



Sandwell Council Local Cycling and Walking Infrastructure Plan

Strategic Outline Case

January 2020

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Introduction

Sandwell Metropolitan Borough Council (SMBC) has appointed Mott Macdonald to prepare a Local Walking and Cycling Infrastructure Plan (SCWIP) to support mode shift in favour of active travel across the authority. This document is the Strategic Outline Case to support the development of the SCWIP.

The aim of the SCWIP is to:

- Assist the implementation of the West Midlands Strategic Cycle Network
- Identify the local walking and cycling networks within Sandwell with a prioritised plan for delivery
- Coordinate the plan with existing plans for 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.

The SCWIP is a Sandwell-wide review of the cycle network and walking routes and incorporates 15 cycle routes for development and six core walking zones for improvements. The SCWIP integrates with the West Midlands Local Cycling and Walking Infrastructure Plan (LCWIP), the Cycling SPD and the Sandwell Rights of Way Improvement Plan (ROWIP). The plan presents a long-term approach to developing walking and cycling infrastructure in the borough.

"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 proposed SCWIP scope is shown below in Figure 1:.1

¹ For a larger v ersion, please see Appendix A of the SCWIP Final Report, January 2020

Figure 1: SCWIP area

Source: Mott MacDonald

Scheme description

Table 1: SCWIP Cycle Routes provides a description of each of the cycle routes along with recommended infrastructure elements. For further detail please see the SCWIP Final Report January 2020.

Table 1: SCWIP Cycle Routes

Cycle Route number	Cycle Route description	Infrastructure Recommendations
1	Birmingham Canal – West Bromwich via Spon Lane	 Segregated two-way track for cyclists Implementation of quietways Implementation of 20mph zones and traffic calming measures
2	NCN Route 5 Improvements, linking to WMLCWIP route	 Road priority changes Junction improvements Crossing improvements Segregated two-way track for cyclists Segregated shared use paths Improved signage and wayfinding
3	Spon Lane to Black Lake (Metro stop) Along Kelvin Way & Great Bridge	 Segregated two-way tracks and single way tracks for cyclists Road priority changes Implementation of 20mph zones and traffic calming measures Implementation of quietways Segregated shared use paths Formalising parking Improved signage and wayfinding Improved lighting Vegetation maintenance Place led intervention
4	Oldbury to Blackheath Town Centre	 Junction improvements including early cycle release Crossing improvements Segregated two-way tracks Speed reduction Parking restrictions
5	Oldbury to Bearwood with links to WMLCWIP Route	 Junction improvements including early cycle release Crossing improvements Implementation of quietways and traffic calming measures Segregated two-way tracks Formalising parking
6	Oldbury to Galton Bridge Station	 Junction improvements Crossing improvements Implementation of quietways, speed reductions and traffic calming measures Segregated two-way tracks

Cycle Route number	Cycle Route description	Infrastructure Recommendations
7	Stone Cross to Yew Tree via Tame Bridge Parkway Railway Station	 Junction improvements Crossing improvements Segregated shared use paths Segregated single way tracks Implementation of quietways, speed reductions and traffic calming measures
8	Tipton to Wednesbury Town Centre via Metro	
9	Tividale to Dudley Por via Sheepwash Nature Reserve	
10	Cradley Heath to boundary with Dudley MBC, via railway station	 Junction improvements Crossing improvements Segregated two-way tracks Speed reductions and traffic calming measures Filtered permeability with public transport and walking and cycling through route only Wider public realm scheme

Cycle Route number	Cycle Route description	Infrastructure Recommendations
11	Cape Hill to Black Patch via Midland Metropolitan Hospital	 Junction improvements Crossing improvements Implementation of quietways, speed reductions and traffic calming measures Improved wayfinding Segregated cycle path Resurfacing towpaths Segregated shared use paths
12	Walsall canal to Birmingham canal through Tipton via Alexander High Schoo	 Junction improvements Crossing improvements Segregated two-way tracks Implementation of quietways, speed reductions and traffic calming measures Segregated shared use paths Formalising parking Resurfacing part of the carriageway
13	Old Hill Railway Station to Bumble Hole Nature Reserve via Dudley Canal	 Resurfacing canal towpath to form a shared use path Wayfinding improvements
14	Toll End to Hill Top, via Harvills Hawthorn	 Junction improvements Crossing improvements Segregated two-way tracks Implementation of quietways, speed reductions and traffic calming measures Improved wayfinding Parking enforcement Segregated cycle path
15	Newton Road to A34 via Wilderness Lane	 Junction improvements Crossing improvements Implementation of quietways, speed reductions and traffic calming measures Segregated two-way tracks Segregated shared use paths

The six core walking zones (CWZs) are as follows:

- Core Walking Zone 1: Black Heath town centre to Rowley Regis Railway Station
- Core Walking Zone 2: Smethwick Rolfe Street Station to Midland Metropolitan Hospital via Windmill Eye
- Core Walking Zone 3: High Street to Langley Green Railway Station
- Core Walking Zone 4: Sandwell and Dudley Railway Station to Bromford Lane Residential Estate
- Core Walking Zone 5: Wednesbury Great Western Street to Town Centre
- Core Walking Zone 6: Friar Park and Yew Tree to Tame Bridge Parkway Railway Station

For more information on the Core Walking Zone recommendations please see the SCWIP Final Report, January 2020.

