island.
5. **Junction 5** Tighten radii, Change priority. Multimodal junction improvements
6. **Junction 6** Tiger crossing on south side of junction.
7. **Junction 7 & 8** Refuge island.
8. **Section 1** Two way track.
2. **Section 2** Quiet-ways & segregated route
3. **Section 3** Enforce parking restrictions, narrow carriageway and create a seregated cycle path.
4. **Section 4** Make official quiet-way with a wider public realm regeneration.
5. **Section 5** Upgrade underpass to shared use path, improve signage.
6. **Section 6** Segregated cycle path on carriageway. Formalise parking. Traffic calming measures.
7. **Section 7** Two way track.
8. **Section 8** Upgrade existing zebra crossing to a tiger crossing, continue two way track on north of the road.
9. **Section 9** Two way track.
10. **Section 10** Quiet-way.
11. **Section 11** Resurfacing, way-finding and officialise parking.
12. **Section 12** Narrow carriageway and create a two way track.

3.16 Cycle Route 13 Old Hill Railway Station to Bumble Hole Nature Reserve via Dudley Canal

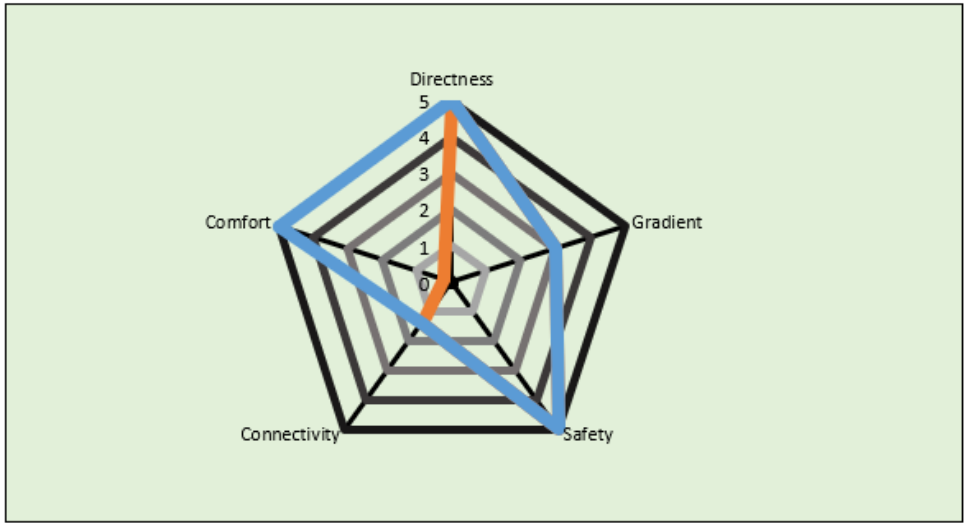
Cycle Route 13 is entirely off road, along the Dudley Canal. It provides an off-road shared use path from Old Hill Station to Bumble Hole Nature Reserve for approximately 3km. There are several opportunities along the route to improve access on and off the canal as it runs through an industrial area with a large work force. This route provides connections to existing and proposed infrastructure:

- West Midlands LCWIP cycle route is to the south and crosses the Dudley Canal
- Existing cycle routes exist to the south surrounding the station
- There are 20mph zones in close proximity to the station offering comfortable cycling conditions
- There are opportunities to extend this route to Merry Hill shopping centre
- The borough is very hilly in this area and so the canal offers a flat, easier alternative

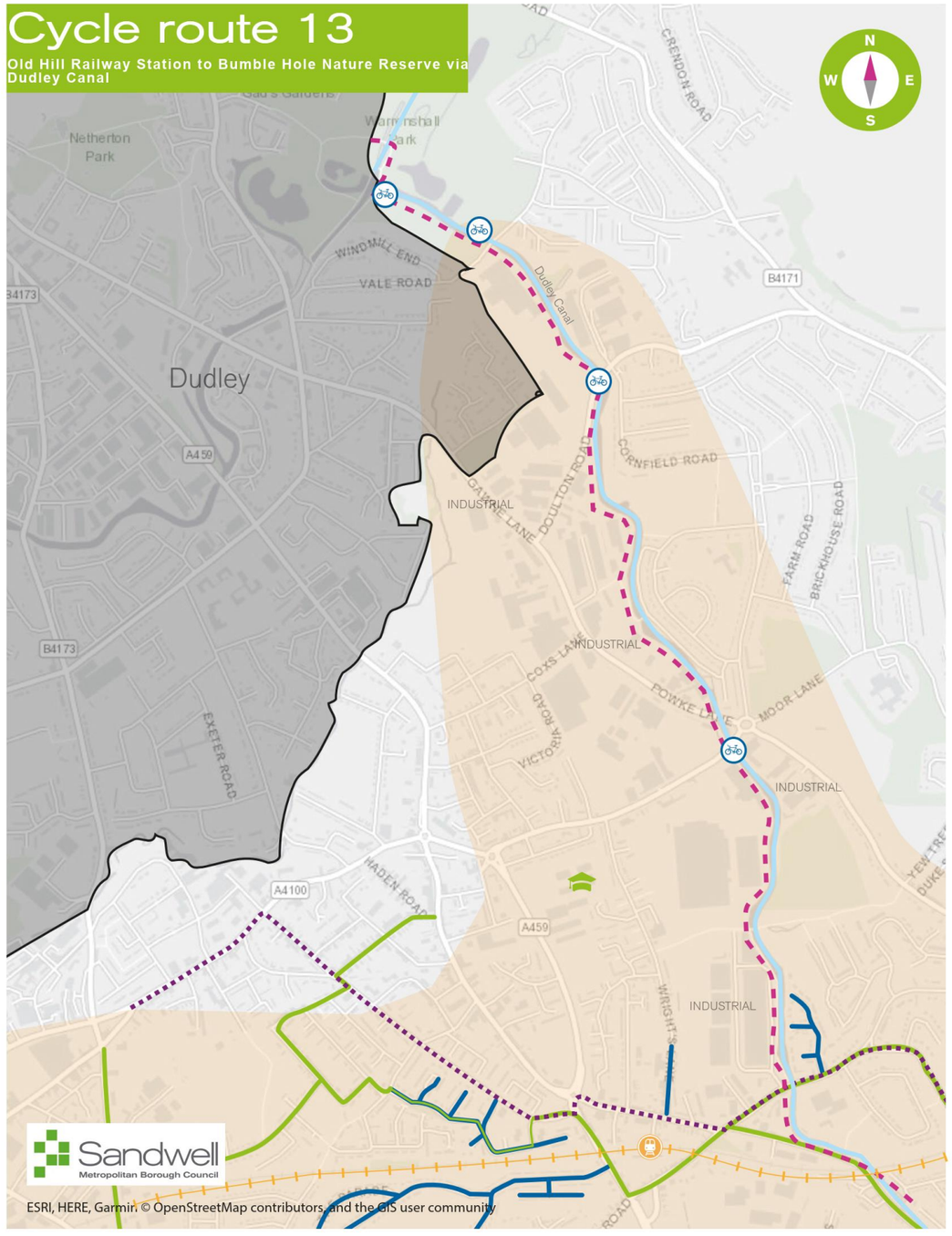
As the recommended infrastructure follows the same route as what currently exists and due to the nature of the canal, the RST scores the directness, gradient, safety and connectivity the same regardless of the infrastructure recommendations. Comfort however shows a large improvement which would encourage the use of the canal towpath as a cycle route.

Figure 3.21 Route 13 RST scores

	Performance Scores	
Criterion	Existing	Potential
Directness	5.00	5.00
Gradient	2.99	2.99
Safety	5.00	5.00
Connectivity	1.41	1.41
Comfort	0.23	5.00



Number of Existing Critical Junctions/Crossings	0
Number of Potential Critical Junctions/Crossings	0



Key

- Cycle route 13
- WM LCWIP
- Canals
- Canal access
- Existing cycle route
- 20 mph zone
- Regeneration corridor
- Rail line
- Rail Station
- Local authority boundary
- Secondary schools

Entire Route Recommendation
Resurfacing towpath to create shared use path.

3.17 Cycle Route 14 Toll End to Hill Top, via Harvills Hawthorn

Cycle Route 14 links an existing cycle route with a WM LCWIP cycle route through Harvills Hawthorn. The proposed route is approximately 1.5km and consists of a connector road. The area the route runs through is primarily industrial and so offers journey to work trips to be made by cycle, however, due to the nature of the area, can be subject to heavy vehicles and debris on the carriageway. There is currently some good infrastructure to the west of the route which links Harvills Hawthorne to the Walsall Canal and the potential to connect to SCWIP Cycle Route 12. There is also the potential to connect the route to the existing off carriageway cycle route to Black Lake Metro stop. The route is also close to some future transport schemes:

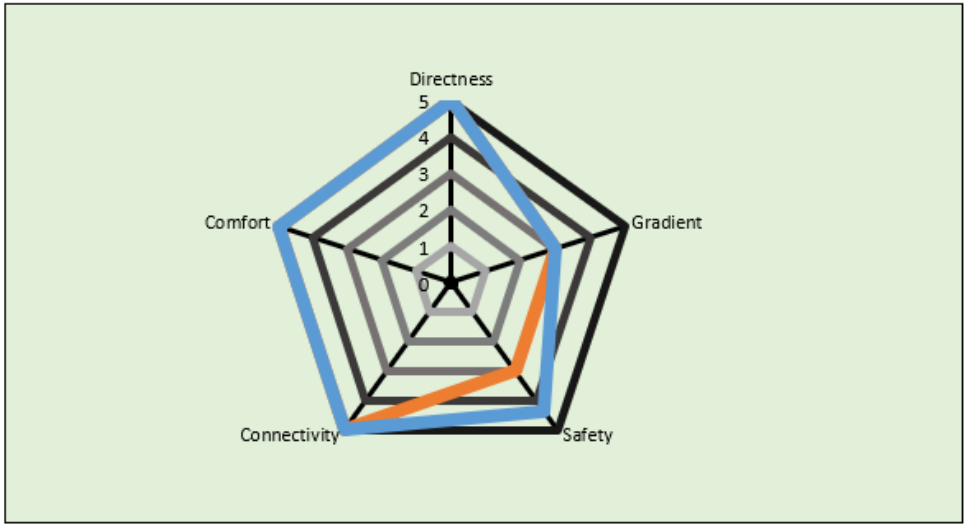
- The proposed Wednesbury – Brierley Hill Metro extension runs to the west of Cycle Route 14
- The proposed WM LCWIP cycle route at Hill Top would continue this route in a northward and southward direction

Cycle Route 14 follows the existing route and so provides a direct link from the existing infrastructure on Bagnall Street to the proposed WM LCWIP route on Hill Top. Therefore, the directness, comfort, connectivity and gradient scores remain the same in the RST, however, the safety score is largely improved due to recommendations of:

