

New Directions for Crawley

Transport and access for the 21st century

March 2020

Crawley Borough Council

Contents

Introduction 3
New Directions for Crawley 4
Context – working together 5
The climate and ecological emergency 7
A vision for 21st century Crawley 8
Crawley's strengths 10
Realising the vision 11
Delivering the vision 12
Current local challenges 14
Clean air and active health 16
Planning for people and places 17
New directions, new thinking 18
Ideas and options 20
Crawley Borough Council 22
Action planning 23

Appendix

I Crawley's new Local Plan 25
II West Sussex Transport Plan 29
III Cycling and walking 31
IV Further discussion:
Climate – Gatwick Airport – New Technologies – Electric vehicles 35
References and bibliography 37

Introduction

Transport impacts all of our lives in one way or another. We all depend on walking or buses, driving, cycling or trains to get around, or on services and businesses that need to reach us. However, transport is the biggest source of carbon emissions, driving the climate crisis. It can also be a major contributor to air pollution, a source of collisions, a barrier to street access and takes up a lot of valuable land.

Crawley Borough Council is looking at how we can transform transport and access in Crawley for its future sustainability. We need to reduce carbon emissions, improve safety and air quality, reduce congestion and make better use of street space to create a more active, healthier town.

New Directions for Crawley has several objectives. It looks at some of the issues presented by the current approach to travel and access in Crawley, suggests what our vision for the future might be, outlines some options for improvement and shows what could be delivered in the town over the next five years. It identifies the authorities, key stakeholders and the policies with which the strategy needs to work and briefly describes how an evidence-based action plan can be developed.

This is a first for Crawley. Following our consultation, we are looking forward to working with our partners to develop this issues and options document into a detailed action plan for a healthier, more sustainable and connected Crawley.



Councillor Peter Smith

Councillor Peter Smith
Cabinet member for Planning and Economic Development

New Directions for Crawley

The world is changing. Work and travel patterns are changing. Our understanding of how travel and access works is changing.

Old ways of dealing with congestion and other transport problems by 'planning for vehicles' are being challenged. Evidence shows that 'planning for people and places' provides better long-term solutions for everyone. Adopting this new approach, alongside rapid advances in technology and the overriding need to deal with vehicle emissions, mean that we have to change the direction we are taking if we are to meet the demands of the 21st century.

Crawley's needs are also changing. The major challenges posed by the climate emergency, air quality, a shortage of affordable homes and poor health related to inactivity have to be addressed.

We need to develop a forward-focused vision for a low carbon, healthy and attractive town where people want to continue to live and work. Solutions to meeting our transport and access needs have to be centred on movement of people and goods rather than vehicles.

Crawley Borough Council aims to join those in the forefront of new thinking on transport and access to find sustainable solutions for Crawley.

New Directions is a developing strategy for discussion. It outlines a vision and looks at where we are now, presents issues and options, highlights new thinking and identifies opportunities for Crawley. A multi-modal transport study will be undertaken alongside developing plans and modelling of options. This will inform development of a detailed action plan for the period to 2030, to enable Crawley to transform how we all get around and access our town, whatever our needs or abilities.



In the last 20 years:

- 18-30 year old males drive half as much
- Fewer young people have driving licences
- Only people over 60 are driving more

All Change 2018 and Metrobus



Context – working together

The Local Transport Authority responsible for the borough of Crawley is West Sussex County Council (WSCC). Crawley Borough Council works closely with WSCC within a framework provided by its Local Transport Plan (LTP).

Some aspects of transport infrastructure or service delivery require a lead by WSCC with technical, statutory and strategic responsibilities and plans.

The borough's planning role can ensure local access and connectivity. Its emerging Local Plan shows how new urban design can shape streets to be people-centred, providing healthier, connected places and enabling local mobility. Crawley Borough Council is in a position to identify funds and manage delivery of some projects in Crawley that WSCC may not have the resources to prioritise, but can support on a technical basis.

See appendix I for key borough policies on urban design, neighbourhood priorities and sustainable transport that New Directions for Crawley aims to take forward.

Appendix II outlines challenges and policies for Crawley, identified by the West Sussex Transport Plan.