Strategic Case

Policy context

To ensure the SCWIP is coordinated with existing plans already in place for the Black Country and West Midlands, a review of National, Regional and Local Plans has been undertaken. A policy review has also been undertaken to ensure the SCWIP supports all the relevant national, regional and local policies. This initial analysis informed the scope of the SCWIP.

How the SCWIP Supports These

Table 2: Policy below summarises how the SCWIP is aligned with the different policies and plans. For a full analysis, see the SCWIP Final Report, January 2020.

Table 2: Policy context

Key Themes

Policy Title

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 aimsto 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), DfT	 Increasing cycling and walking activity Improving the safety of cyclists Identifying safe cycling and walking infrastructure 	 The SCWIP aimsto increase opportunities to walk and cycle Safety of walking and cycling routes are taken into account and planned in the infrastructure SCWIP.
LCWIP Guidance (2017), DfT	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

Regional

Strategic Economic Plan (SEP) (2017), WMCA	Improvements in connectivity	The walking and cycling plans enable improvements in connectivity in active travel within the borough to key destinations and transport links
West Midlands Movement for Growth (2017), WMCA	 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), WMCA	 Aiming to achieve a 5% cycle mode share for all journeysin 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

Policy Title	Key Themes	How the SCWIP Supports These
		Many of the SCWIP routes are planned around schools to allow modal shift in favour of active modes of travel to school
West Midlands Cycle Charter (2017), WMCA	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
Local		
Town Centre Regeneration Plans (2018), WMCA	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), WMCA	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.
BlackCountry Core Strategy (BCCS) (in development), Dudley MBC, SMBC, Walsall Council and City of Wolverhampton Council	 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
BlackCountry Walking and Cycling Strategy and Implementation Plan (2016), Dudley MBC, SMBC, Walsall Council and City of Wolverhampton Council	Providing schemesfor 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 plansfor 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
SmethwickArea Action Plan (AAP) (2008)	Improving pedestrian and cycling infrastructure Designing street layouts to avoid conflict between different modes, for	The SCWIP involves improvements to walking and cycling infrastructure The walking and cycling improvements will take layouts into consideration to avoid such conflicts

cycling and walking consideration

Policy Title	Key Themes	How the SCWIP Supports These
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

The Need to Implement the SCWIP

The socio-economic context

The population of Sandwell is rising with ONS mid 2018 estimates showing that there are 327,328 people living in the district of all ages². SMBC has forecast continued population growth with around 30,300 additional people residing in the district from 2016 to 2030. Sandwell borough has a complex network of places within which people exercise their choice of location for residence, business and their destination for employment, shopping, education, health treatment, leisure and entertainment. Consequently, the borough has to support considerable trips on a daily basis. These trips will continue to grow with the SAD (2012) allocating land for considerable development within the borough. Congestion is currently a major issue for the borough which will only exacerbate with growth if no attractive alternatives are offered to encourage active travel over the private car.

Travel patterns

Travel to work

Following analysis of Census Journey to Work (2011) data, the most popular workplace destination for people living in Sandwell, is Sandwell itself³. Census Journey to Work (2011) data of 5km or less has been plotted on a map to show the extent of journeys which would have a comfortable cycle commute in Sandwell. The map is shown in Figure 2:. This shows the extent of the population who have the potential to travel to work using more active transport modes in favour of the private car, if attractive options are available.

² ONS – Mid Year Population Estimates 2018

³ NOMIS, 2011, WF01BEW shows that Sandwell is the top destination of workplace destination for those living in Sandwell. Birmingham was the second most popular workplace destination.

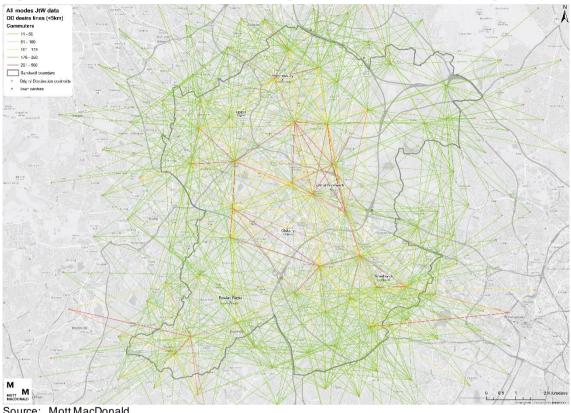


Figure 2: Journeys to work in, out and through Sandwell of 5km or less (straight line)

Source: Mott MacDonald

The Census Journey to Work (2011) data for Sandwell shows a high dependence on car travel as set out below in Table 3: S. Cycling to work only accounts for 0.9% of journeys to work which is a lot lower than the national and regional averages of 3% and 2% respectively. Walking already accounts for 5% of journeys to work which is also lower than the national and regional averages of 11% and 10% respectively.

Table 3: Sandwell journey to work mode share - 2011 census

	No.	Percentage
Not in employment	90,878	42.0%
Driving a car or van	79,817	36.9%
Bus, minibus or coach	12,687	5.9%
On foot	10,769	5.0%
Passenger in a car or van	8,021	3.7%
Work mainly at or from home	7,840	3.6%
Bicycle	1,897	0.9%
Train	1,520	0.7%
Underground, metro, light rail or tram	913	0.4%
Motorcycle, scooter or moped	887	0.4%
Taxi	687	0.3%
Other method of travel to work	429	0.2%

