Crawley LCWIP

Local Cycling and Walking Infrastructure Plan 2021



Cyclists must be separated from volume traffic, both at junctions and on the stretches of road between them.



Cyclists must be separated from pedestrians.



Cyclists must be treated as vehicles, not pedestrians.



Routes must join together; isolated stretches of good provision are of little value.



Routes must feel direct, logical and be intuitively understandable by all road users;



Routes and schemes must take account of how users actually behave;



Purely cosmetic alterations should be avoided.



Barriers, such as chicane barriers and dismount signs, should be avoided.



Routes should be designed only by those who have experienced the road on a cycle.

Crawley Borough Council

crawley.gov.uk/transport

Version release	Author	Approved
24 June 2020 Consultation draft	Kay Wagland Sustainability Team	Crawley Borough Council Cabinet
12 March 2021 Final	Kay Wagland Sustainability Team	Cllr Gurinder Jhans Environmental Services and Sustainability LCWIP Steering Group
7 July 2023 Amendment to Route H	Kay Wagland Sustainability Team	(delegated, following stakeholder input) Clem Smith Head Planning & Economic Devt (inc Sustainability)

Crawley Local Cycling and Walking Infrastructure Plan – 2021

Foreword

Crawley has most of the elements to be a great town for cycling and walking: it is relatively flat, with access to shopping, employment, education and leisure facilities within a short radius of our homes and has many leafy, green avenues that could make cycling and walking particularly appealing. The other element needed is a high quality network of safe, practical and attractive cycling and walking routes for Crawley residents and visitors of most abilities that meet shorter journey needs.

The Crawley Local Cycling and Walking Infrastructure Plan (LCWIP) is a practical, evidence-based plan for making that happen.

The LCWIP identifies functional, direct routes and zones and outlines measures to develop these into a connected network. It will inform the new Local Plan, guiding building development, and will provide a clear rationale for investment to make our streets safe and attractive for active travel and for collaborative working with our local transport authority.

It is an important contribution to New Directions for Crawley, the council's transport and access plan, which outlines transport as the key sector contributing to the climate emergency, poor air quality and mental and physical health issues. Our LCWIP will help local residents and businesses to be central to the discussion to improve people-focused, healthy, low carbon neighbourhoods.

This transformation in transport infrastructure and the resulting shift to cycling and walking will help deliver significant reductions in carbon emissions and improvements in air quality, local community health and quality of life – something of which Crawley people can be proud.

The experience of the pandemic has shown us the important role active transport choices can play and that developing high quality walking and cycling infrastructure is a key element for our health and resilience.

Councillor Gurinder Jhans
Cabinet Member for Environmental Services and Sustainability
Crawley Borough Council

This report is structured to make it a practical tool.

Descriptions and discussion in the main body of the document, focusing on brief explanations of the process for developing the route plans, outlined proposed schemes and costs, how the plan links to wider Crawley Borough Council activity and options for delivery.

Routes, supporting data and more detailed explanations are provided in appendices, with references.

Crawley LCWIP 2021

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1 Cycling and walking

a Vision

As one of the original new towns, Crawley's streets were planned around far lower car ownership than we have now. We need to build on its strengths to renew its streets and neighbourhoods, reshaping them to be healthier, safer and people-centred. We could see Crawley as a town where:

- Walking and cycling become the natural first choice for accessing what we need, through improved urban design which prioritises active travel over motor vehicles
- People are generally fitter mentally and physically due to greater activity levels and better air quality
- Children have more safe places to play and travel independently
- Local businesses benefit from easy, attractive access in a pleasant environment
- Land is freed up for new homes, new business and other uses as demand for car parking goes down
- Beautiful, greener, low traffic neighbourhoods improve wellbeing for all.

A shift in how we get around which reduces demand for car use means Crawley is taking action on the climate emergency and improved air quality by cutting pollution and carbon emissions.

A key to achieving this vision is to provide safe and attractive infrastructure for cycling and walking.

b Why action on cycling and walking?

Cycling and walking instead of using motor vehicles can have a profound impact on the quality of life in Crawley. Action to increase cycling and walking will enable improvements to:

- **Climate emergency** – cycling and walking as zero carbon transport displacing vehicles which are now the biggest single contributor to greenhouse gases
- **Health** – physical and mental health benefits from being active, as well as improved air quality
- **Time savings** – in urban areas, cycling is typically the quickest mode for journeys of less than three miles
- **Cost saving** – personal travel cost savings and savings to the NHS from reduced demand on health services due to a healthier population
- **Safety** – reduced risk to others as cycling and walking are intrinsically safe modes of travel and often alternatives to use of motor vehicles
- **Space efficiency** – reduction in car parking demand and vehicles occupying less street space also frees land for uses other than storing cars
- **Employment** – people who cycle are typically healthier, happier employees
- **Congestion** – motor traffic reduction, cycling and walking provides flexible mobility in densely built-up areas where it is easy to stop or avoid obstructions. Local delivery by cargo bike further reduces van numbers
- **Public transport** – Cycling and walking provide important stages to accessing public transport, making train or bus journeys more viable
- **Local economy** – people cycling and walking are more likely to shop and spend more locally. Cargo bike deliveries can be more efficient and effective, especially with e-bikes
- **Urban and country landscapes** – more accessible, pleasant, quieter and cleaner streets and rural areas
- **Nature** – reducing wildlife deaths and habitat destruction from traffic and roads
- **Sociability** – walking and cycling make for easier access to and increased interaction with other people.

These benefits are recognised by government, key agencies and research and professional bodies which now advocate increasing levels of cycling and walking and upgrading infrastructure to enable this. These include Public Health England and NICE (the National Institute for Health and

Care Excellence), the Chartered Institute of Highways and Transportation, and Transport for New Homes.

The importance of cycling and walking is made clear in the National Planning and Policy Framework (NPPF), which guides all planning authority development policy. The NPPF advises encouraging cycling and walking to promote 'healthy and safe communities', and that 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)'*.

c What is the LCWIP?

A Local Cycling and Walking Infrastructure Plan (LCWIP) is a costed plan which identifies and prioritises physical infrastructure improvements in a specified area to enable a significant increase in cycling and walking. It has been determined through a combination of:

- Evidence of where people originate trips and where they need to go for different purposes
- Standard assessment methods for identifying the most appropriate routes and the improvements that are needed to ensure those routes are safe and attractive for cycling and walking, and
- Discussions with people who are familiar with the locations and communities.

The LCWIP gives us:

- A **cycle network plan** of preferred routes for further development based on corridors developed from origin and destination points identified with social and economic data
- A **walking zone and route plan** for improvements. Crawley town centre was evaluated as the first core walking zone, along with a route to Crawley Leisure Park
- A **programme of infrastructure improvements** for future investment, identified, specified and prioritised systematically with a range of evaluation tools provided through the Department for Transport (DfT)
- Proposals for **how it can be implemented,** embedding the plan with other development plans and involving local residents and other stakeholders in taking it forward.

The LCWIP is a key document in informing the planning authority's Local Plan. It provides guidance for developers on providing safe, accessible, connected, people-centred neighbourhoods for homes and business, ensuring full linkage with the wider town cycle network and formally evaluated walking routes.

d How has the LCWIP been developed?

LCWIP development guidance emerged from the government's 2017 Cycling and Walking Investment Strategy (CWIS). Local authorities are invited to adopt a systematic, evidence-based and strategic approach to identifying cycle route and walking zone improvements for an area of the authority's choosing.

The DfT allocated funds for technical support and provided guidance to enable a number of Local Transport Authorities (LTA) to each develop an LCWIP.

As a Local Transport Authority (LTA), West Sussex County Council succeeded in its bid for DfT's technical support to be delivered by a range of consultants. While it planned its own LCWIP for strategic inter-urban routes across the county, including a key commuter link from Horsham to Crawley, it was unusual among LTAs in establishing a partnership programme with the districts and boroughs across the county to support each of those authorities developing their own LCWIPs. As one of these authorities, Crawley was also unusual in adopting a borough wide network approach as the geographical scope for its LCWIP.

The DfT provided a staged structure for developing the LCWIP which covers:

1 **Determining scope and governance** – the geographical extent of the plan and the detail into which it will go, alongside how the plan will be overseen and who will be engaged in its development

2 **Data gathering** – identifying information to inform the plan including policies, existing networks and trip generators both now and for the future

3 **Cycle network planning** – defining journey origins and destinations to establish cycle routes which are needed to be developed and identifying high level specifications

4 **Walking zone and route planning** – identifying key walking areas to be included and analysing these to establish high level improvements, along with any associated walking routes

5 **Project prioritisation** – evaluation of cost benefits and relative merits of developing routes and zones to enable prioritisation of schemes

6 **Integration and application** - to identify how the plan will inform other policies and practices, such as the Local Plan and how the LCWIP's schemes can be implemented.

The LCWIP does not cover elements such as feasibility, pilot studies or behaviour change activity, but this activity is expected to be developed within the wider work on the Climate Emergency action plan and in progressing the New Directions for Crawley transport strategy.

2 LCWIP Stage 1 – Scope and governance

Geographical and functional scope

In determining the geographical scope of the LCWIP, the DfT recommends looking at the likely distance that would be travelled by bike in a single journey, which is up to about 10km (six miles) or around 30 minutes' cycling time. This is approximately the distance across Crawley.

The town centre presents an obvious location for developing a core walking zone and the Manor Royal Business Improvement District, as a large and key business district, invited focus for another. Crawley Growth Programme projects and work undertaken at Manor Royal in addressing sustainable transport, with funding potential, provided additional reasons to adopt these locations for the plan.

Crawley's neighbourhood structure also includes opportunities for well-defined walking zones and routes centred on neighbourhood parades, community facilities and schools. The New Directions for Crawley transport strategy recognises the role that quieter traffic-calmed neighbourhoods could play in providing safer zones for road cycling without special infrastructure and this idea has been built into the LCWIP project as it progressed. The LCWIP would then propose connecting up traffic-calmed neighbourhoods using safe crossings to dividing distributor roads which includes cycle infrastructure.

The National Cycle Network Route 21, London to Paris (Avenue Verte) runs through Crawley. Housing and business sites are being developed across Crawley's boundaries in Horsham and Mid Sussex districts adjacent to the Borough. The A264 presents a barrier to commuter access for cycling between Crawley and Horsham. These all point to a need for the LCWIP to identify how priorities for different transport modes, walking and cycling network continuity and infrastructure standards are to be agreed with adjacent authorities. Fortunately, the partnership for the LCWIPs established by WSCC provides a common language and understanding of the approach to developing walking and cycling infrastructure by each district and borough authority within its area. It is recommended that this partnership adopts a Memorandum of Understanding to facilitate this common approach between the local authorities

It was decided that the Crawley LCWIP should cover all the Borough to provide a whole town cycle network of key routes.

The town centre would be assessed first as a core walking zone, with an associated walking route and the Manor Royal Business District subsequently assessed as time permitted.

Click here for the current **Cycle Crawley cycle network map**, which includes Public Rights of Way, footpaths, bridleways, railway and bus stations, bus stops and key destinations.

Governance

Crawley Borough Council's approach to organisation and accountability was considerably simpler than DfT guidance, which assumed a Local Transport Authority lead.

A steering group to guide the project, comprising Crawley Borough Council staff from Planning (policy and development management), Economic Development, Sustainability and Wellbeing teams, and the Cabinet member for Environmental Services and Sustainability along with a representative from the Crawley Cycle and Walking Forum. A consultant from Transport Initiatives supported the process with advice and technical knowledge.

Crawley LCWIP proposals were considered by Crawley Borough Council's Corporate Management Team and Cabinet. The proposals have also been informed by a series of consultations undertaken during the creation of this plan. These are set out in detail later in this document.

Crawley Borough Council aims to lead delivery of its LCWIP using the experience it has gained in implementing sustainable transport infrastructure schemes through the Crawley Growth Programme undertaken with West Sussex County Council. The LCWIP will help to deliver outcomes from the developing Climate Emergency Action Plan, the New Directions Transport and Access Plan and, will support the emerging Local Plan in providing the basis for how development in Crawley will help to shape the future of the town.

Engagement

A public consultation was run early in the LCWIP development process, conducted largely through a survey which received 173 survey responses. There were also interviews with local interest groups concerned with mobility disabilities. Information was also sought into local people's experiences of walking and cycling in Crawley.

The results of the consultation identified commonly used and problematic routes and locations, and particular concerns and practical issues with them. The survey also provided demographic information about the respondents. The consultation was provided online and as a paper document promoted through social media, libraries, schools, community facilities, by the Manor Royal Business Group and at popular locations around the town.

Crawley Cycle and Walking Forum is an advisory group of local residents and representatives of organisations including Cycling UK, Sustrans, Crawley Wheelers, the British Horse Society and Wheels for Wellbeing. It also involves Crawley Borough Council members and invited West Sussex County Council officers. Forum members were involved in reviewing, and contributed to the network planning process. Their familiarity with Crawley and activities in the town enabled them to identify additional local journey attractors and destinations. They were provided with training in cycle and walking route evaluation tools and were key in contributing to determining the proposed LCWIP routes.

The high level results for cycle routes and the walking zone surveys were included in public consultations undertaken for the New Directions for Crawley transport strategy document in early 2020 and further public consultation on the draft LCWIP that included outline route improvement proposals for the whole network was undertaken over the summer of 2020.

Further engagement will normally be undertaken for each of the individual route schemes involve full consultation and local discussion to determine the best measures and designs for implementation.

Timescales

DfT current targets, outlined in the government's Cycling and Walking Investment Strategy, are to double cycling journeys from 2018 to 2025 and to increase walking trips during that time.

The Crawley LCWIP was developed at the same time as the drafting of New Directions for Crawley, a Crawley Borough Council transport strategy document addressing issues and options for shifting from a car-centred to a people-centred approach to mobility and access. The LCWIP will apply for 10-year time frame (to 2030) to accord with the action plan emerging from the now adopted New Directions for Crawley strategy. .

Additionally, in informing the emerging new Local Plan, the LCWIP will help to guide the design and access elements of new development proposals, enabling direct progress in the provision of routes at development site locations or of sites through S106 agreement, or, CIL infrastructure funding contributions. The new Local Plan will apply from 2022-37 and it is expected that the LCWIP will be further developed during that time.

See ***appendix 2.1*** for adopted geographical scope
See ***appendix 2.2*** for the agreed governance statements for the Crawley LCWIP
See ***appendix 2.3*** for the survey questionnaire and results tables

3 LCWIP Stage 2 – Data gathering

3a Numbers and policies

Cycling and walking in Crawley

Crawley's levels of walking and cycling are below national and county averages despite several factors which favour conditions for active travel, such as a relatively flat terrain and amenities and employment locations being within reasonable walking and cycling distances of many people's homes.

% of population	*Cycling at least once a month – any purpose*	*Cycling at least three times a week for travel*	*Walking at least once a week – any purpose*	*Walking at least five times a week for travel*
England	*16.1*	*3.2*	*69.5*	*16.9*
West Sussex	*18.3*	*3.1*	*73.7*	*16.6*
Crawley	*15.3*	*2.4*	*64.9*	*16.1*

Gov.uk 2017/18 tables CW0302 and CW0303

In general, there are several factors contributing to low rates of walking and cycling. These include:

- Perceptions of safety, with dominance of motor vehicles on routes and at key destinations
- Poor journey connectivity, where routes for walking or cycling are not direct, and
- Poor quality of the infrastructure, where surfacing is poor, space insufficient, gaps exist in the network or obstacles impede movement.

Busy roads make streets unattractive with noise, air pollution and increased danger. In Crawley, fast moving traffic and dual carriageways create 'severance' in several areas, cutting through walking and cycling movement 'desire lines' and seriously affecting air quality, such as at the large Air Quality Management Area (AQMA) designated around Hazelwick roundabout.

Abundant car parking is invites car use. Pre-pandemic surveys of Crawley town centre car parking indicate that provision is likely to be in excess of demand even at peak times. Car parking is also readily available in other key shopping, leisure and employment locations.

Crawley's existing cycle and walking infrastructure is largely in poor condition, often with insufficient space for people walking or cycling, gaps in the network and difficult junctions and crossings that are difficult to navigate or dangerous. People with disabilities are often not catered for.

Improving cycling and walking infrastructure and developing transport plans aim to change these imbalances in priorities.

Manor Royal Business District is the largest employment area in the south-east of England with a workforce of around 30,000. The Manor Royal Business Improvement District commissioned a transport study in 2016, which included a survey of employees. They found:

- 17 per cent live within a 15 minute walk of their employment. Only between four and six per cent walk to work
- 50 per cent live within a 30-minute cycle ride of Manor Royal. Only three per cent cycle.

(Manor Royal Transport Strategy, SDG, 2017)

Gatwick Airport is also a major employer in the region with a total workforce of 24,000. Gatwick Airport Limited undertook a wide-ranging survey of employees of all businesses on the campus in 2016 with a responses of more than 5,000. This showed:

- 47 per cent travel less than 10 miles to the airport and 11 per cent travel less than three miles
- 61 per cent commute by car. Only two per cent cycle and one per cent walk.

(GAL Staff Travel Survey, 2016)

National statistics show that women walk more, but cycle less than men. National surveys identify safety fears as a key inhibitor to women cycling. Countries with high quality infrastructure and corresponding high levels of cycling do not experience this gender differential. We can expect

some degree of levelling out of this difference with better, safer infrastructure and increased numbers cycling.

Sustrans runs the Bike It programme in Crawley schools, supported by Crawley Borough Council. The programme encourages all modes of active travel – walking, cycling and using a scooter. Up to 15 schools participate at any one time and typically show measured increases in active travel modes of journeys to school and a reduction in car use. This is particularly marked when the project officer is directly involved at the school. Lack of safe, local cycle infrastructure is thought to be a limiting factor in raising rates of active travel to school and embedding them in longer term practice.

Public consultation

The LCWIP survey brought out general issues and issues relating to specific locations. In addition to indicating participants' favoured routes, it identified locations where some shorter term interventions could improve the existing cycle and walking networks through clearing vegetation and repair or maintenance.

The survey confirmed that cycling on both footways and shared paths can be a source of conflict, arising from genuine and perceived risks of collision and that better, separated cycle tracks are needed. This is borne out by the experience of Crawley Borough Council in dealing with public complaints about cycling on footways and even designated shared paths.

Key issues raised in the public survey on walking and cycling included (in no particular order):

- Improving surfacing
- Vegetation blocking pathways
- Need for segregated cycle tracks
- Wider footways and cycleways
- Better pedestrian crossings
- Better lighting of route ways
- Reduce vehicle numbers
- Provision of bike storage (personal and public).

Discussions with Crawley Transport Action Group, which addresses access for people with mobility disabilities, highlighted infrastructure quality issues, for example, identifying locations where recently upgraded pedestrian surfaces at crossings and junctions made wheelchair use unnecessarily unstable through poor design.

In contrast to the initial survey, the follow up consultation on the draft LCWIP network of routes looked for the level of public support and general responses to the draft plan. The consultation was carried out with a brief online questionnaire with space for comments promoted largely through social media. It ran July-September 2020, during the pandemic.

This period coincided with the government's Emergency Active Travel Fund (EATF) scheme, set up in response to travel constraints due to the Covid-19 crisis. The EATF scheme introduced rapid 'pop-up' cycle lanes with light protection, aimed at providing social distancing space for safe commuting and other essential journeys. However, they were largely poorly designed and without consultation or engagement. They evoked some hostile responses and were later withdrawn. There was inevitable confusion between the purpose of the LCWIP consultation and the EATF 'pop-up' cycle lanes, evident in the responses.

Despite this, a large majority of respondents agreed it was important to make it easier for people to cycle and walk in Crawley and a smaller majority said that LCWIP network proposals would make cycling more accessible.

See **appendix 3a.1** for summary of follow up consultation on the draft LCWIP

Crawley Cycle and Walking Forum data

Forum members CTC (now Cycling UK) and Sustrans had undertaken qualitative evaluation of existing cycle infrastructure in Crawley in 2008 and provided a report on cycle infrastructure in the Manor Royal Business District. This work generated a high level list of prioritised proposed cycle infrastructure improvement schemes, which provided the basis of discussion with West Sussex

County Council and Crawley Borough Council on delivering improvements. The evolved list provided Crawley's community input into the County Council's Walking and Cycling Strategy in 2016 and helped to inform the cycle route selection for the Crawley Growth Programme, alongside Transport Initiatives' work following the Crawley Cycle Network Review (2017).

Crawley Borough Local Plan 2015-2030

Appendix 3a provides a more comprehensive list of policies and web links to relevant Local Plan documents.

Current key policies in the Crawley Borough Local Plan that set the context for the LCWIP include:

SD1 - Presumption in Favour of Sustainable Development

Development will be supported where it meets a number of strategic objectives, including:

- *Progress towards Crawley's commitment to being carbon neutral by 2050 and adapts to climate change;*
- *Complements Crawley's character as a compact town within a countryside setting, developed on a neighbourhood principle and maximises the use of sustainable travel;*
- *Protects, enhances and creates opportunities for Crawley's unique Green Infrastructure;*

CH2 – Principles of Good Urban Design

This includes objectives:

- *make places that connect with each other and are easy to move through, putting people before traffic and integrating land uses and transport networks;*
- *provide recognisable routes, intersections and landmarks to help people find their way around;*

IN3 Development and Requirements for Sustainable Transport

Development should be concentrated in locations where sustainable travel patterns can be achieved through the use of the existing transport network, including public transport routes and the cycling and walking network.

The Crawley Local Plan 2015-2030 identifies current housing growth areas as:

- Crawley town centre
- Forge Wood neighbourhood
- Kilnwood Vale (outside Crawley boundary in Horsham district)
- Pease Pottage (outside Crawley boundary in Mid Sussex district).

The LCWIP considers these housing areas, along with the possible impact of potential future housing development in adjacent locations to the west and east of the town identified in the Draft Crawley Borough Local Plan 2021-2037.

Draft Crawley Borough Local Plan 2021-2037 (February 2021)

Key policies in Crawley's emerging Local Plan that set the context for the LCWIP include:

Strategic Policy ST1: Development and Requirements for Sustainable Transport
Development should be located and designed so as to encourage travel via the walking and cycling network and public transport routes, while reducing dependency on travel by private motor vehicle (also see Policy CL3 and CL4). This should include:
i. Designing developments to prioritise the needs of pedestrians, cyclists and users of public transport over ease of access by the motorist;
ii. Providing an appropriate amount and type of parking in accordance with Policy ST2;
iii. Phasing the development process so that walking and cycling infrastructure forming part of the development is in place and usable at the point of first occupation;
iv. For development which generates a significant demand for travel, and/or is likely to have other transport implications: contributing to improved sustainable transport infrastructure off-site, including, where appropriate, bus priority measures, enhanced passenger information, and routes identified in the council's Local Cycling and Walking Infrastructure Plan; '

Policy CL3: Movement Patterns, Layout and Sustainable Urban Design
All development should seek to:
1. Use land more efficiently and sustainably, integrate land uses and transport networks. It should build upon, connect to, enhance and extend sustainable movement, in turn maximising opportunities for compact development and sustainable travel and increased levels of sustainable transport modal share.
2. Put people before traffic and encourage walking and cycling through establishing a layout of pathways which:
i. Understand and respond to the wider borough pattern of movement, demonstrating how walking and cycling connections will enhance and integrate schemes with Crawley Town Centre, local centres, transportation hubs, schools and employment areas.
ii. Connect new development to areas of rural open space and/or large urban areas of green open space and ensure new route alignments follow direct desire lines as much as possible allowing for through routes to be straight and direct, providing clear, legible and obvious linkages to adjoining areas.
iii. Ensure that buildings are orientated to overlook movement corridors in order to provide passive supervision and safety.

In addition to the above, larger schemes will be required to establish a development form based on sustainable compact layout and scale. These must:
a. Be planned and located adjacent to stations, stops or interchanges along existing segregated, high capacity, high frequent public transport corridors; and
b. Be designed and laid out to ensure future residents and users are within eight minute walking distance of such rail stations or bus stops.

The emerging Local Plan's identification of development areas, existing housing and employment, amenities and transport loci informed the identification of likely journey corridors for the LCWIP.

Click here for the ***emerging*** **Crawley Borough Local Plan 2021-2037 map** showing future development areas, schools, shopping and key facilities.

Crawley Growth Programme

The Crawley Growth Programme is underpinned by principles of developing sustainable transport, including by improving cycle infrastructure and access to transport interchanges. It focuses on the town centre and Manor Royal as linked employment and development areas and identified key commuter cycle routes, on a whole route basis, rather than isolated locations (as had happened in the past). The Transport for London Cycle Level of Service evaluation tool was used to assess proposed improvements to selected routes.

See **appendix 3a.2** for the list of current and draft Local Plan policies relating to cycling and walking in Crawley
See **appendix 3a.3** for prioritised cycle route proposals outlined for the Crawley Growth Programme.

3b Identifying route options for the LCWIP

Crawley's existing cycle network

Crawley Borough Council commissioned a review of its existing cycle network from consultancy Transport Initiatives, which reported in the Crawley Cycle Network Review (2017). Pre-empting the LCWIP, it included:

1. Classification of tracks (paths), roads and crossings throughout the whole town through an assessment of the level of Bikeability skill (levels 1-3) required to safely use each element. This identified where safer cycling might be undertaken without improvement, where improvements could make it safe to cycle and crossings that can enable cycle connectivity could be improved.
2. Analysis of 'mesh density' of the designated cycle network to see how well it reaches people across Crawley
3. 'Porosity' analysis showing how permeable zoned areas across the town are for people cycling, the zones being identified by boundaries formed by primary roads, rail or other barriers, and where 'gateways' access is provided
4. Current and potential demand for cycling to work identified with the Propensity to Cycle Tool (PCT) using census data to identify desire-line corridors and corresponding residential areas which, with network improvements, could attract higher cycling rates
5. An audit of town centre public cycle parking.

The review provided a comprehensive cycle infrastructure assessment of Crawley with data supplied in GIS formats which could inform development of LCWIP route proposals and where to target improvements for secondary cycle connectivity through and between neighbourhoods.

This review enabled Transport Initiatives to draw up a list of cycle route proposals for the Crawley Growth Programme. A number of these routes were taken through to high level design proposals and costings. The Crawley Growth Programme aims to deliver one or more of these cycle schemes, which also correspond with routes identified through the LCWIP.

See appendix 3b.1 for key results of the 2017 Crawley Cycle Network review, including: porosity map, mesh density map, Cycle Skills Network Audit maps

Trip generators

Identifying route options started with identifying the likely origins and destinations for the journeys they would serve.

Trips origins are largely identified as residential areas. Census data is available aggregated into defined areas with comparable populations called Output Areas and grouped as Super Output Areas (SOA) for neighbourhood statistics. High density populations have a smaller defined SOA and lower density populations a larger SOA. A centroid point location marker is provided for each SOA. The centroid provides a locus for mapping a residential origin.

For destinations, DfT suggests looking at journey to work areas. Crawley is home to Manor Royal Business District and Gatwick Airport, as well as a large shopping centre and is therefore a major employment centre as a town with three large employment locations and several further key sites.

Commuters leaving Crawley daily for work elsewhere number 19,000 and inward commuters, 43,000, resulting in a net inward commuting population of 24,000. This means it is important to consider Crawley's railway stations as key origins of journeys within the town, as well as destinations for leaving the town. The important transport interchanges for multi-stage journeys, with connections with bus services and onward travel by bike and foot are at:

- Gatwick Airport Station that serves the airport and Manor Royal and has direct rail links to London, Brighton and stations to Portsmouth and Southampton.
- Three Bridges Station, which also serves Manor Royal, and has direct rail links to London, Brighton and stations to Portsmouth and Southampton.
- Crawley Station, that is located adjacent to the major shopping area in the town centre, and provides access to and from London and Portsmouth/Southampton.