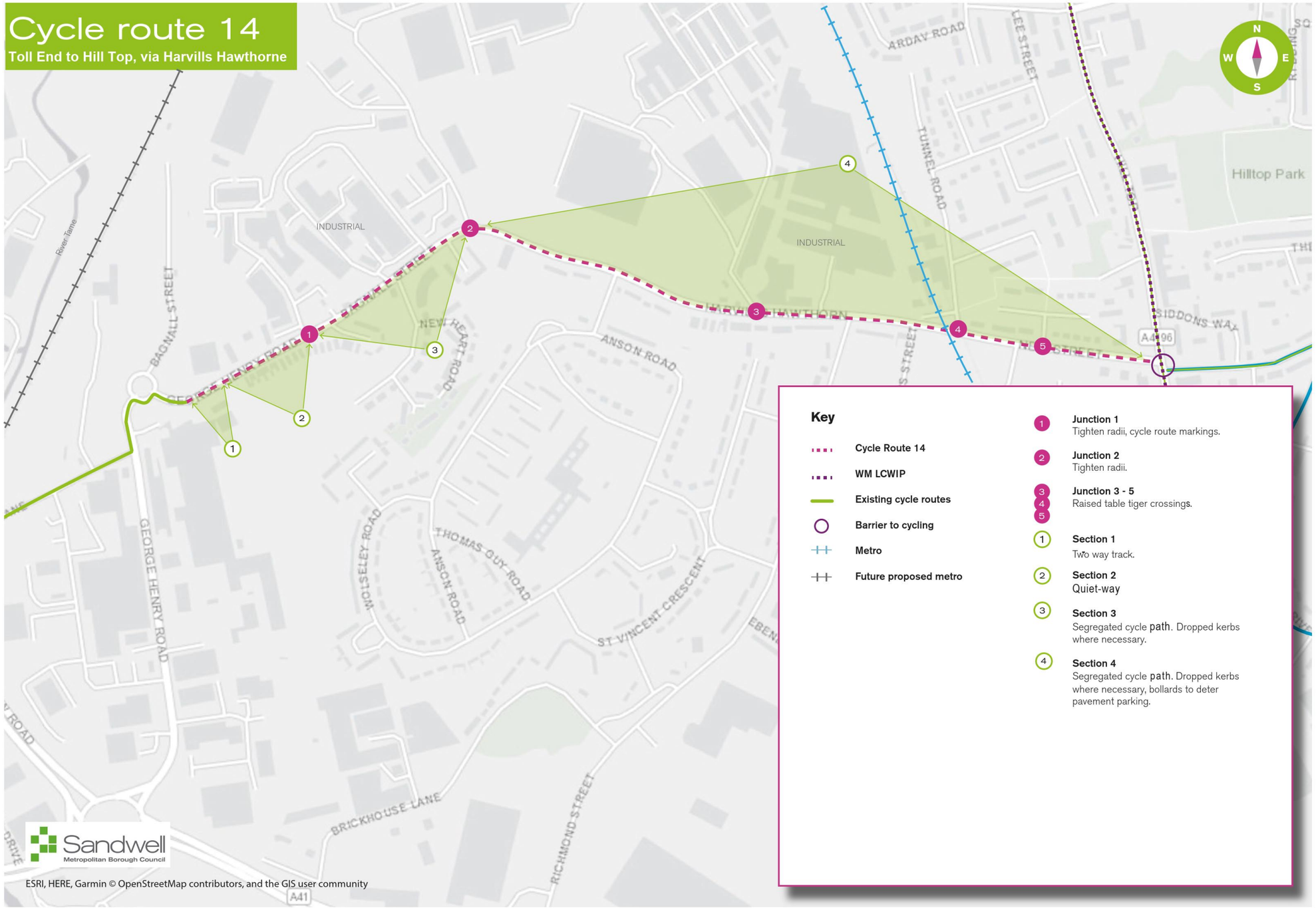
- Segregation for the majority of the route, limiting conflict with other road users, especially heavy vehicles accessing the industrial estate
- Making the road an official quietway to lower speeds, especially on areas where segregation is not possible
- Tightening junction radii to encourage slower speeds and heighten visibility at key points where conflict can potentially occur

Figure 3.22 Route 14 RST scores

	Performance Scores	
Criterion	Existing	Potential
Directness	5.00	5.00
Gradient	3.00	3.00
Safety	3.00	4.34
Connectivity	5.00	5.00
Comfort	5.00	5.00



Number of Existing Critical Junctions/Crossings	6
Number of Potential Critical Junctions/Crossings	1


Cycle route 14
Toll End to Hill Top, via Harvills Hawthorne
N
W
E
S
River Tame
BAGNALL STREET
GEORGE HENRY ROAD
INDUSTRIAL
NEW HEART ROAD
ANSON ROAD
WOLSELEY ROAD
THOMAS GUY ROAD
ST VINCENT CRESCENT
BRICKHOUSE LANE
RICHMOND STREET
ARDAY ROAD
TUNNEL ROAD
LEE STREET
Hilltop Park
SIDDONS WAY
A4096
A41
Sandwell
Metropolitan Borough Council
ESRI, HERE, Garmin © OpenStreetMap contributors, and the GIS user community
Key
Cycle Route 14
WM LCWIP
Existing cycle routes
Barrier to cycling
Metro
Future proposed metro
Junction 1
Tighten radii, cycle route markings.
Junction 2
Tighten radii.
Junction 3 - 5
Raised table tiger crossings.
Section 1
Two way track.
Section 2
Quiet-way
Section 3
Segregated cycle path. Dropped kerbs where necessary.
Section 4
Segregated cycle path. Dropped kerbs where necessary, bollards to deter pavement parking.

3.18 Cycle Route 15 Newton Road to A34 via Wilderness Lane

Cycle Route 15 links Newton Road with the A34 through a residential area. The route is approximately 2km in length and links to Q3 Academy Great Barr and Grove Vale Primary School, encouraging a shift from private car to active travel for journeys to school. The route falls along one local road, park lands and one connector road. The route is somewhat limited due to the gradients in part as well as fast moving vehicles despite one of the roads being a residential local road. Traffic calming measures have previously been requested by the Q3 Academy due to concerns over safety and a lack of crossing opportunities for the school. This route creates links to other transport opportunities with:

- An existing cycle route running along the A4041
- NCN Route 5 currently provides a route around the Q3 Academy to the Yew Tree Estate and along the Rushall Canal
- Off road cycle route running along the Dudley canal
- The proposed Sprint bus route runs along the A34, to the north of the route

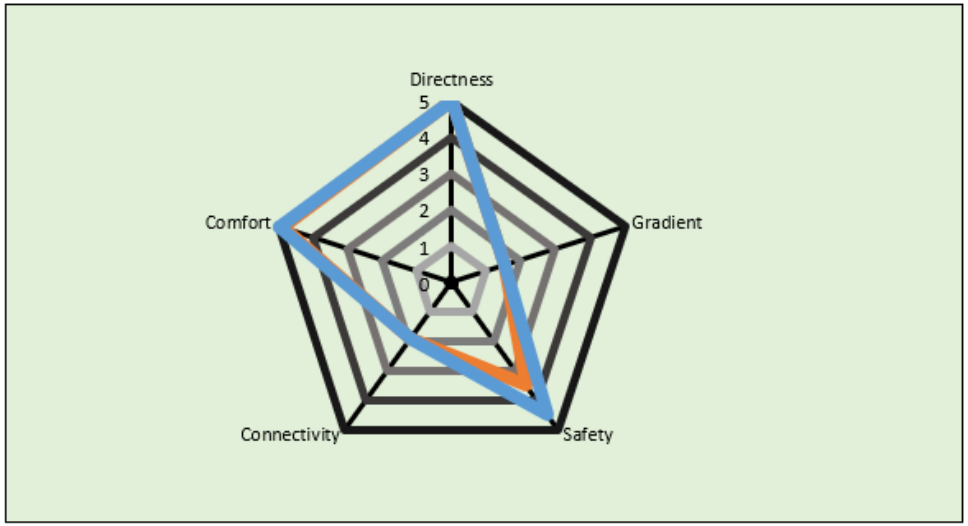
As the proposed infrastructure runs along the same alignment as the existing route, the RST scores remain the same for directness, gradient, connectivity and comfort. They are however improved for safety through the recommendations to:

- Implement quietways
- Segregate through shared use paths and two-way tracks
- Improving junctions
- Inserting crossings

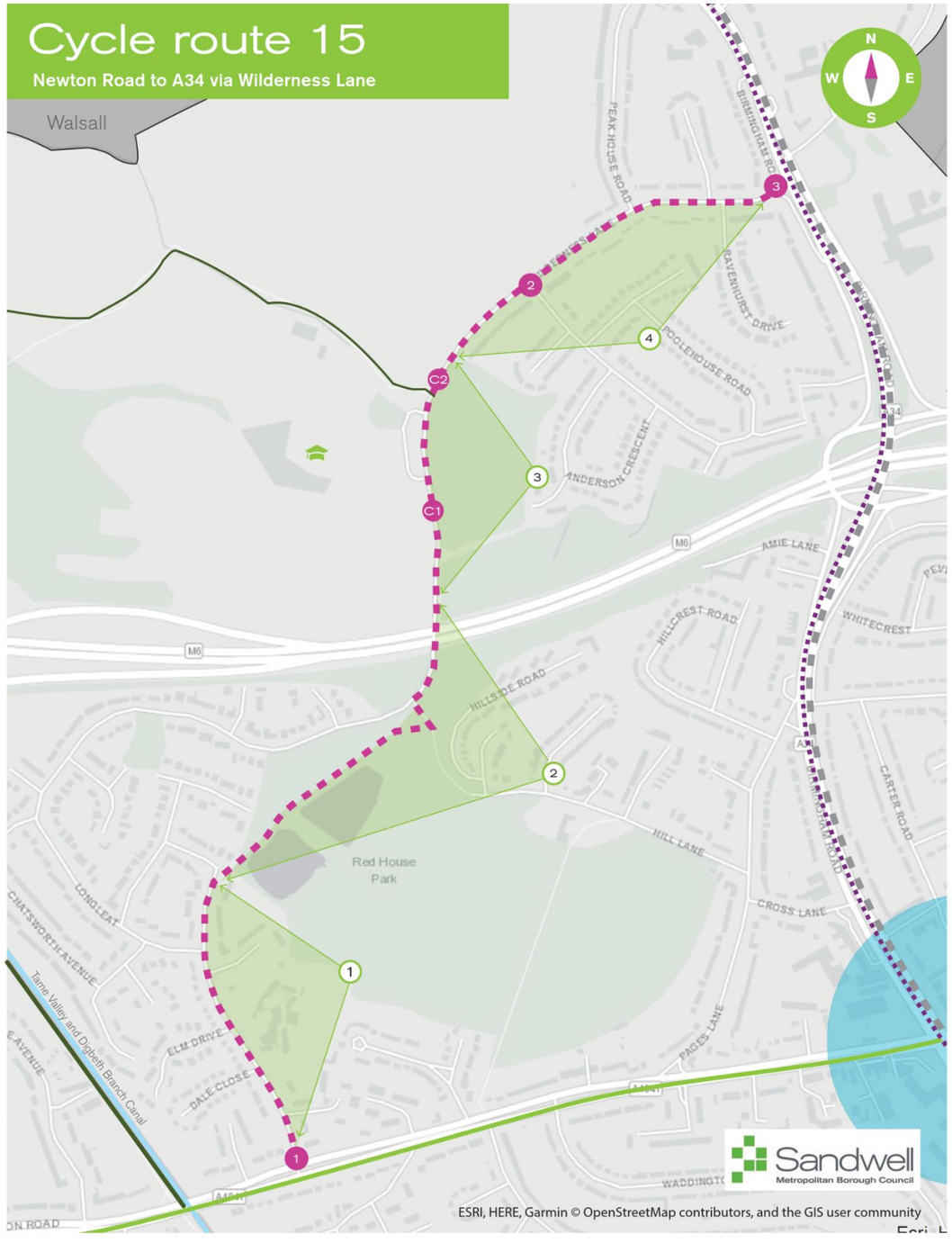
These improvements will also improve the comfort of cyclists through improved safety, however, these scores are not reflected in the RST.