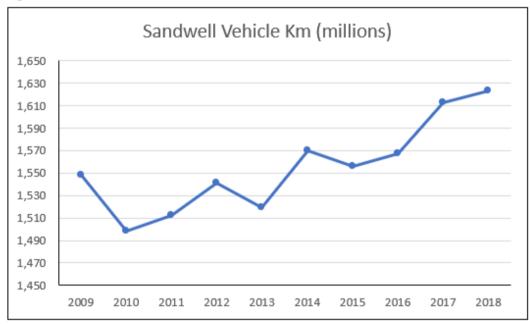
	No.	Percentage
Total	216,345	100.0%

Source NOMIS - Table WD703EW, 2011

Car availability

Car availability per household in Sandwell has increased since 2001. Census 2011 data shows that the percentage of households with no access to a car has decreased from 37.5% in 2001 to 33.9% in 2011. This suggests a rising trend in car journeys is taking place in Sandwell, which is confirmed through ONS 2018 data illustrated below in Figure 3:

Figure 3: Sandwell vehicle km increases



Source: ONS - Table TRA8905

The increased population and overall level of car ownership when overlaid with the Census Journey to Work (2011) data, indicates that car is the predominant method of travel to work, which will largely remain the same with the increasing trends of car ownership.

Opportunities for multimodal journeys

Sandwell benefits from having extensive rail and metro links in the borough. There are proposed plans to improve existing railway lines and proposals for a new metro line between Wednesbury and Brierley Hill, offering six new metro stops along the line. This will provide public transport links to Walsall, Wolverhampton, Birmingham and Dudley, all of which are major trip generators.

Figure 4: shows how accessible cycle journeys could be to rail and metro stations. It shows that vast amounts of the population of Sandwell borough could reach the station in under 15 minutes by bicycle if the choice of active travel was more attractive than private vehicle.

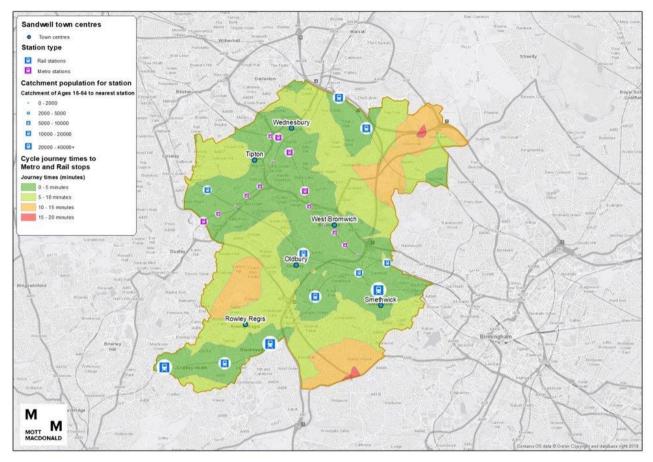


Figure 4: Cycle journey time to metro and rail stops and catchment of population from the stations

Source: Mott MacDonald

How SCWIP can impact on these issues

- Currently the population of Sandwell is reliant on private car use with a high modal share for private car use on journeys to work
- With growth in demand for travel predicted and aligned to ongoing population growth, the need for investment in walking and cycling infrastructure is necessary to offer an attractive alternative to motor vehicle usage, minimising any impact on Sandwell's transport system and local connectivity.
- By offering an attractive alternative to private car journeys through the development of a
 walking and cycling network, the SCWIP supports the borough's growth by opening
 capacity on the transport networks for a growth in trips associated with an increased
 population.
- The majority of Sandwell's population live within a 15 minute cycle ride to a metro or rail station. The SCWIP includes routes to and from these stations and will encourage more multi modal journeys.

Population health

The health of a population is an important factor to consider. The health of a population has an impact on the economic and productivity of an area, social context and wellbeing of a population. Sandwell has been ranked as the 13th most deprived local authority in the 2015 Index of Multiple Deprivation. Walking and cycling can encourage the development of an economy as the physical activity boosts workplace activity and reduces sickness:

"Physical activity boosts energy levels, increases workplace activity and reduces sickness absence. Businesses with active workforces have lower sickness rates and lower staff turnover."

A consequence of low physical activity contributes to a number of preventable illnesses such as obesity, diabetes, stroke, cancer, dementia, heart disease, hypertension and mental illnesses. SMBC has a 2030 vision of Sandwell being:

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

However, there is evidence to suggest people living in deprived areas are twice as likely to be physically inactive as those living in more prosperous areas⁵. As such this section looks at the current physical activity and obesity levels of Sandwell using data from Sports England Active Lives Survey, May 2017/18⁶.

Air pollution within an area can also cause detrimental health issues. Exposure to nitrogen dioxide (NO2) has adverse impacts on human life. This includes respiratory problems, with a link being made to children being exposed to high levels of NO2 and poor lung function later in life⁷. One of the main sources of NO2 emissions is the transport sector and so modal shift towards more active modes of transport will help Sandwell meet its 2030 vision with regards to living healthy lives for longer.

Physical activity

The current levels of physical activity in Sandwell are lower than both the regional and national averages. The levels of physical activity are measured by the amount of activity taken place in minutes per week. Figure 5: shows physical activity levels for the population of Sandwell. Just over half of the population (54.7%) are classified as 'active' (150+ minutes of exercise per week). One third (33.3%) of Sandwell's population is classed as 'inactive' (less than 30 minutes of activity per week), which is more than the national average of a quarter (25.2%).