The Crawley Growth Programme is an example of current successful collaborative working with WSCC and Manor Royal Business Improvement District, along with Arora, Metrobus, Network Rail, Gatwick Airport Limited and GTR, to deliver sustainable transport infrastructure and street improvements.

Further opportunities for working together are suggested later in this document where Crawley Borough Council aims to work with neighbourhood communities and other partners to help them shape their environments.

Half of Crawley residents' journeys to work in Crawley are less than three miles.





The number **10** bus runs

24/7

Bewbush to Gatwick Airport mostly every

Six minutes

Context – working together

New Directions for Crawley is being developed in the light of newer regional and national policy. In particular:

- **Transport for the South East.** TfSE is a nascent regional transport body likely to be responsible for managing government and other development funds to deliver a regional transport and access strategy. Its strategic aim is a shift from the traditional approach of planning for vehicles to planning for people and places. The strategy is available at **www.tfse.co.uk**
- **The Cycle and Walking Investment Strategy.** The importance of cycling and walking as part of the transport mix was recognised by central government in releasing the CWIS. This has led to the funding of Local Cycle and Walking Infrastructure Plans (LCWIPs) which Crawley and WSCC have developed in partnership. A link to the CWIS and the Crawley LCWIP summary can be found in appendix III.
- **National Planning and Policy Framework.** The Government's NPPF guides planning authorities and says that significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. It is available at **www.gov.uk/government/publications/national-planning-policy-framework--2**

"Planning for vehicles with extensive highway capacity enhancements for cars is not sustainable in the longer term. Instead, there needs to be a transition from the current focus towards more planning for people and more planning for places".

TfSE, draft Transport Strategy for the South East



The climate and ecological emergency

Transport now generates a third of all UK carbon emissions, making it the largest contributing sector. Road traffic emissions are 90 per cent of that contribution. Whilst all other sectors' emissions are reducing, transport's is increasing.

We are already experiencing the climate effects of rising sea levels, coastal erosion, fires, storms and floods in the UK and around the world. Continuing with 'business as usual' would mean we are headed for catastrophic climate impacts.

Urgent action is needed.

In July 2019, Crawley Borough Council declared a climate emergency and pledged to cut its net carbon emissions by at least 45 per cent by 2030 and to zero by 2050. The UK government has made a legal commitment to cut net carbon emissions to zero by 2050.

Action on transport must be prioritised to help meet these targets and tied into borough milestones to be determined in its carbon reduction plan.

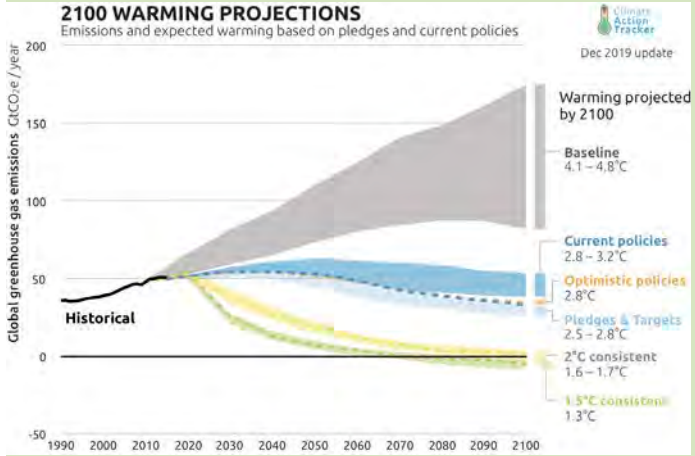
The transition to zero carbon will require a major shift to sustainable transport modes and managed highway demand. This means improving active and public transport infrastructure – particularly for interchanges between transport modes and for walking and cycling. It requires developing shared transport such as car clubs and bike rental, along with extensive use of digital technology from personal journey planning to prioritising buses in traffic. It will also mean addressing affordability and planning priorities for higher density urban building, where walking and cycling infrastructure and good public transport access are at the core of all development.

Fortunately, there are many available measures that will decarbonise transport and improve access for everyone. These measures will have additional benefits, including:

- improving health from better air quality and stimulating walking and cycling
- releasing land for urban development and protecting nature
- attractive, safe and sociable streets, connecting communities and local business.

"We cannot afford to allow transport emissions to rise".





A vision for 21st century Crawley

In the light of these challenges, new thinking and evidence, we need a new vision for Crawley.