Cycle and walking access to all these stations has some serious limitations.

Crawley Borough Council provided GIS data for mapping existing business sites and potential future housing and business development. Some minor mapping adjustment to SOA centroids was necessary to enable them to be used as practical point locations for trip origins. SOA centroids, current business sites and future residential and business development map icons were weighted to reflect populations and workforce size.

Additional destinations were identified from OS maps and local knowledge of key trip attractors. Those considered include:

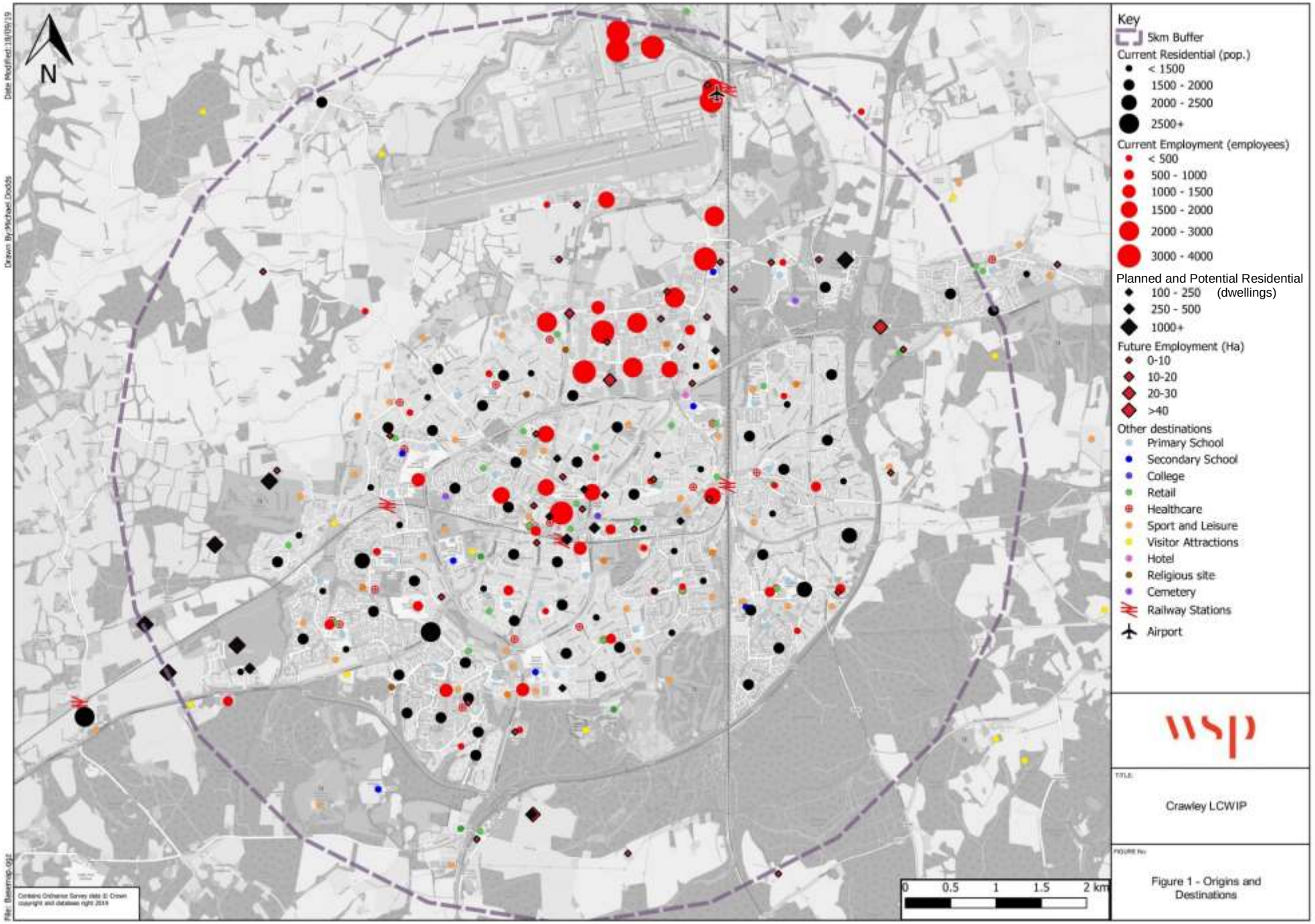
Key destinations

- Town centre – major shopping, cafes and office area, night time economy, employment and transport hub (rail and bus station)
- Manor Royal Business District – key employment centre, industry and offices
- County Oak – retail and business area, main recycling and waste management centre
- Gatwick Airport and railway station – key employment centre and regional transport hub
- Three Bridges Station – regional rail hub and Stephenson Way industrial site
- The Hawth – regional theatre and arts hub between the town centre and Three Bridges
- South Crawley: K2 Crawley leisure centre, football stadium, Tilgate Park, Tilgate Nature Centre and Tilgate Forest Golf Centre.

Key origins and other destinations

- All neighbourhoods, notably:
  - Ifield and Langley Green with rugby, cricket and golf clubs, Mill Pond, temples
  - Forge Wood, a developing neighbourhood in the north east with limited access points
- Cross-boundary developments including Kilnwood Vale, , and Pease Pottage, that are currently being developed
- Schools, college, religious centres
- Medical centres and hospital
- Restaurants, pubs, hotels, supermarkets
- Sports fields, green spaces and bridleways.

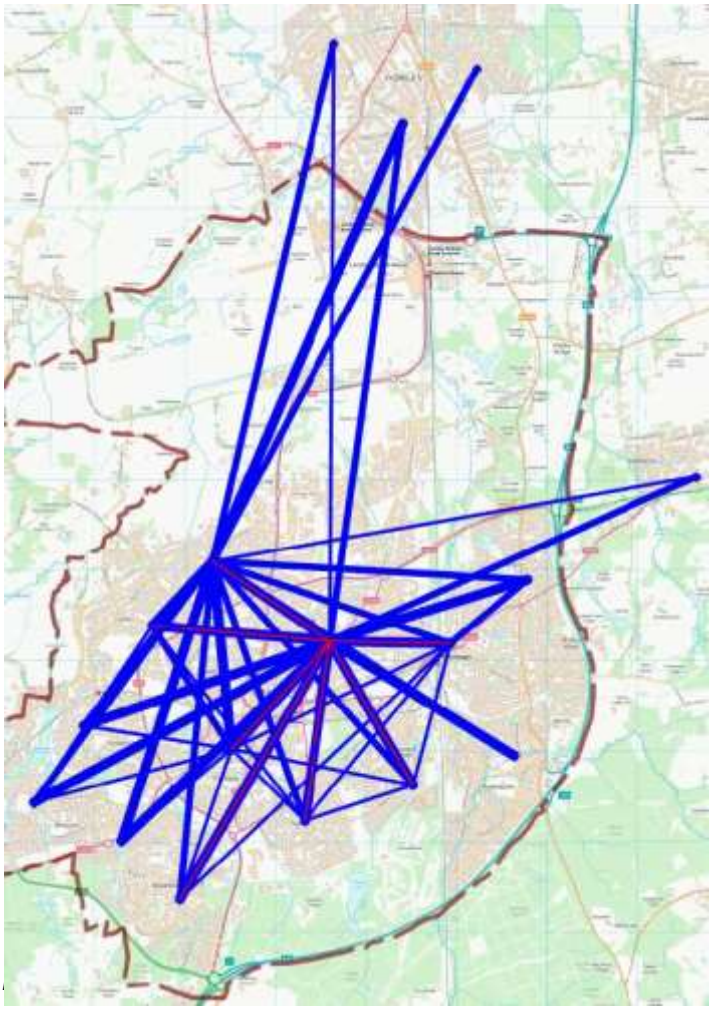
In addition to review by the steering group, Cycle and Walking Forum members also reviewed and agreed the list of origins and destinations set out on the following page.


Key
5km Buffer
Current Residential (pop.)
< 1500
1500 - 2000
2000 - 2500
2500+
Current Employment (employees)
< 500
500 - 1000
1000 - 1500
1500 - 2000
2000 - 3000
3000 - 4000
Planned and Potential Residential
100 - 250 (dwellings)
250 - 500
1000+
Future Employment (Ha)
0-10
10-20
20-30
>40
Other destinations
Primary School
Secondary School
College
Retail
Healthcare
Sport and Leisure
Visitor Attractions
Hotel
Religious site
Cemetery
Railway Stations
Airport
N
0 0.5 1 1.5 2 km
Crawley LCWIP
Figure 1 - Origins and Destinations

Propensity to Cycle Tool

The Propensity to Cycle Tool (PCT) aims to identify likely route corridors where cycling has the greatest potential to grow and provides estimated figures for their use. The PCT selects census SOA centroids and links them directly to employment locations or schools as straight line corridors to indicate the basis for identifying potential routes for cycling to work or to school. The SOA data on rates of cycling are then weighted using topographical data and current cycle usage and selected targets or expectations of different policies such as the UK government target to double cycling or Dutch levels of cycling, to provide estimates of potential cycle rates associated with those routes.

Since PCT analysis is based on 2011 census and travel to school data and uses only employment and school destinations, its key use is to generate corridors for comparison with the corridors drawn from the supplemented mapped data and local knowledge, to raise questions about or confirm prioritised corridors. It is not sufficient to provide the sole source of data for identifying corridors, especially in Crawley's circumstance where the shopping centre is a key trip attractor and railway stations play roles as trip origins for major incoming commuter travel.



4 LCWIP Stage 3 – Cycle network planning

Development of the network plan was guided by Transport Initiatives consultancy, which also undertook on-the-ground evaluation and drafting route proposals. Additional route assessment was undertaken by the Crawley Cycle and Walking Forum and volunteers who were given technical training. Training and further guidance was provided by WSP consultants through the West Sussex County Council programme.

Corridors (desire lines)

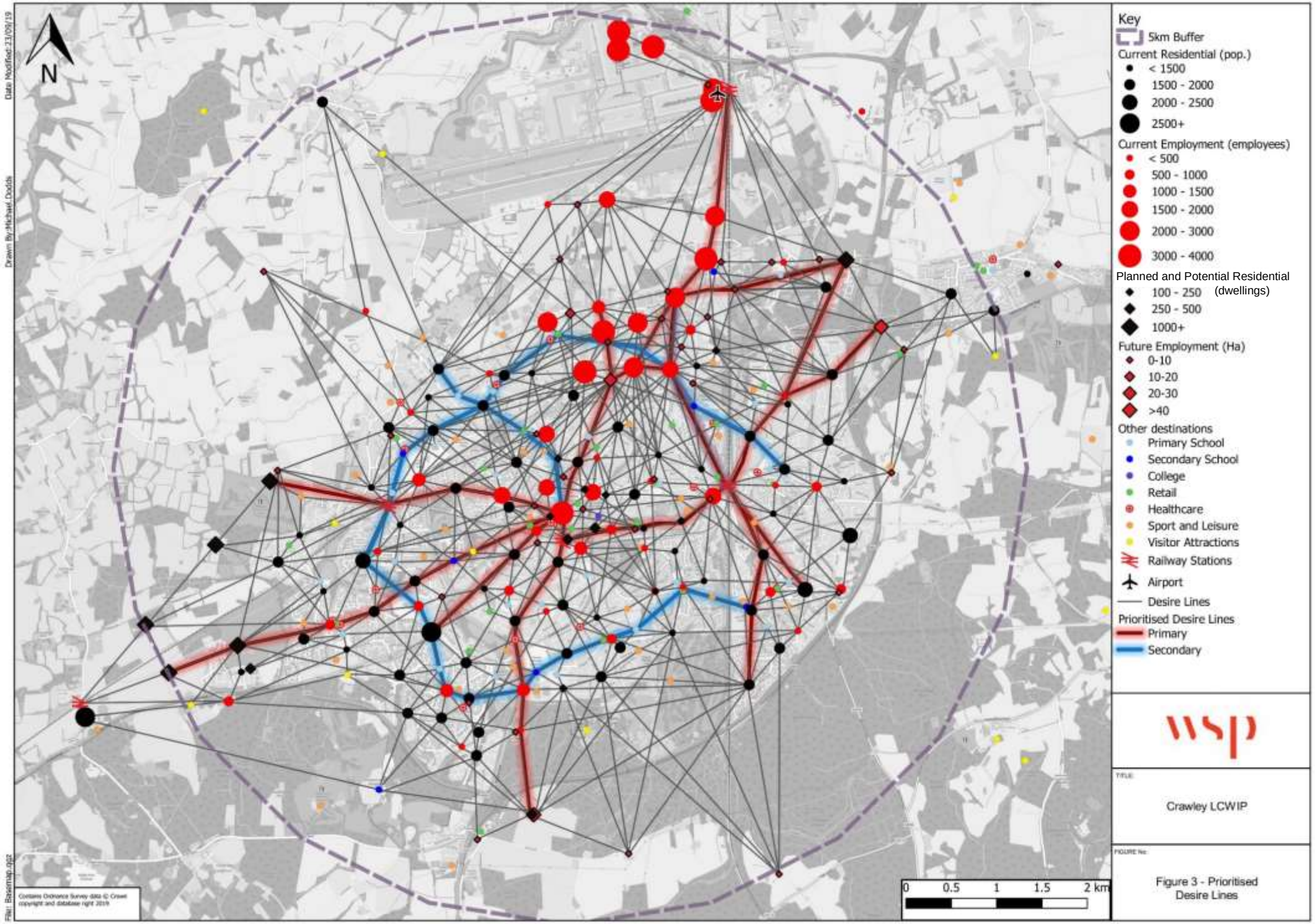
Clustered SOAs (residential locations) – mapped in black dots for 2011 populations and diamonds for subsequent planned or potential future housing development and sized according to population density data – indicate trip origins. These were fairly evenly scattered across much of the borough, except to the north where business and industrial areas are located.

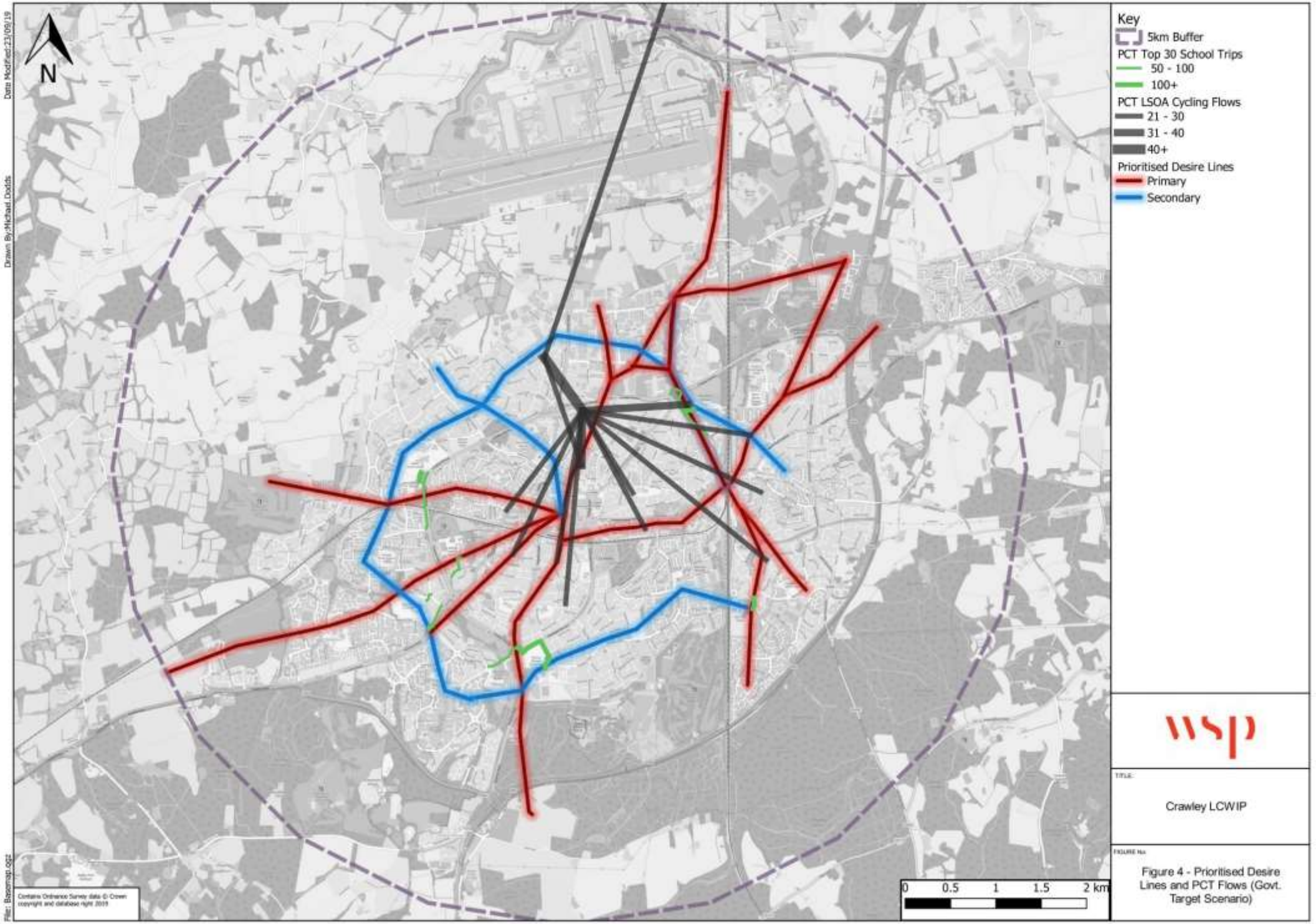
Employment sites – mapped in red dots for current business and diamonds for planned development and sized according to density – indicate key trip destinations. These were more clearly clustered, largely around Gatwick, Manor Royal and the town centre. Some directly south are also close to other key trip attractors, indicating a likely key corridor.

Mapped origin and destination points were manually linked with straight ‘desire’ lines. Clusters, or density of the lines, along with the size of the weighted mapped SOA and employment icons, helped to indicate potentially useful routes and enabled priority corridors to be estimated; see figure 3 overleaf.

Most prominent were the corridors to the employment clusters to the north and the railway stations, bearing out the high levels of inward and outward commuting, and to the town centre. Patterns of routing corridors from loose linear clusters of residential origin points could be identified where further points along the lines could be linked to reinforce the desirability of the corridor. It should be remembered that this mapping does not include the weighting for cycle use, which the PCT does.

The PCT tool was run with the government target for doubling cycle rates, and its output was overlaid on the corridor mapping undertaken by hand. The main disconnect with the manual mapping was due to the absence of the town centre shopping area from the PCT data, the displaced location of the employment central locus (centroid) for Manor Royal along with the absence of Forge Wood (as a neighbourhood developed after the last census) and rail stations. However, it could be seen that in shifting the Manor Royal centroid to a more accurate geographical focus, that corridors had a reasonable degree of correlation and the potential for Gatwick Airport routes was confirmed. Schools identified by the PCT with cycling potential aligned well with manual corridors; see figure 4.


Date Modified: 23/09/19
Drawn By: Michael Dodds
File: Basemap.qgz
N
Key
5km Buffer
Current Residential (pop.)
< 1500
1500 - 2000
2000 - 2500
2500+
Current Employment (employees)
< 500
500 - 1000
1000 - 1500
1500 - 2000
2000 - 3000
3000 - 4000
Planned and Potential Residential
100 - 250 (dwellings)
250 - 500
1000+
Future Employment (Ha)
0-10
10-20
20-30
>40
Other destinations
Primary School
Secondary School
College
Retail
Healthcare
Sport and Leisure
Visitor Attractions
Railway Stations
Airport
Desire Lines
Prioritised Desire Lines
Primary
Secondary
0 0.5 1 1.5 2 km
Contains Ordnance Survey data © Crown copyright and database right 2019
wsp
TITLE:
Crawley LCWIP
FIGURE No:
Figure 3 - Prioritised Desire Lines


N
Key
5km Buffer
PCT Top 30 School Trips
50 - 100
100+
PCT LSOA Cycling Flows
21 - 30
31 - 40
40+
Prioritised Desire Lines
Primary
Secondary
0 0.5 1 1.5 2 km
Crawley LCWIP
Figure 4 - Prioritised Desire Lines and PCT Flows (Govt. Target Scenario)

Route Selection

The translation of corridors to route options demanded a combination of practical geography, experience, local knowledge and formal evaluation using the Route Selection Tool (RST) provided by the DfT.

The practical process of identifying potential routes to match the corridor 'desire lines' as far as possible involved group work with maps and local experience of the streets in each area. Residential origins, or other route start and end points, were largely planned at neighbourhood shopping parades, key facilities or other routes to ensure connectivity and utility.

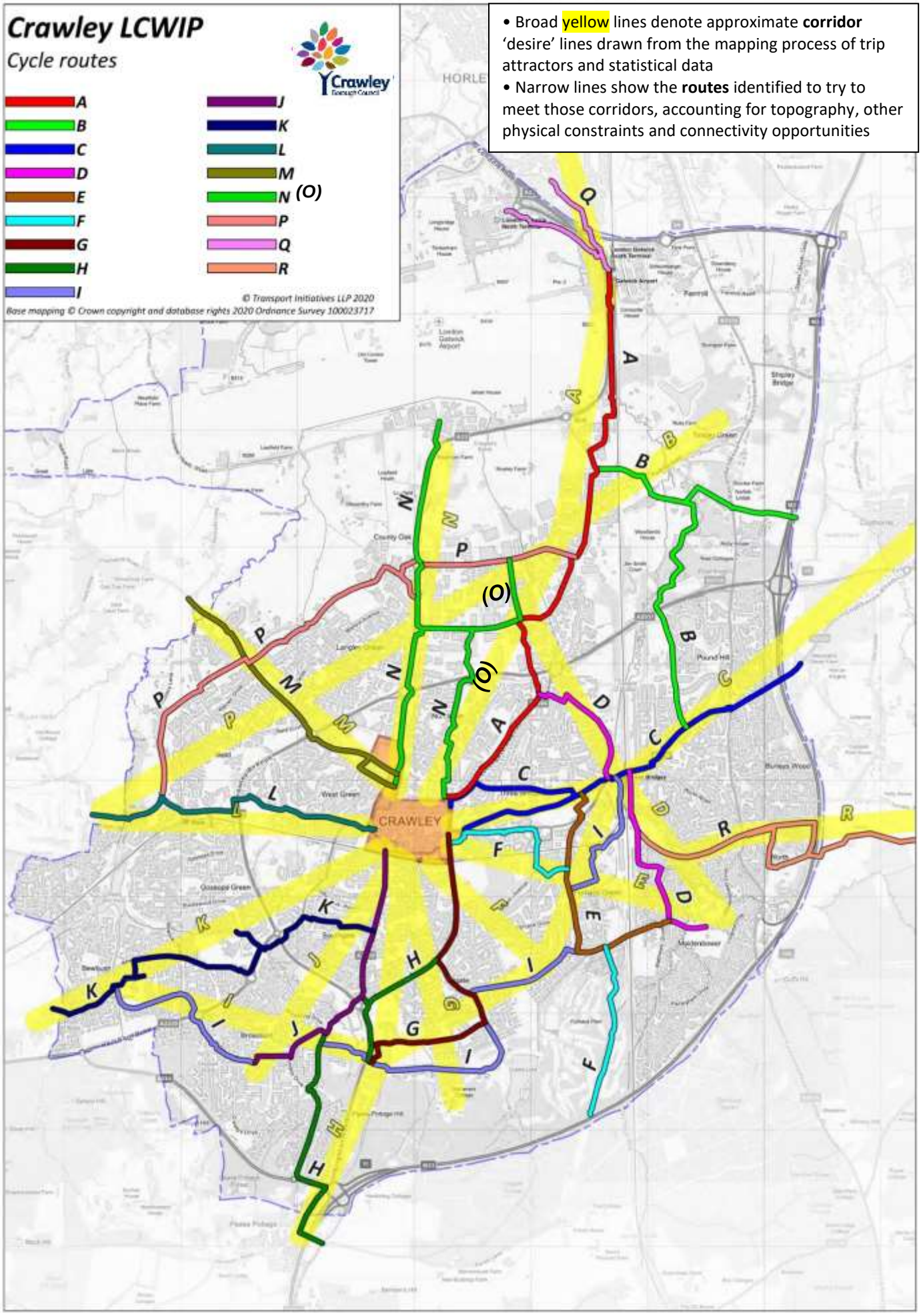
Working within limitations of general street layouts and barriers such as railway lines or building construction, streams or protected woodland, but not by path or carriageway widths, street furniture or similar more minor elements, the emerging routes identified were:

A	Gatwick Airport to town centre via Manor Royal and Northgate
B	Pound Hill to Manor Royal via Forge Wood
C	Copthorne to town centre via Three Bridges (limited to Pound Hill within Crawley boundary)
D	Maidenbower to Manor Royal via Three Bridges
E	Maidenbower to town centre via Furnace Green
F	Tilgate Park to town centre via Furnace Green
G	Tilgate to town centre (extended to K2)
H	Pease Pottage to town centre via K2 Crawley/Tilgate (joins route G)
I	Bewbush to Three Bridges via Broadfield and Tilgate Nature Centre (split around route G)
J	Broadfield to town centre
K	Kilnwood Vale to town centre (joins route J)
L	Ifield to town centre
M	Ifield Avenue to town centre
N	Lowfield Heath to town centre *(subsequently split into a separate route O)*
P	Ifield to Manor Royal via Langley Green
Q	Gatwick Airport to Horley (not developed within this LCWIP)
R	Worth Way (not developed within this LCWIP)

These would be translated into defined and evaluated routes with the RST.

Some experience of route evaluation at Crawley Borough Council had been gained through previous use of the TfL Cycle Level of Service (CLoS) design evaluation method. This is a tool which enables assessment of aspects of a route design performance, covering safety, directness, coherence, comfort, attractiveness and adaptability. It scores factors within each of those aspects, with some critical factors which can 'fail' the design and recommends a minimum total score for a successful design.

The RST provides a similar style of guided evaluation of an *existing* route against a set of design outcomes, and assesses the potential for improvements to meet the required levels of given criteria. The criteria addressed are directness, gradient, safety, connectivity, comfort and critical junctions which will impact on the ability of the route to meet the standard. The tool scores each aspect and indicates overall value of the route.


Crawley LCWIP
Cycle routes
A
B
C
D
E
F
G
H
I
J
K
L
M
N (O)
P
Q
R
© Transport Initiatives LLP 2020
Base mapping © Crown copyright and database rights 2020 Ordnance Survey 100023717
• Broad yellow lines denote approximate **corridor** 'desire' lines drawn from the mapping process of trip attractors and statistical data
• Narrow lines show the **routes** identified to try to meet those corridors, accounting for topography, other physical constraints and connectivity opportunities
CRAWLEY
HORLEY

The RST process requires breaking down the route into consistent links, or sections, and junctions, identified according to the characteristic of the section and evaluating each against the RST criteria. One section might be a stretch of unprotected carriageway, with a high volume of traffic (scoring low) and the next where the route transfers to an off-road, wide track (scoring high). A ‘critical’ junction could invalidate an otherwise high-scoring route.

This process is undertaken through walking the proposed routes and scoring sections on site in a spreadsheet for each criterion and specified conditions. The spreadsheet provides a summary score of performance under existing conditions and for potential performance where improvements have been included.

In view of the large number of routes in the draft network and the need to limit this first iteration of the Crawley LCWIP, two routes (Q and R) were omitted from the evaluation process and route C truncated to the Borough boundary. The assessed routes were reviewed by Transport Initiatives who identified improvement measures at a high level and some extra route linkages to extend functionality at relevant opportunities. Final proposals were agreed through wider review by steering group members and Transport Initiatives provided outline cost estimates for each element of each route.

The individual route plans for 16 routes showing the sections on which each route was evaluated.