Figure 3.23 Route 15 RST scores

	Performance Scores	
Criterion	Existing	Potential
Directness	5.00	5.00
Gradient	1.52	1.52
Safety	3.48	4.48
Connectivity	1.91	1.91
Comfort	4.90	5.00



Number of Existing Critical Junctions/Crossings	0
Number of Potential Critical Junctions/Crossings	0



Key

- Cycle Route 15
- Canals
- Off road cycle route
- Existing cycle routes
- Future transport scheme
- Air quality hotspot
- Local authority boundary
- School
- WM LCWIP

- **Junction 1** Raised table.
- **Crossing 1 & 2** Toucan crossing.
- **Junction 2 & 3** Raised table tiger crossing.
- **Section 1** Quiet-way, lightly segregated cycle route. Speed reduction measures.
- **Section 2** Segregated path.
- **Section 3** Two way track.
- **Section 4** Segregated cycle route.

3.19 Costings

Each of the cycle routes have been given an indicative cost. The costs of the routes have been determined through the following methodology:

- Stage 1: A high cost and low cost based on the Greater Manchester Cycling Design Guidance and Standards, excluding contingency and excluding inflation since this guidance was published
- Stage 2: The above costings were reviewed by SMBC
- Stage 3: SMBC Highways Team produced a highest cost estimate which included a 20% contingency
- Stage 4: An average was taken from the SMBC highest cost estimate and the low cost calculated using the Greater Manchester Cycling Design Guidance to produce a final indicative cost

The final indicative costs, along with SMBC high cost estimates and Manchester Cycle Design Guidance low-cost estimate are shown below in Table 3.1 below.

Table 3.1 Cycle route costings

Cycle Route Number	Cycle Route Description	Highways Highest	Lowest using Manchester Cycle Design Guidance based approach	Average of both
1	Birmingham Canal – West Bromwich via Spon Lane	£600,000	£256,700	**£428,350**
2	NCN Route 5 Improvements, linking to WMLCWIP route	£210,000	£212,000	**£211,000**
3	Spon Lane to Black Lake (Metro stop) Along Kelvin Way & Great Bridge	£300,000	£1,672,200	**£986,100**
4	Oldbury to Blackheath Town Centre	£420,000	£1,327,700	**£873,850**
5	Oldbury to Bearwood with links to WMLCWIP Route	£900,000	£1,098,200	**£999,100**
6	Oldbury to Galton Bridge Station	£600,000	£1,357,800	**£978,900**
7	Stone Cross to Yew Tree via Tame Bridge Parkway Railway Station	£360,000	£898,600	**£629,900**
8	Tipton to Wednesbury Town Centre via Metro	£468,000	£816,800	**£642,400**
9	Tividale to Dudley Port via Sheepwash Nature Reserve	£300,000	£455,800	**£377,900**
10	Cradley Heath to boundary with Dudley MBC, via railway station	£360,000	£518,200	**£439,100**

Cycle Route Number	Cycle Route Description	Highways Highest	Lowest using Manchester Cycle Design Guidance based approach	Average of both
11	Cape Hill to Black Patch via Midland Metropolitan Hospital	£360,000	£355,700	**£357,850**
12	Walsall canal to Birmingham canal through Tipton via Alexander High School	£780,000	£1,193,000	**£986,500**
13	Old Hill Railway Station to Bumble Hole Nature Reserve via Dudley Canal	£780,000	£472,500	**£626,250**
14	Toll End to Hill Top, via Harvills Hawthorn	£360,000	£268,000	**£314,000**
15	Newton Road to A34 via Wilderness Lane	£564,000	£455,000	**£509,500**
Totals		**£7,362,000**	**£11,358,200**	**£9,360,700**

It must be noted that the final indicative costs may change subject to detailed design and site investigations and exclude engineer design fees and commuted sums. Additional costs may be incurred as a result of a number of factors such as complicated service diversions and ground works for each route, which are yet unknown.

4 Network Planning for Walking

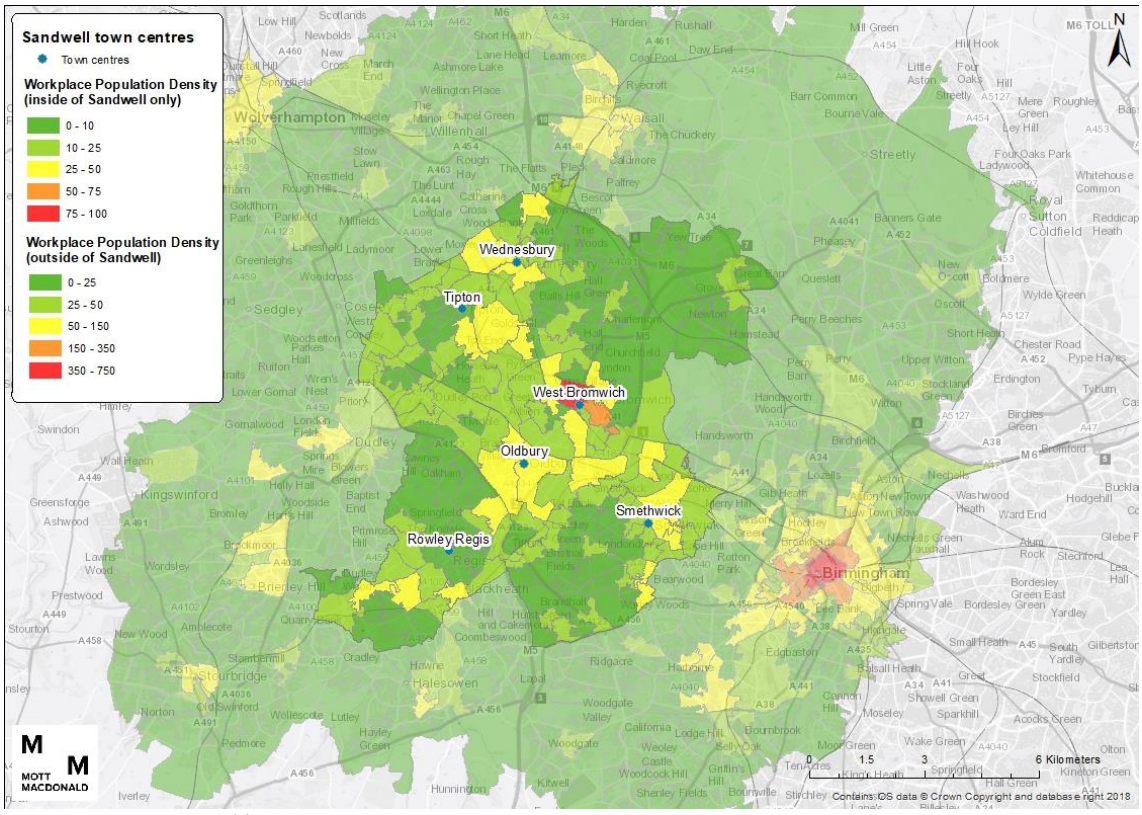
4.1 Desk based assessment

The following section describes several analyses carried out to establish the greatest areas of demand for walking.

4.1.1 Workplace populations

In order to establish the biggest attractors for walking, 2011 Census workplace populations were mapped across Sandwell. These are shown in Figure 4.1. The map shows that, in the main, the town centres within Sandwell are also the highest in terms of work place population with the exception of Rowley Regis with the areas between Oldbury, West Bromwich and Smethwick having higher workplace populations. West Bromwich had the highest workplace population within the authority.

Figure 4.1 Census 2011 workplace population



Source: Mott MacDonald

At the outset of the project, the way in which walking areas would be prioritised was discussed and, rather than workplace populations alone, a focus on access to jobs and education was prioritised in line with SMBC's priorities to provide access to transport.

In line with the cycling analysis, factors such as 20mph zones, access to secondary schools, connectivity between local centres, public transport, new developments, canal routes were prioritised.

The following Core Walking Zones (CWZs) were therefore selected. The sections below describe the rationale for selecting these areas and a map of the zones can be seen in Appendix A.

Table 4.1 CWZ selection rationale

Core Walking Zone	Rationale
Core Walking Zone 1 Black Heath town centre to Rowley Regis Railway Station	This is a walking zone has a main walking route and requires improvements to pedestrian facilities. Aspirations are to have one route with signed journey times and associated improvements in the area. This walking route is in proximity to Rowley Regis Rail station, the town centre and suffers from congestion along the main road. The area has a number of bus drop off areas which add to the congestion. There is a Rights of Way Improvement Plan into the area.
Core Walking Zone 2 Smethwick Rolfe Street Station to Midland Metropolitan Hospital via Windmill Eye	This walking route provides connecting from Smethwick Rolfe Street and Midland Metropolitan Hospital through Windmill Eye, a residential area. The alternative walking route follows a dual carriageway which provides pedestrian access. The proposed route is more direct than the road and therefore a shorter walking time. It provides connectivity to Smethwick High Street.
Core Walking Zone 3 High Street to Langley Green Railway Station	This provide connectivity to a new residential development in the area which will be traffic calmed along Weston Road. A speed table will be installed to provide a link into the station. The proposal assumes bus stops will move closer to Langley station and the existing crossing will remain.
Core Walking Zone 4 Sandwell and Dudley Railway Station to Bromford Lane Residential Estate	This zone provides connectivity from Sandwell and Dudley railway station to a residential area on Bromford Lane and a proposed new school. It also provides links to the Birmingham canal and is in an Air Quality improvement area.
Core Walking Zone 5 Wednesbury Great Western Street to Town Centre	This zone provides a connection from Wednesbury Great Western Metro stop to the town centre. This area is historically industrial and therefore has poor natural surveillance although the area is lit. The area is allocated as a future housing site. The site is relatively small being a c 4-minute walk in total, however, the area needs to be improved to demonstrate that the walk is attractive. In future there is potential that, should the Stourbridge people mover proposal go ahead, that an extension will incorporate Wednesbury town centre.
Core Walking Zone 6 Friar Park and Yew Tree to Tame Bridge Parkway Railway Station	There are two routes in this area. One through Friar Park which is traffic calmed in a 20mph zone. In addition, on the opposite side Yew Tree estate has a proposed 20mph zone. This zone therefore incorporates two routes from each estate to Tame Bridge railway station. It would also provide connectivity to a potential 100 dwellings going into site to the north of Friar Park Road

4.2 Walking Route Audit Tool

The Walking Route Audit Tool (WRAT) was used to assess conditions for pedestrians within the six Core Walking Zones (CWZs) that were identified. Each road within CWZs was assessed using the WRAT. The WRAT is again specified by LCWIP guidance and scores walking routes against the five themes of attractiveness, comfort, directness, safety and coherence with a total of 20 audit categories. The themes are described as:

- Attractiveness
  - This measure considers the impact of maintenance, fear of crime, traffic noise, lighting and street clutter on the attractiveness of pedestrian conditions
- Comfort
  - The measures in this category ensure that there is sufficient width for pedestrian flows both on footways and on pedestrian crossings
  - The measures also consider the impact of gradient and footway parking which is particularly pertinent to some of the CWZs identified
- Directness
  - Directness analyses the extent to which pedestrians are able to cross on their desire lines and the impact of vehicular traffic on pedestrians' movement
- Safety
  - This measure is focussed on vehicle volumes and speeds on the pedestrian environment and the visibility of pedestrians to drivers
- Coherence
  - Coherence reviews the provision of dropped kerbs and tactile paving

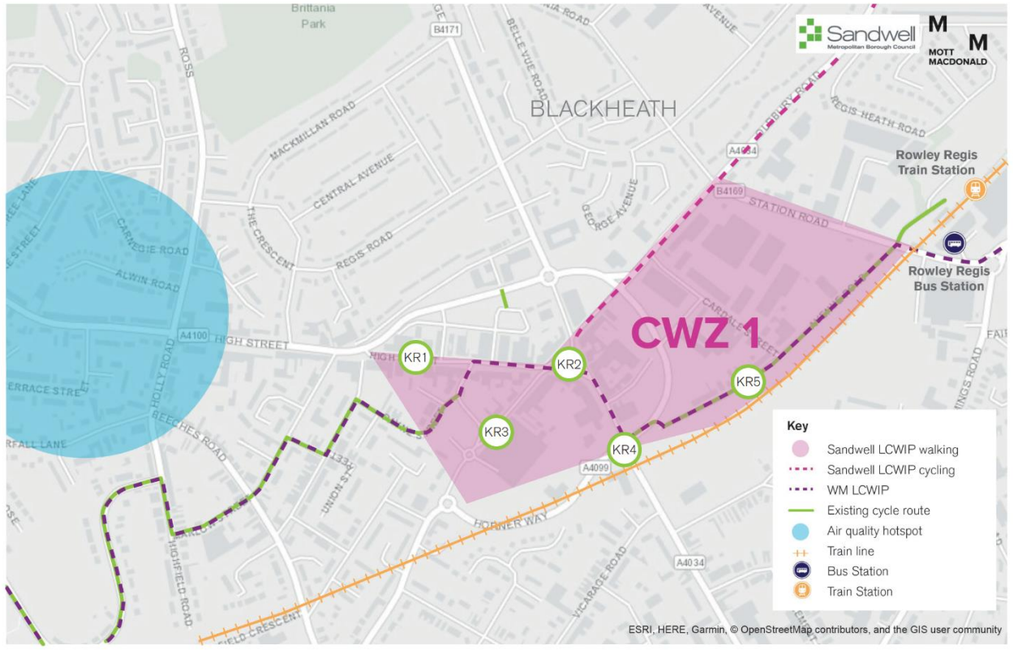
Criteria are scored either 0 or red (poor), 1 or amber (adequate but would be improved if possible) to 2 or green (good). LCWIP guidance recommends that a score of 70% is typically the minimum acceptable level of provision. Routes which score less than this should be used to identify where improvements can be made. The following pages outline the findings of the WRAT and recommendations made to improve WRAT scores.