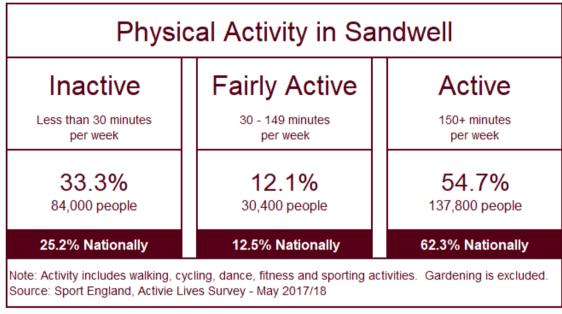
⁴ https://www.sandwelltrends.info/physical-activity/

⁵ www.sandwell.gov.uk/download/downloads/id/3269/west_bromwich_streetscape_strategy.pdf

 $^{^6}$ Accessed on $\underline{\text{www.sandwelltrends.info}}$

https://uk-air.defra.gov.uk/assets/documents/no2ten/Local_zone35_Sandwell_AQActionplan_1.pdf

Figure 5: Physical activity in Sandwell



Source: www.sandwelltrends.info/physical-activity

Sport England's 2018 Active Lives survey has suggested that-

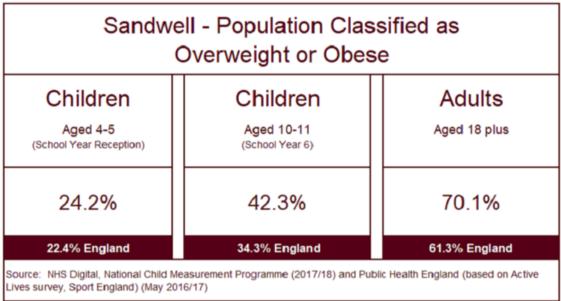
"an extra 20,420 physically inactive people would have to start doing any physical activity for Sandwell to reach the national average"⁸.

Obesity

As shown above, Sandwell has large amounts of inactivity which is a contributing factor to obesity. Unsurprisingly, due to the lack of physical inactivity, obesity is also above regional and national average. Obesity can lead to discrimination, social, emotional and psychological problems as well as reducing life expectancy. Obesity also has a large impact on the community, leading to less productivity. Physical activity can reduce obesity in a population. Obesity has been recorded for Sandwell and with the physical activity in Sandwell being recorded as below average, it is unsurprising that it is not only the adult population, but also the child population which suffer from high obesity levels. Figure 6: shows that almost one quarter (24.2%) of children between 4-5 are classified as obese or overweight. This percentage almost doubles (42.3%) for children aged between 10 and 11 years. Almost three quarters (70.1%) of adults are classified as overweight or obese.

⁸ www.sandwelltrends.info/physical-activity

Figure 6: Sandwell's population classified as overweight or obese



Source: https://www.sandwelltrends.info/healthy-weight/

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 management is.

SMBC have an Air Quality Action Plan $2018-2023^{\circ}$. The Air Quality Action Plan (AQAP) acknowledges the impact of poor air quality on health outcomes and premature deaths particularly in the most vulnerable (elderly and children). The action plan commits Sandwell to improving the air quality for the people who live and work in the borough. It is acknowledged within this Action Plan that:

"In Sandwell elevated NO2 levels are observed at busy junctions, narrow congested streets and in town centres."

It sets out five key areas that the council has already taken action on:

- 1. Promoting health initiatives that support sustainable transport and behavioural change
- 2. Reduce congestion and minimise transport emissions through traffic management and highway improvement
- 3. Implementation of guidance and policy, working in partnership with key stakeholders to improve air quality outcomes.
- 4. Improve understanding of pollutant behaviour particularly at hot spot locations.
- 5. To review the council's impact on air quality through an assessment of its vehicle fleets, taxi licencing and employee vehicle use.

⁹ http://www.sandwell.gov.uk/downloads/file/26079/air_quality_action_plan_2018_-_2023

It then identifies three key action points, which include implementing sustainable transport initiatives to which it commits to take further action upon:

Priority 1 – ".... to develop an air pollution model of the borough to ensure all hot spot locations are identified...."

Priority 2 – ""continue promoting walking, cycling, car sharing and public transport initiatives and undertake additional health promotion campaigns (including walking and cycling) to increase physical activity and the use of low emission vehicles".

Priority 3 – To review its own role as a public services provider and what is can do to reduce emissions from its own activities.

Climate Emergency

On 28 June 2019, the West Midlands Combined Authority, in line with a number of other authorities, declared a climate emergency10 in relation to pollution levels with the authority area. It pledged to safeguard the environment, stating that the area had a

"moral responsibility to tackle climate change".

Its earlier commitments to zero emissions by 2030 were reiterated and the need for each person to play their part.

Increasing walking and cycling, and commensurate reduction in car usage can contribute to achieving this aim.

How SCWIP can impact on these issues

- By providing infrastructure to allow for active travel the SCWIP increases the opportunities for physical activity throughout the borough.
- Walking and cycling are among the cheapest modes of transport and so help build
 equality within the borough as it offers affordable options of travel to employment and
 higher education which in turn will encourage economic growth of the borough
- Many of the SCWIP walking and cycling routes have been planned to align with large employment sites and schools. This will offer an attractive alternative to private car for journeys to work or education, reducing childhood and adult obesity.
- By implementing the SCWIP, and creating a coherent walking and cycling network, SMBC will be encouraging people to walk and cycle, increasing levels of physical activity, lessening obesity levels of the borough
- By implementing the SCWIP and encouraging a move towards zero emissions transport modes, Sandwell can contribute to lessening NO2 emissions and aiding the climate emergency declared on behalf of the West Midlands in June 2019.
- By developing walking and cycling through the SCWIP, Sandwell will be supporting the 2030 vision of the borough being a 'a place where we live healthy lives and live them for longer.'