By 2030, people in Crawley will enjoy a better quality of life as they experience the physical and psychological benefits of being more active. Residents will be spending more time out and about in more attractive neighbourhoods with greener, safer places for wandering with families and friends, enjoying cafes, shops and other local business. Businesses reap the benefit of more contented staff who have less stressful journeys to work, with less congestion and fewer pressures for costly car parking.

- Walking and cycling routes are safe, direct, attractive and popular. Buses are smart, with zero emissions, traffic signal priority and WiFi, using new bus shelters with live information and serving all the neighbourhoods. We are keen to be more active, more productive and healthy, so the first choice for going to work, particularly to Manor Royal, Gatwick or the town centre, is to walk, cycle or take a bus.
- Phone apps, dedicated online local information and other technologies tell us when and where buses and trains are available and provide ticketing, so we don't have to wait around.
- The town centre has attractive, affordable and market-rate apartments within a very short walk of the new smart, accessible Crawley rail and bus stations, along new leafy walkways and priority crossings. Many out-of-town commuting, college, shopping or business trips are easiest by train or bus.
- The increase in town centre residents has created demand for independent food shops, bars and cafes within a short walk. Queens Square, Queensway, Broadway, the High Street and The Boulevard are lively in the evenings.



Copyright Living Streets

"New housing developments should be planned in such a way that residents can walk, cycle and use public transport to go about their daily lives".

Transport For New Homes



- When you need to use a car, the Crawley car club electric cars are available at nearby dedicated parking spaces with a swipe of a card and car hire is on hand locally for use for longer periods. With the mix of transport services on the doorstep and car availability when it is needed, private car use has dropped.
- Resident and visitor car parking in all Crawley neighbourhoods includes electric vehicle charge points, but lower car ownership has also freed up street parking spaces for a safer, more attractive environment.
- Bike rental is available across town, including effortless electric bikes, alongside more secure cycle parking. Upgraded cycle routes in safer, traffic-calmed neighbourhoods mean that many more children and adults who were previously wary of cycling are happy to nip around on two wheels.
- The way we go about improving neighbourhoods and the town as a whole has evolved, with local communities in ongoing conversations and sharing of ideas with Crawley Borough Council and our partners. Those communities can be residents, businesses or communities of interest and the process includes addressing access and movement of people as a key part of developing attractive places where we want to live and work. Practical schemes emerge out of community debate, trial projects and consensus.
- The air is cleaner, Crawley residents are healthier and the town is a great place to be!

This is a real vision. Measures to make it happen are being planned or considered now and have been proved to be successful elsewhere.



Cycling saves a typical commuter





Crawley's strengths

Crawley is in an enviable position to develop sustainable travel and access.

- **Neighbourhoods** centred on key facilities, provide opportunities for developing localised traffic management schemes. By slowing vehicles within a neighbourhood and limiting through-traffic, streets can be made safer and more attractive for direct walking and cycling access.
- **Four railway stations** directly link Crawley to London, Brighton, Portsmouth and Southampton, as well as a fast east-west route across the town. Major upgrades to improve access and facilities are planned for Gatwick Airport, Three Bridges and Crawley stations.
- **Good bus network and services,** including Fastway guided lanes, has meant a significant increase in bus use in Crawley, in contrast to a national decline. We have free WiFi and USB charging on buses, mobile service apps, bus stop realtime information and the fleet is shifting to best available emissions standards and zero emissions trials.
- **As a compact town** where most trips are short distance, with relatively flat terrain across the town, walking and cycling can be made very attractive travel options.
- **Green space with tree-lined routes and wide grass verges** are key Crawley features which invite active use of the streets, where road traffic is moderated.
- **Cycling projects** including Bike It, which has been working successfully with students, parents and teachers in Crawley schools for the last eight years as part of a national programme to encourage cycling, scooting and walking to school.
- **Three major centres of employment,** at Manor Royal, the town centre and Gatwick Airport, each of which is within cycling or walking distance of many of the borough's neighbourhoods and each has excellent bus connections. Rail links with London and Brighton provide additional rail-connected employment centres for the town.
- **A desire to be in the forefront** of developing sustainable, integrated, future-proofed transport for Crawley, reflected in the development of new urban design principles in the Local Plan.