4.3 Designing for walking

As for cycling (see section 3.3), the needs of pedestrians have been treated as the highest priority within the identification of interventions to support walking, as per the user hierarchies identified in Manual for Streets. In some locations, an area-wide regeneration scheme could be considered which, again, would add weight to the importance of pedestrians' needs.

Core Walking Zone: 1

Blackheath town centre to Rowley Regis railway station



SWOT Analysis:

Strengths:	Weaknesses:
• Some areas offer a lot of space which can be used for pedestrian enhancements • Area is already well used by pedestrians (especially peak hour along route to and from station) • There are clear desire lines created by pedestrians • The local highway network can provide alternative routes, limiting private vehicles using 'inner ring-way roads'	• Conditions and maintenance (tripping hazards, uneven surfacing, vegetation in some areas) • Pedestrian infrastructure not in line with desire lines with physical barriers in the way • Allocation of space not conducive for comfortable pedestrian use • Congestion leading to poor air quality • Lack of visibility in places causing potential road safety concerns • Lacks a community / meeting point • Lack of way-finding • Some streets have negative feel i.e. Avenue Road
Opportunities:	**Threats:**
• With further research and street observations, major schemes could really impact the walkability of the area. • Majority of interventions are quick to deliver with low costs • This zone also incorporates cycle route 4 – opportunities to align walking and cycling • There are further future opportunities for a wider regeneration led scheme	• Some interventions may be controversial • Bus companies may not agree to changes • There may be some disruption to the ability to travel if major works take place. Local businesses may suffer due to this.

- *WRAT - Walking Route Assessment Tool

Whole Zone:

Comfort:
The conditions of the pathways in the whole CWZ differed greatly, with the majority of streets assessed scoring higher. There were issues identified such as tripping hazards, uneven paving and some paths being very narrow in areas. Station Road and Park Street West scored the lowest for comfort due to the general poor condition of the footways and narrow width for the whole stretch of road. Some of the main signalised crossing points had low levels of scoring due to widths, waiting times and crossing times which were not comfortable for pedestrians.

Attractiveness:
In general, the area scored well for attractiveness in the *WRAT assessment. One element of attractiveness which lowered scores for the zone was traffic noise and pollution; only three roads in the whole zone were not impacted by this.

There were some areas which scored lower due to cars parked on footways, heavy motor vehicle usage and uninviting atmospheres. Station Road scored the lowest on attractiveness due to the combination of the high motor vehicle use, large amounts of vehicle parking on footways, low maintenance and potential of conflict with vehicles due to lack of visibility and a lot of business entrances. There was only one road which evoked fear of crime which was Avenue Road due to barbed wire on business fencing and broken glass on the street, potentially from car windows. This road was also very shaded, due to vegetation along the railway line embankment.

Directness:
The WRAT scoring varied considerably for directness, with local streets tending to score higher than connectors, high street and arterial roads. Where roads scored low, it was mostly due to the locations of crossing points and high traffic flow rendering it difficult to cross roads and follow desire lines. The two roads which scored the lowest were Station Road and Oldbury Road, due to the high levels of motor vehicle movement and crossing facilities being inadequate.

Safety:
As with the directness scoring, safety scores varied with the lowest scores being given for traffic volume and speed. Market Place Roundabout and Station Road scored the lowest in terms of traffic volume and Archer Way was given the lowest rating for traffic speeds. Visibility in general was good however, High Street and Halesowen Street did score slightly lower in this category. This was due to the number of moving and stationary vehicles on the roads causing blind spots for both pedestrians and motor vehicles and so increasing safety risks while crossing. The roads which scored the lowest in terms of safety were Oldbury Road, Station Road, Market Place Roundabout, Halesowen Street and Archer Way. These roads are likely to have large amounts of footfall.

Coherence:
On average, coherence scored poorly within CWZ1. This is in relation to aspects such as dropped kerbs and tactile paving. Throughout the study area, there were many places where there was insufficient tactile paving, or dropped kerbs were not aligned to desire lines. Dropped kerbs were more common, however these were not necessarily in line with where people were crossing or were not at the most direct crossing point, for example, on Bassano Road, Market Place Roundabout and Halesowen Street. Due to lack of coherence and physical constraints (guard railing), pedestrians were crossing sporadically to try and reach their destination, adding risk to their safety.

Key Recommendations:

1. High Street
- There is lots of uneven paving, overspill of shops and local businesses creating clutter, tripping hazards and narrowing space for pedestrians.
- An initial intervention would be to reallocate carriageway to pavement and remove parking on one side of street as there is a lot of off-street parking available. The existing pavement areas should be resurfaced. Dropped kerbs and tactile paving need to be implemented and wayfinding, include signage to the station.
- A longer-term future intervention would be to develop a wider town-centre community led street design to develop a holistic view of how the public space is used.

2. Market Place Roundabout
- There are currently a lot of barriers to pedestrian desire lines and pedestrians ignore existing guard railing and walk into the roads.
- An early intervention would be to remove guard railing, officialise crossing points, reduce vehicular speed limits to 20mph and include wayfinding signage to the station.
- A longer term intervention would be to initiate a town team similar to Wednesbury to investigate public realm improvements along side pedestrian, public transport and cycle improvements.

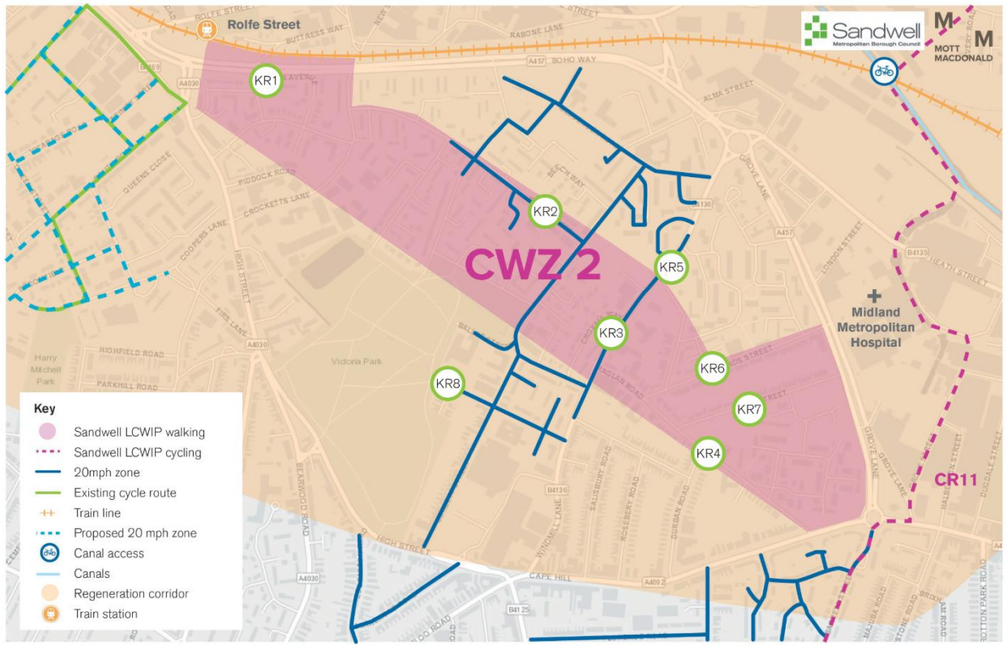
3. Halesowen Street
- This area does not currently adhere to pedestrian desire lines. It is congested as traffic uses it as a short cut to the supermarket and it is a bus route. Current signalised crossings leave pedestrians waiting and small amount of time to cross the road.
- Interventions are to create a 3-way zebra instead of existing signalised crossings (Marylebone High Street) and build out the bus stops. This will deter private motors using as a cut through.
- This area could form part of the town centre regeneration or be a smaller Phase 1 intervention that could be a catalyst for a wider regeneration scheme.

4. Long Lane and Archers Way Junction
- This junction is currently a wide crossing which does not offer much pedestrian crossing time.
- An early intervention would be to lengthen the crossing time at the signals and reduce waiting time.
- A longer term solution would be regeneration led scheme as there are large opportunities for public realm.

5. Avenue Road
- This road currently has a lot of tripping hazards, negative feel (enclosed), and implication of safety issues – barbed wire, broken glass from vehicles etc.
- An early intervention would be to make this road an official quietway, with a 20mph speed limit, resurfacing the pathway, removing trip hazards caused by drainage, working with businesses to improve the safety of the area and increase levels of lighting and signage to the station.
- A longer term solution would be to align with Long Lane and Archers Way junction creating a regeneration led scheme as this road has huge scope to be an attractive residential location for commuters to Birmingham due to it's prime location close to the station.

Core Walking Zone: 2

Smethwick Rolfe Street to Midland Metropolitan Hospital (MMH) through Windmill Eye



SWOT Analysis:

Strengths:	Weaknesses:
• Residential streets offer slower speeds of traffic and easier crossing for pedestrians making any improvements low cost. • There is one main walking route through the residential area and so all other residential streets have minor, low cost improvements to be made	• There are some major arterial roads which create permeability issues • The area has a mix of older housing and new builds. As such there are areas where footpaths are narrow, and lack of driveways mean cars are parked on pavements. • There are signs implying that anti-social behaviour occurs in the area • Some parts of the residential area have litter issues • The area does have some quite significant gradients
Opportunities:	**Threats:**
• There is a clear route from Smethwick Rolfe Street to MMH • There is an opportunity to potentially align with Cycle Route 11	• Due to the residential nature of the area, streets may not be maintained for example, littering, dog fouling, broken glass etc.

Whole Zone:

Comfort:
Many of the local roads scored poorly for comfort in the WRAT assessment, this was mainly due to the footway widths and footway parking. Parking on the footway, further constrained footway widths forces pedestrians onto the carriageway. Some of the local roads also had significant gradients which impacted on their score. The busier arterial roads scored better in terms of comfort as the footway widths were greater and there were fewer house frontages and, when there were, there were dedicated parking areas or on road parking was available which stopped footway parking. The only main arterial road which did not score well was the A457 where the pedestrian facilities were minimal and non-existent in parts.