¹⁰ https://www.wmca.org.uk/news/the-wmca-declares-climate-emergency-and-pledges-urgent-action-to-reduce-emissions/

Current situation for travelling actively

Existing infrastructure

There is currently some provision for cycling, with some areas of Sandwell having segregated, safe infrastructure. The current provision is sporadically spread across the borough, both in quality and amount, and so does not offer a cohesive network to attract people away from private cars. The cycle routes can range from fully segregated cycle routes to advisory lanes which are often used as parking spaces, and canal towpaths with unsuitable surfaces and poor perceptions of safety and security. Sandwell has several National Cycle Network (NCN) routes running through the borough, most noticeably, NCN route 5 runs to the east of the area to Sandwell Valley Country Park and NCN route 81 taking advantage of the extensive canal system. There are also examples of good quality Midland Metro Walk and Cycleway runs along a section of the Metro line.

Positively, a lot of the residential areas in Sandwell are already 20mph zones, or are proposed future 20mph zones. These offer more pleasant cycling and walking conditions, however, these are not currently extended to the main arterial corridors which cause severance and permeability issues for active travel.

Sandwell is challenged by the extensive severance issues with the Strategic Road Network (SRN) and several proposed Major Road Network (MRN) routes running through it. These roads typically offer higher vehicle speeds and higher levels of traffic, which is unattractive to cycling and walking, especially if there is no physical segregation from motorised vehicles.

Another severance to walking and cycling are the four main railway lines. There are also two metro lines. Sandwell can boast 12 rail stations and 16 metro stops providing public transport links to Walsall, Birmingham and Wolverhampton. There are also proposals to extend the metro route from Wednesbury to Brierley Hill, offering six new metro stops in the borough and extending accessibility by public transport to Dudley. Active travel as a part or all of a journey is a possibility for many of Sandwell residents, however, cycle parking at some railway and metro stations is very poor, for example at Dudley Port there are only two cycle hoops in place 11. This discourages active travel as a part of a multi-modal journey.

Currently the cycling conditions in Sandwell do not offer a network where people feel safe to ride as they are mixed with high levels of fast flowing traffic. This make cycling unappealing, uncomfortable and unattractive compared with other transport modes such as private cars. The current infrastructure in place will not encourage modal shift away from private car use.

Road safety

Accident data from the Department for Transport's (DfT) 'Reported accidents by region, local authority, road class and vehicles licensed' for Sandwell is shown below in Table 4: for a five-year period between 2013-2017. The data shows that the numbers of accidents have increased in the five-year period. Unsurprisingly, the majority of accidents are on the classified 'A' roads and the 'minor' roads which mirror the makeup of the network within the borough.

The figures for 'minor' classified roads are slightly higher than those of classified 'A' roads. Minor roads typically offer safer walking and cycling environments, however, the figures for Sandwell Borough do not currently reflect this with the higher number of accidents occurring.

¹¹ Figure taken from the Black Country LCWIP Appendix D

Table 4: Sandwell's accident data by road type (2013 – 2017)

Year	Motorway	A Trunk ¹²	A Principle	All A Roads ¹³	Minor	AII
2013	40	0	229	229	265	534
2014	48	4	281	285	296	629
2015	33	1	271	272	346	651
2016	44	3	225	228	341	611
2017	31	4	257	261	347	639

Source: RAS10014: Reported accidents by region, local authority, road class and vehicles licensed: England (ODS, 66.8KB) https://www.gov.uk/government/statistical-data-sets/ras10-reported-road-accidents

Although we do not have the figures for Sandwell Borough with regards to the amounts of accidents pedestrians and cyclists have been involved in, data has been extracted from DfTs 'Reported casualty and accident rates by urban and rural roads, road class, road user type, severity and pedestrian involvement, Great Britain' to show the national figures of cyclist and pedestrian involvement in accidents. This is a general reflection which can also be associated with Sandwell. The data has been extracted for a five year period of 2013-2017 and shown below in Table 5:.

Table 5: Numbers of pedestrians and cyclists involved in accidents

Year	Cyclists	Pedestrians
2013	19,752	24,033
2014	21,624	24,748
2015	19,172	24,061
2016	18,743	23,550
2017	18,651	23,805

Source: RAS30018: Reported casualty and accident rates by urban and rural roads, road class, road user type, severity and pedestrian involvement, Great Britain, 2017. https://www.gov.uk/governmaent/publications/reported-road-casulties-great-britain-annual-report

With the exception of 2014, there appears to be a decline nationally in cyclists involved in accidents. The pedestrian rate also appears to be declining, however at a slightly slower rate. For the same five year period, data has been extracted to show which vehicles are involved in pedestrian accidents in Great Britain and the casualty severity of pedestrians and cyclists across the UK. This data is shown Table 6: and Table 7: respectively.

Table 6: Pedestrians accidents involving other vehicles, Great Britain

Year	Bicycle	Motorcycle	Car	Bus or Coach	Van / LGV	HGV
2013	446	883	19,525	1,035	1,440	424
2014	498	939	20,094	1,064	1,478	435
2015	444	1,057	19,397	1,006	1,435	433
2016	460	1,085	18,897	892	1,357	412

¹² Based on 2010 Core network

¹³ Includes 'A' roads where trunk/principal status could not be allocated

Year	Bicycle	Motorcycle	Car	Bus or Coach	Van / LGV	HGV	
2017	531	1,159	18,855	875	1,498	392	

Source: RAS30018: Reported casualty and accident rates by urban and rural roads, road class, road user type, severity and pedestrian involvement, Great Britain, 2017. https://www.gov.uk/governmaent/publications/reported-road-casulties-great-britain-annual-report

Motorised vehicles currently have the highest conflict figures for both pedestrian and cyclists. The majority of conflicts for pedestrian and cyclists are categorised as 'slight' in severity. There are, however still high numbers of casualties classed as 'serious' and those who are killed whilst walking and cycling.