See **appendix 4.1** for individual cycle route plans with section annotated with outline improvements, summary RST and outline costs.

Routes are summarised here for length, typical cycling time and broadly estimated costs.

NB: *Some routes share some sections with other routes. In order to avoid double counting these are split into shared and unique sections. Some routes have short spurs to link key destinations such as nearby schools.*

Crawley LCWIP routes summary and cost estimates

Route		Shared routes	Length (km)	Av time @ 9km/hr (mins)	Upper costs - includes all route elements and preferred major infrastructure options.*			Lower costs - omits some elements, uses short term or minimal infrastructure where functional.		
					Est cost entire route (£m)	shared section cost (£m)	Est costs across network (£m)	Est cost entire route (£m)	shared section cost (£m)	Est costs across network (£m)
A	Gatwick Airport to town centre via Manor Royal and Northgate	-	5.57	37	7.20	0	**7.20**	4.06	0	**4.06**
B	Pound Hill to Manor Royal via Forge Wood	-	4.21	28	1.93	0	**1.93**	0.26	0	**0.26**
C	Copthorne to town centre via Three Bridges (from Crawley boundary)	-	2.65	18	5.10	0	**5.10**	1.92	0	**1.92**
D	Maidenbower to Manor Royal via Three Bridges	C	3.25	22	5.78	1.20	**4.58**	2.67	0.06	**2.61**
E	Maidenbower to town centre via Furnace Green	D	2.76	18	2.19	1.53	**0.66**	0.385	0	**0.38**
F	Tilgate Park to town centre via Furnace Green	E	4.10	27	2.53	0.17	**2.35**	1.55	0.153	**1.40**
G	Tilgate to town centre (extended to K2)	-	3.02	20	4.52	0	**4.52**	1.74	0	**1.74**
H	Pease Pottage to town centre via K2 Crawley/Tilgate	G, J, I	5.93	40	6.73	1.88	**4.86**	5.03	1.532	**3.50**
I	Bewbush to Three Bridges via Broadfield and Tilgate Nature Centre	E, G, H, J	5.68	38	7.26	0.91	**6.35**	2.77	0.759	**2.01**
J	Broadfield to town centre	-	2.50	17	2.74	0	**2.74**	0.93	0	**0.93**
K	Kilnwood Vale to town centre	J	3.59	24	8.43	0.03	**8.41**	2.76	0.027	**2.73**
L	Ifield to town centre	-	2.86	19	0.82	0	**0.82**	0.79	0	**0.79**
M	Ifield Avenue to town centre	-	2.85	19	4.80	0	**4.80**	2.39	0	**2.39**
N	Lowfield Heath to town centre	-	3.13	21	9.70	0	**9.70**	2.41	0	**2.41**
O	Manor Royal to town centre (west)	A	3.20	21	2.14	0.50	**1.64**	0.301	0	**0.30**
P	Ifield to Manor Royal via Langley Green	N	4.86	32	4.33	1.74	**2.59**	3.02	0.60	**2.42**
	Totals		**60.15**				**68.27**			**29.85**

This excludes some options which are likely to be prohibitively costly, though proposals are retained.
Costs include designs, surveys, permissions etc, but exclude officer time and exceptional conditions.

Here is annex B of the DfT LCWIP guidance for details of the **Route Selection Tool criteria and scoring**.

Design standards

West Sussex County Council has its own set of design guidance adopted in 2018. This, in turn, references the London Cycling Design Guide, the Greater Manchester Design Standards, Sustrans Design Handbook and DMRB IAN 195/16, advising that these publications should inform design where it is not detailed in the West Sussex County Council guide. In the absence of national standards, the West Sussex County Council guide provided minimum standards for Crawley's initial draft outline LCWIP proposals.

The Department for Transport (DfT) released its new cycling and walking policy document, Gear Change, in July 2020. This radical departure from typical practice, reflecting the experience of successful cycling infrastructure design in other parts of northern Europe, was accompanied by a long-awaited Local Transport Notice (LTN 1/20) set of design guiding standards. Crawley outline design proposals were subsequently amended to meet LTN 1/20 standards.

Gear Change tells us this design guidance *'sets out the much higher standards we will now require if schemes are to receive funding, along with a number of failings, common in the past, which we will either no longer allow at all, or will strongly discourage... We would rather do nothing than do something inadequate. The standards will be enforced by a new inspectorate, Active Travel England… we will expect Local Authorities and developers to utilise the guidance in the design of their schemes regardless of whether they are seeking Government funding.'*

It is Crawley BC policy that *all* new cycle and walking infrastructure should meet LTN 1/20 guidance standards (and any updates to this).

Click **LTN 1/20** for the July 2020 DfT design guide.
Click **Gear Change** **A bold vision for cycling and walking** for the DfT policy document.
The **WSCC Cycling Design Guide** can be found here.

See **appendix 4.2** for summary LTN 1/20 guidance on protection and lane and track widths.

There are choices in designing cycle routes: they may be more leisure-orientated, attractive routes away from traffic, which tend to be slower and indirect, particularly where motor vehicle routes are prioritised for directness; or utility-orientated, direct routes, usually alongside road traffic that are faster and direct. It was decided that the LCWIP routes should be planned for utility, identifying cycling as a means of transport rather than just a leisure activity. This is not least because this demands good design to provide safe infrastructure and ensures other transport users recognise the function of cycling as a transport mode requiring highway space.

Historically, shared footway/cycleway tracks had been a favoured design to separate cycling from other road traffic. This can work in rural areas with very low pedestrian use and low levels of cycling. However, in urban areas with higher levels of walking and cycling traffic, sharing of the two different modes, with very different typical speeds severely reduces utility for both. This is reflected in the consultation undertaken for this LCWIP and regular complaints from Crawley residents. Vulnerable pedestrians do not feel safe, cyclists are presented with obstacles and frequently slowed to a point where a bike's advantage as a mode of transport is lost and there is often insufficient space. It can result in friction. For this reason, cycleway design separated from both pedestrians and motor traffic is required, with minimal interruptions.

5 LCWIP Stage 4 – Walking zone and route planning

The LCWIP is being developed in the context of a wider transport and access strategy for Crawley. This proposes that neighbourhoods are prioritised as 'low traffic zones', which cars can access but not cut through and enable attractive, safe walking within the zone. The walking zone assessment undertaken for the LCWIP provides a model for assessing conditions and measures for low traffic neighbourhoods with the potential for community use of the Walking Route Assessment Tool (WRAT) to provide a systematic approach and comparable standard.

Equalities

The 'walkability' of an area or link (access route) is of particular importance in meeting needs of people with disabilities and mobility or other needs as well as those using child buggies. Poor street design, use of barriers and street furniture can create obstacles for many people, including those referenced by the Equalities Act 2010. Walking area and route assessments can help to enable full compliance with the Act.

Walking Route Assessment Tool (WRAT)

WRAT, a simple assessment tool provided by DfT, enables assessment of an area or link within the zone. WRAT specified criteria address 'walkability' of the areas and links identified by the assessor. The tool provides an easy, guided scoring system and a traffic light, good / adequate / poor, indicator for each criterion. 'Poor' indicates a fail for the criterion and a score below 70 per cent is a fail for that area or link.

Core criteria	Sub criteria	Issues to be assessed
Attractiveness	**1 Maintenance**	Maintenance of footways, removal of vegetation, rubbish and care of street furniture
	2 Fear of crime	Evidence of vandalism and how well the area is overlooked and observed
	3 Traffic noise, pollution	Level of traffic noise and pollution affecting the area
	4 Attractiveness – other	Any other issues such as lighting, excessive guardrails and bollards, refuse sacks etc.
Comfort	**5 Condition**	How level the footways are and the quality of the surface
	6 Footway width	Generally over 2 metres wide is good and less than 1.5 metres not good
	7 Crossing width	The width of staggered crossings, specifically the width of refuges, islands and reservations
	8 Footway parking	How the footway is obstructed by footway parking
	9 Gradient	Are there significant gradients on the footway?
	10 Comfort – other	Other obstructions such as access gates opening onto footway, bus shelters, bins and other barriers
Directness	**11 Footway provision**	How footways provide for pedestrian desire lines
	12 Location of crossings	How the crossings are located in relation to pedestrian desire lines
	13 Gaps in traffic	Can pedestrians crossing away from crossings find adequate gaps?
	14 Crossing delay impact	How staggered crossings and waiting times affect journey times
	15 Green man time	Length of green man time
	16 Directness – other	Are bus stops etc. accommodated? Is layout confusing, leading to potential severance?
Safety	**17 Traffic volume**	How much traffic is there and how close is it to pedestrians?
	18 Traffic speed	How fast the traffic is moving and its proximity to pedestrians
	19 Visibility	How well pedestrians can see and be seen
Coherence	**20 Dropped kerbs and tactile paving**	Are dropped kerbs and tactile paving correct and where they should be?

Walking zones

The areas selected for the LCWIP for assessment as walking zones or routes were:

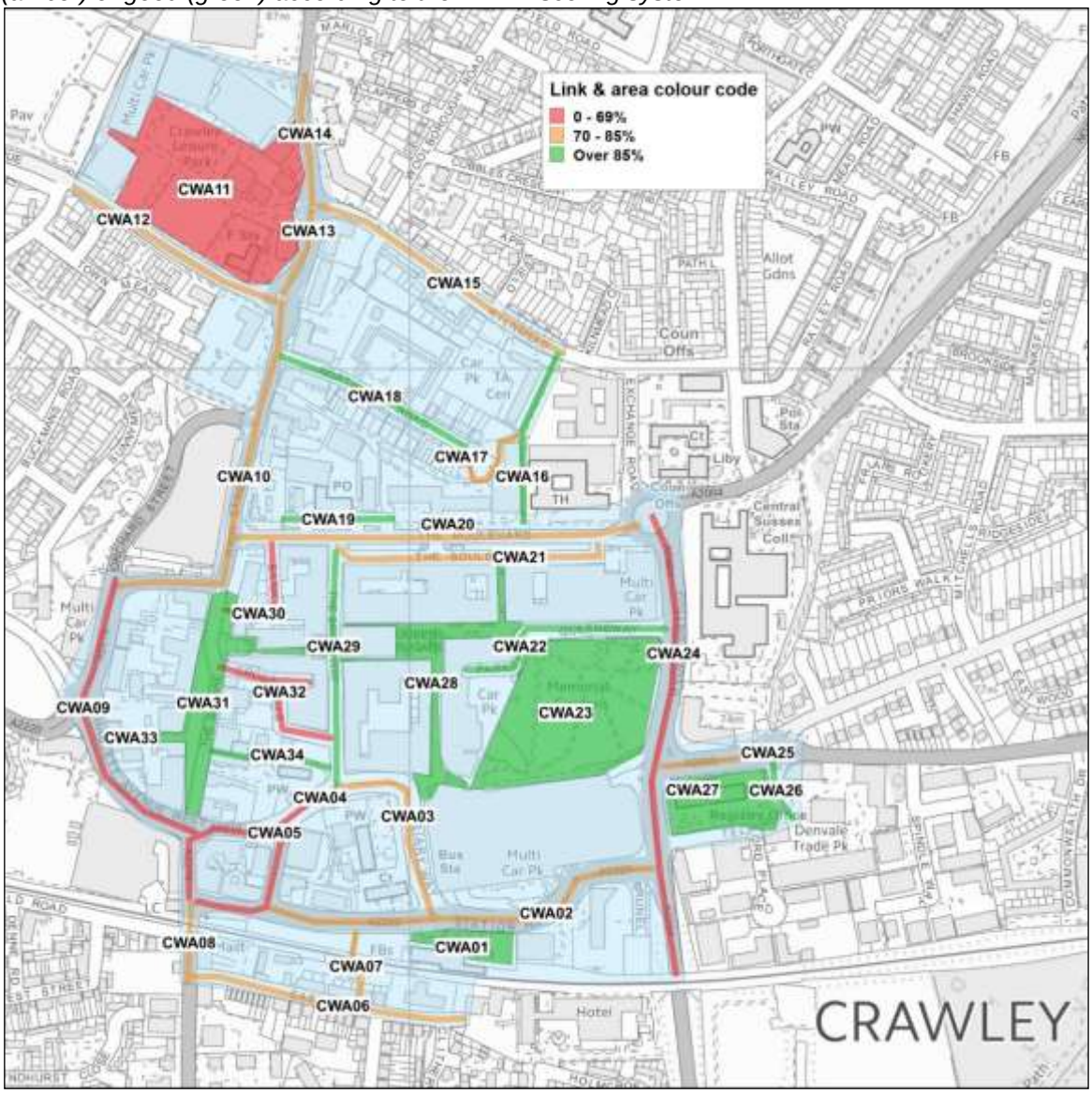
A Crawley town centre and Crawley Leisure Park zones, with a connecting walking route

B Manor Royal Business District

Transport Initiatives undertook the assessment of the town centre, dividing the audit area into 28 links and six areas.

Crawley town centre links or areas were classified according to WRAT criteria:
13 were Good (green)
14 were Adequate (amber), indicating improvements would be of some benefit
7 were Poor (pink), indicating a fail for the area or link.

Town centre walking audit plan below shows results in links and areas classified as poor (pink), adequate (amber) or good (green) according to the WRAT scoring system.



The traffic light method shows where the town centre works well for walking and where it fails.

Fail areas and links

Ref.	Street / area	Score (/ 40)	%
CWA04	Haslett Avenue West	**27**	**67%**
CWA05	Station Road, Station Way, Haslett Avenue West gyratory	**27**	**67%**
CWA09	Pegler Way	**27**	**67%**
CWA11	Crawley Leisure Park	**26**	**65%**
CWA24	College Road	**25**	**62%**
CWA30	Bank Lane	**24**	**60%**
CWA32	Cross Keys	**23**	**57%**

Despite identifying failing elements, the overall evaluation indicates a reasonably good level of walkability for the town centre.

See **Appendix 5.1** for the Crawley town centre core walking zone link and area WRAT scores.

Manor Royal

Time and resource limitations meant that a Manor Royal assessment has not been undertaken for the LCWIP at this stage. However, Crawley Borough Council aims to undertake the assessment, working alongside Manor Royal Business Group, to help develop the plan for the Business District. Manor Royal Business District underwent a review of the 'grey' street infrastructure in 2017 to develop a schedule of improvements, particularly in terms of quality and aesthetic. The LCWIP would help ensure a consistent approach across the town in terms of accessibility.

6 Next steps

Consultation

The Crawley LCWIP is a high level plan which involved public consultation and involvement of stakeholders to determine corridors and routes. The next stage of consultation will be through community and other stakeholder engagement on detailed designs for each route (or routes) as it is taken forward for implementation.

The level of engagement will vary according to the complexity of issues and needs along the route. For example, whether solutions along a section might best be met by filtering the movement of traffic within a neighbourhood, reducing vehicle speeds, cutting rat-running and opening up a safer environment for cycling and walking, or by building separated cycle tracks and crossings alongside a busy main road.

An important element of the engagement will be with stakeholders with mobility disabilities and sensory impairments, and other users such as parents with child buggies, to ensure that Equalities Act requirements are met.

Scheme prioritisation

DfT provides guidance for prioritisation of measures with the Active Mode Appraisal Tool (AMAT). This provides a route benefit to cost ratio by assessing a range of criteria as well as costs, including greenhouse gas emissions, health impacts of increased activity (such as reduced employee sick leave and reduced demands on health services), traffic collisions, journey times, indirect taxation, air quality, noise, infrastructure maintenance, congestion and more. The AMAT will be employed as route proposals are considered for funding.

However, there are many other influencing factors that determine which routes in the proposed network are likely to be brought forward. These include the approval of major developments, the availability of targeted competitive funds, smaller scale site access improvements, neighbourhood priorities or mitigation measures such as reducing vehicle collisions, improving air quality, addressing mobility constraints caused by traffic on children going to school, and, wider transport pressures or opportunities.

Progressing New Directions, the Crawley transport strategy, will involve reviewing traffic circulation and is likely to identify opportunities for developing Low Traffic Neighbourhoods and redirecting vehicle flows. This would free up space for safe cycling and walking and provide options for implementing LCWIP routes.

CBC will reference the LCWIP when considering all land use planning and economic development to bring forward infrastructure improvements where the opportunities arise.

Click on **AMAT** for DfT guidance document.

Funding

The total cost of constructing the full LCWIP network with 16 routes is estimated at between £29m and £68m and would include design, surveys, audit and project management costs, but exclude officer time.

At the time of writing, there are a number of potential sources of funding for developing these routes:

- **Active Travel Fund** – this DfT fund was initiated in an emergency response to mobility and distancing needs of the Covid pandemic in 2020. It has been extended to an annual budget allocation in response to bids from Local Transport Authorities. It is expected that WSCC will typically select one route within the county per year to benefit from the ATF. The ATF budget is unlikely to meet the full costs of many schemes awaiting funding and will be balanced across all authorities in the county, which means that Crawley cannot expect the fund to make substantial contribution to its infrastructure needs in its present form..
- Direct developer investment as part of **regeneration** schemes – all aspects of access by people (as opposed to freight movement) of Crawley regeneration must prioritise cycling and walking.
- **Section 106** contributions and Community Infrastructure Levy (**CIL**) can be drawn from new development where cycle and walking infrastructure can mitigate increases in vehicular traffic that would otherwise arise from the development.

- **The Towns Fund** and **Future High Street** funds – Crawley BC has won £21m government fund in a bid underpinned by the LCWIP to provide a key commuter cycle route linking Gatwick Airport station, Manor Royal Business District and the town centre.
- **Crawley Growth Programme** (extension to the existing programme) – focused on Manor Royal, Three Bridges station and town centre sustainable transport links, also includes good cycle infrastructure linking key locations and rail connections.
- **Air Quality Grant** – as a competitive annual bid scheme, particularly targeting fine particulates and aiming to help deliver the Defra Clean Air Strategy, these grants can provide non-capital funds to support LCWIP schemes delivering a measurable modal shift to active travel.

Covid-19 response

While Covid-19 has dissuaded some people from public transport use, walking and cycling are clear priorities for mobility that is not car-dependent, and for maintaining public health resilience through physical activity.

Monitoring

Crawley currently has five sets of cycle trip counters, two of which are positioned to evaluate cycle trips to and from Manor Royal (Northgate), one each just west (West Green) and south of the town centre (Southgate Avenue) and one to the west of Three Bridges (Pound Hill). It is proposed that all newly-developed cycle routes will include a plan for monitoring and evaluating their use and effectiveness.

Application of the LCWIP

The Crawley LCWIP is referenced frequently in the emerging Local Plan, reflecting local policy within the context of the National Planning Policy Framework. The LCWIP will be a key document for CBC planning and economic development teams when considering developments within the Borough. A short and easily digestible version will be available as supplementary guidance to developers and other stakeholders.

Training and awareness-raising workshops on principles and new ideas behind infrastructure development guidance, particularly in a context of wider street environment and traffic management measures for supporting active travel, will be provided for relevant Crawley Borough Council staff and members, partners and key stakeholders.

Crawley LCWIP 2021

Appendices

Appendix 2.1 Geographical scope
– adopted 7 August 2019

1 Geographical scope

The area covered by a LCWIP is not required to be the entire borough. A rule of thumb is that it could usefully address an area with a radius of 5km from a central locus. Some LCWIPs focus on particular areas or corridors, particularly within larger cities. However, it is proposed that Crawley's LCWIP will cover the **whole borough**, because:

- The town is a manageable size, approximating to the 5km radius from Crawley town centre, with fairly clear boundaries
- There is a spread of existing cycle infrastructure across the town, of variable quality
- A significant amount of work has previously been undertaken on assessing the entire existing cycle network throughout the town, and
- Key areas of Manor Royal and town centre-related transport corridors have previously been evaluated and cycle schemes identified for implementation.

It is intended that the LCWIP will inform and provide detail for the Crawley Local Plan and will contribute to the town's developing transport strategy, New Directions for Crawley. These will ensure that the LCWIP focuses on **neighbourhoods**, particularly in identifying walking zones and key routes. Neighbourhood walking zones should enable safe, direct and uninterrupted walking access to neighbourhood parades and schools from nearby residential areas, with accompanying road traffic management measures. This will demand extensive community engagement in each neighbourhood to achieve ownership and the best outcomes.

There are potential **cross-boundary considerations**, which are likely to impact on the LCWIP:

1. NCN routes 20 and 21 go through Crawley, including the route known as Avenue Verte, the London to Paris route (via Newhaven). This extends to the north through Gatwick Airport to the borough of Reigate and Banstead (Surrey) and some discussion with Surrey County Council may result from our LCWIP work. Links with both authorities to look at cycle infrastructure in that area have previously been established.
2. Cycle and walking access between Horsham and Crawley is important, particularly for commuting to the key employment areas of Gatwick Airport and Manor Royal. Currently there is no safe link across the A264, making this a grossly underused route for cycling at approximately eight miles from the centre of Horsham to Crawley town centre. Partner links with Horsham District Council and West Sussex County Council, established through the LCWIP process, will be pursued to enable provision of route continuity here.
3. Housing developments in neighbouring authorities (Horsham and Mid Sussex district councils) adjoining the Crawley authority boundary will create significant requirements for cycling and walking infrastructure for Crawley Borough Council to ensure active travel access to employment and facilities in Crawley. These include sites at Pease Pottage, Copthorne and west of Ifield. The latter is a Homes England proposal for 10,000 homes.

The LCWIP needs to address cross-authority boundary developments. It will have to identify how transport mode priorities, network continuity and infrastructure standards are to be agreed with adjacent authorities, particularly through the planning process. West Sussex County Council plans to provide templates and processes for this agreement for local authorities across the county.

The first stage LCWIP identifies and prioritises key cycle routes to be developed, some of which extend beyond borough boundaries. It addresses up to three key walking zones, with one linked walking route.

Plans for neighbourhood walking zones will be undertaken in the next development of the LCWIP or using LCWIP tools as neighbourhood development opportunities arise.

A **map** of the town including cycle infrastructure and public transport stops exists as a graphic image *(attached)* and a GIS file. This will form a key tool for initial planning.

Appendix 2.2 Governance
– adopted 7 August 2019

2 Governance

The Crawley BC Sustainability Team is responsible for managing the Crawley LCWIP process.

Responsible Owner for the plan is the current manager for this team and Head of Planning and Economic Development, Clem Smith.
Project lead is Kay Wagland.

The project team is guided by a steering group. The LCWIP Steering Group comprises:

- Clem Smith – Head of Planning and Economic Development – CHAIR
- Cllr Geraint Thomas – cabinet member and portfolio holder for Environment and Sustainability *(succeeded by Cllr Gurinder Jhans, January 2020)*
- Kay Wagland – Sustainability Officer – Project leader
- Louise Skipton-Carter – Sustainability Team Manager
- Richard Mosinghi – Strategic Planning, Planning Officer
- Marc Robinson – Principal Planning Officer
- Gordon Easden – Chair Crawley Cycle and Walking Forum
- Alan Heaton – Wheels for Wellbeing Officer
- Mark Strong – Transport Initiatives consultancy (advisory basis).

Proposals for the Crawley LCWIP will be recommended by Crawley Borough Council's CMT and Cabinet and approved by Full Council. These will be informed by a consultation programme to include a range of representative interest groups.

The Crawley LCWIP is part of the West Sussex County Council LCWIP programme, in which Crawley Borough Council is a partner. This programme provides organisational guidance and technical support, involving WSP consultants provided through the Department for Transport (DfT). It will need to include Crawley's LCWIP.

Timetable

The DfT-funded West Sussex County Council LCWIP programme is to be completed by the end of November 2019. The county council's draft submission to DfT at this time will include a summary of Crawley's prioritised cycle routes and walking zones with outline costs.

Crawley Borough Council will go on to complete its LCWIP by early January 2020 to meet the timetable for delivering its transport strategy and Local Plan.

Note at LCWIP publication, June 2020:

Changes in DfT timetabling and requirements of local authorities participating in the West Sussex County Council programme in late 2019 along with schedules of the Crawley Transport Strategy and emerging Local Plan resulted in a shift in the Crawley LCWIP timetable to accommodate additional DfT-funded technical support and adoption of the draft Plan by Crawley Borough Council cabinet committee.

The very sad and untimely death of Cllr Geraint Thomas meant his councillor role was taken up by his successor Cllr Gurinder Jhans. Cllr Thomas' contribution was much appreciated.

Appendix 2.3 Public survey questionnaire

Help to improve cycling and walking in Crawley

Walking and cycling are key to the future of local transport and access, for our health and our town. You can join us in creating that future for Crawley.
We're developing Crawley's Local Cycling and Walking Infrastructure Plan (LCWIP) to provide a clear vision for improvement. We need your experience and thoughts on how and where cycle routes and walking spaces in the town should be improved.

We all know of places where walking and cycling hits problems. These might include:

- *Narrow pavements alongside busy traffic*
- *Badly laid out road crossings*
- *Overhanging vegetation*
- *Badly parked cars*
- *Kerbs or steep slopes*
- *Poor visibility, hidden or dark areas*
- *Lack of seating*
- *Speeding traffic*
- *Indirect or slow routes*
- *Hold-ups by slow traffic signals*
- *Uneven, potholed or loose surfaces*
- *Lack of cycle parking*
- *Puddle splashing from vehicles*
- *Walking and cycling conflict points*

There will be other issues.

Join the discussion by answering these questions and you could win one of 10 Decathlon vouchers (£25 each).

We'd really like you to be SPECIFIC and give us details, particularly ROAD NAMES or clear landmarks, telling us exactly where the problems are or your suggestions could be.

1 **Where in Crawley do you find particular problems on trips where you regularly walk or cycle – and what are those problems?**

a) Your trip going from (street)
b) Going to (destination, street)
c) Types of problem
d) Problem location (street[s], landmarks)

2 **Where would you like to walk or cycle, but usually avoid?**

a) Your trip going from (street)
b) Going to (destination, street)
Why do you usually avoid walking or cycling this route?
c) Type(s) of problem
d) Problem location (street[s], landmarks)

3 **What are the top three places you'd like to see improved? Why have you chosen these?**

a) Route going from (street)
b) Going to (destination, street)
c) Location[s] (street[s], landmarks)
d) What improvement[s]?

Types of improvement could include:

- *Separated cycle tracks*
- *Pedestrian space with no vehicles*
- *Reduced motor traffic*
- *Better lighting*
- *Changes to car parking*
- *Protected bus stop*
- *Improve surfacing*
- *Widen walkway*
- *Priority road crossing (cycling or walking)*
- *Drop or raised surface levels eg kerb*
- *Remove or install barriers*
- *Directional signage*
- *Cut back vegetation*
- *Cycle parking*
- *Seating*

You could suggest others.

Appendix 2.3 Public survey: response summary

The LCWIP survey ran in the early autumn of 2019 for four weeks. It was accessible online from the Crawley Borough Council website and promoted through social media and networks including the Manor Royal Business Improvement District, schools, locations including libraries, community centres, stations, Crawley Mall, Hawth theatre and K2 sports centre where paper version were available to complete and deposit. Informal meetings with two groups concerned with action for mobility for people with disabilities.