Attractiveness:
Overall the area scored well for attractiveness. Local roads lost points for maintenance in areas but general fear of crime and traffic noise and pollution were scoring relatively highly throughout. Main arterial and busy connectors scored lower in attractiveness due mainly to traffic noise and pollution.
The residential area had a lot of pedestrian links with car parking areas set away from the residences. These links suffered from poor maintenance and low levels of lighting and in some areas signs of anti-social behaviour occurring (signage, broken glass and remnants of alcohol being drunk in the street). This therefore meant that these footways, although segregated and wide, did have low scores for attractiveness.

Directness:
Due to the residential nature of the area, streets generally had low volumes of traffic and low vehicular speeds. This meant for the majority of residential streets, it is unnecessary to have signalised crossings as streets are naturally permeable with pedestrians able to cross at their desired point with no need to wait on traffic. Where residential areas did lose marks were where there was a lack of dropped kerbs and tactile paving. It was also observed that links from the residential area to trip generator, for example Pool Road and Tiverton Road, had very little infrastructure to help pedestrians cross to Victoria Park. There were no dropped kerbs or tactile paving, making it very difficult for those who have mobility impairments or people with pushchairs.

Safety:
As with attractiveness and directness, the majority of the area scored high for safety, except the main arterial and busier roads. This is generally due to the nature of the area being mostly residential and local roads. Some small residential roads did score low, mostly due to the positions of the crossing points and the close proximity to the main busier roads. The connecting streets had a mid-range score, mostly due to the larger amounts of traffic and speeds of vehicles moving along them. All of the arterial routes had low scores on safety, all of which were due to speed and volume of traffic. This coupled with the lack of crossing points heightens risks to pedestrians.

Coherence:
On average, coherence scored poorly within CWZ2. This is in relation to the lack of dropped kerbs, tactile paving and wayfinding throughout the study area. There were many places where there was insufficient tactile paving and dropped kerbs, these tended to be in the older part of the residential area. Areas which have been built more recently have a much better score for coherence. For example, Windmill Precinct had a lot more tactile paving, dropped kerbs and raised tables in comparison to Woodlands Street which barely had any. As this zone is so residential, it can be difficult to find a route to a specific destination. Way-finding would benefit the area greatly.

Key Recommendations:

1. Smethwick Rolfe Street – Residential area and the A457
- Currently there is an unsafe crossing point to Lynton Avenue with no dropped kerbs/tactile/crossing infrastructure and the footway ends at Cross Street. Recommend extending footway to junction with Crocketts Lane/New St/A457 on the north side and including pedestrian phasing on traffic lights.
- Investigate an alternative junction option for this as there was evidence of accidents happening (bent guard railing, memorial flowers).
- Recommend formalising the crossing point to Lynton Avenue from north side of footway on A457, ensuring Lynton Avenue is 20mph and an increase in wayfinding out of Smethick Rolfe Street Railway Station.
- Recommend narrowing the carriageway and decrease speed limits along A457 to 30mph.

2. Price Street and Windmill Precinct
- Increase wayfinding. Implement parking enforcement on Price Street (all houses have driveways) and mirror Windmill Precinct infrastructure. Make both Price Street and Windmill Precinct a 20mph speed limit.

3. B4136/Windmill Lane
- This school zone is 20mph in sections and has good crossing facilities near to the school. Recommend to extent the 20mph for the whole length of road. Ensure crossing points and wayfinding at Poplar Street and Raglan Road as these will provide accesses to MMH.

4. Raglan Road
- This route isn't the most direct route to MMH, however could still act as a link.
- Increase wayfinding measures – see Windmill Lane recommendation.
- Footway parking reduces footway width significantly, therefore recommend introducing parking controls to reduce this.

5. Poplar Street
- Recommend increasing wayfinding – see Windmill Lane recommendation and Reglan Road. Same measures apply

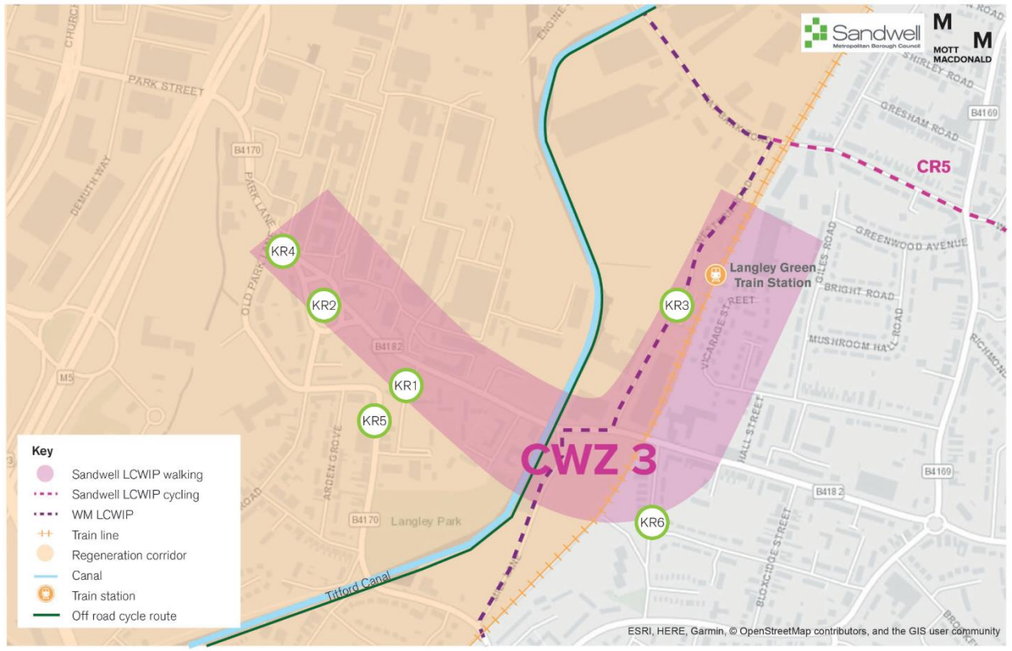
6. Woodlands Street
- This route isn't the most direct route to MMH, however could still act as a link.
- Footway parking reduces footway width significantly, therefore recommend introducing parking controls to reduce this.
- Dopped kerbs and tactile paving needed at entrance with St Matthew's Road.
- Ensure Speed limit is 20mph.

7. Unett Street
- This route isn't the most direct route to MMH, however could still act as a link.
- Footway parking reduces footway width significantly, therefore recommend introducing parking controls to reduce this.
- Sufficient wayfinding will also be required and consistent dropped kerbs and tactile paving.

8. Access to Victoria Park
- Dropped kerbs, tactile paving and limited on road parking at the entrances (on both sides of the road) to help create visibility.

Core Walking Zone: 3

High Street to Langley Green Railway Station



SWOT Analysis:

Strengths:	Weaknesses:
• Direct route between Langley Green High Street and Langley Green Railway Station • Area is well used by pedestrians especially peak hour along route to and from station. • There are clear desire lines created by pedestrians	• Conditions and maintenance (tripping hazards, uneven surfacing, vegetation in some areas) • Pedestrian infrastructure not in line with desire lines • Congestion, leading to poor air quality • Lack of visibility in places causing potential road safety concerns • Lacks a community / meeting point • Some streets have negative feel i.e. Western Road • Lack of wayfinding and signage throughout
Opportunities:	**Threats:**
• The redevelopment of the brownfield site will improve the area and need for improvement • Majority of interventions are quick to deliver with low costs • There are further future opportunities for a wider regeneration led scheme with the roundabout and footways along Western Road outside of station	• Some interventions may be controversial • Bus companies may not agree to changes • There may be some disruption to the ability to travel if works take place.

Whole Zone:

Comfort:
The footway conditions of the CWZ differed with them generally scoring well but none of the footways being at an excellent standard and therefore there is room for improvement. The issues were generally with the conditions of the footways in terms of maintenance, the footway widths with street clutter such as wheelie bins and then sporadic footway parking which was severely impacting available footway width where it did occur meaning difficulty for wheelchair users and parents with pushchairs with space and visibility.

Attractiveness:
The area scored low regarding the attractiveness as much of the roads within the area were connector roads as the area is a boundary between an industrial area and a residential area and this means the area is not the most pleasant walking zone with barbed wire along brick walls and metal fences around the industrial sites. The traffic noise pollution impacted the area significantly also with only two of the nine sections of roads not being impacted by traffic noise pollution.
There is a lack of greenery within the CWZ which also impacts the attractiveness. There is also a large brownfield site opposite Western Road which had construction vehicles using the site at the time which indicates there is development but has been an unused, unkept site for a while. Also due to the area being predominantly industrial and the brownfield site there is a lack of surveillance which can take away from the attractiveness for pedestrians.

Directness:
The WRAT scoring for the area indicates the routes are quite direct with lots of high scores due to the straightforward journeys to the desired locations. There is a problem with the lack of crossings to and from bus stops in the area where there are not crossings near to the bus stops until significantly further down the road and therefore people crossing the arterial roads without crossings.

Safety:
The safety for pedestrians has potential improvements across the zone as there is not much traffic, but this means vehicles are travelling quicker along the arterial roads than usual. The crossing of B4182 Station Road by Western Road has severe visibility issues with it being on a corner and near to the canal bridge where vehicles travel quickly and there being no form of crossing to aid pedestrians. It is worth noting the area will be significantly busier at peak times with the railway station being nearby as well as schools. It is a popular route bypassing main roads as well as the heavy goods vehicles using the industrial sites.

Coherence:
The coherence scored poorly across the routes in the zone with there only being tactile paving and dropped kerbs on one junction in the area. There were a few dropped kerbs which were not following desire lines of pedestrians and therefore a lot of improvement is needed especially along B4182 Station Road and around the B4182 Station Road/Titford Road/Park Lane roundabout to follow desired crossing points.

Key Recommendations:

1. Whyley Walk and Station Road
- These roads requires clear signage to aid pedestrian wayfinding towards Langley Green High Street from Langley Green Railway Station.

2. B4182 Station Road/Titford Road/Park Lane Roundabout
- This junction is currently a confusing layout for pedestrians with no crossings to the inner paths of the roundabout.
- Recommend to add crossings to the roundabout with sufficient dropped kerbs and tactile pathing.
- A longer term improvement would be to completely redesigning the roundabout space with a public realm environment.

3. Western Road
- There is currently a footway on the station entrance side only which suffers from cars parking on it and obscuring space.
- Recommend that the double yellow lines should be extended along the road to stop the cars parking on the footway and a new footway can be delivered as part of redevelopment of Langley Maltings.