Table 7: Pedestrian and cyclist casualty severity UK wide

Road user an severity	d	Year			
Pedestrian	2013	2014	2015	2016	2017
Killed	405	464	427	463	485
Serious	5,160	5,203	5,104	5,304	5,769,
Slight	19,247	19,850	19,317	18,514	18,280
Cyclist					
Killed	113	116	100	105	103
Serious	3,185	3,460	3,279	3,458	3,748
Slight	16,396	18,045	15,744	15,245	14,798

Source: RAS30034 Reported casualties by severity, road user type and country, United Kingdom https://www.gov.uk/government/publications/reported-road-casualties-great-britain-annual-report

Transport for West Midlands (TfWM) have released a 'Road Safety Statement' in July 2019 (please see Appendix 1). Within this statement there is a focus on improving road safety for the following groups of people:

- Young road users
- Rural road users
- Motorcyclists
- Older, vulnerable road users

The two-year action plan commits to:

- Working with employers with commercial fleets and drivers to promote good safety practice
- Implementation of HGV sideguards to deflect vulnerable road users from getting too close
- £250m fund for Cycling, Safety and Integration (as part of RIS1, Highways England).

The aim is to have a positive impact on road safety in the West Midlands and also nationally. The £250m fund for Cycling, Safety and Integration in particular will have a large impact on the West Midlands walking and cycling ambitions to improve cycling infrastructure and make roads safer for vulnerable users.

How SCWIP can impact on these issues

- The SCWIP, along with other planned walking and cycling infrastructure improvements in the borough, will support the development of a coherent walking and cycling network.
- By incorporating walking and cycling to rail and metro stations, cycling and walking will become an integrated mode of transport and more likely be used as part of a multi-modal journey and encourage first and last mile journeys to be made actively.
- Accident statistics have shown a growth in accidents over the five-year period from 2013 to 2017. The ambitions to improve road safety for vulnerable road users will be recognised by the implementation of safer walking and cycling infrastructure through the SCWIP and other planned infrastructure developments.
- The safety benefits of providing dedicated infrastructure, such as that recommended by the SCWIP will normalise walking and cycling due to minimised risks from travelling actively

Impact of not developing the SCWIP

Without the development of a SCWIP, Sandwell's population will continue to be reliant on private vehicle which would have the following consequential impacts on the borough:

- Sandwell would not be supporting key national, regional and local policies to encourage the
 use of sustainable transport alternatives to private car use
- Sandwell will not be able to support the continued growth of the borough as all new trips will
 continue to be reliant on private vehicle with the lack of an attractive walking and cycling
 network to offer a choice of an alternative
- Reliance of private vehicle will exacerbate the current congestion issues and have a further detrimental impact on local air quality
- The obesity and overweight statistics for Sandwell will remain stagnant or deteriorate further
 without opportunities to incorporate physical activity through increased levels of walking and
 cycling. This will limit, or slow down, the economic development of the borough.
- By not developing a coherent or attractive cycling and walking network, Sandwell will be limiting opportunities to realise the 2030 vision of Sandwell being "a place where we live healthy lives and live them for longer."
- A modal shift away from private car will be limited without the SCWIPs contribution to other proposed regional infrastructure proposals for walking and cycling
- Road safety for vulnerable road users, such as pedestrians and cyclists, will unlikely be improved without implementing safe walking and cycling infrastructure such as those recommended through the SCWIP.

Economic Case

Economic appraisal

The current Business Case analysis tools for the economic case are geared towards large highway or public transport schemes rather than active travel schemes. As such the usual appraisal methods are not appropriate to show the benefits of walking and cycling improvements. Best practice from countries renowned for their progress on cycling (such as Denmark, Holland and Sweden) indicates that they do not typically justify new and / or improved cycling and walking infrastructure through the usual BCR figures used for other transport modes due to the number of, currently, unquantifiable benefits walking and cycling have. TAG UNIT A5.1¹⁴ does give guidance appraisal techniques for active travel and as such the SCWIP will be appraised against the following from the guidance:

- Physical activity
- Journey quality
- Accidents
- Environmental
- Time savings

Physical activity impacts

Physical activity impacts of active travel are measured based on the change in mortality resulting from an increase in walkers and cyclists. Physical activity, through modal shift away from private car use, in favour of active travel, results in the economic benefit of less absenteeism for businesses and education leading to less staff turnover for businesses and a more active workforce and so successful businesses. An area of growing businesses and economy are likely to attract more employees and residents which in turn sustains the growth of said area.

The proposed routes have been strategically placed where it is believed that the highest uptake of walking and cycling will be or in areas where the existing cycle network needs connecting to create a cohesive network. The SCWIP has been designed to be attractive to both those who are regular cyclists and those who have not cycled for a long period of time. Segregation offers higher levels of safety and comfort and so can be used by a much wider community than the current infrastructure and so will result in higher usage. The routes are located along employment corridors and also serve a number of high streets and education establishments. This encourages the physical activity of cycling to become a part of everyday life.