Summary of responses – surveys returned, online and paper = 168

Q1 problems where you regularly walk or cycle
Total contributions = 263
The location attracting most comments was ***Three Bridges station area*** with 20 specific references.

problem	references
Overhanging vegetation	60
Poor surface	54
Poor/lack of safe cycle infrastructure	41
Crossing hazard	23
Incoherent cycle infrastructure	21
Narrow footway/poor walking infrastructure	19
Footway cycling	18
Carriageway cycling hazard	16
Potholes	15
Speeding traffic	15
Heavy road traffic	12
Shared path conflict (between users)	9
Feels unsafe	9
Parked vehicles	8
Poor route markings	8
Route obstructions, including bus Stops	7
Litter/glass	6
Flooding	4
Lighting	4
Anti-social behaviour	3
Lack of bike storage	3
Incoherent walkways	3
Lack of cycle parking	3
No footway	3
Air quality	2
Faulty signals	2
Long wait at signal crossing	2
Muddy track	2
Poor/lack of signage	2
Indirect cycle route	2
Car parking	1
Poor visibility	1
Staggered crossings	1
No priority at side junctions	1
	380

Q2 problems where you would like to walk or cycle but avoid
Total contributions = 149
Three Bridges station and Haslett Avenue featured heavily. Other key locations were Brighton Road, High Street and links to Horsham.

problem	references
Poor surface	19
Poor/lack of safe cycle infrastructure	18
Heavy road traffic	15
Overhanging vegetation	14
Narrow footway	12
Speeding traffic	9
Footway cycling	7
Lighting	6
Poor wheelchair infrastructure	6
Parked vehicles	5
Potholes	5
Anti-social behaviour	4
Feels unsafe	5
Steep slopes (for wheelchair)	4
Bike storage	3
Incoherent cycle infrastructure	3
Obstacles	3
Crossing hazard	2
Flooding	2
Lack of cycle parking	2
Litter/glass	2
Muddy track	2
Poor walking infrastructure	2
Crossing hazard	2
Prohibited cycling	2
Lack of drop kerb	2
	156

With additional comments on:

air quality – bus infrastructure – long wait at signal crossing – poor route markings – poor signage – indirect routes – cycle/walking conflict – unsegregated cycle infrastructure – intrusive railings – noise

Q3 improvements you'd like to see

Contributions = 289

Improvement	references
Improve surface	51
Segregated cycle track	49
Cut back vegetation	42
New cycle track / improve cycle infrastructure	37
Road crossing	29
Widen footway	28
Lighting	14
Restrict car parking	11
Improve bus stop area	8
Reduce speeds	8
Enforce no cycling	6
Safety measures	6
Bridge/crossing	6
Cut traffic	5
Cycle parking	5
Improve walking infrastructure	5
Signage	4
Cycle priority	3
Repair potholes	2
Route marking	2
Seating	2
Widen cycleway	2
Clear litter	1
Courtesy	1
Cycle parking security	1
Flood management	1
New walking infrastructure	1
Prohibit cycling	1
	331

Improvement locations	references
Three Bridges	54
Ifield	42
Town centre	26
Southgate	22
Pound Hill	20
Maidenbower	13
Furnace Green	12
Manor Royal	11
Broadfield	10
West Green	10
Crawley	9
Northgate	8
Tilgate	8
Bewbush	5
Gossops Green	5
Langley Green	5
Charlwood	4
Crawley Avenue	4
Worth	4
High Street	3
London Road	3
Kilnwood Vale	1
A23	1
	280

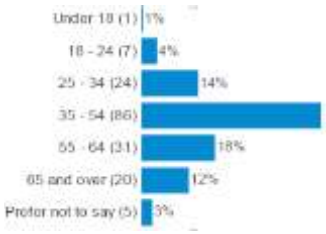
Appendix 3a.1 Public consultation on draft LCWIP

Crawley residents were consulted in July-September 2020 on the proposals in the draft LCWIP. This coincided with the government's Emergency Active Travel Fund (EATF) scheme, set up in response to needs due to Covid-19, generating some hostility and confusion with the LCWIP.

Summary of responses – surveys returned, online form and email = 184

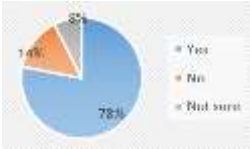
- Male 51%; Female 46%
- With a disability: 6%
- 98% were Crawley residents.
  54% live in Maidenbower and Pound Hill

Ages:

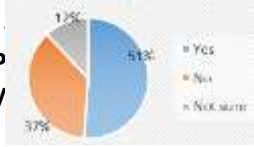


This second LCWIP survey asked:

1 'Do you think it is important to make it easier for people to walk and cycle in Crawley?'



2 'With designs ensuring safe, connected cycling, do think the cycle route network outlined in the LCWIP make cycling more accessible for people in Crawley



3 For comments on any of the cycling routes proposed in the LCWIP.

Summary of 176 responses, grouped into general concerns:

A EATF pop-ups

47 addressed the EATF, 43 being negative or critical comments about the scheme, but included some concerns that the pop-ups did not serve cycling safely**.** Themes were:

bad design	5
vehicles squeezed for space	16
confusing	3
congestion generated	11
not needed /few cyclists	9
poorly protecting cyclists	6
welcome pop ups	4
existing cyclepaths sufficient	3
remove pop-ups	4
need to support pedestrians	2

B Objections to cycling

18 responses were directed against cycling *per se*, though of these, 8 said yes to Q1. Criticisms included issues with cycling on pavements (3) and cyclists using the road when there is a cycle path (7)

C specific locations

36 comments on location-specific infrastructure details were a mix of supportive and negative or just individual common or interesting contributions. The most frequent locations of concern were:

Route B (Pound Hill to Manor Royal via Forge Wood)	5
Route C Copthorne to TC	4
Route D Maidenbower to MR via Three Bridges	4
Route G TC to K2 via Tilgate	2
Three Bridges station	8
Maidenbower	5
Radford Rd	5
20mph	1

D general infrastructure

34 respondents made non-location specific contributions. There were few real themes here, but they did include:
Surfacing and maintenance; secure cycle parking; concern over cycling, walking and driving competition for highway space; need for segregation, connection and coherence.

Appendix 3a.2 Local Plan policies relating to cycling and walking

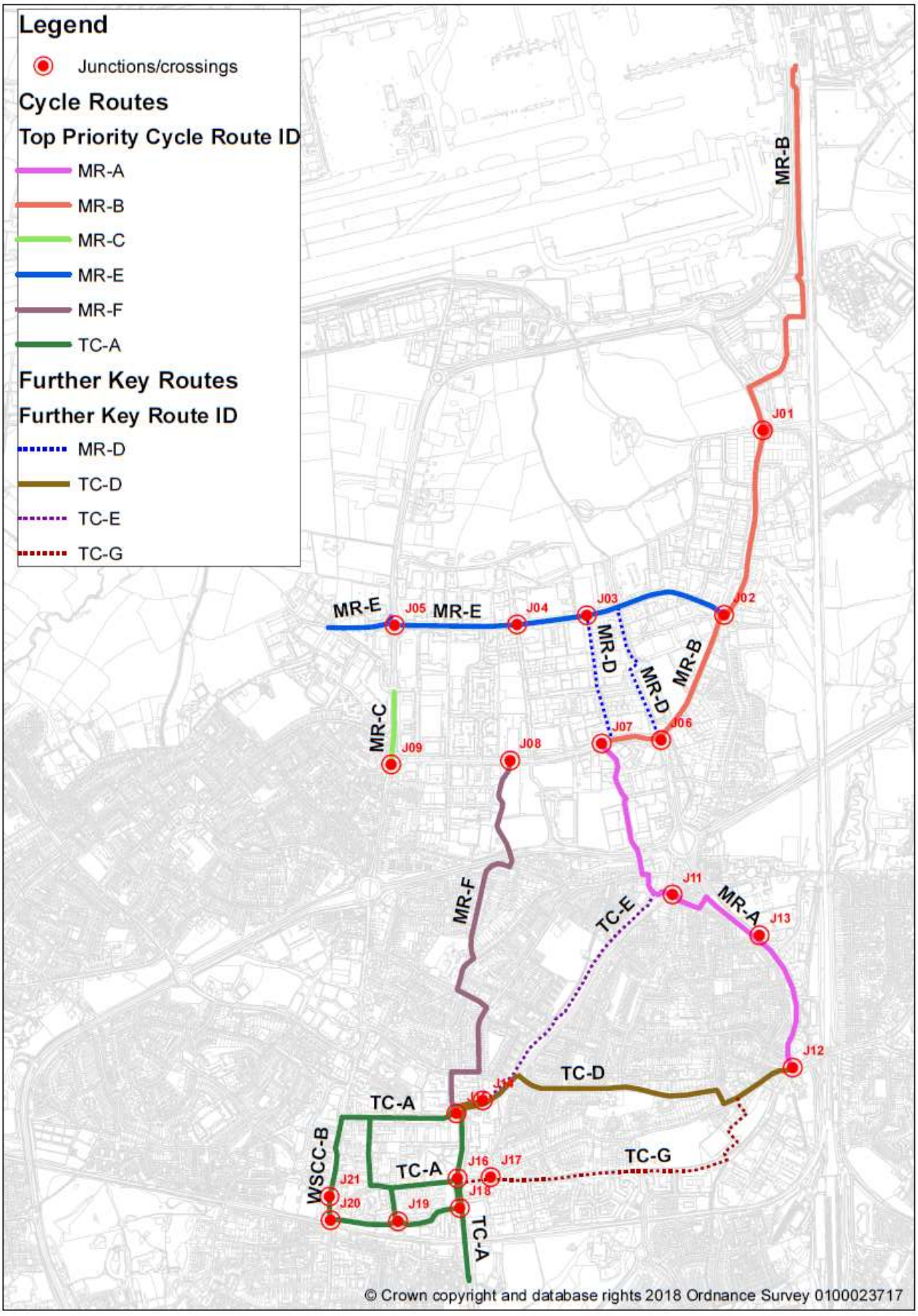
These policies are listed for reference. The Local Plan and supporting documents should be read in full for appropriate context and complete understanding. They are available at the web page links provided.

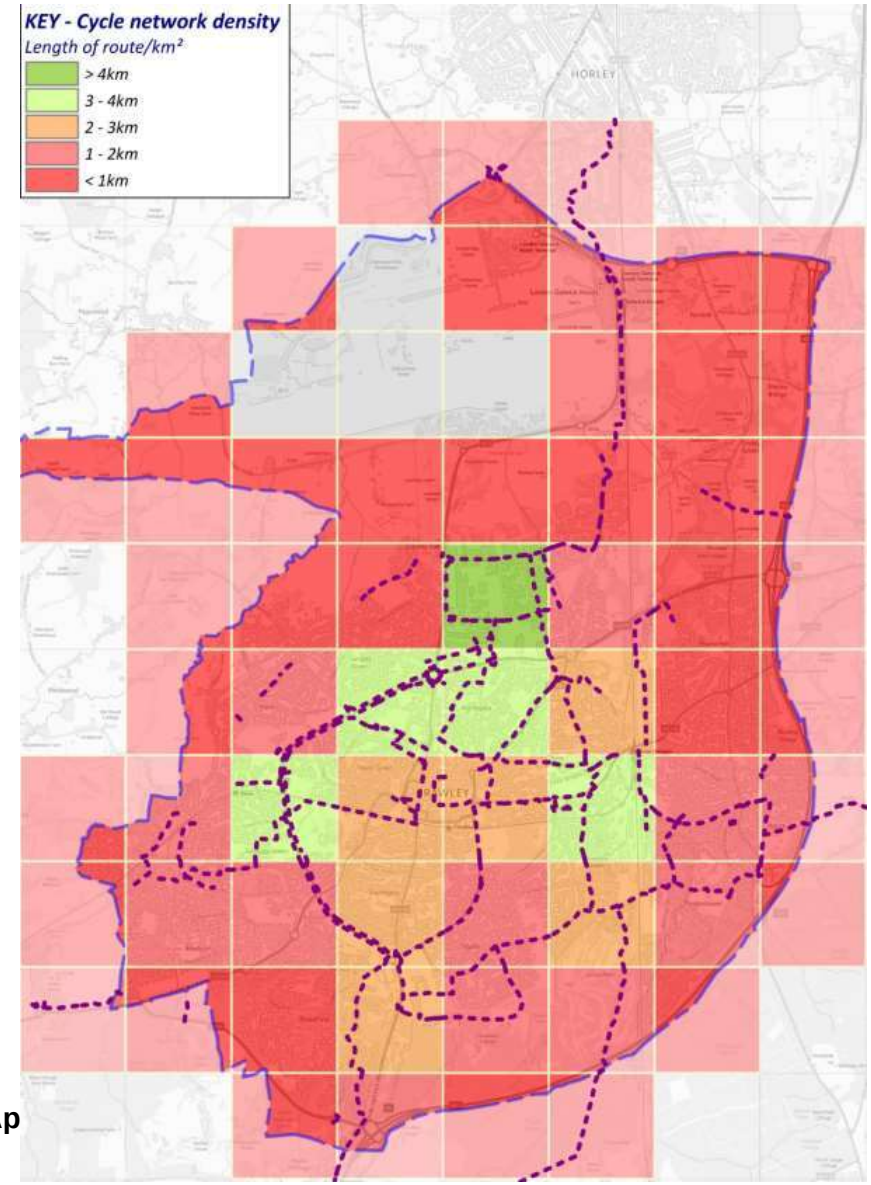
Adopted – Crawley Borough Local Plan 2015 – 2030 Adopted Local Plan and supporting documents web pages	**Emerging – Crawley Borough Local Plan Review 2021 – 2037 (as at January 2021)** Local Plan review web pages
Policy SD1: Presumption in Favour of Sustainable Development	**Policy SD1 Presumption in Favour of Sustainable Development**
Policy CH1: Neighbourhood Principle Ensuring the neighbourhood centres remain the focal point for the local community, providing facilities that meet their day-to-day needs within walking distance.	**Policy SD2 Enabling Healthy Lifestyles and Wellbeing**
Policy CH2 Principles of Good Urban Design	**Policy CL1: Neighbourhood Principle** b) ensuring the neighbourhood centres remain the focal point for the local community, providing facilities that meet their day-to-day needs within walking distance.
Policy CH3: Normal Requirements of All New Development F Meeting the requirements necessary for their safe and proper use, in particular in regard to access, circulation and manoeuvring, vehicle and cycle parking.	**Policy CL2: Making Successful Places – Principles of Good Urban Design**
Policy CH11: Rights of Way and Access to the Countryside	**Policy CL3: Movement Patterns, Layout and Sustainable Urban Design** Key points in main LCWIP report.
Policy H5: Gypsy, Traveller and Travelling Showpeople Sites Acceptable development of this site will include adequate highway and pedestrian and cycle access being achieved.	**Policy CL4: Compact Development – Layout and Sustainable Urban Design**
Policy ENV1: Green Infrastructure Proposals should maximise the opportunity to maintain and extend the green infrastructure links to form a multi-functional network of open space, providing opportunities for walking and cycling, and connecting to the urban/rural fringe and the wider countryside beyond	**Policy CL8: Development Outside the Built-Up Area**
Policy IN1: Infrastructure Provision	**Strategic Policy DD1: Normal requirements of All New Development** i) Meet the requirements necessary for their safe and proper use, in particular with regard to access, circulation and manoeuvring, vehicle and cycle parking, loading and unloading, and the storage and collection of waste/recycling.

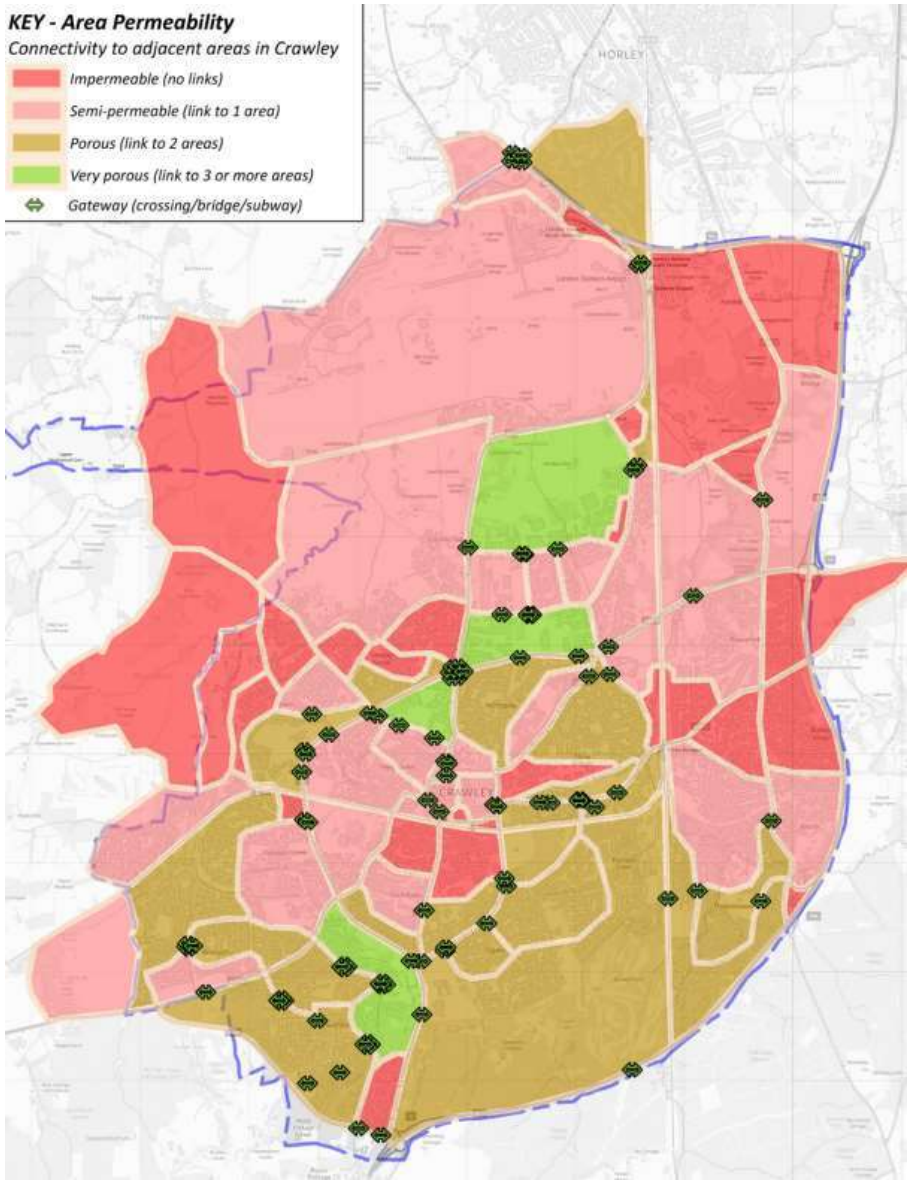
Policy IN3: Development and Requirements for Sustainable Transport Development should be concentrated in locations where sustainable travel patterns can be achieved through the use of the existing transport network, including public transport routes and the cycling and walking network	**Policy OS2: Provision of Open Space and Recreational Facilities**
Policy IN4: Car and Cycle Parking Standards Development will be permitted where the proposals provide the appropriate amount of car and cycle parking to meet its needs when it is assessed against the borough council's car and cycle parking standards.	**Policy OS3: Rights of Way and Access to the Countryside**
	Policy IN1: Infrastructure Provision
	Policy IN2: The Location and Provision of New Infrastructure
	Policy EC4: Strategic Employment Location Proposals for development of the Strategic Employment Location will be required to: f. Upgrade and extend pedestrian/cycle routes to the site from residential areas in Crawley and Horley and from Gatwick Airport station.
	Policy GAT1 Development of the Airport with a Single Runway
	Policies H3 (c) H3 (d) H3 (e) Housing Typologies Cycle parking and waste/recycling storage will be adequately designed into the scheme from the start and the site will meet the requirements necessary for access, circulation and manoeuvring,
	Policy H8: Gypsy, Traveller and Travelling Showpeople Sites Acceptable development of this site will include adequate highway and pedestrian and cycle access being achieved.
	Policy H9: Houses in Multiple Occupation
	Policy GI1: Green Infrastructure v) Proposals should maximise the opportunity to maintain and extend the green infrastructure links to form a multi-functional network of open space, providing opportunities for walking and cycling, and connecting to the urban/rural fringe and the wider countryside beyond Development will be permitted where the proposals provide the appropriate amount of car and cycle parking to meet its needs when it is assessed against the borough council's car and cycle parking standards.
	Strategic Policy ST1: Development and Requirements for Sustainable Transport Development should be located and designed so as to encourage travel via the walking and

	cycling network and public transport routes, while reducing dependency on travel by private motor vehicle (also see Policy CL3 and CL4). This should include: i. Designing developments to prioritise the needs of pedestrians, cyclists and users of public transport over ease of access by the motorist; ii. Providing an appropriate amount and type of parking in accordance with ST2; iii. Phasing the development process so that walking and cycling infrastructure forming part of the development is in place and usable at the point of first occupation; iv. For development which generates a significant demand for travel, and/ or is likely to have other transport implications: contributing to improved sustainable transport infrastructure, including, where appropriate, routes identified in the council's Local Cycling and Walking Infrastructure Plan. The Mobility Strategy or Travel Plan will identify: • how the development will optimise the usage of sustainable modes of transport as opposed to the private motor vehicle; • appropriate improvements to sustainable modes, or the introduction of new infrastructure that is required to adequately mitigate development impacts and detail how this will be delivered and operated
	Policy ST2: Car and Cycle Parking Standards Development will be permitted where the proposals provide the appropriate amount of car and cycle parking to meet its needs when it is assessed against the borough council's car and cycle parking standards
	Policy ST3: Improving Rail Stations b) at Three Bridges Station, support its role as a potential parkway station and as a major interchange between the rail, bus, highway, cycle and pedestrian network; c) at Crawley Station, support its role as a major gateway to the Town Centre and improve its integration with the main shopping area and bus station and accessibility by cycle and pedestrians; **Strategic Policy**
	Policy ST4: Safeguarding of a search Corridor for a Crawley Western Link Road

Appendix 3a.3 Outline Crawley Growth Programme cycle route proposals – 2018

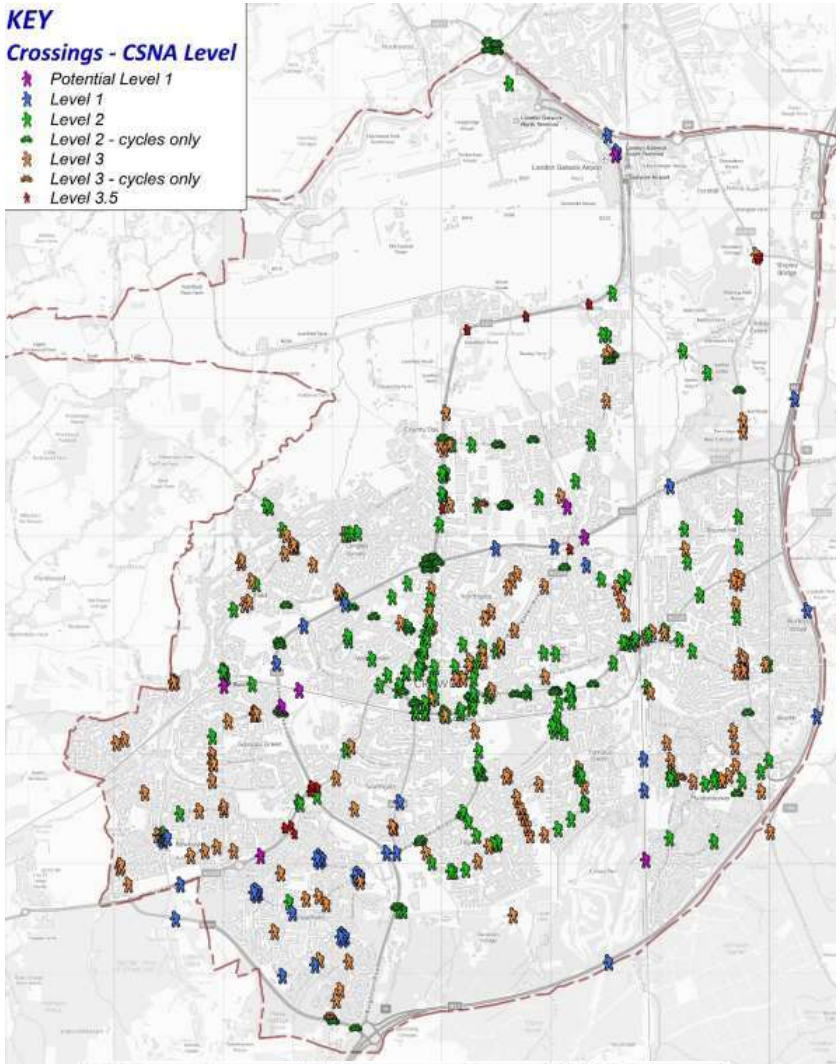



KEY - Cycle network density
Length of route/km²
> 4km
3 - 4km
2 - 3km
1 - 2km
< 1km


KEY - Area Permeability
Connectivity to adjacent areas in Crawley
Impermeable (no links)
Semi-permeable (link to 1 area)
Porous (link to 2 areas)
Very porous (link to 3 or more areas)
Gateway (crossing/bridge/subway)

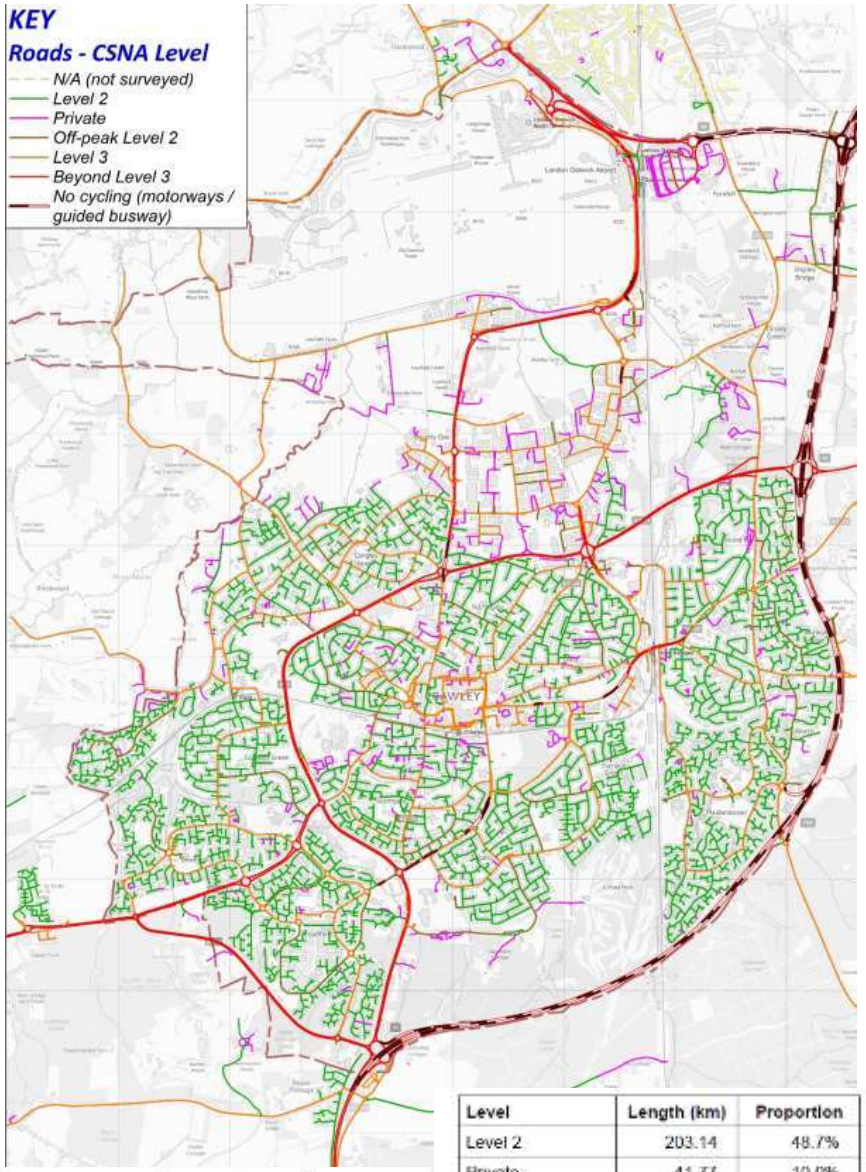
Ap

Cycle Skills Needs Analysis (CSNA)
Levels attributed according to Bikeability assessments. Higher levels (red/amber) indicate need for more confidence in skills for safe use