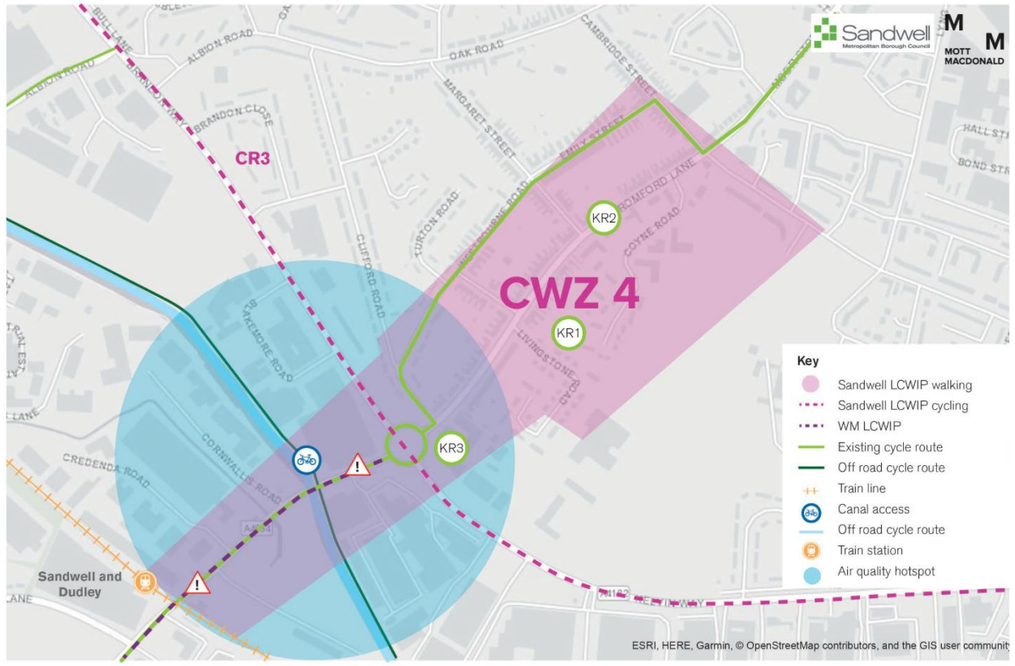
4. Park Lane junction
- The roundabout currently offers triangular pieces of land which could act as pedestrian refuge on two of the junction arms, one of which suffers from constant car parking which restricts visibility and access.
- Recommend to enforce parking restrictions to deter footway parking.

5. High Street
- Currently there is consistent footway parking restricting pedestrian routes to car parks and parks.
- Recommend to engage with the local community and review traffic management with a view to restrict through traffic on High Street.

6. Thompson Road Station Access
- This is currently the only step-free access to platform two.
- Improvements along this road should be made to help pedestrians access platform two, including lighting, vegetation maintenance and wayfinding.

Core Walking Zone: 4

Sandwell and Dudley Railway Station to Bromford Lane Residential Estate



SWOT Analysis:

Strengths:	Weaknesses:
• Directness of all footpaths are very good	• Narrow terraced roads with no driveways – there is a severe lack of space on some roads.
Opportunities:	**Threats:**
• Opportunities to align with Cycle Route 3	• Residential opposition, business opposition

Whole Zone:

Comfort:
This CWZ generally scored medium to high across the whole audit. The majority of points were lost due to footway widths, footway parking and crossings. These occurred mostly on the north west side of Bromford Road, with the exception of Wetsbourne Road and the corner of Lyttleton Street on the east side of Bromford Road.

Attractiveness:
This CWZ generally scored well for attractiveness. The most consistent issue was maintenance, traffic noise and pollution. The maintenance occurred on the majority of residential streets where damage was cause by cars parked on the footway.
A lot of the residential streets were terraced houses with no driveways causing residents to park on the footway. A lot of the roads were impacted by traffic noise and pollution from Bromford Lane.

Directness:
The WRAT scoring was exceptionally high for directness with only Bromford Lane scoring slightly less. The directness of footway provision was good, gaps in traffic was generally fine and there were no signalised pedestrian crossing due to the nature of the residential area. The main cause for point loss was locations of crossings and occasionally (Bromford Road) gaps in traffic to allow for crossing.

Safety:
The CWZ scored relatively low on safety with only Coyne Road, Clifford Road and Livingstone Road scoring high. The main concerns were visibility due to parked cars, and traffic speed levels. Traffic volumes on Bromford Road, Cambridge Street and the Kelvin way / Bromford Road Roundabout were also a concern.

Coherence:
On average, coherence scored poorly within CWZ4. This is in relation to aspects such as dropped kerbs and tactile paving. Throughout the study area, there were many places where there was insufficient tactile paving, or dropped kerbs with no tactile paving. Livingstone Road however offered a good example within the CWZ of a pedestrian link between two areas.

Key Recommendations:

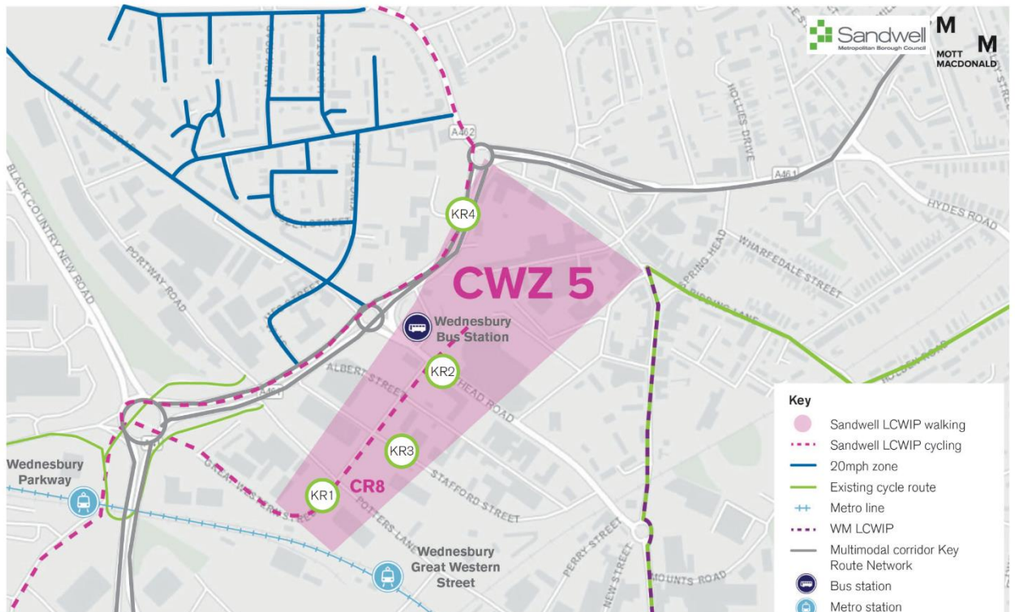
1. Area Wide
- Throughout the whole CWZ invest in an area wide parking management scheme, ensure dropped kerbs and tactile paving on all crossing points and make the whole area a 20mph zone
- Potentially could look at the whole area for a regeneration project. Need both walking and cycling improvements along this corridor to encourage alternatives to private car as is a part of an air quality hotspot.
- The proposed expansion to the railway station car park could should be used an opportunity to improve pedestrian and cycle infrastructure.

2. Bromford Lane
- Minimise carriageway to 6.5m and reallocate the space to extending footways. Wayfinding will also be required.
- Dropped kerbs and tactile paving will be needed at all side road junctions.
- Tighten junction radii into the station car park to allow for a more direct crossing through minimising carriageway widths.

3. Bromford Lane/ Kelvin Way roundabout
- Multimodal junction design required which must also compliment Cycle Route 3.

Core Walking Zone: 5

Wednesbury Great Western Street to Town Centre



SWOT Analysis:

Strengths:	Weaknesses:
• This route is an easy and quick walk • Already a lot of good infrastructure in place • Parts of the CWZ have high footfall already	• Parts of the CWZ suffers from poor surveillance • Limited lighting in some areas
Opportunities:	**Threats:**
• Potential future investment in transport infrastructure in the area • Future housing allocation • Opportunity to align with Cycle Route 8	• Businesses in the area may not be keen on some of the recommendations

Whole Zone:

Comfort:
The CWZ generally scored well for comfort due to the majority of the area having no footway parking, level gradients and general street conditions being mostly pleasant. Areas which did not score so well for comfort (but still had a reasonable score) were the Shambles Car Park due to there being no official footpaths through and a slight gradient and Potters Lane due to pavement parking and narrow footpaths and crossing points.

Attractiveness:
As with comfort, the CWZ scored well for attractiveness with the lowest score being for the Shambles Car Park. Areas which lost points were mainly due to traffic noise and pollution and were mostly on roads which were closest to or were main roads in the area. Some areas of the CWZ are already pedestrianised and offered full scores for attractiveness. These were O'Connells Walk and Union Street.

Directness:
The whole CWZ was very high scoring, except for two roads: Dudley Road and Holyhead Road. These two roads scored very low due to no gaps in traffic creating difficulty for crossing and where signalised crossings are available there was very long waiting period and a very short green man time.

Safety:
The scoring for safety was varied across the CWZ between mid-range scoring and high scoring. There were no roads which had oppressively low scoring. The roads with the lower scores lost points due to traffic volumes and speeds with only the Shambles Car Park and Upper High Street scoring low for visibility. This is due to parked cars creating blind spots.

Coherence:
On average, coherence scored poorly within CWZ2. This is in relation to the lack of dropped kerbs, tactile paving and way-finding throughout. Throughout the study area, there were many places where there was insufficient tactile paving and dropped kerbs.

Key Recommendations:

1. Great Western Street and Victoria Street
- This is a key route from station to town centre. On eastern side the footway is of sufficient width, however on west side of footway is less wide.
- Carriageway widths are generous with hatching in middle of carriageway showing scope to widen footway, particularly at junction with Potters Lane.
- Remove parking from northwest side of carriageway to allow the footway to be built out.
- Need to increase way-finding to and from the station, but additional may be needed at junction with Potters Lane.
- These streets have the potential to be a part of a wider long-term masterplan.

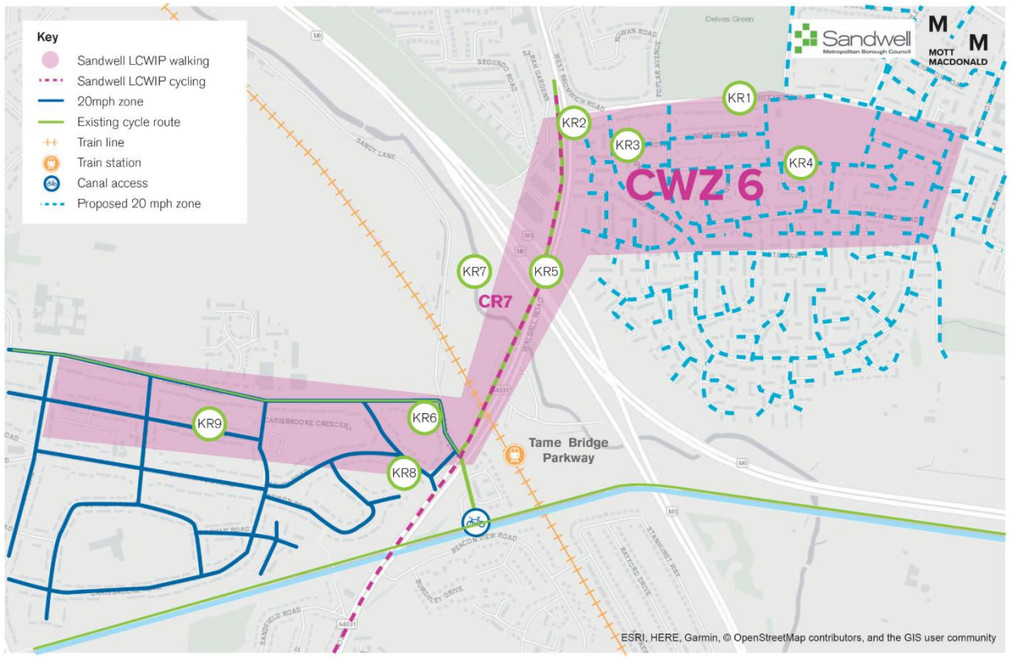
2. Hollyhead Road
- This is a key access road to bus and coach station.
- Recommend to remove guard railing and street furniture which currently reduce footway widths.
- Re-sequence traffic lights to allow for shorter waiting times and longer green man time.
- Create a direct crossing point from Victoria Street to the town centre.

3. Potters Street, Albert Street and Stafford Street
- This area is very industrial with a lack of active frontage and therefore could make pedestrians feel unsafe walking through the area. Footway parking also significantly narrow.
- Recommendations are to narrow the carriageway, formalising parking and improve lighting on both sides of carriageway.
- Possibility for a long-term masterplan to develop housing in the area between the tram station and the town centre.