The proposed walking infrastructure contains a lot of smaller improvements such as dropped kerbs, tactile paving and wayfinding. These elements are important to ensuring all people feel confident when walking, especially so for people with disabilities. By allowing walking to be an option to all people, a higher uptake will occur increasing the physical activity of the population.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/712970/tag-unit-a5-1-active-mode-appraisal-may-2018.pdf?_ga=2.103968326.712311158.1566897113-1235111002.1510753223

Journey quality impacts

Journey quality will be improved through offering safer cycle infrastructure with high quality cycle surfacing and allowing dedicated space for cycling. Quality of a journey is based on the safety perceptions as well as infrastructure and environmental conditions along a route.

As many of the routes are aligned to some of the major arterial transport corridors, the current infrastructure does not offer protection from other modes of transport, heightening the perceptions and real dangers of current cycling in Sandwell. The recommendations suggested offer protection from other transport modes, through segregation, especially along the arterial routes which offer higher volumes and speeds of traffic. Infrastructure improvements to include active travel priority at both major and minor junctions will offer safety benefits for both walking and cycling and so journey quality improvements. This in turn will encourage further uptake in walking and cycling across the borough.

Accident impacts

DfT's Active Mode Appraisal states that the accident impacts should be measured as:

"accident analysis should take account of changes in accidents involving pedestrians and cyclists, resulting from changes in walking and cycling and the infrastructure used, and the impact of mode switch on accidents involving other road users" 15

The data extracted and demonstrated in Table 7: showing the casualty severity of pedestrians and cyclists UK wide can potentially be a reflection of the casualty severity within the Sandwell borough. As shown in Table 6: the largest conflict for pedestrians and cyclists are cars and other motorised vehicles. As such, the segregated nature of recommendations alongside junction and crossing improvements will separate pedestrians and cyclists from motorised vehicles and so minimise the risk of conflict.

The SCWIP promotes safety for walking and cycling through segregated infrastructure and as such minimises the perceptions and reality of danger whilst travelling actively, encouraging uptake of walking and cycling.

Environmental impacts

"The environmental benefits from a walk or cycling scheme are achieved through a reduction in motorised traffic and hence a reduction in the associated externalities" 16

The implementation of the SCWIP will encourage a modal shift in favour of active travel through:

- Showing that walking and cycling are modes of transport rather than just for leisure
- Offering safe, segregated routes, separating pedestrians and cyclist from motor traffic
- Offering convenient routes to large trip generators such as workplaces, high streets and higher education establishments
- Creating a coherent walking and cycling network across the borough

Modal shift towards walking and cycling, away from private vehicle use, will reduce NO2 emissions through reduction in the use of cars and also through reduction in congestion. This will be monitored in the existing six locations within the borough.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/712970/tag-unit-a5-1-active-mode-appraisal-may-2018.pdf?_ga=2.103968326.712311158.1566897113-1235111002.1510753223

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/712970/tag-unit-a5-1-active-mode-appraisal-may-2018.pdf?_ga=2.103968326.712311158.1566897113-1235111002.1510753223

Time saving impacts

Congestion is currently a major issue for Sandwell which increases journey time for those travelling within and through the borough. It also impacts on bus reliability and journey time, meaning that public transport is often not an attractive enough option to encourage modal shift away from the private vehicle. As the congestion is so severe in the borough, walking and cycling could offer (?) quicker, more reliable journeys if infrastructure was in place to make it an attractive option such as segregation, short cuts and to destinations of interest.

"While many active mode schemes may aim to increase demand for walking and cycling through improved quality of facilities, they may also result in time savings to pedestrians and cyclists through provision of quicker or shorter routes."¹⁷

A modal shift towards active travel in favour of private car would also reduce the number of trips made on the highway network by motorised vehicles and increasing capacity. By removing some car trips from the network, journey times for other road users can also be reduced.

Cost of the SCWIP

Cycle route 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
- Stage 2: The Greater Manchester Cycling Design Guidance and Standards 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 Greater Manchester Cycling Design Guidance and Standards low cost to produce a final indicative cost

The final indicative costs, along with SMBC high cost estimates and Greater Manchester Cycling Design Guidance and Standards low-cost estimate are shown below in Table 8: below.

Table 8: Cycle route costings

Cycle **Cycle Route Description Highways** Lowest using Average of **Route Highest** Manchester both **Number** Cycle Design **Guidance based** approach 1 Birmingham Canal - West Bromwich via £600,000 £256,700 £428,350 Spon Lane £210.000 £212.000 £211.000 NCN Route 5 Improvements, linking to WMLCWIP route

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/712970/tag-unit-a5-1-active-mode-appraisal-may-2018.pdf? ga=2.103968326.712311158.1566897113-1235111002.1510753223

Cycle Route Number	Cycle Route Description	Highways Highest	Lowest using Manchester Cycle Design Guidance based approach	Average of both
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
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, site investigations and exclude engineer design fees. Additional costs may be incurred for example through complicated service diversions and ground works for each route which are yet unknown.

Core walking zone 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 SMBCs Highway Team on the following infrastructure across all six of the core walking zones:

- 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: Telent 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 / TM
- 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. 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 9:

Table 9: Core walking zones indicative costs

Core Walking Zone	Description	Indicative Cost
1	BlackHeath town centre to Rowley Regis Railway Station	£415,500
2	SmethwickRolfe 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

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 the SCWIP is implemented.

Total SCWIP cost

The total indicative cost of SCWIP is: £12,123,700.