Level	Number		Proportion	
	Pedestrian only	Cycle / pedestrian	Pedestrian only	Cycle / pedestrian
Potential 1	9		2%	
1	42		10%	
2	160	52	38%	12%
3	141	3	34%	1%
Beyond Level 3	13		3%	

Table 3 Crossings by CSNA Level (in Crawley only)



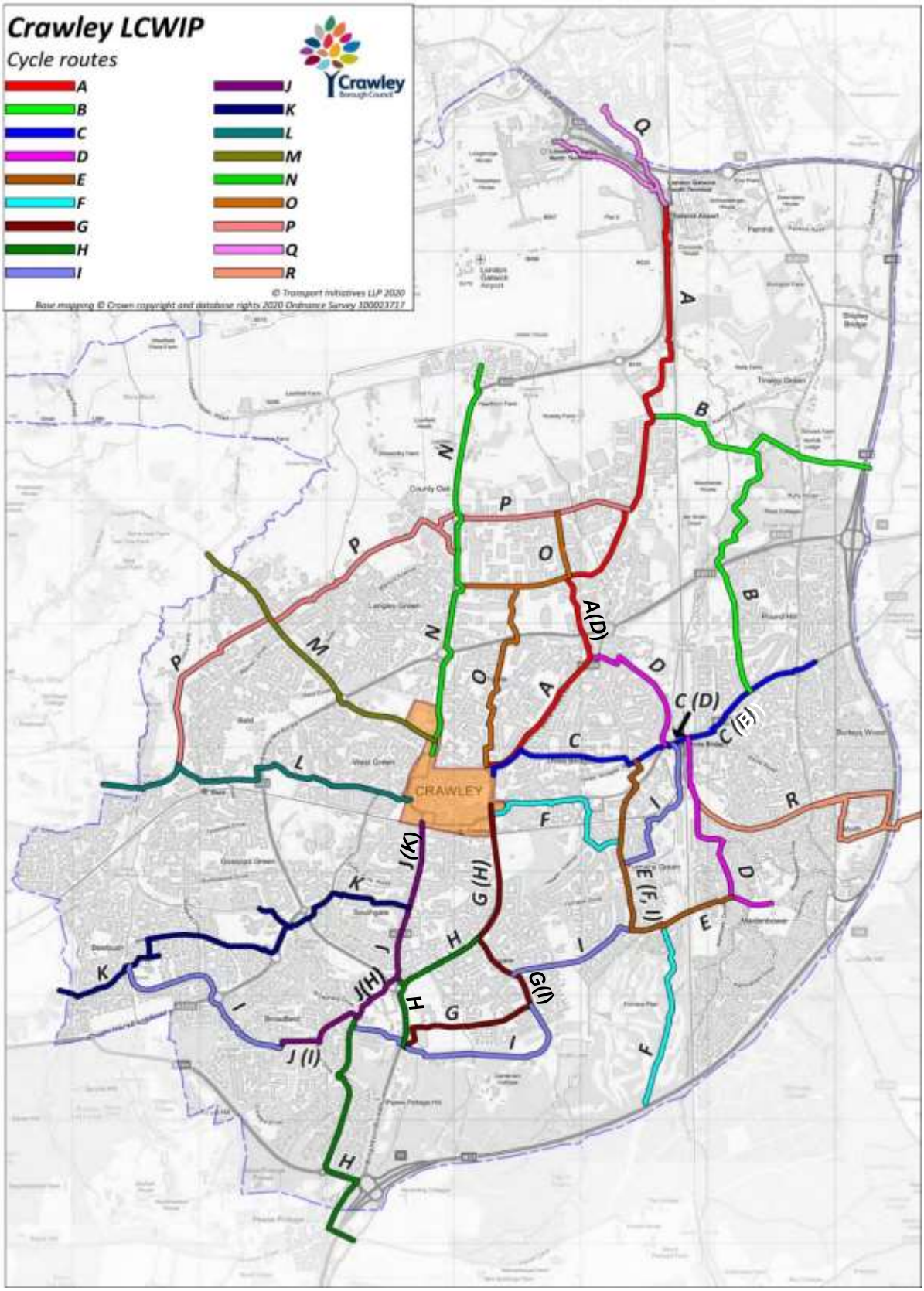
Level	Length (km)	Proportion
Potential Level 1	63.15	59.4%
1	40.05	37.7%
2	3.07	2.9%

Table 2 Length of paths by CSNA Level

Level	Length (km)	Proportion
Level 2	203.14	48.7%
Private	41.77	10.0%
Off-peak Level 2	26.91	6.4%
Level 3	95.93	23.0%
Beyond Level 3	30.61	7.3%
No cycling	19.16	4.6%

Table 1 Approximate length of roads by CSNA Level

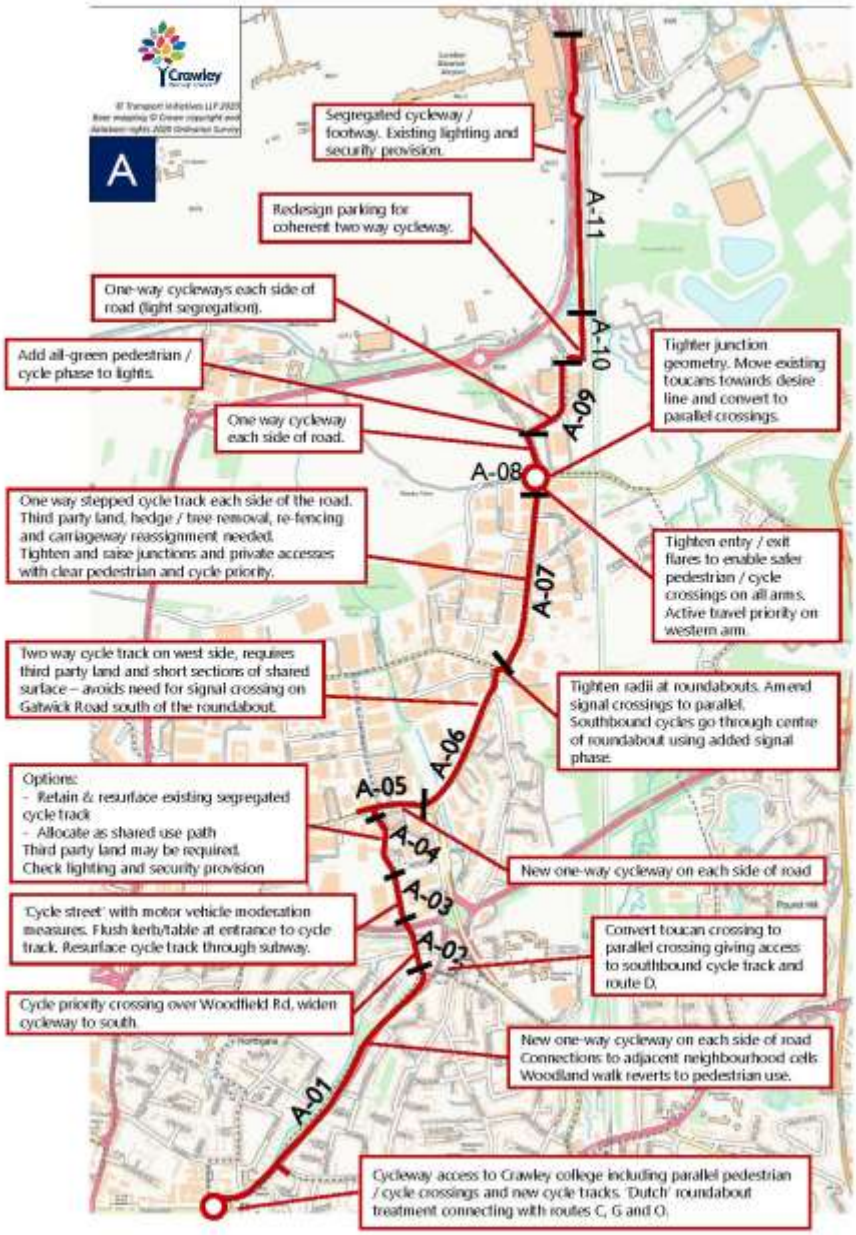
Appendix 4.1 LCWIP routes: whole proposed network



Route identification in brackets shows shared sections of route, costed in the unbracketed route as indicated on p24 of the main body of the report.

The following individual routes are divided into sections for evaluation and costings. Total network cost is less than the sum of individual routes due to the shared elements of some.

Appendix 4.1 LCWIP routes: A – Gatwick Airport to town centre via Manor Royal (and Northgate)

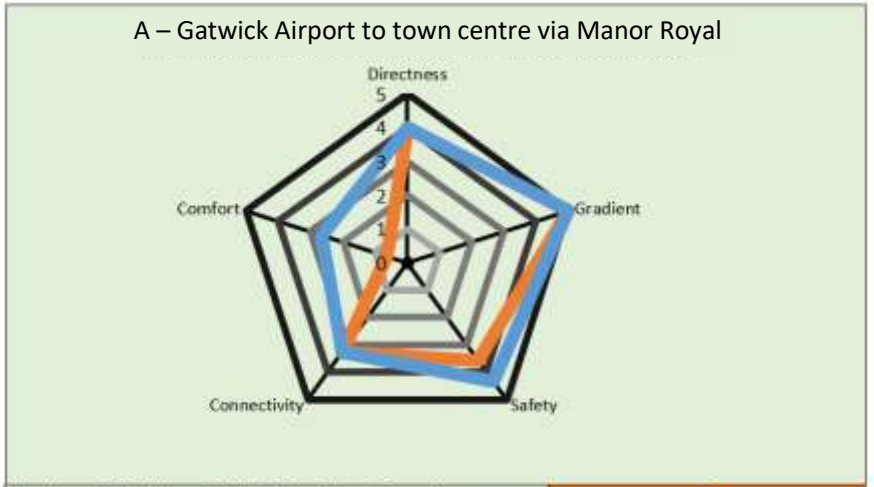


Currently more than 14,500 Gatwick Airport employees drive to work and over half the workforce live in Crawley. We estimate the potential for 4,800 to cycle to work. Additionally, Gatwick Airport railway station provides access to and from London, Brighton and other employment and residential centres. Route A is a key route for cycle access to work at Gatwick Airport and the station for outward and inward commuting to Manor Royal and the town centre. Safe cycle access to and from the station could generate modal shift from cars to rail. Route A links with other proposed network routes providing connectivity across Crawley. This was also recognised earlier through the Crawley Growth Programme, which prioritised this route.

Average cycle time at 9km/hour = 37 minutes

RST summary evaluation

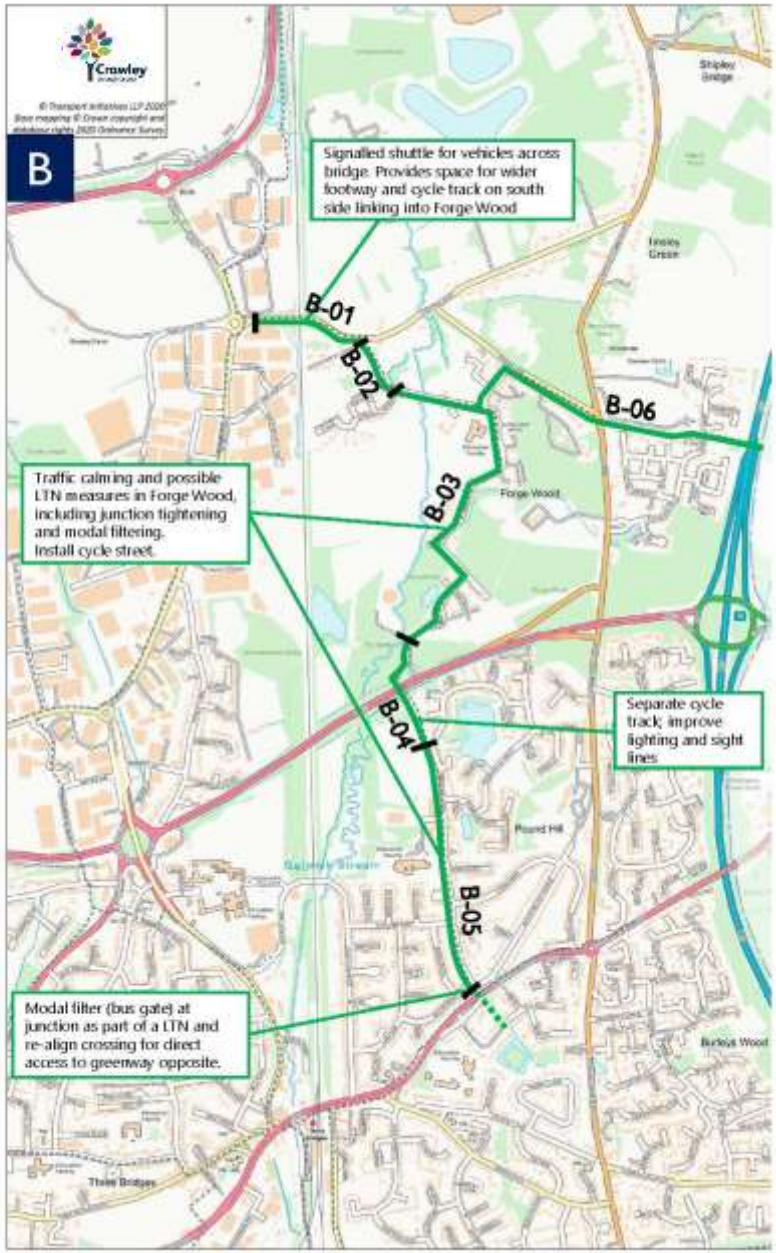
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	8
Number of Potential Critical Junctions/Crossings	0
Indicative Cost	£4.06m - £7.2m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

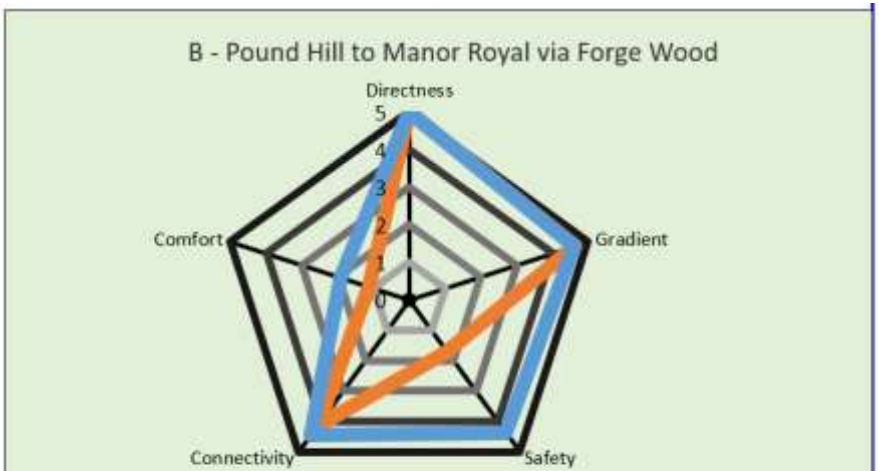
Appendix 4.1 LCWIP routes: B – Pound Hill to Manor Royal via Forge Wood



The railway line and Crawley Avenue are barriers to access to Manor Royal and Gatwick Airport for the neighbourhoods of Pound Hill and Worth. Route B provides cycle access via an underpass to Crawley Avenue, through residential streets of the new Forge Wood neighbourhood and crosses the railway via the narrow Radford Road bridge, with protected cycle space reducing vehicular traffic flow, to Manor Royal, joining route A for Gatwick Airport. It also provides cycle access from Forge Wood to Three Bridges Station, joining route C for the town centre. These neighbourhoods are shown by the PCT to be locally major commuter trip origins.

Average cycle time at 9km/hour = 28 minutes

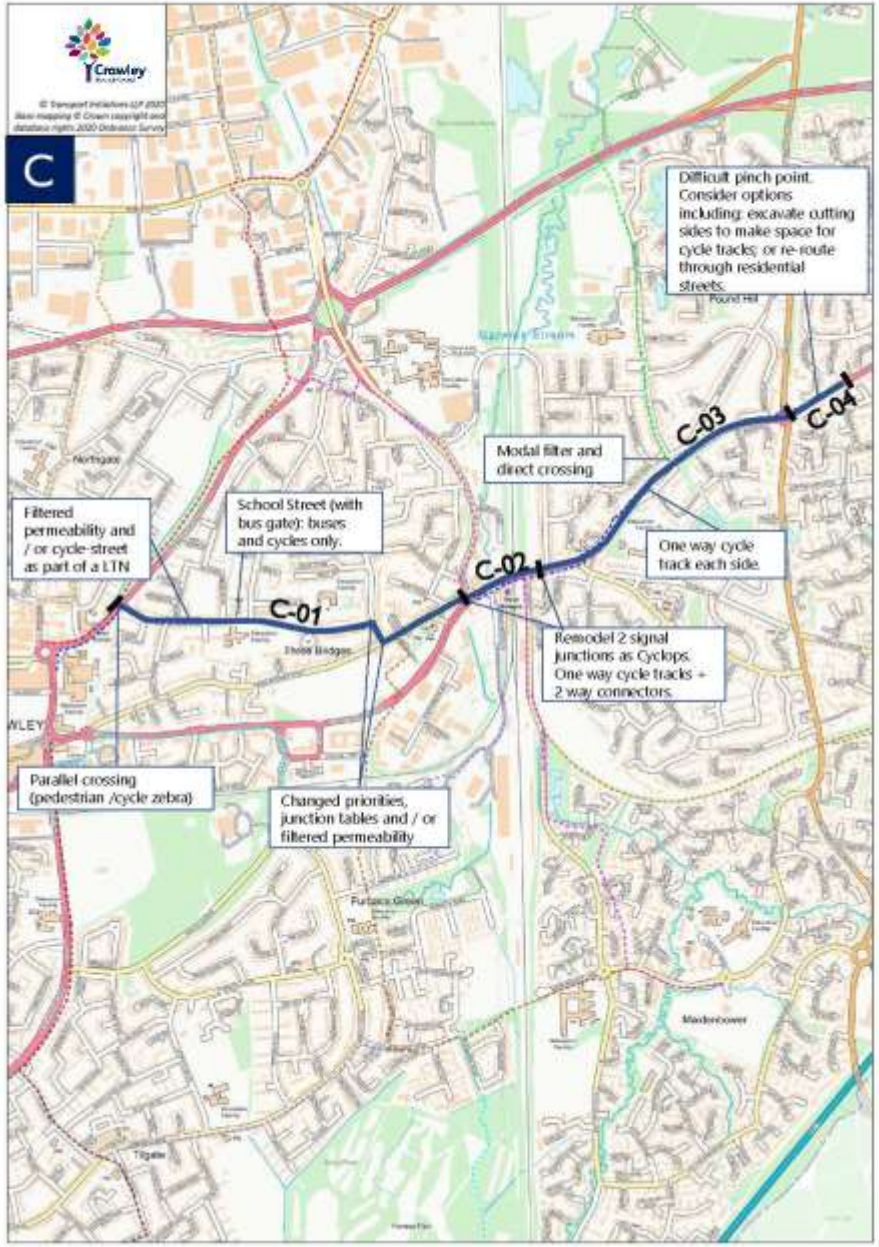
RST summary evaluation
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	3
Number of Potential Critical Junctions/Crossings	0
Indicative Cost	£0.26m - £1.93m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

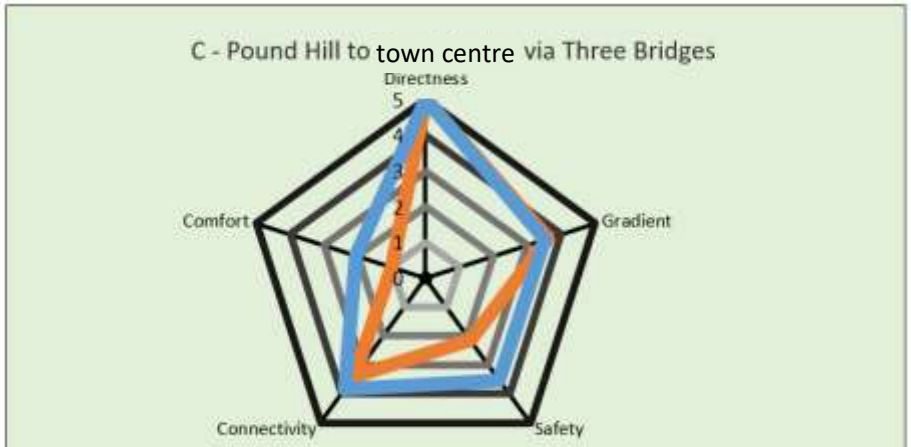
Appendix 4.1 LCWIP routes: C – Pound Hill to town centre via Three Bridges (limited to Crawley boundary)



A route serving residential areas of Worth and Pound Hill, Worth Park Avenue had been previously improved as a shared route, but retains critical junctions at Balcombe Road, Station Hill and Hazelwick Avenue as well as interruptions along the shared path. Junction and side road treatments resolve this. From Three Bridges Station further hazardous junctions require treatment along with filtering of Gales Drive as part of potential Low Traffic Neighbourhood measures for Three Bridges centred on the schools for safe access.

Avera Average cycle time at 9km/hour = 18 minutes

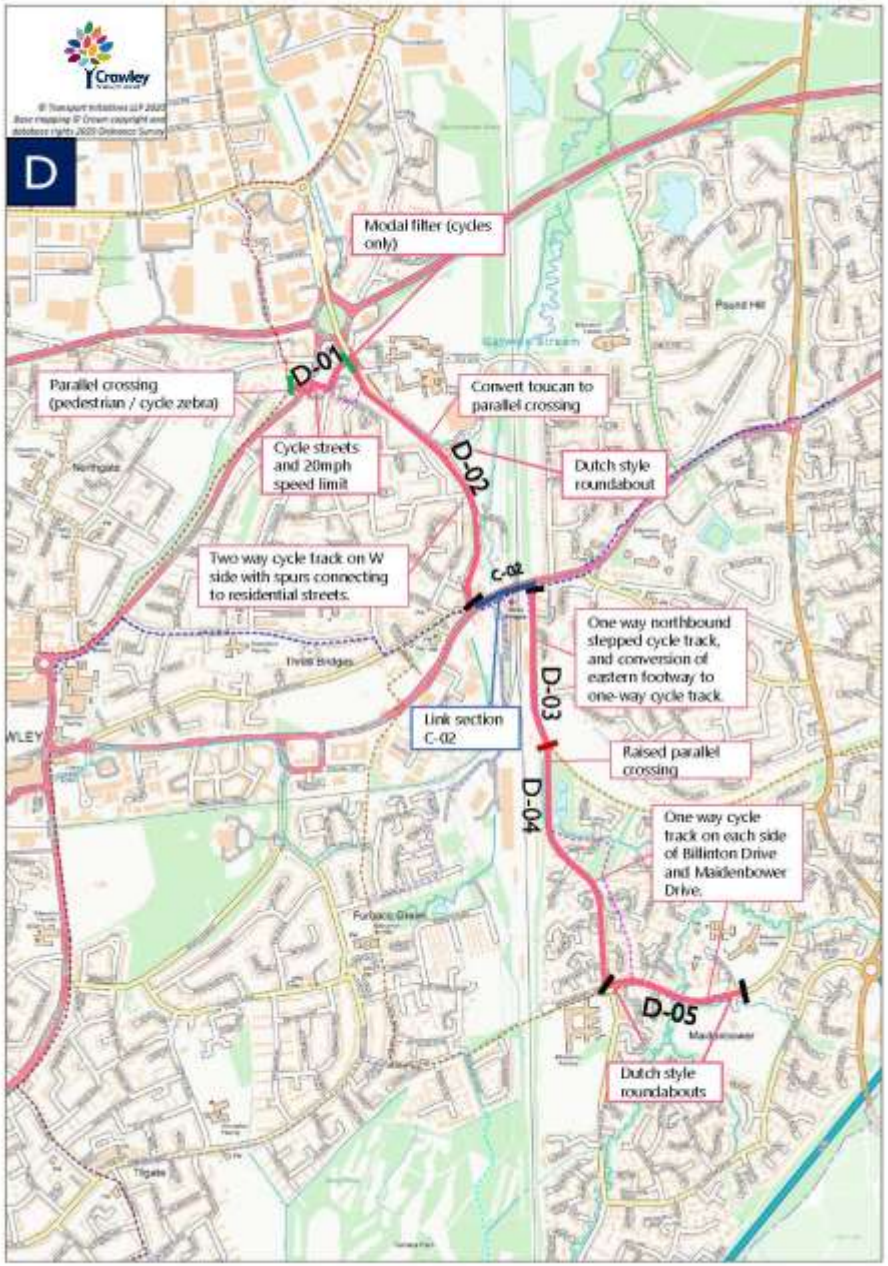
RST summary evaluation
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	9
Number of Potential Critical Junctions/Crossings	1
Indicative Cost	£1.92m - £5.1m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

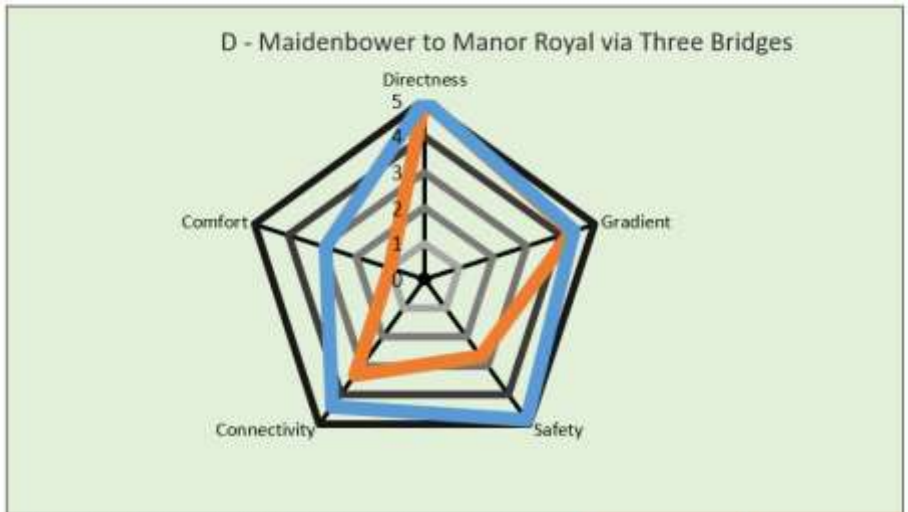
Appendix 4.1 LCWIP routes: D – Maidenbower to Manor Royal via Three Bridges (joins routes A, C)



Route D serves Maidenbower neighbourhood as a commuter route, where Billinton Drive presents relatively direct access to Three Bridges Station, but challenges in allocating space for cycling, particularly towards the northern end. Treatment of the station area is key for continuity and safety where motor traffic dominates and there are several critical junctions. Light segregation for on-carriageway cycling is proposed for Hazelwick Avenue, which is fast at peak times and busy at others.