4. Dudley Road
- This road is a busy dual carriageway route, ideally pedestrians would be directed to avoid Dudley Road as there are high traffic volumes, and instead go through the pedestrianised town centre.
- Pedestrian environment is adequate on Dudley Road as there is sufficient footway widths and crossing points.
- Recommend allowing shorter waiting times at the signalised crossing and longer green man time.

Core Walking Zone: 6

Friar Park and Yew Tree to Tame Bridge Parkway Railway Station



SWOT Analysis:

Strengths:	Weaknesses:
• Already a 20mph zone and proposed 20mph zone • Connects two residential areas to public transport infrastructure • A lot of residential areas and by the nature of this offers a lot of quieter routes and slow moving traffic so costs may be lower in these areas	• Huge main road severance issues • Motorway bridge offering little scope for improvements • There are a lot of 'hidden' areas in the residential areas which encourages anti-social behaviour • Some areas couldn't be assessed as were under construction
Opportunities:	**Threats:**
• Future housing allocation – potential funding? • Desire lines easily spotted to allow for some 'quick win' improvements on the pedestrian network • Opportunities to align with Cycle Route 7	• Bus companies may not agree with potential solutions.

Whole Zone:

Comfort:
The CWZ generally scored well for comfort due to the majority of the area having wide footways residential area. There were very little steep gradients in the area and general conditions were quite good. Areas which did not score so well for comfort (but still had a reasonable score) lost marks due to footway parking and narrowness of footway widths, which happened in both residential areas. On the main arterial road, Walsall Road, there was also very narrow crossing points which lowered the score for comfort.

Attractiveness:
The CWZ generally scored quite well for attractiveness due mostly to the majority of streets being in residential areas which were well maintained, low noise levels and low levels of pollution. There were however some areas which evoked fear of crime and antisocial behaviour. This included grafitti (Bourton Close), vandalism and CCTV in place implying a history of crime (Bassett Road) and loitering youths which residents called 'druggies' on the day of the audit (Oak Court). There were also some maintenance issues including overgrown vegetation, and dog faeces. The main arterial road did score lower on volume of traffic, noise and air pollution.

Directness:
The majority of the CWZ scored quite high with regards to directness. This was due to many of the roads being in residential areas and so typically low levels of traffic and low speeds. The low levels of traffic at low speeds mean signalled crossing points are unnecessary, as streets are naturally permeable with no crossings needed, or pelican and zebra crossings being sufficient.

However, the main arterial road, Walsall Road, scored fairly low for not providing safe crossing points where desire lines fell and where there was a signalised pedestrian crossing, there was a long wait before a short green man time. The crossing was also staggered meaning it took a long time to cross the busy road.

Other roads lost points due to lack of crossing facilities and high volumes of traffic, making it difficult for pedestrians to cross, for example Friar Park Road, Sandy Lane and Walsall Road.

Safety:
The main arterial Walsall Road scored poorly for safety due to the large volumes and speeds of traffic. The majority of the rest of the CWZ performed highly on safety. Occasionally marks were taken where poor lighting and a lack of natural surveillance was evidently causing an issue, see the examples given under 'Attractiveness'. Marks were also taken occasionally where there was lack of visibility, mainly due to sharp corners or excessive on street car parking.

Coherence:
The whole CWZ scored poorly on coherence. There were a lot of dropped kerbs, however there was very limited tactile paving. There was no signage to the rail station or areas of interest. There were no dropped kerbs to help pedestrians cross the Greenside Way to the northern bus stop by Delves Green which is replicated along Friar Park Road. Desire lines were found from Ladbury Road to Woodruff Way, clearly for residents to get to Walsall Road. These went through vegetation which could easily be cleared to form an official path. Walsall Road did not offer crossing points at desire lines which made exiting Greenside Way very difficult. Greenside Way, along with Friar Park Road are not permeable creating severance issues for future housing growth on each side of the road.

Key Recommendations:

1. Greenside Way
- Verge parking is inconsistently managed: bollards in some locations and tolerated in others.
- Recommend a comprehensive/consist management plan to parking. Parking should be tolerated if it doesn't encroach into the pedestrian comfort space.
- Also need crossing facilities for pedestrians and cyclists closer to Woodruff Road

2. Junction of Greenside Way and Walsall Road
- This junction is currently very difficult for both pedestrians and cyclists due to it's size and design.
- Whole junction multi-modal reconfiguration should be adopted. The junction design needs to include pedestrian and cycle crossing facilities

3. Ladbury Road – Woodruff Road - Poppy Drive – Walsall Road
- There are clear desire lines between Ladbury Road and Woodruff Road.
- Recommend to clear vegetation to make an official path across the grassed area between Ladbury Road and Woodruff Road.
- Have a raised table crossing on Woodruff Road and have speeds limits set to 20mph. Ensure there is clear signage through to Walsall Road.

4. North Residential Area
- This area currently has inconsistent dropped kerb and tactile paving. There are several areas where vegetation obscures vision and reduces pedestrian comfort. On several residential road, vehicles are blocking footways restricting space and there are several areas which suffer from lack of lighting.
- Need to ensure there are consistent dropped kerbs, tactile paving and general vegetation maintenance. There should also be heightened security in darker areas such as improved lighting.
- On road parking enforcement and signage to the railway station.

5. Walsall Road
- Recommend to tighten the junction radii and narrow carriageway to 1 lane in each direction, dependent on vehicular counts.
- Speed limits should be reduced to 30mph.
- Improve crossing by Nisa Local by widening path and dropping kerbs and giving tactile.
- Improve the existing signalised crossing by making it a direct crossing with a longer green man phase and a shorter waiting time, replicate this on the crossing at Sandy Lane
  – will need to make sure this works with the junction to Roberts Road.

6. Friar Park Road
- Reduce road widths to 6.5m by removing the hatching, building out the pavements. Include speed reduction techniques such as further build out of pavements to create give ways and priorities. Re-allocate all extra road space to pedestrians and cyclists by creating segregated facilities on each side of the road. Create dropped kerbs and tactile paving for all minor road crossing points and also along the road where built out pavements will be.
-

7. Sandy Lane
- Narrow the road width and make a pathway to the east of the road. Make Sandy Lane a priority instead of Friar Park Road to help reduce speeds. Tighten junction radii.

8. Roberts Road
- Tighten junction radii with Asbury Road. Provide dropped kerbs and tactile paving

9. Southern Residential Area
- Ensure there are dropped kerbs, tactile paving, improved security, such as lighting .
- On road parking enforcement would be beneficial.
- Improve way-finding throughout to the rail station

4.4 Costings

The core walking zones consist of numerous different infrastructure recommendations as well as recommended regeneration or public realm led schemes. These elements cannot be costed as further feasibility and design needs to be implemented. As such, the core walking zones have been costed by SMBC's Highway Team on the following infrastructure across all six of the core walking zones and does not include contingency:

- Dropped kerbs: Two bullnosed kerbs and two dropper kerbs, includes adjustments to the pathway
- Tactile paving: Two rows of eight slabs, bullnosed kerbs and dropper kerbs, includes adjustments to the pathway
- Signage: Non illuminated signs
- Resurfacing: Based on distance of requirement assuming a two-metre-wide footway with a 25mm overlay
- Parking controls: Based on distance of requirement, traffic regulation orders (TROs), lining and signage
- Zebra crossings: Two columns with beacons, tactile crossings
- Pedestrian crossing alterations: Contractor costs, including change of control
- 20mph zones: Based on distance of requirement, TRO, lining and signage
- Lighting: Based on number of lights required and 6m column with LED lantern for each
- Removal of guard railing: including reinstatement / traffic management
- Introduction of bollards: Based on distance of requirement with bollards at two metre intervals
- Vegetation clearance: Based on distance of requirement assuming two metre wide vegetation clearance - shrubs, no excavation

As with the cycle route costings it must be noted that the final indicative costs may change subject to detailed design and site investigations and exclude engineer design fees and commuted sums. Additional costs may be incurred for complicated service diversions and ground works for each route which are yet unknown.

The indicative costs for each core walking zone are showed in Table 4.2.

Table 4.2 Core Walking Zone indicative costs

Core Walking Zone Number	Description	Indicative Cost
1	Black Heath town centre to Rowley Regis Railway Station	£415,500
2	Smethwick Rolfe Street Station to Midland Metropolitan Hospital via Windmill Eye	£690,200
3	High Street to Langley Green Railway Station	£299,200
4	Sandwell and Dudley Railway Station to Bromford Lane Residential Estate	£202,600
5	Wednesbury Great Western Street to Town Centre	£101,100
6	Friar Park and Yew Tree to Tame Bridge Parkway Railway Station	£1,054,400
Total		**£2,763,000**

Source: SMBC

As is usual with pedestrian improvements, it is unlikely that all infrastructure will be implemented at the same time. The cost of the walking improvements will be spread over the period in which they are implemented.

5 Prioritising Improvements

5.1 Development of the prioritisation matrix

Once infrastructure recommendations were presented to SMBC, it was decided that the CWZs would not be officially prioritised as the infrastructure will be implemented as they integrate into other interventions such as the public realm schemes.

In line with the LCWIP guidance, several categories of prioritisation variables have been used. The approach taken to prioritising the cycle routes incorporates SMBC's 2030 Vision Ambition identified policy criteria:

- Ambition 2: Healthier for Longer
- Ambition 6: Excellent public transport to the region and beyond
- Ambition 7: Major new housing along transport routes and employment sites
- Ambition 8: Create environments in the six towns where people choose to live as well as incorporating criteria from the LCWIP guidance as demonstrated below

A draft matrix was prepared by the MM project team, which was then reviewed, in a workshop format with the client's project team and relevant stakeholders. The matrix was adapted by SMBC to create a simplified version that each route was scored against.

Each of the cycle routes were assessed against the following criteria:

- If the route passes through an air quality hot spot
- Direct links to the canal network, green spaces and area of interest
- Direct links to public transport hubs
- Near large trip attractors
- Links to strategic transport improvement corridors (such as the A4123, Sprint and Metro extension projects)
- Links to West Midlands LCWIP
- Potential for modal shift
- Direct links to secondary schools
- Links to 20mph zones
- If the route passes through the regeneration corridor
- If the route supports areas of low car ownership (any areas above 26% of the population not owning)
- If the route passes through areas of high deprivation (based on Census 2011 data)
- If the routes are close to congestion hotspots in Sandwell
- If the recommendations address any severance issues such as railways, tunnels etc
- If the route passes though high work place population density areas (from Census 2011)
- If the route has any direct links to allocated development site (SLP)
- If the route is a part of a strategic transport scheme
- If the route is within an accident hotspot based on LTP scheme analysis from casualties 2013-2017

The deliverability of a scheme e.g. factors such as operational impacts on parking, and the cost of the scheme (based on the average cost of the Mott MacDonald low cost and the SMBC Highways Team high cost estimates). The outputs list the different routes and schemes in order of priority with funding streams likely to be a determining factor in delivery.

The prioritised list is shown below in Table 5.1.

Table 5.1 Prioritised list of cycle routes

Route	Name	Score*	Priority
9	Tividale to Dudley Port via Sheepwash Nature Reserve	19	1
4	Oldbury to Blackheath Town Centre	18	2
8	Tipton to Wednesbury Town Centre via Metro	18	3
1	Birmingham Canal – West Bromwich via Spon Lane	17	4
3	Spon Lane to Black Lake (Metro stop) Along Kelvin Way & Great Bridge	17	5
6	Oldbury to Galton Bridge Station	17	6
12	Walsall canal to Birmingham canal through Tipton via Alexander High School	17	7
14	Toll End to Hill Top, via Harvills Hawthorn	17	8
2	NCN Route 5 Improvements, linking to WMLCWIP route	15	9
5	Oldbury to Bearwood with links to WMLCWIP Route	15	10
11	Cape Hill to Black Patch via Midland Metropolitan Hospital	15	11
13	Old Hill Railway Station to Bumble Hole Nature Reserve via Dudley Canal	15	12
10	Cradley Heath to boundary with Dudley MBC, via railway station	14	13
7	Stone Cross to Yew Tree via Tame Bridge Parkway Railway Station	13	14
15	Newton Road to A34 via Wilderness Lane	11	15

* Subject to meeting objectives set out in WebTAG and funding available

The full Prioritisation Matrix can be found in Appendix B.