Potential funding sources

Potential funding sources have already been found for some of the cycle routes. These are shown in Table 10:

Table 10: Potential Funding Sources

Cycle Route	Funding Source	Amount Predicted
4	Major Route Networkfunding. Two phases of funding.	Currently unknown
11	Section 106 funding available	£50,000
All	National Productivity Infrastructure Fund (NPIF)	To Be Announced (TBA)
All	Transforming Cities Fund (TCF)	Currently unknown
All	Integrated Transport Block (ITB)	£250kperannum
1, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14	Housing Infrastructure Fund (HIF)	ТВА
3, 4, 6, 7, 9, 10, 11, 12, 13	Access to Rail/RailInvestment Funds	Currently unknown

Value for money

The return on cycling investment is maximised when existing cyclists utilise it more frequently and there is new uptake of cycling because of the route ¹⁸. A recent Government report on the return of cycling and walking concluded: "All of the studies in the UK and beyond report economic benefits of walking and cycling interventions which are highly significant, and these average 13:1[Benefit Cost Ratio (BCR)]." The threshold of BCR are 4:1 which are considered 'very high' value for money by DfT. BCRs for walking and cycling infrastructure are considerably greater than the threshold and have multiple benefits:

- Easing congestion
- Improving health
- Reducing pressure on infrastructure
- Environmental benefits
- Journey quality
- Road safety

¹⁸ Get Britain Cy ding Report, https://allpartycycling.files.wordpress.com/2013/04/get-britain-cycling1.pdf

¹⁹ The British Cycling Economy, 'Gross Cycling Product Report', January 2001

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 of the SWCIP main report.

Summary

- The total indicative cost of SCWIP is £12,123,700.
- Some potential funding has already been sourced
- The economic benefits cannot be quantified at this point however, using the DfT guidance for active travel appraisal the SCWIP offers large benefits in terms of physical activity uptake, journey quality improvements, accident reduction, environmental benefits and journey time savings.
- Convenient routes to large trip generators such as workplaces, high streets and higher education establishments is facilitated through SCWIP due to the segregated nature of the recommended infrastructure
- This will promote walking and cycling as an alternative transport mode and not just a form
 of leisure.

Management Case

The management case assesses if a proposed scheme is deliverable. The SCWIP management case is based on the Black Country Walking & Cycling Strategy management case to ensure consistency in delivery throughout the region. At this stage of the SCWIP a high-level description of the management process, identified risks and lessons learnt have been identified.

Prioritisation

The cycle routes have been prioritised in order of delivery. This is shown below in Table 11:.

Table 11: 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 HarvillsHawthom	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

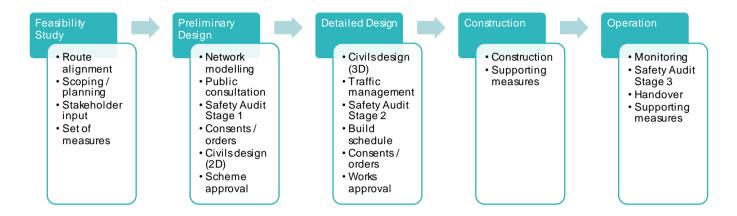
Management process

The below diagram shows the Black Country's intended process for delivering their LCWIP. This is a typical process of delivering high quality cycling and walking infrastructure which usually takes about 18 months to deliver with:

- Four months spent on the feasibility study
- Eight months spent on the Preliminary and detailed designs
- Six months spent on the construction of the route (may vary dependent on the length of the route)

Figure 7: shows the management process and details the elements of each stage.

Figure 7: Management process



Source: BlackCountry LCWIP, Appendix D

Stages of the management process can overlap, depending on the complexity and length of the route.

In order to deliver the SCWIP, SMBC will have to joint work with a consortium of different partners typical of cycle and walking infrastructure and so it is likely the SCWIP will follow a similar process. The consortium will include:

- Council Officers and Politicians
- Project and Programme Team
- Stakeholders
 - User groups
 - Frontagers
 - Businesses
- Design Engineers
- Powers and Consent
- Traffic and Signal Engineers
- Other Experts and Specialists
- Communications and Marketing
- Supporting measures / Behaviour Change
- Construction Managers
- Contractors

Identified risks²⁰

There are a number of key risks to consider when implementing walking and cycling infrastructure and that may impact on the delivery of the scheme. These include:

The identified risks have been directly taken from the Black Country LCWIP Appendix D as they are likely to be the same risks and lessons learnt which will impact on the delivery of SCWIP

- Restricted road space
- Competing demands and priorities
- Approvals processes
- Providing consistent routes
- Politics
- Parking and loading
- Major infrastructure barriers
- Land and highway ownership
- Legislation
- Timescales of delivery

Lessons learnt²¹

Lessons learnt from the implementation of other walking and cycling infrastructure are:

- Benefits of managing schemes as whole routes
- Benefits of pairing hard and soft measures
- The cost of works which are 'unseen'
- Importance of good surfacing
- Importance of good infrastructure
- Importance of political support
- Importance of methods of stakeholder engagement
- Integrating different schemes and benefits

Summary

- A high-level management plan has been suggested based on the Black Country LCWIP
- Potential delivery partners have been identified
- · Common delivery risks have been identified
- Lessons learnt have been identified from other schemes

²¹ The identified lessons learnt have been directly taken from the Black Country LCWIP Appendix D as they are likely to be the same risks and lessons learnt which will impact on the delivery of SCWIP

Appendices

Appendix 1: TfWM Road Safety Statement

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Appendix 1: TfWM Road Safety Statement