Average cycle time at 9km/hour = 22 minutes

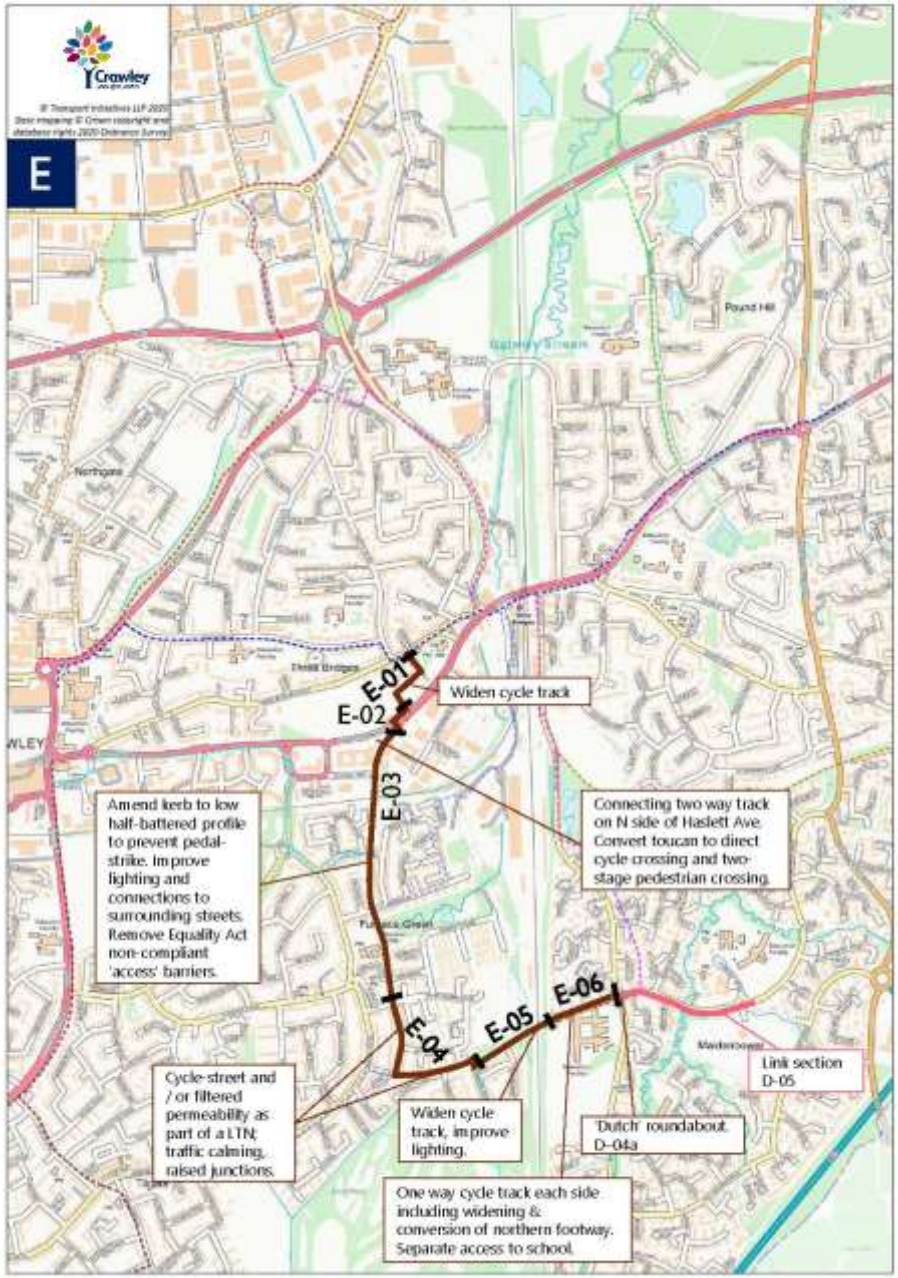
RST summary evaluation
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	4
Number of Potential Critical Junctions/Crossings	1
Indicative Cost	£2.61m - £4.58m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

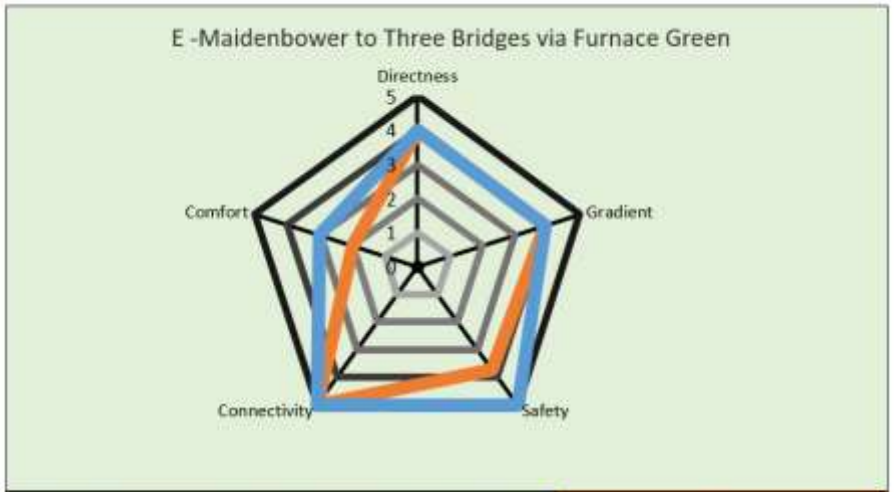
Appendix 4.1 LCWIP routes: E – Maidenbower to Three Bridges via Furnace Green



As access from Maidenbower is limited by the railway line, route E provides access to the town centre via a rail underpass by Oriel High School to Furnace Green. This is in a relatively low traffic area, but requiring route clarity and smoothing of sharp bends and obstacles. This is part of the link connecting the two NCN routes 20 and 21, which go through Crawley. The off-road track Tilgate Drive is a part of NCN20 and a popular route that needs clearing of vegetation, with measures to avoid pedestrian conflict. This route joins route F for access to The Hawth and town centre south.

Average cycle time at 9km/hour = 18 minutes

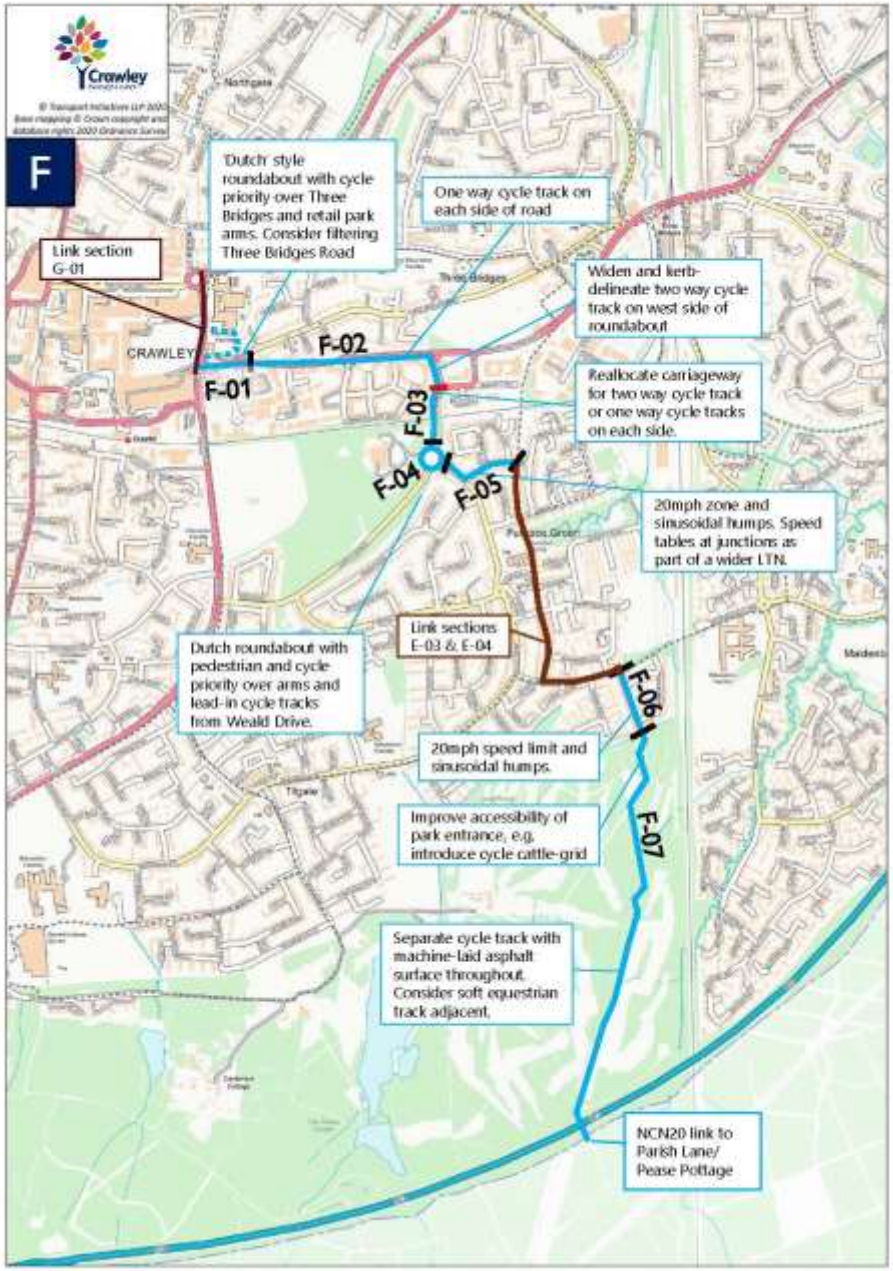
RST summary evaluation
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	2
Number of Potential Critical Junctions/Crossings	1
Indicative Cost	£0.38m - £0.66m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

Appendix 4.1 LCWIP routes: F – Tilgate to town centre via Furnace Green (joins route E)

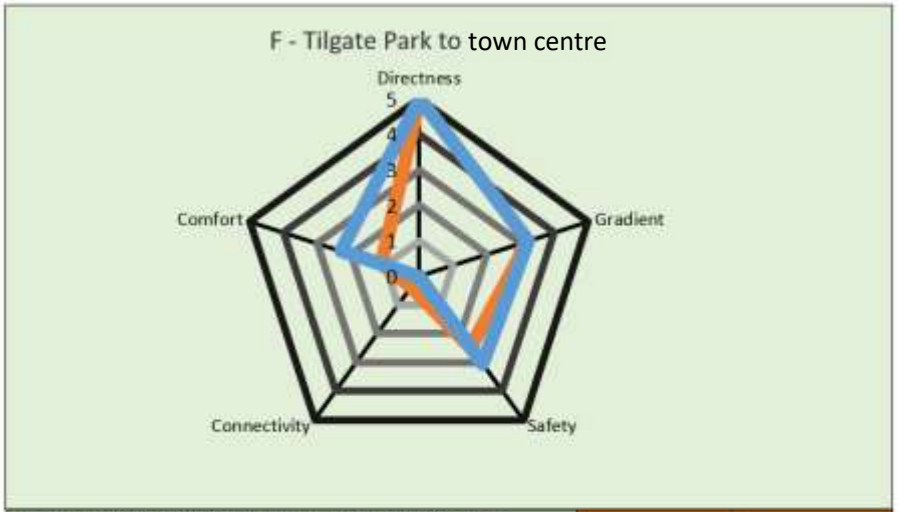


Route F follows the NCN20 route from Brighton across the M23, Tilgate Park and Tilgate Forest Golf Centre and on through Tilgate. The route uses Tilgate Drive (NCN20) and diverts from here to highways, serving The Hawth where a signal crossing to the busy and fast Hawth Avenue is needed. Proposals for reallocating some carriageway space at Weald Drive, a new track at the Squareabout and crossings. Traffic management may need to be addressed here and at the Three Bridges Road junction by the town centre.

Average cycle time at 9km/hour = 27 minutes

RST summary evaluation

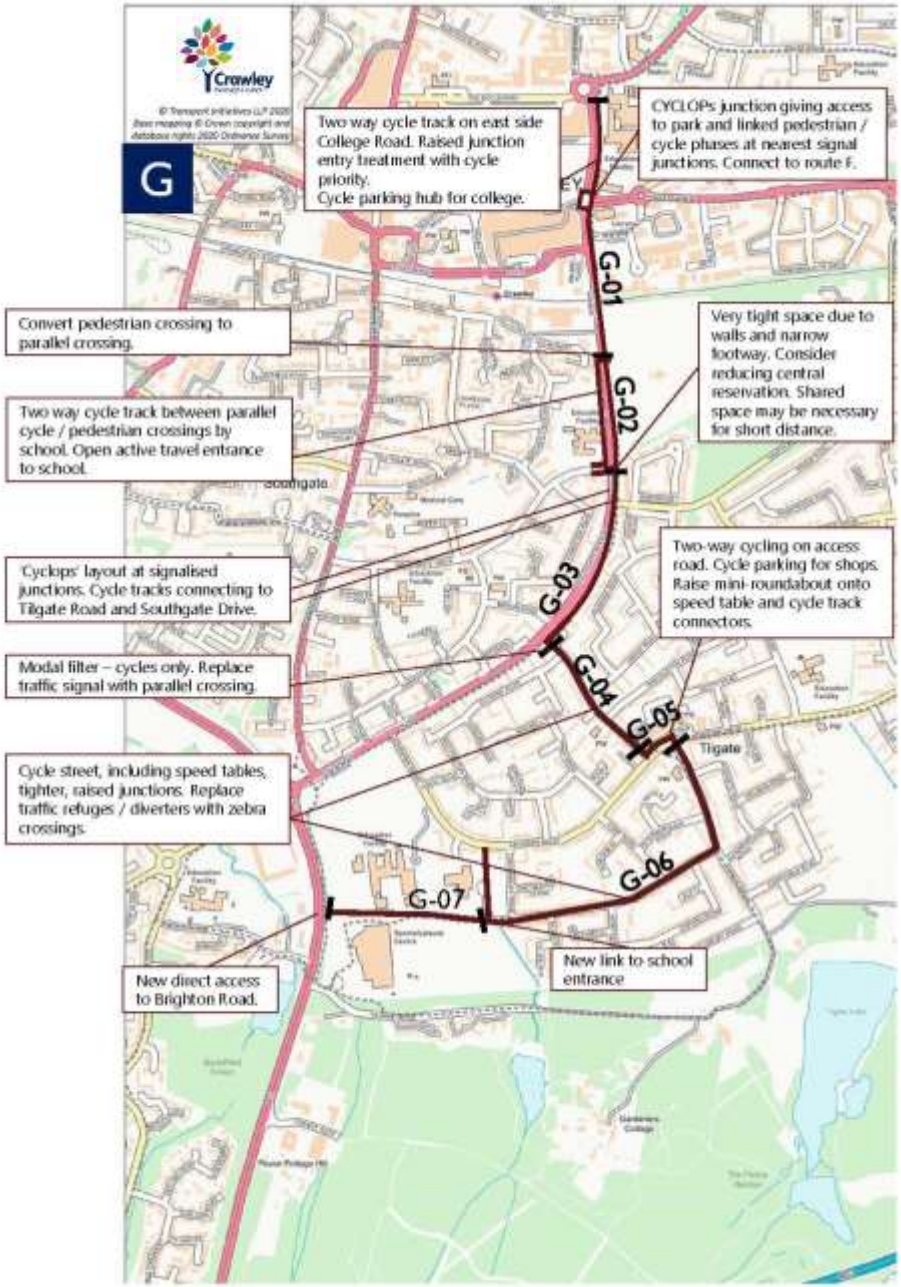
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	2
Number of Potential Critical Junctions/Crossings	0
Indicative Cost	£1.4m - £2.35m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

Appendix 4.1 LCWIP routes: G – Tilgate to town centre (extended to K2 Crawley)

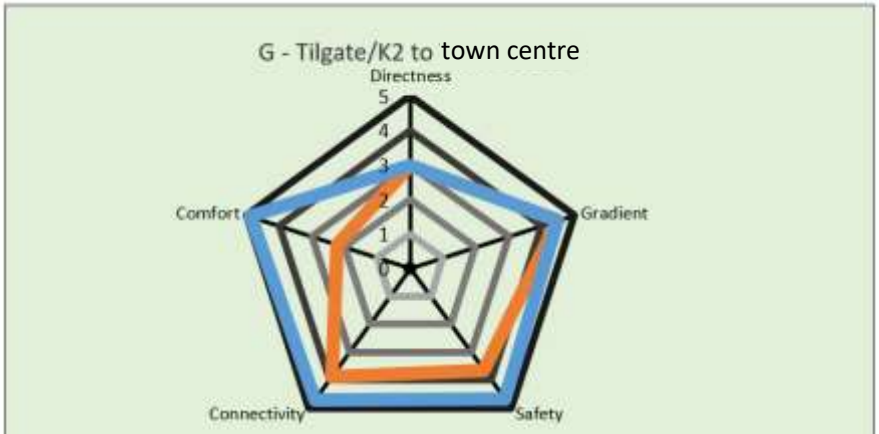


Southgate Avenue is a key route for access to the town centre and Crawley railway and bus stations not only from Tilgate, but also Broadfield (see route H). Its existing cycle track is widely recognised as currently inadequate as far too narrow, with obstacles such as bus stops and railings and hold-ups at side junctions with staggered signalled crossings. Guided bus lanes make carriageway options difficult and this proposal looks at tabled, straight through junctions, track widening and railing removal.

Average cycle time at 9km/hour = 20 minutes

RST summary evaluation

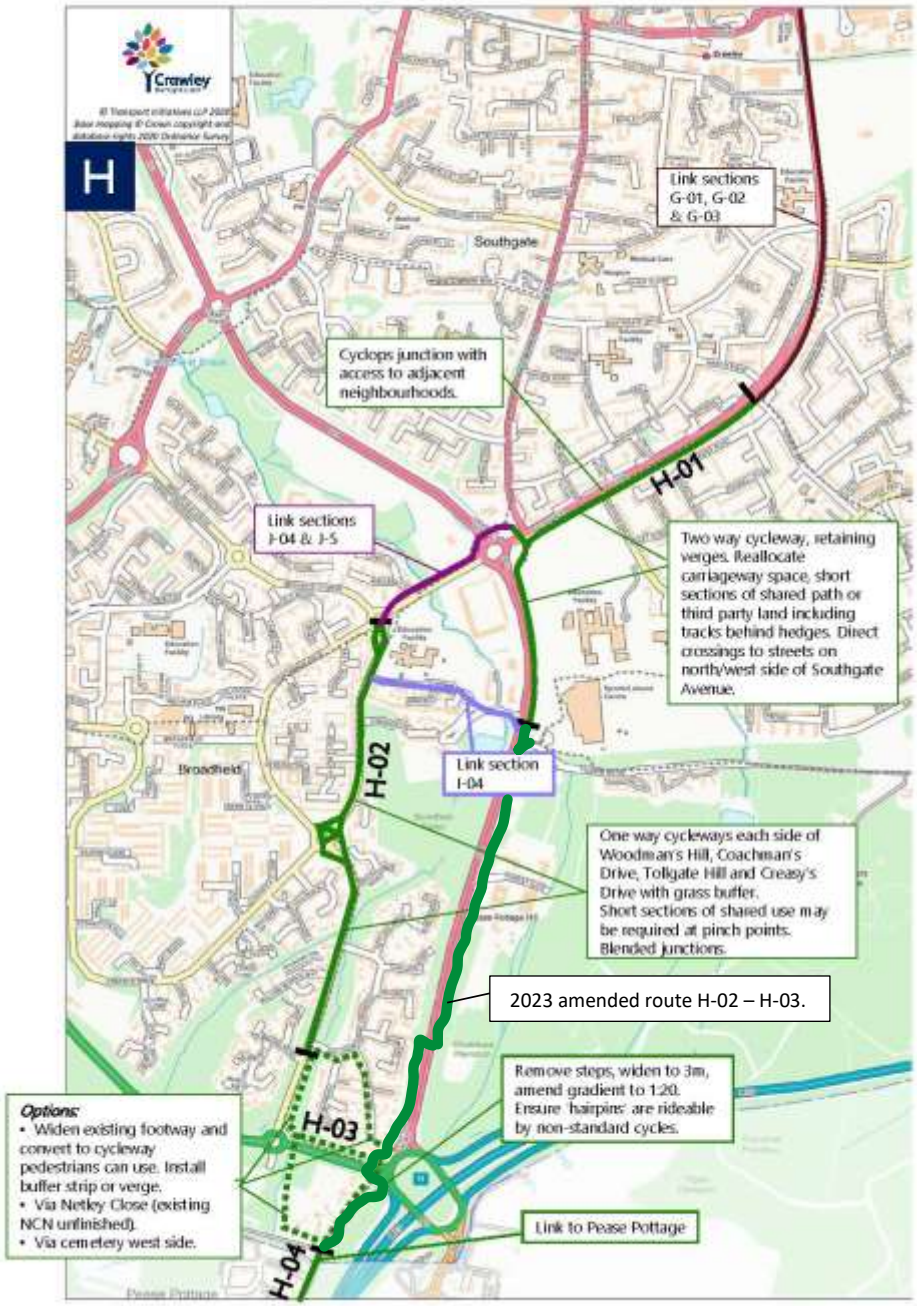
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	6
Number of Potential Critical Junctions/Crossings	0
Indicative Cost	£1.74m - £4.52m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

Appendix 4.1 LCWIP routes: H – Pease Pottage to town centre via Tilgate (joins route G, J) – *amended 2023*



Cycle and walking access to the new development east of Pease Pottage junction on motorway is challenging as motor vehicle access is currently prioritised. Fully separated active travelcrossings are need, but this area is outside Crawley boundary. Main measures proposed through Broadfield are critical junction treatments. Bus / Fastway lanes on Southgate Avenue require cycling on a shared track, which needs widening and railing removal. The route is picked up at Titmus Drive, Tilgate, to the town centre by route G.

2023 amendment following community and WSCC input: reallocate H-02, H-03 to A23 Brighton Rd, following existing minor footways either side, and at grade crossing midway. Revised treatment proposed by National Highways: from A264 southward – ramp diverted around higher ground alongside A23 to Old Brighton Rd, Pease Pottage.

Average cycle time at 9km/hour = 40 minutes (amended: 35 mins)

RST summary evaluation

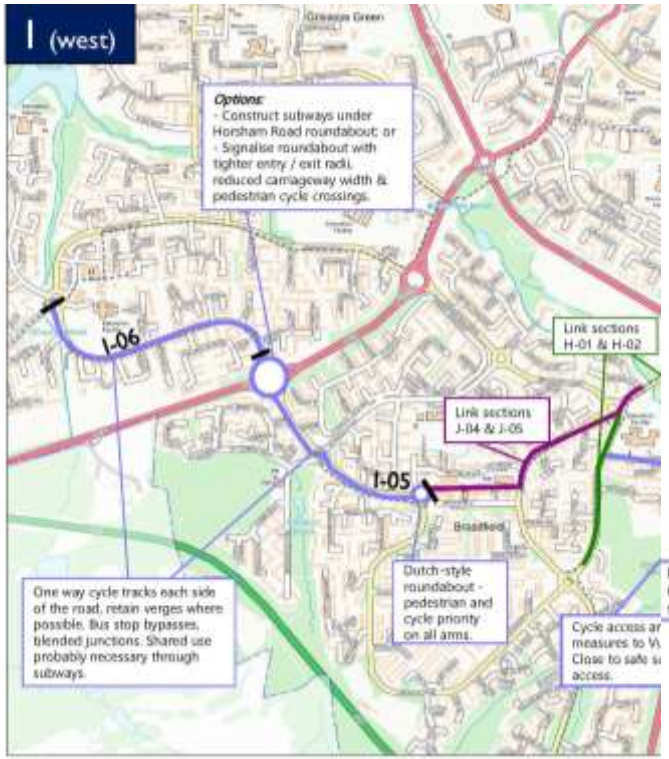
Key: brown = existing conditions; blue = potential with improvements

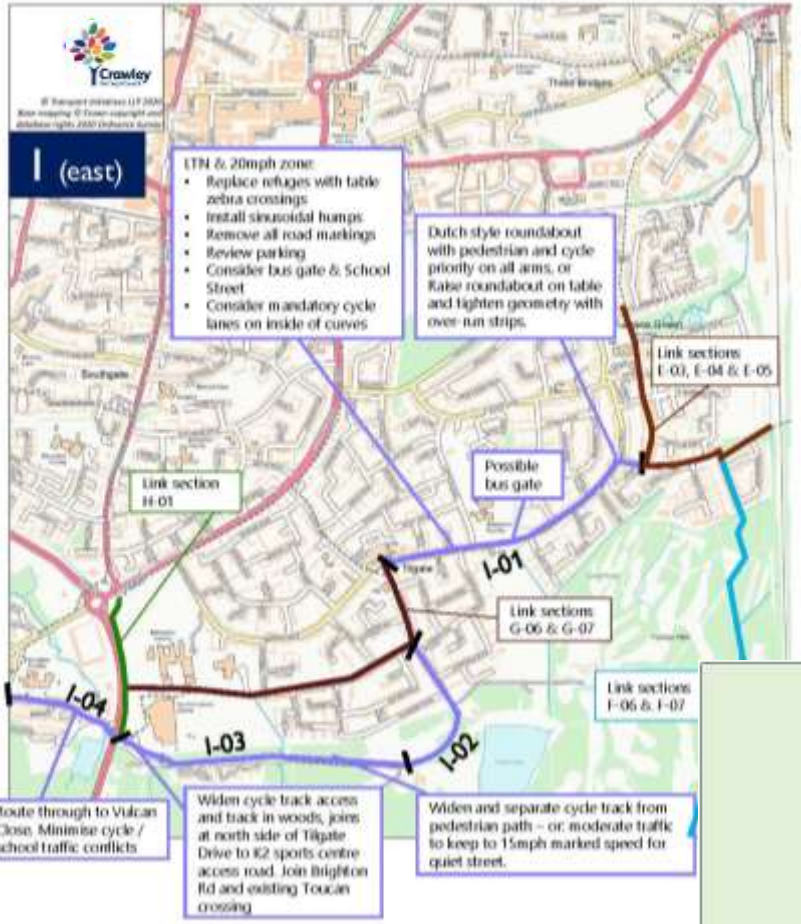


Number of Existing Critical Junctions/Crossings	5
Number of Potential Critical Junctions/Crossings	0
Indicative Cost	£3.5m - £4.86m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

Appendix 4.1 LCWIP routes: I – Bewbush to Three Bridges via Broadfield, Tilgate Nature Centre (joins routes J, G and E)



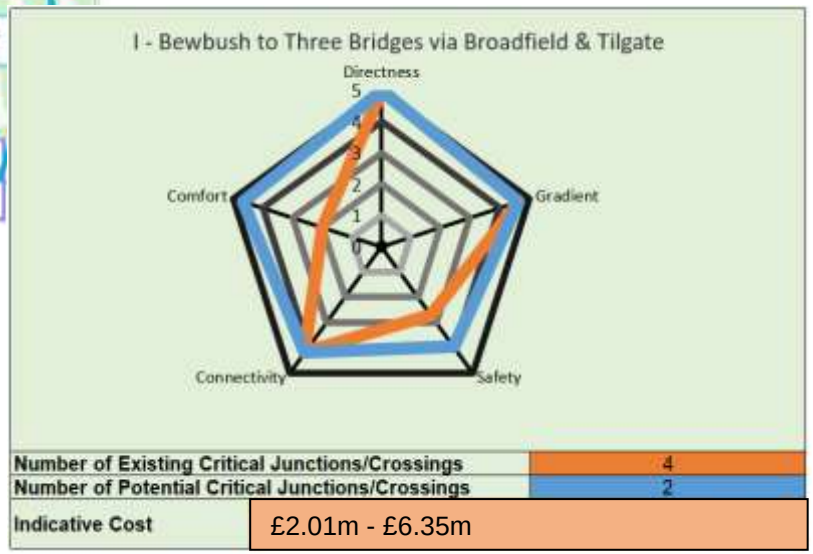


Route I (west and east) forms something of a 'south-circular' linking up the more radial routes and taking in major destinations including K2 Crawley and Tilgate Nature Centre. The key issues for access to Three Bridges Station from the neighbourhoods in the south west are crossing the A264 Horsham Road and A23 Brighton Road. Proposed subway crossing is a significant cost.

There has been some discussion of creating a route through the Network Rail site at Three Bridges, including as a facility for staff there. However, this is challenging for security reasons and may not be possible.