6 Integration and Application

The final stage of the LCWIP process is to integrate the outputs found through the LCWIP process into local planning and transport policies, strategies and deliverable plans. Throughout the LCWIP project dialogue between Mott MacDonald and SMBC has been very clear about SMBC's intention to build on the investments already made in the borough, to continue to invest in high quality infrastructure to support mode shift towards cycling and walking.

6.1 Immediate actions

After approval at Scrutiny Committee in October 2019, and subsequent Cabinet approval, the LCWIP report and outputs will be published on the SMBC website.

6.1.1 Medium term actions

The LCWIP report, along with its other outputs will become an appendix to any future Sandwell Transport Strategy. It will sit in a suite of existing documents including the existing cycling and walking strategies to support the infrastructure elements of these strategies. Behavioural elements of the cycling and walking strategies will remain in those strategies. It is recommended that the infrastructure section of the cycling strategy is updated in line with the LCWIP.

6.1.2 Ongoing process

The prioritised investment plan is intended to be embarked upon as soon as is possible and worked through in order of identified priority. The SCWIP will replace the two-year cycling programme which currently exists with a living programme.

Of the three required outputs from an LCWIP – a report on the process undertaken (this document), a network map and prioritisation matrix (copies attached as appendices), the prioritisation matrix will be the most frequently updated output based on changes to authority priorities, refinement of route and zone costings as SMBC moves through its implementation plan.

6.1.3 Five-year plan

SMBC intends to refresh its LCWIP every five years, and therefore the LCWIP should be reviewed and refreshed in 2024. SMBC already has plans to ensure that additional data sets to support analysis relevant to the LCWIP are captured. The recent update to the Propensity to Cycle tool to include school data should support analysis specific to encouraging cycling to schools. Other data sets to be considered include:

- Ongoing collection of Metro, rail and bus patronage figures
- Ongoing collection of park and ride survey data
- Ongoing collection of cycle parking usage data
- Business rates or commercial GFA data to support local centre analysis
- User data of local facilities such as libraries, community centres and leisure facilities
- Highway traffic counts, particularly in new development areas such as the Sandwell Aquatic Centre being constructed for use in the Commonwealth Games in 2022 and ongoing after the Games.

- Travel plan employee survey data for significant attractors such Midlands Metropolitan Hospital.
- Refresh of mode share and propensity to cycle demand after the 2021 census

7 Stakeholder Engagement

Stakeholders were given the opportunities to partake in the development of the SCWIP through several meetings and presentations. A commitment is needed from SMBC to continue Stakeholder Engagement as the SCWIP develops.

7.1 Initial stakeholder meeting 30 January 2019

An issue and options presentation was made to a range of stakeholder on 30th January 2019 walking through the initial GIS analysis was presented to a range of stakeholders. The presentation can be found at Appendix C. The intention for this meeting was to present the differing ways in which the first cut of prioritisation for cycle route and core walking zone selection could be made.

Discussion included the validity of utilising data from the 2011 census given that it is now eight years old, however, given the paucity of complete comparable data across the authority, this was felt to be the only reliable source of data for now.

An acknowledged action was that for future iterations of the SCWIP, data collection should be considered now in order to plan for its collection throughout the period running up to the SCWIP refresh. Further notes on this can be found in the Integration and Application section of this document.

It was agreed to add in points of interest data to the GIS analysis, and TfWM representatives offered to share their Park and Ride survey data in order to further develop the analysis concerning cycling and walking to rail stations. Hamstead, although not within SMBC's boundary, was requested to be included as it serves Sandwell's population.

7.2 Second stakeholder meeting 28 February 2019

The updated GIS analysis was presented at this meeting and the SMBC Transport Planning discussed the cycle routes and core walking zones selected for prioritisation for auditing based on the information previously provided. This information is contained in the body of this report.

7.3 Stakeholder infrastructure review session

A Stakeholder Infrastructure Review Session was held on 23 May 2019 to all key stakeholder feedback on the infrastructure that is being recommended. Those invited to the session were members of the following organisations:

- SMBC
- TfWM
- Canal and River Trust
- Dudley Council
- Birmingham City Council
- Cycling UK
- Mott MacDonald

Unfortunately, not all organisations were represented at the meeting, however were given the opportunity to feedback comments via email after. Those who did attend the meeting were:

- SMBC
- Canal and River Trust
- Cycling UK
- Mott MacDonald

The meeting consisted of Mott MacDonald presenting on the history of the LCWIP, current statistics for Sandwell and the ambition of SMBC alongside the methodology and LCWIP process (this presentation can be found in Appendix E). As the meeting was limited in time, two of the cycle routes were chosen and explained using Google Earth to show examples of the type of recommendations which were being recommended, as well as one core walking zone. The cycle routes presented were Route 3 and Route 12. These routes were chosen due to their length and the type of infrastructure recommended covering all aspects of the other 13 routes. Core Walking Zone 1 was chosen again, due to the amount of infrastructure recommended and it being replicated in other walking zones.

Feedback during the meeting and resulting actions are shown in Table 7.1

Table 7.1 Meeting feedback and actions required

Feedback	Action
The statistics for the figures surrounding Dudley Port did not look representative. It was thought that this was due to a lot of the population using the station falling outside of the Sandwell boarder.	Mott MacDonald will investigate the reason for the discrepancy.
There was concern about signalising roundabouts on the key arterial routes and how that would impact on vehicular traffic and congestion.	The impact on the vehicular movements will not be known until further detailed route design and traffic modelling is undertaken. However, signalising large roundabout junctions does give advantage for any future transport solutions as it provides data and control over junction movements.
There was a preference to make as much of the cycle routes segregated and to avoid shared use paths where possible.	The routes were reassessed and measured to ensure segregation was implemented in favour of shared use paths.
Some areas of the routes chosen had already had infrastructure improvements implemented.	Mott MacDonald to incorporate these into recommendations, deleting aspects where necessary.
The High Streets and larger aspects of the core walking zones could be implemented as wider regeneration projects.	Mott MacDonald agreed, however further feasibility and study work would need to be undertaken to provide more specific recommendations and as such in the SCWIP, these areas shall be referred to as ‘wider regeneration areas’.
Further details were needed on the core walking zones about the amount of dropped kerbs, tactile paving and signage required to help with a costings exercise.	Mott MacDonald agreed to send a recommended number of dropped kerb, tactile paving and wayfinding improvements for each of the core walking zones.

Following the Infrastructure Review Session, all cycle routes and core walking zone recommendations were sent out to the key stakeholders with the opportunity to provide feedback for nine working days post the meeting (the deadline for feedback being 5 June 2019).

7.4 Stakeholder comments and feedback

Stakeholder comments were anonymised by SMBC before sending to Mott MacDonald. The comments received consisted of:

- Making small changes to the details of the recommendations suggested
- Realigning routes onto the existing paths

- Removing specifications regarding which side of the roads the infrastructure would be
- Changing the wording to avoid any confusion about the infrastructure suggested

As such, where suggested, recommended infrastructure was aligned to the existing routes. This in some cases offered more direct cycling infrastructure which is desirable. The removal of a specification regarding which side of the road the infrastructure would be placed occurred in instances where the implementation could be on either side. By removing this specification, it allows for more flexibility when reaching the detailed design phase of the work.

Comments with regards to the core walking zones were minimal and consisted of clarity in sentences and local knowledge of the areas adding further detail to the recommendations. These were all accommodated in the core walking zone final recommendations.

7.5 Final project presentation

This meeting took place on 16 September 2019 at SMBC's offices. A variety of stakeholders including Canal and River Trust, neighbouring authorities, internal stakeholders within public health, planning and highways, and TfWM. The rationale and methodology used to produce the SCWIP was presented and questions regarding its onward use addressed. Requests to refer to the climate emergency, road user hierarchy and active travel/physical activity/obesity levels/public health were made by stakeholders and these comments have now been integrated into the SCWIP outputs. Clarification around whether the indicative costings include commuted sums were made and this has also been reflected in the report. Planning colleagues requested that the network map is made available electronically on the internal planning system which was agreed to be actioned for full visibility and ease of access to the plans. A copy of this presentation can be found at Appendix F.

7.6 Scrutiny committee

The project will be presented at Scrutiny Committee on 10 October 2019. The final project meeting presentation will be re-presented, incorporating any feedback from the stakeholders at the final project meeting. A copy of this presentation can be found at Appendix G.

7.7 Letters of support

A number of letters of support for the SCWIP have been received by stakeholders including the Canal and River Trust, the Black Country Local Enterprise Partnership and Transport for West Midlands. These can be found at Appendix I.

8 Conclusion

Mott MacDonald was appointed by SMBC to prepare a Local Cycling and Walking Infrastructure Plan (LCWIP) to support mode shift to active modes across the authority. The LCWIP process used was in line with the DfT's six-stage LCWIP process. For Sandwell, this is known as the 'SCWIP' (Sandwell Cycling & Walking Infrastructure Plan).

The LCWIP process is new and it is accepted by DfT that it is not practical to carry out audits of all walking and cycling across an authority and therefore it is necessary to prioritise where to focus auditing effort on the areas with the greatest opportunity to affect mode shift towards active transport modes and that fit with the authority's policy objectives.

The process included:

- A policy and data led analysis
- Alignment to SMBC's policy objectives
  - air quality improvement areas
  - regeneration corridors
  - proximity to secondary schools
  - proximity to transport hubs (mainly Metro and rail rather than bus)
  - current and planned 20mph zones

A map of the selected cycle network and Core Walking Zones (CWZs) can be found in Appendix A.

15 cycle routes and six walking zones were selected for auditing purposes. The DfT's LCWIP RST and WRAT were used to audit the cycle routes and walking zones and recommendations were given to improve their scoring.

On some cycle routes there are opportunities for large scale interventions such as roundabout remodelling to allow for and prioritise cycling, and for walking, some larger scale public realm schemes could be considered.

When costing the SCWIP, major scheme interventions were excluded, with a primary focus being on delivering the essential interventions for both walking and cycling and an indicative cost has been produced for the SCWIP which total £13.2m.

SMBC prioritised the routes based on a simplified matrix produced by Mott MacDonald, to prioritise all 15 of the cycle routes. The walking zones were not prioritised due to their implementation being delivered when the large public realm aspects of the schemes develop.

The LCWIP report and associated outputs (network map and prioritised list of interventions) will be presented at Scrutiny Committee in October 2019 and, subject to approval, published on SMBC's website. The LCWIP will be integrated with other walking and cycling strategies and used on an ongoing basis to shape the cycling and walking implementation plans. The LCWIP will be refreshed in 2024 incorporating new and updated data sources including school data from the Propensity to Cycle tool, 2021 Census data and improved data to support walking interventions.

A high-level Strategic Case has been developed for the SCWIP and can be found in Appendix H.

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A. Sandwell Cycle Route Network and Core Walking Zones

B. Prioritisation matrix for Cycle Routes

C. Issues and Options

D. Enhanced Metro and Rail GIS Analysis

E. Stakeholder Presentation - 23 May 2019

F. Stakeholder Presentation - 16 September 2019

G. Scrutiny Committee Presentation

H. SCWIP Strategic Case

I. Letters of support

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