Average cycle time at 9km/hour = 38 minutes

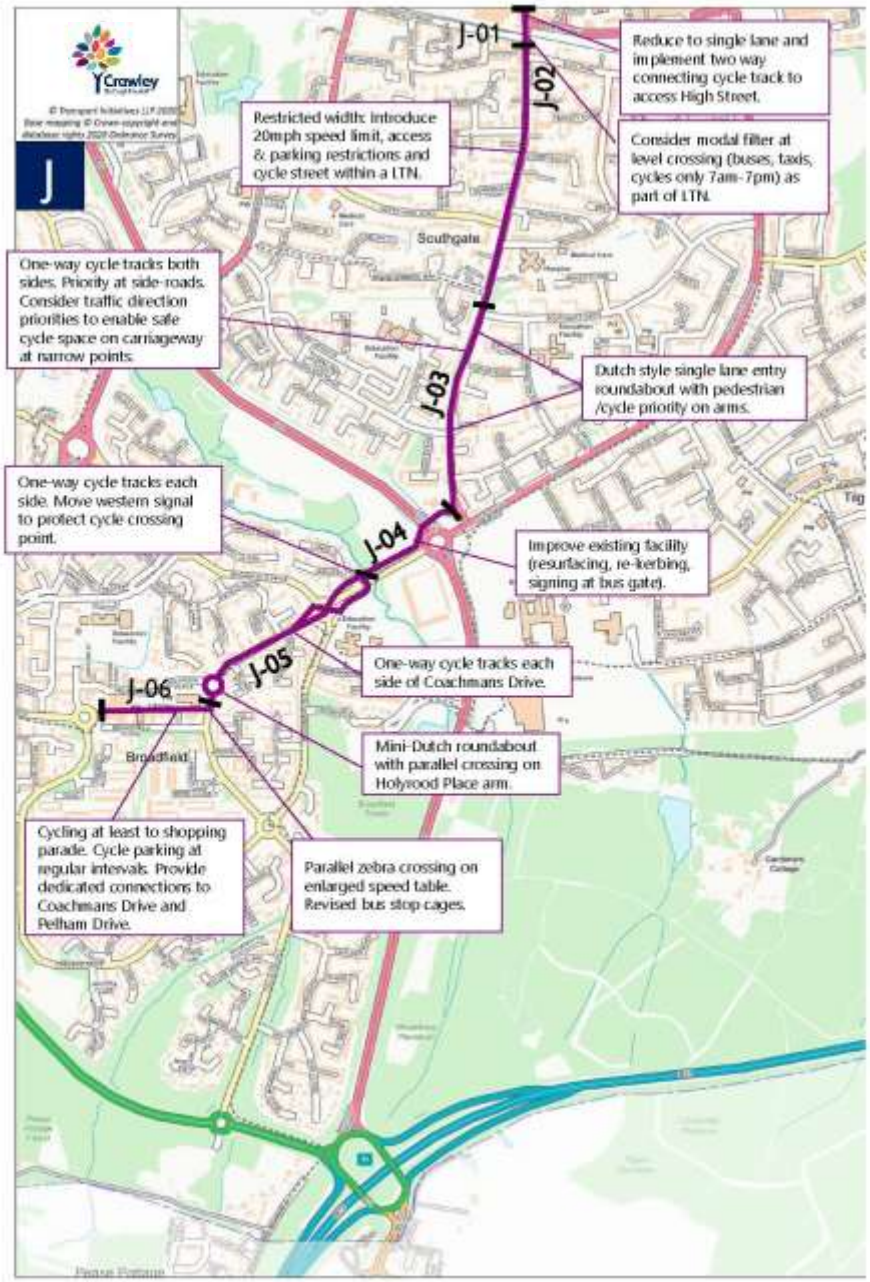
RST summary evaluation
Key: brown = existing conditions
blue = potential with improvements



Number of Existing Critical Junctions/Crossings	4
Number of Potential Critical Junctions/Crossings	2
Indicative Cost	£2.01m - £6.35m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

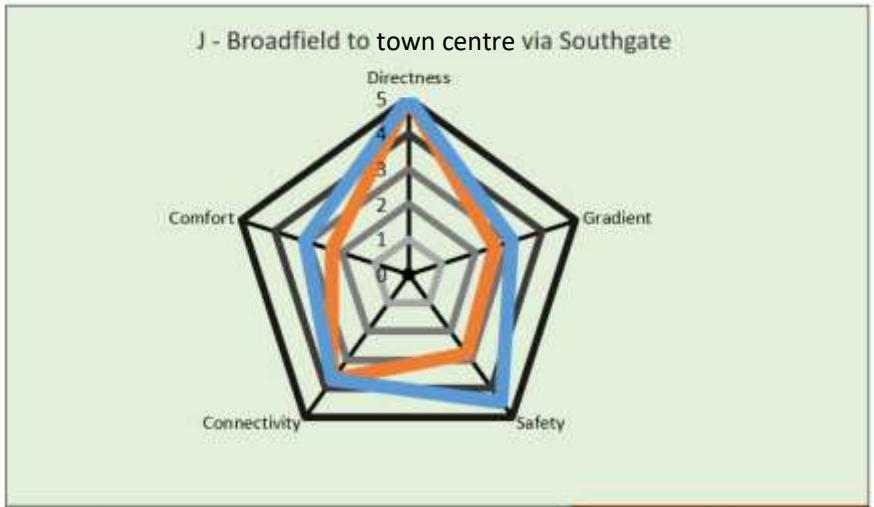
Appendix 4.1 LCWIP routes: J – Broadfield to town centre via Southgate



Broadfield has several relatively fast local distributor roads including Coachmans Drive, which currently provide little space for safe cycling. Safe treatment using this direct link to the football underpass by the stadium gives access to Southgate and northward routes. The underpass needs significant improvement but is a useful safe track. Brighton Road presents particular challenges with a narrow cutting, a hill and speeding traffic through Southgate, suggesting calming and traffic limiting measures to benefit the neighbourhood, where Horsham Road and Southgate Avenue are alternative traffic routes.

Average cycle time at 9km/hour = 17 minutes

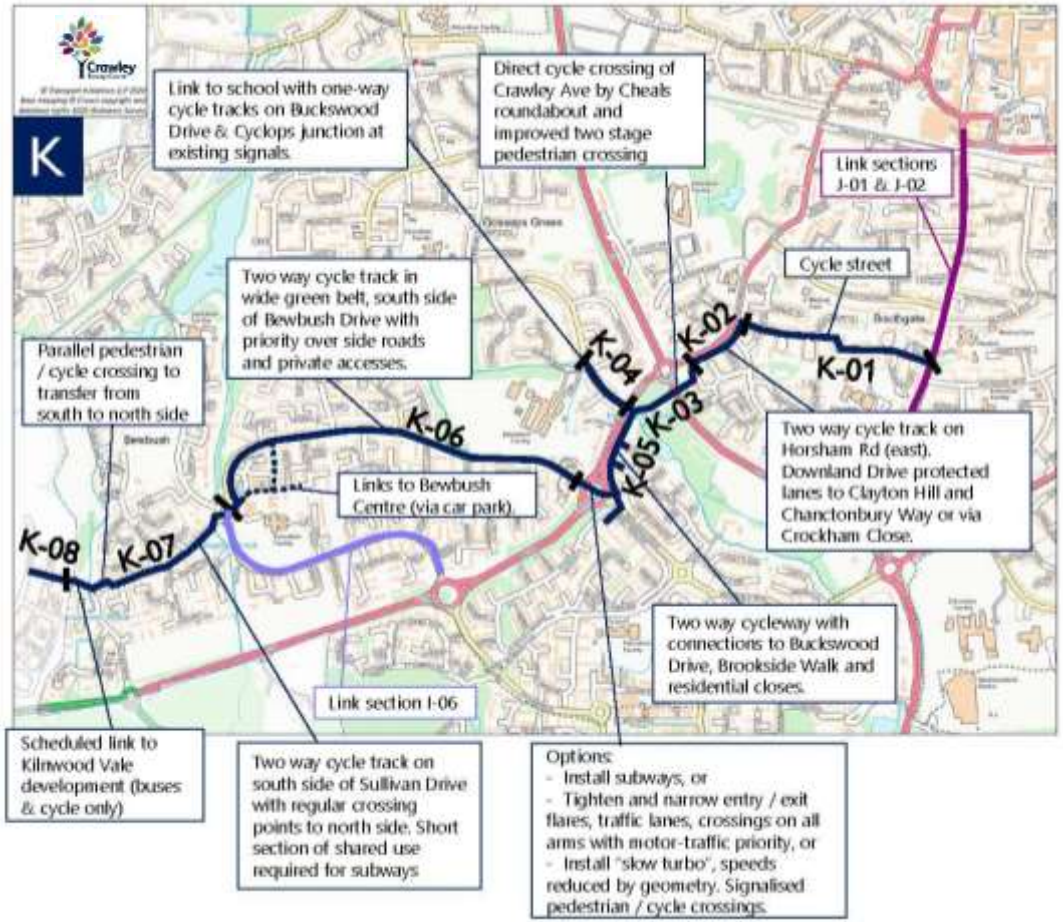
RST summary evaluation
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	0
Number of Potential Critical Junctions/Crossings	0
Indicative Cost	£0.93m - £2.74m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

Appendix 4.1 LCWIP routes: K – Kilnwood Vale and Bewbush to town centre (joins route J)

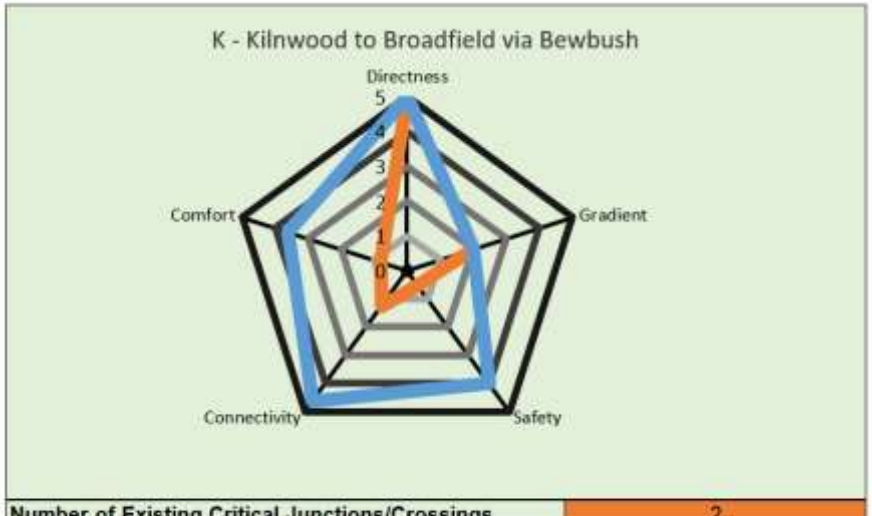


Kilnwood Vale is a new housing development. Many of its residents work at Manor Royal or Gatwick Airport. A bus gate provides cycle access from Illett Avenue into Bewbush, prohibiting car through traffic. Bewbush Drive is relatively direct but is a fast traffic route with a significant hill but offers a good route with treatment for safety and connectivity to neighbourhood streets. Cheals roundabout at the junction of Horsham Road and Crawley Avenue is a notorious hazard point for walking and cycling with only one crossing point. An existing crossing at Horsham Road is an opportunity to link with this across a desire line, giving access to Southgate neighbourhood to join route J to the town centre.

Average cycle time at 9km/hour = 24 minutes

RST summary evaluation

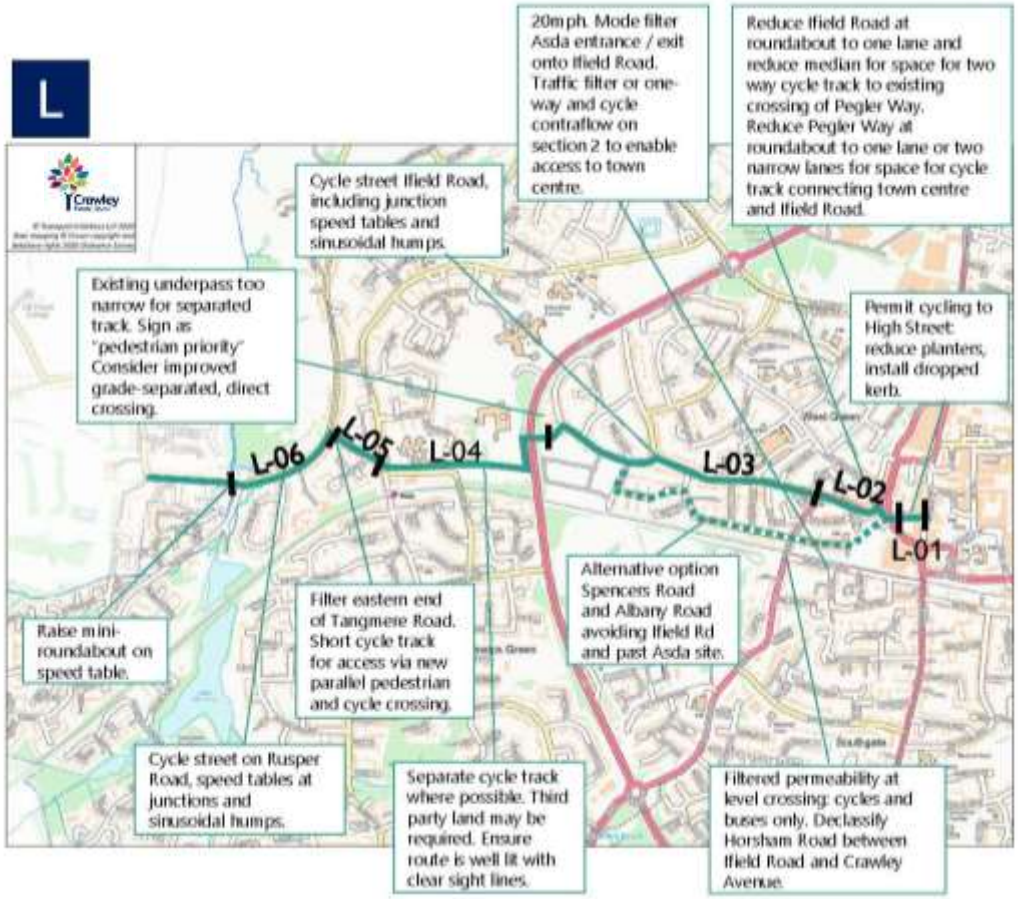
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	2
Number of Potential Critical Junctions/Crossings	1
Indicative Cost	£2.73m - £8.41m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

Appendix 4.1 LCWIP routes: L – Ifield to town centre

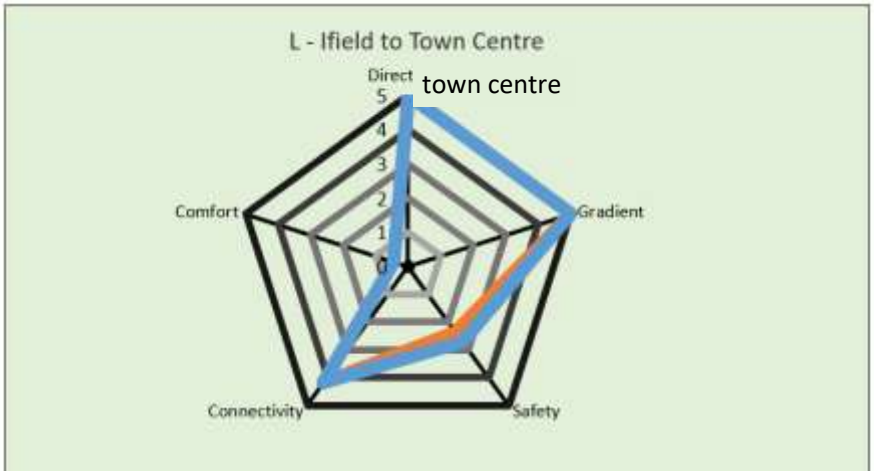


Ifield West faces access barriers to the town centre by the railway line and, particularly, Crawley Avenue. Additionally, Ifield Road, as a narrow street, busy with traffic at peak times, presents issues for safe cycling and invites traffic management to release space. Proposals consider a shuttle system.

This route links two schools to West Green via a narrow underpass to Crawley Avenue and an existing off-road cycle track. This is well used as a footway and suggests opening up the underpass to provide a practical cycle facility. Feasibility and costs for this will need to be assessed separately.

Average cycle time at 9km/hour = 19 minutes

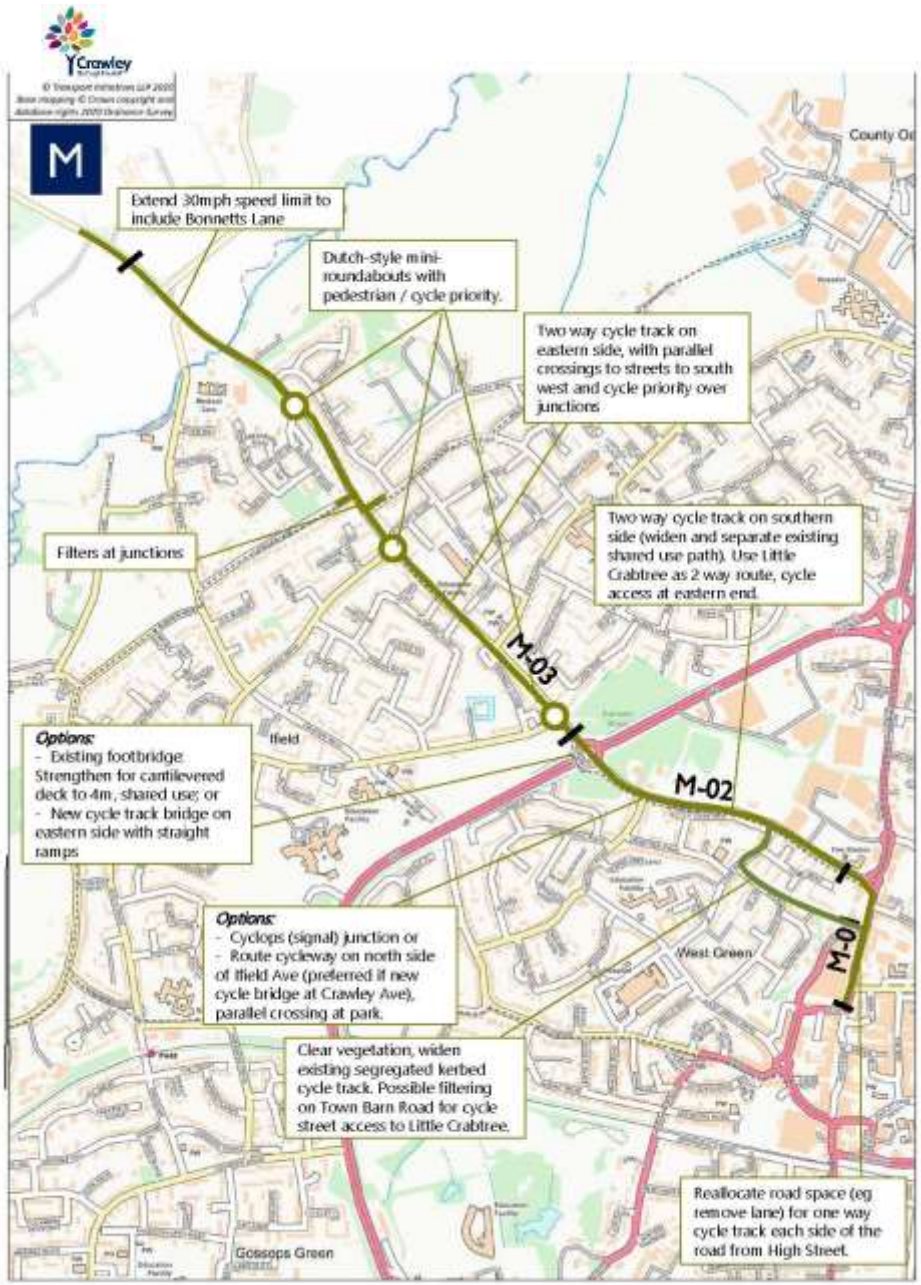
RST summary evaluation
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	4
Number of Potential Critical Junctions/Crossings	3
Indicative Cost	£0.79m - £0.82m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

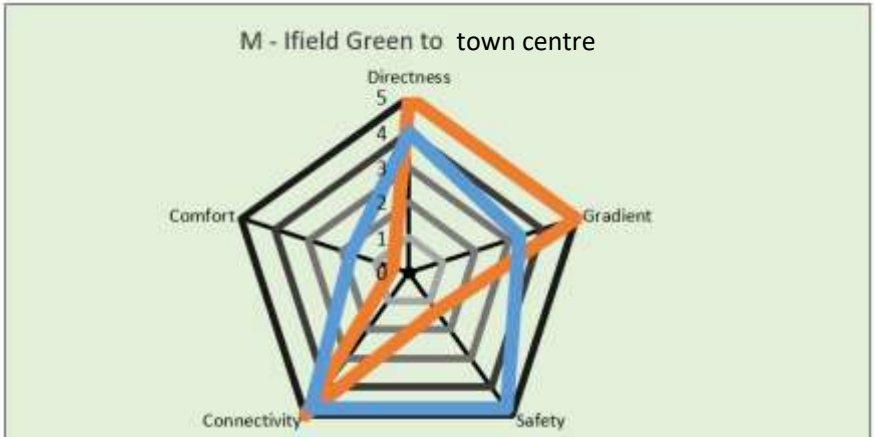
Appendix 4.1 LCWIP routes: M – Ifield Green to town centre



Ifield Avenue is a route to several sports facilities and a temple in Ifield Green as well as to Charlwood village and is busy at peak times. A shared cycleway/footway from Bonnetts Lane to Crawley Avenue is interrupted by frequent junctions with residential streets with vehicle priority and uncontrolled crossing refuges where vehicles also have priority at all times. A 40mph speed limit set just a few metres north of Langley Lane bridleway (route P) reinforces traffic dominance. Measures to reduce vehicle speed and provide some cycle continuity and priority is required.

Average cycle time at 9km/hour = 19 minutes

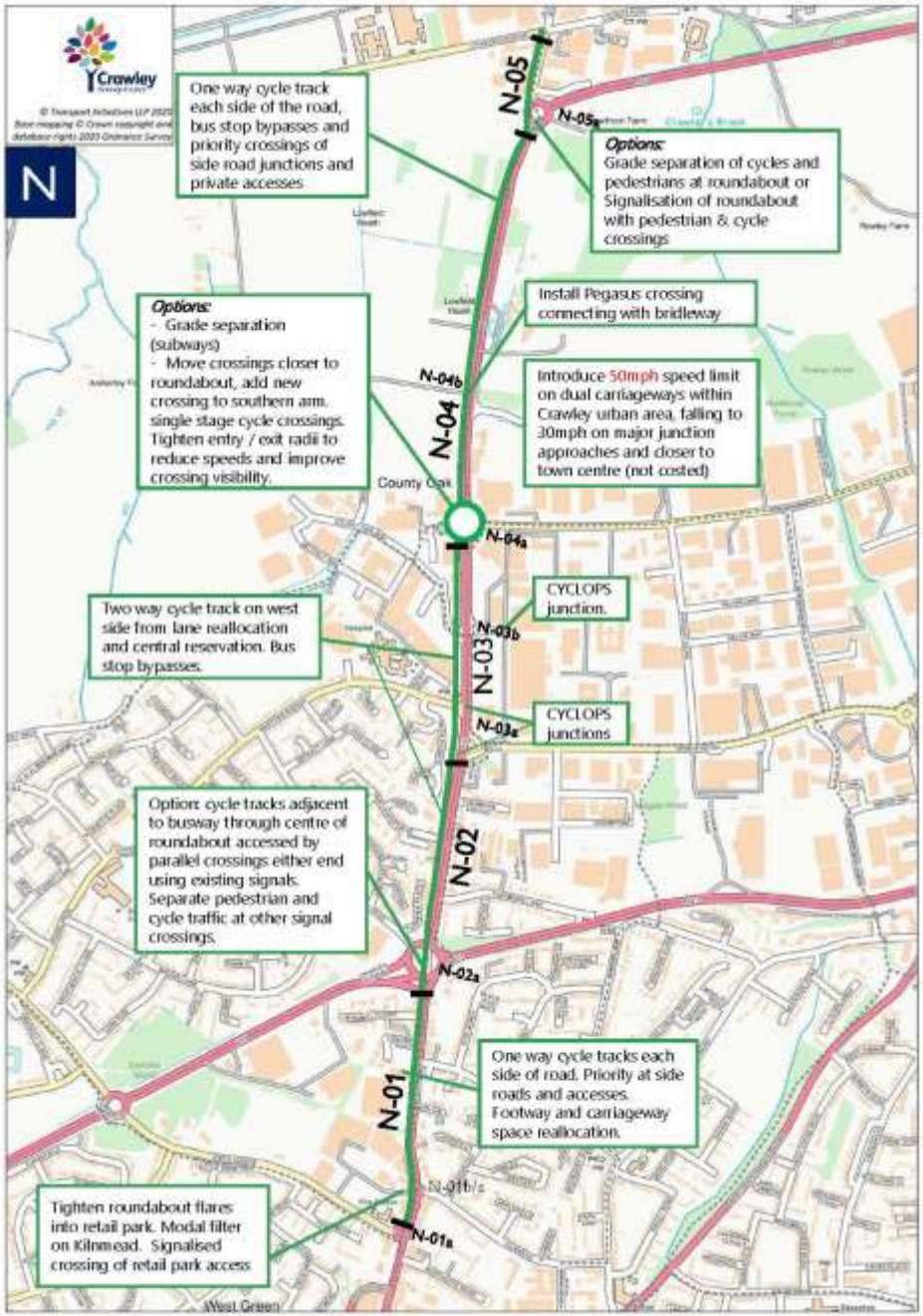
RST summary evaluation
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	7
Number of Potential Critical Junctions/Crossings	1
Indicative Cost	£2.39m - £4.8m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

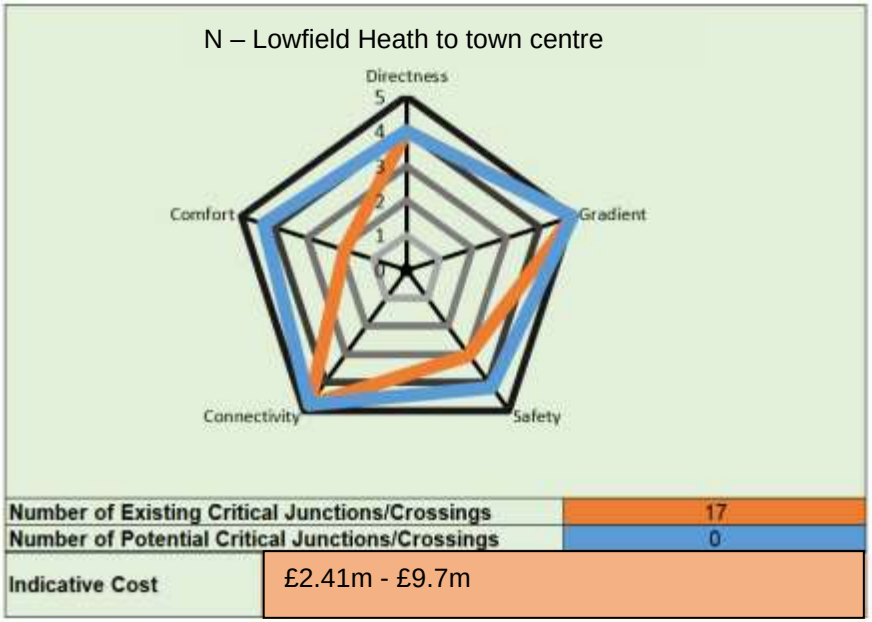
Appendix 4.1 LCWIP routes: N – Lowfield Heath to town centre



Corridor mapping indicates route N as important for access to employment and shopping and follows a stretch of the A23 that is busy but not the key through traffic route, which follows Crawley Avenue. Tushmore Roundabout presents a particular challenge: while already served by toucan crossings, these mean four signal phases to continue northward. Much of the A23 London Road is dual carriageway with narrow pavements, the southern sections are single carriageway with limited footway space. Carriageway reallocation will need to be considered.

Average cycle time at 9km/hour = 21 minutes

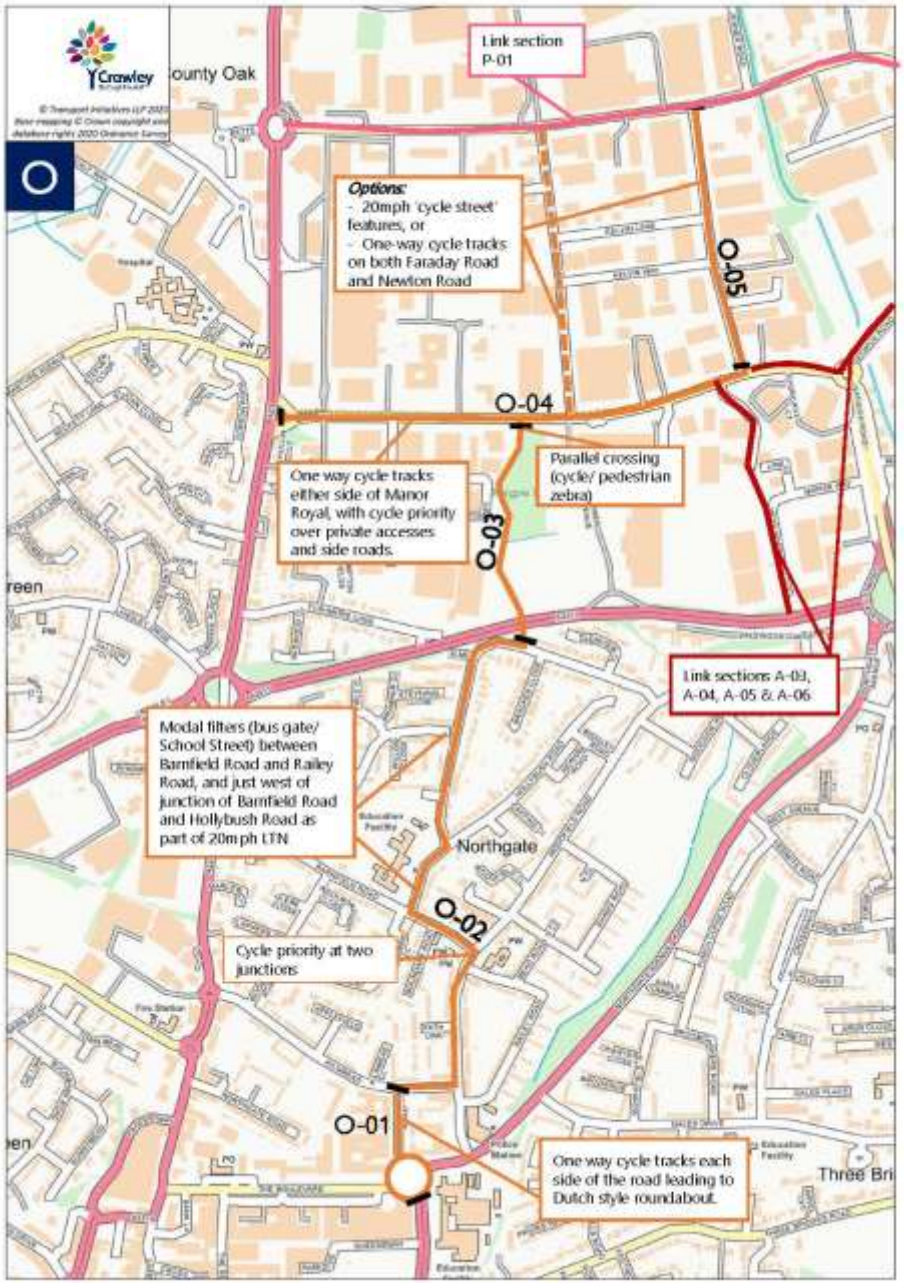
RST summary evaluation
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	17
Number of Potential Critical Junctions/Crossings	0
Indicative Cost	£2.41m - £9.7m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

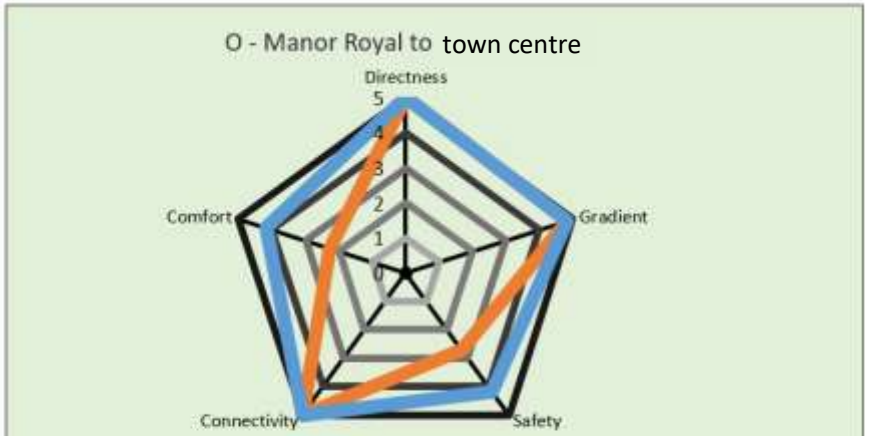
Appendix 4.1 LCWIP routes: O – Manor Royal (west) to town centre



Route O is an abstract from route N, providing access between Manor Royal and the town centre and including improvements to the existing cycle tracks along Manor Royal itself and add protected space on Newton Road, to provide full connectivity. This section looks for business site entrance measures for levelling and reprioritising. The route through Northgate passes a primary school and shopping parade, suggesting a low traffic neighbourhood treatment, filtering safe streets for cycling and walking. Woodfield Road is used by police vehicles but is also a rat-run and would need careful measures for filtering vehicles.

Average cycle time at 9km/hour = 21 minutes

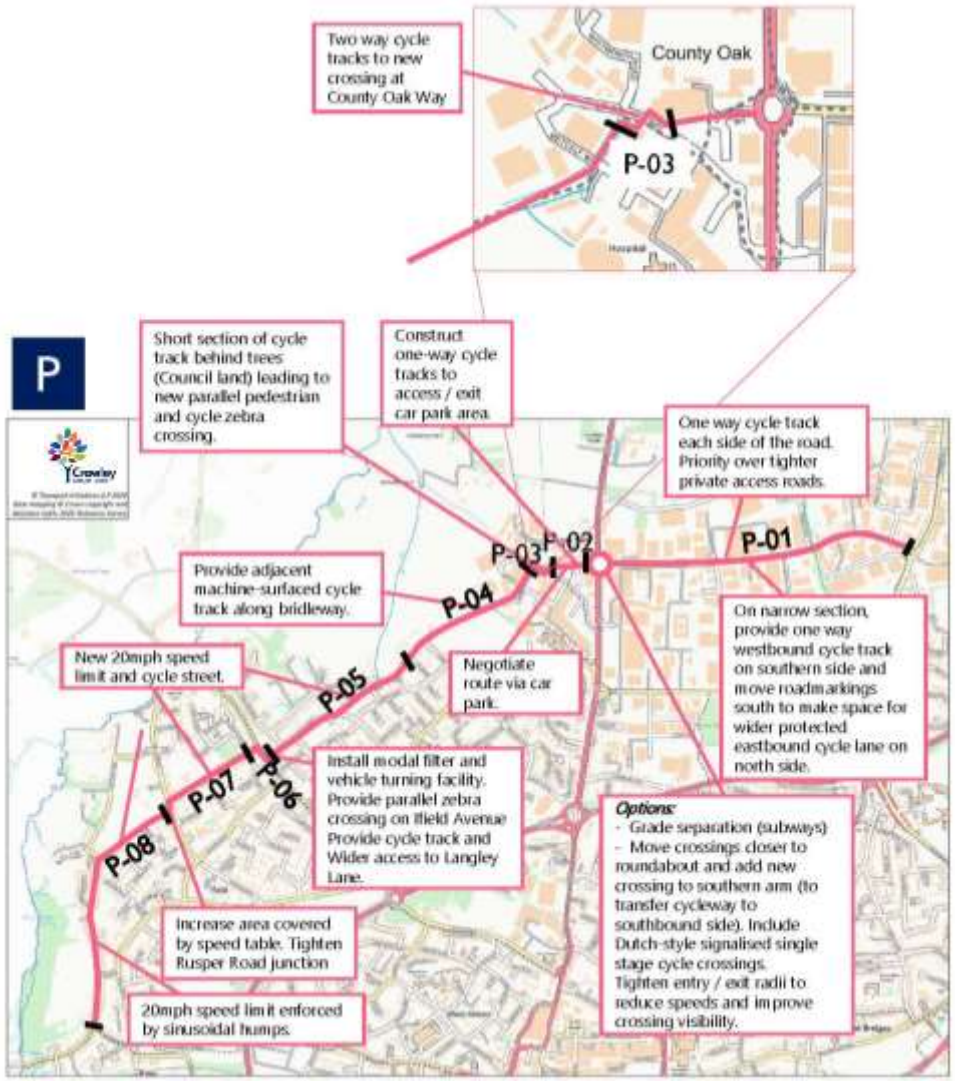
RST summary evaluation
Key: brown = existing conditions; blue = potential with improvements



Number of Existing Critical Junctions/Crossings	7
Number of Potential Critical Junctions/Crossings	0
Indicative Cost	£0.3m - £1.64m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

Appendix 4.1 LCWIP routes: P – Ifield to Manor Royal via Langley Green



Route P serves Ifield and Langley Green as a partial north circular route, shown by the Crawley Cycle Network Review to be particularly lacking in cycle facilities as well as a priority corridor. Single carriageway residential streets, busy at peak times, with limited space for segregation for cycles, suggests potential for traffic management and quiet neighbourhood measures providing safer, comfortable cycling. The Langley Lane bridleway and Langley Walk are attractive features of the route, with key challenges in crossing busy roads like Ifield Avenue and avoiding conflict with vehicles at County Oak, along with safe and direct access to Manor Royal around the retail centres.

Average cycle time at 9km/hour = 32 minutes

RST summary evaluation

Key: brown = existing conditions; blue = potential with improvements

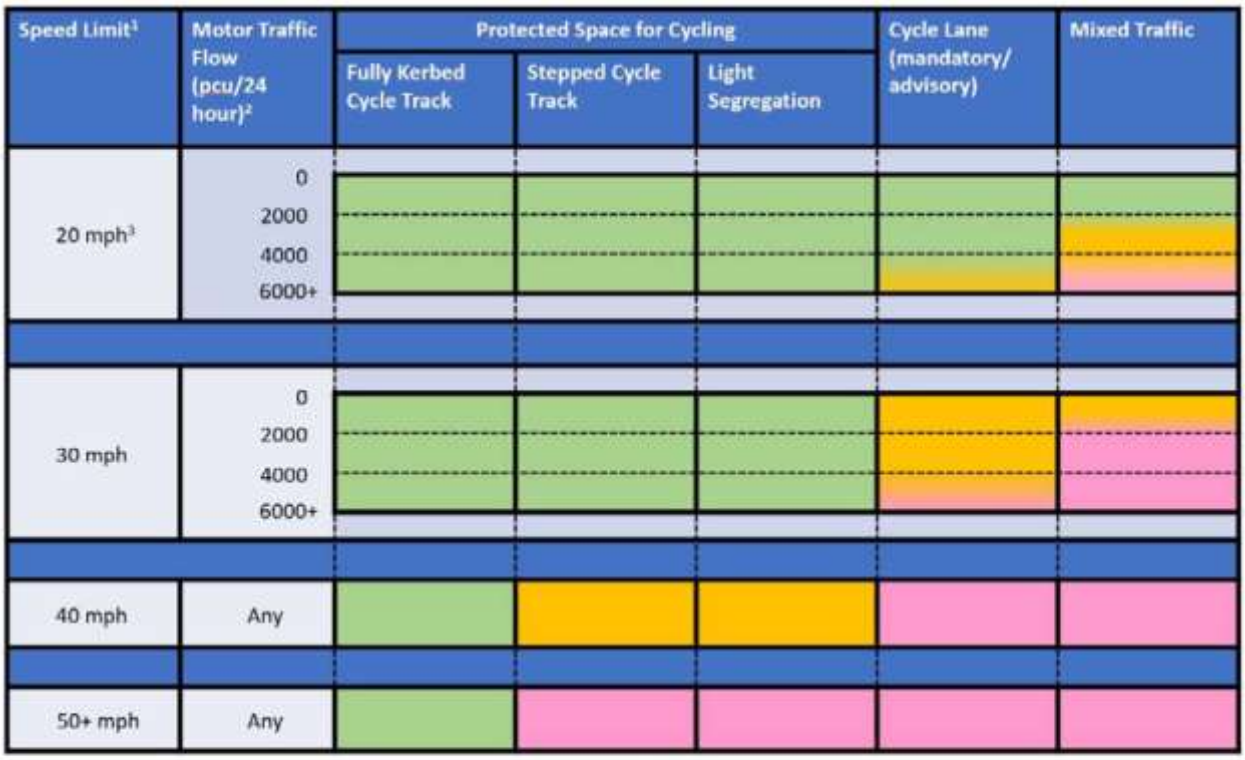


Number of Existing Critical Junctions/Crossings	17
Number of Potential Critical Junctions/Crossings	0
Indicative Cost	£2.42m – £2.59m

Upper costs include all recommended route elements and preferred major infrastructure options. Lower costs omit some elements and uses shorter term or minimal infrastructure where functional.

Appendix 4.2 Summary LTN 1/20 guidance on protection and lane and track widths

Appropriate protection from motor traffic on highways



Cycle lane and track widths

Cycle Route Type	Direction	Peak hour cycle flow (either one way or two-way depending on cycle route type)	Desirable minimum width* (m)	Absolute minimum at constraints (m)
Protected space for cycling (including light segregation, stepped cycle track, kerbed cycle track)	1 way	<200	2.0	1.5
		200-800	2.2	2.0
		>800	2.5	2.0
	2 way	<300	3.0	2.0
		>300-1000	3.0	2.5
		>1000	4.0	3.0
Cycle lane	1 way	All – cyclists able to use carriageway to overtake	2.0	1.5

*based on a saturation flow of 1 cyclist per second per metre of space. For user comfort a lower density is generally desirable.

Appendix 5.1 Crawley town centre walking zone – link and area scores

(fails highlighted red)

Ref	Street name	ATTRACTIVE-NESS				COMFORT						DIRECTNESS						SAFETY			COHER-ENCE	TOTAL		
		A1	A2	A3	A4	Cm 1	Cm 2	Cm 3	Cm 4	Cm 5	Cm 6	D 1	D 2	D 3	D 4	D 5	D 6	S1	S2	S3	Ch1	SCORE	%	Comments
CWA01	Station forecourt	2	2	2	2	2	2	1	2	2	2	2	1	2	2	2	2	1	2	2	0	35	87	Western access incoherent and missing dropped kerb crossing off Station Way
CWA02	Station Way	1	2	1	2	1	0	2	2	2	2	2	1	1	2	2	2	1	1	2	1	30	75	South side pavement west of station too narrow, poor surface and vegetation encroaching. Some missing tactile paving
CWA03	Friary Way	2	2	1	2	2	2	2	1	2	1	2	1	2	2	2	2	1	2	1	1	33	82	Market stalls, narrow pavement
CWA04	Haslett Avenue West	1	2	1	1	2	1	0	1	2	1	2	1	2	2	2	2	1	1	2	0	27	67	Missing tactile paving and dropped kerbs. Narrow crossing
CWA05	Station Road, Station Way, Haslett Avenue West gyratory	1	2	0	1	1	0	2	1	2	2	2	1	1	2	2	2	1	1	2	1	27	67	Narrow pavements in parts and incoherent in some layout
CWA06	East Park	2	2	2	1	1	1	2	2	2	2	2	1	2	2	2	2	1	2	2	0	33	82	Missing dropped kerb
CWA07	Railway footbridge and access off East Park	1	1	2	1	1	0	2	2	2	2	2	2	2	2	2	0	2	2	2	2	32	80	Steps only on footbridge
CWA08	Brighton Road	2	2	1	2	1	0	2	2	2	1	2	2	1	2	2	2	1	1	1	0	29	72	Narrow pavement on east side and missing tactiles and poor dropped kerbs with ponding
CWA09	Pegler Way	1	2	1	2	2	0	2	2	2	0	2	0	1	1	2	2	1	1	1	2	27	67	Pavement narrowed by line segregated cycle path and bus shelters and street furniture and planters
CWA10	High Street and Orchard Street	2	2	1	2	1	2	2	2	2	2	2	2	1	2	2	2	1	1	2	1	34	85	Some missing tactile paving
CWA11	Crawley Leisure Park	2	2	1	1	2	1	2	2	2	2	0	0	1	2	2	0	1	2	1	0	26	65	Large car park where the fact that people walk to and from their cars is almost totally forgotten
CWA12	Ifield Avenue	1	2	1	2	1	0	2	2	1	2	2	2	1	2	2	2	1	1	1	2	30	75	Line segregated cycle path and some vegetation encroachment severely narrows pavement

Ref	Street name	ATTRACTIVE-NESS				COMFORT						DIRECTNESS						SAFETY			COHER-ENCE	TOTAL		
		A1	A2	A3	A4	Cm 1	Cm 2	Cm 3	Cm 4	Cm 5	Cm 6	D 1	D 2	D 3	D 4	D 5	D 6	S1	S2	S3	Ch1	SCORE	%	Comments
CWA13	London Road	2	2	1	1	2	2	2	2	2	1	2	1	1	2	2	2	1	1	1	2	32	80	
CWA14	London Road	2	2	1	1	2	2	2	2	2	1	2	2	1	2	2	2	1	1	2	2	34	85	
CWA15	Kilnmead	1	2	1	2	2	1	0	2	2	2	2	1	1	2	2	2	1	1	0	2	29	72	Very busy for what is primarily a residential street
CWA16	Path between Kilnmead and The Boulevard	1	0	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	35	87	Surface deteriorating and needs clearing of mud and leaves
CWA17	Path from east end of Northgate Road	0	0	2	2	0	0	2	2	2	2	2	2	2	2	2	0	2	2	2	2	30	75	Very narrow, muddy and literally round the houses
CWA18	Northgate Road	2	2	2	2	2	1	2	2	2	1	2	2	2	2	2	2	2	2	2	1	37	92	No tactile on west end crossing and ponding here too
CWA19	The Boulevard	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	38	95	
CWA20	The Boulevard	2	2	1	2	0	1	2	2	2	2	2	1	1	2	1	1	1	1	2	1	29	72	Some of the paving slabs very bumpy and all are tired. Crossing by Town Hall should be on demand with no delay on call
CWA21	The Boulevard	2	2	1	2	1	2	2	2	2	1	1	2	2	2	2	2	1	2	2	0	33	82	East end access has no dropped kerbs. Pavement tired and some ponding. Wide pavement on south side only
CWA22	Parkside / Queensway	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	40	100	
CWA23	Memorial Gardens	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	39	97	
CWA24	College Road	1	2	0	2	1	1	2	2	2	1	2	0	0	1	1	2	1	1	1	2	25	62	Pinch points and ponding on eastern pavement. Central barrier means no gaps and crossings which do not serve all desire lines
CWA25	Haslett Avenue East	2	2	1	2	2	2	2	2	2	2	2	0	0	0	2	2	1	1	1	2	30	75	Central guardrail means no gaps and only crossing is at west end
CWA26	Retail access	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	37	92	
CWA27	Library precinct	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	39	97	

Ref	Street name	ATTRACTIVE-NESS				COMFORT						DIRECTNESS						SAFETY			COHER-ENCE	TOTAL		
		A1	A2	A3	A4	Cm 1	Cm 2	Cm 3	Cm 4	Cm 5	Cm 6	D 1	D 2	D 3	D 4	D 5	D 6	S1	S2	S3	Ch1	SCORE	%	Comments
CWA28	Queens Square and environs off it	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	39	97	Little bit of ponding in older section
CWA29	The Broadway	2	2	2	2	1	2	2	1	2	1	2	2	2	2	2	2	1	2	2	2	36	90	Getting tired
CWA30	Bank Lane	2	1	2	1	1	0	2	0	2	2	0	0	2	2	2	2	1	1	1	0	24	60	Back access really without consistent provision
CWA31	The Square	2	2	2	2	1	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	38	95	Some tired bits needing repair
CWA32	Cross Keys	0	0	2	0	0	0	2	2	2	1	0	2	2	2	2	2	1	2	1	0	23	57	Access but publicly accessible cut through
CWA33	Ifield Road	1	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	38	95	
CWA34	Church Walk	1	1	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	37	92	

Appendix 6.1 Glossary - acronyms

AMAT	Active Mode Appraisal Tool
CBC	Crawley Borough Council
CIL	Community Infrastructure Levy
CWIS	Cycling & Walking Investment Strategy
CWZ	Core Walking Zone
DfT	Department for Transport
KSI	Killed or Seriously Injured
LCWIP	Local Cycling & Walking Infrastructure Plan
LSOA / MSOA	Lower Super Output Area Middle Super Output Area
LTIP	Local Transport Investment Programme (WSCC)
LTN	Low Traffic Neighbourhood *(also* Local Transport Note *in LTN1/20)*
LTP	Local Transport Plan
PCT	Propensity to Cycle Tool
RST	Route Selection Tool
STP	Sustainable Transport Package (WSCC)
TI	Transport Initiatives
WRAT	Walking Route Assessment Tool
WSCC	West Sussex County Council

Appendix 6.2 Illustrated infrastructure terms

(kind permission of Chichester District Council and Transport Initiatives)

Measure & description	Illustration
Bus gate A modal filter (see below) where only buses, cycles and pedestrians (and sometimes taxis) are allowed to pass. The most effective bus gates use automated rising/falling bollards which lower to allow buses to pass (as in Graylingwell Drive) but can also be enforced by camera. Sign-only restrictions may be ignored.	
Continuous footway A way of providing priority for pedestrians over turning vehicles at side roads by continuing the footway surface across the junction, giving strong visual priority to people walking. A 'continuous cycleway' can be provided in a similar way for a cycle lane or track.	
Contraflow cycling Where cycles are allowed to travel in both directions on streets that are one-way for motor traffic. It can be implemented using lane markings and signing (with or without some form of physical protection), or by using signing only at the entrance to the contraflow section.	
Cycle bypass Physical separation for people cycling enabling them to avoid a restriction for other road users such as traffic signals and chicanes	

Cycle lane

Advisory – dashed white line marking out a lane intended for cycling. Motor vehicles should not enter the lane unless it is unavoidable but are not legally prohibited from doing so. Advisory lanes offer very little benefit to people cycling.



Mandatory – solid white line marking out a lane for the exclusive use of cycles. Motor vehicles are legally prohibited from driving in the lane. Mandatory lanes offer some benefit to people cycling but do not provide any protection from encroachment by motor vehicles.



Cycle parking

Cycle parking ranges from hoops (‘Sheffield stands’) on pavements or carriageway, to secure on street parking (‘bike hangars’). It can also include lockers and free-standing compounds, as well as secure areas inside buildings. Cycle parking should be fit for purpose, secure and well located, and allow all types of cycles to be parked.





Cycle street Low traffic street where motor vehicles are allowed but cycling has priority	
CYCLOPS CYCLOPS (CYCle Optimised Protected Signals) junctions are a unique design, piloted in Greater Manchester, which can be used at large intersections. They fully separate people cycling from motor traffic, reducing the possibility of collisions or conflict. People walking and cycling are able to get where they want to be in fewer stages with more space to wait than in standard junction designs.	
Dutch style roundabout Roundabout based on Dutch designs, with an outer cycle track ring and parallel crossings for cycles to give them equal priority with pedestrians over oncoming vehicles. Zebra crossings across the cycle tracks give pedestrians priority over cycles. The roundabout is designed to encourage slower driving, with a central over-run area allowing larger vehicles to turn safely.	
Floating bus stop / bus stop bypass Cycle track running behind a bus stop so that people cycling do not have to interact with buses, making it safer and also reducing delay for bus passengers. May be at a lower level than the stop and footway, or at the same level. In busier areas there can be a zebra crossing for bus passengers to cross the cycle track (this can be on a raised table).	

Light protected cycle lane Intermittently placed objects (e.g. wands, bollards, posts, planters or sections of low kerb) to separate and protect people cycling from motor traffic. Usually used in conjunction with a mandatory cycle lane. Can also take the form of a stepped track, with cycling at an intermediate level between the pavement and road.	 
Low Traffic Neighbourhood (LTN) An area of streets (usually mostly residential) where <u>through</u> motor traffic is removed or reduced and calmed. Access by motor vehicles (including buses) for residents and visitors is fully retained, though routes may be slightly longer. LTNs have been clearly demonstrated to provide better, more liveable neighbourhoods with a higher level of walking, cycling, play and community use. There is also strong evidence that they can improve air quality, health and the local economy.	
Modal filter (road closure) A permanent or part-time road closure for motor traffic with access for pedestrians and cycles. It may be enforced by physical measures or signing. Only London councils have legal powers to use camera enforcement at all filters, though 'Gear Change' included a commitment to extend these powers to councils in the rest of England (currently only allowed at Bus Gates – see above)	

Parallel crossing A crossing similar to a zebra crossing, which can be used by cycles as well as pedestrians with the same legal requirements on drivers and other road users to stop for those crossing whether walking or cycling. It may be on a raised table.	
Parklet A structure built on the carriageway in place of car parking allowing use by people sitting, with planting and cycle parking. Parklets outside cafes and restaurants can be used to allow customers space to eat and drink in the open air, especially when pavements are narrow.	
Protected cycle track A path for cycling physically separated from areas used by motor vehicles and pedestrians. It may be next to, or completely away from the carriageway.	
Raised table A flat raised section of the carriageway, used to slow traffic and make it easier for pedestrians (and cycles, where appropriate) to cross	

School Street Section of street outside a school with restricted access during school pick-up and drop-off times, enforced by physical measures or signs. Camera enforcement can be used but only London councils have legal powers to do this, though the DfT have announced plans for this to be extended to Highway Authorities in the rest of England in late 2021.	
Separated path A motor traffic-free path where pedestrians and cycles can travel in parallel, with their areas separated by a physical feature, such as a kerb, flat or raised white line or surfacing in different colours or materials	
Shared use path A motor traffic free path where the surface is fully shared by pedestrians and cycles. It can include pavements alongside carriageways as well as routes completely away from roads, like in parks. LTN1/20 recommends that shared paths are only used outside urban areas and where there is low pedestrian use.	
Signing Cycle direction signs help people cycling to navigate and can include information on destinations, distances (and times) as well as the name and numbers of cycle routes. Clear and accurate signing is important, not just to guide people who are already cycling, but also to market cycling to other people.	

Staggered barriers & access controls These are often used on shared or separated paths with the intention of slowing cycles. However they are a major barrier to people using cycle, especially with non-standard cycles. They also restrict movement by disabled people using wheelchairs and mobility scooters as well as people with pushchairs, and also obstruct use by blind and visually impaired people. For these reasons they are generally considered to breach the Equality Act and should only be considered following an Equality Impact Assessment.	 
Tactile paving Paving with raised lines or dimples alerting blind and visually impaired people to different uses of a path or area. 'Tramline' and 'ribbed' paving is used at the ends of sections of separated cycle and pedestrian paths.	
Toucan crossing A signal controlled crossing that can be used by both pedestrians and cycles (may be on a raised table)	