At an average pace, you can cycle
across Crawley
in half an hour



Copyright Sustrans

Realising the vision

In the light of the climate emergency, health needs, developing technology and new policies and approaches for Crawley and the south east, as well as studies and experience across Europe, Crawley Borough Council aims to work in partnership with WSCC, transport, business and community bodies, to meet the following aims:

1. **Improved sustainable travel infrastructure –** prioritise walking and cycling network improvements and facilities, improving public transport access and services.
2. **Smarter highway network management –** managing demand, directions, speeds and inefficient road space allocation to address congestion and improve access and health of neighbourhoods and business districts.
3. **Integrated transport and land use planning –** ensure housing and business development centres are on public transport links and walking and cycling networks as 'Transit Oriented Development' for improved access.
4. **Effective travel planning –** working with business and other organisations to improve commuter, visitor, shopping and leisure choices and reduce single-occupancy car use.
5. **Shared mobility –** develop facilities such as car clubs and shared bikes, with electric vehicle charging to broaden choices beyond conventional private car use.

Alongside support for:

Digital travel tools – developing Mobility as a Service (MaaS) and transport information provision to enable seamless travel, awareness and use of public transport services as they develop.



"An ageing population, vehicle and energy technology, disruptive digital technologies, and the need for climate change resilience and adaptation will all present uncertainty".

Transport for the South East,
Economic Connectivity Report 2018



Delivering the vision

Real travel and access solutions need to work for transport, planning, health, environment and economic benefit, involving local people, business and service providers.

Crawley's plans over the next five years:



1. Connected residential development – Crawley is advancing its planning policies to enable almost 3,000 high density, new town centre homes to be developed with excellent travel choices. This means attractive apartments alongside rail and bus stations, taxis, shops, cafés and parks, with extra bike facilities and at least one car club, giving a big boost to local business and the evening economy. Car ownership is typically significantly lower in dense urban housing areas than in rural or suburban areas and likely to reduce further in Crawley town centre.

4. Railway station upgrades – The Crawley Growth Programme will help to transform railway station environments and transport interchanges for residents, visitors and commuters at Crawley and Three Bridges. Gatwick Airport station is to be significantly reconfigured and upgraded alongside improved access to local bus services.



2. Key cycle routes – Safe, direct, connected cycle routes are a key Crawley Growth Programme priority, aiming to link Three Bridges and Gatwick Airport railway stations directly with Manor Royal and the town to make journeys by bike a reality.





3. Bus hubs – Smart facilities at Manor Royal, Three Bridges station and the town centre and improved real time information, WiFi and charge points for mobile devices on bus services will further boost the appeal of bus travel. The bus station will be transformed with improved access, seating and waiting space.

5. Parking management schemes – West Sussex County Council's emerging road space audit (RSA) looks at car parking space efficiency for different road users. This data can be used to: identify better use of street space, cut conflicting demand and achieve a more efficient parking space provision.



Delivering the vision



6. Local Cycling and Walking Infrastructure Plan (LCWIP) – A prioritised route development programme based on a critical analysis of the existing network and future needs. The LCWIP includes detailed development planning guidance on walking and cycling infrastructure. See appendix III.



7. Car club – Establishing a car club, where strategically positioned cars with guaranteed parking spaces linked to digital booking and payment, will provide a key piece in the transport jigsaw. For residents and business, this means shared car use nearby when it's needed without the hassles, costs or inefficiencies of ownership.

8. Electric vehicle charging points – The borough will work with WSCC to extend these across the town, including rapid chargers, encouraging the switch to EVs and helping to improve local air quality.



9. Digital travel platform – NIMBLE, an innovative online MaaS facility for personalised, integrated travel information and ticketing, is being developed by Metrobus and supported through the Crawley Growth Programme.





10. Business travel planning – Digital technology has enabled changing workplace practices. This means greater flexibility in working hours, home working, journey sharing and managing deliveries, as well as public transport information. Personal travel planning as well as incentives and constraints designed with businesses can enable their staff to choose sustainable travel.

The Crawley Growth Programme (CGP) provides a package of solutions in a partnership of authorities, business and transport providers, concentrating around the town centre and Manor Royal. Additional initiatives address transport and access issues across the town.

Current local challenges

While many of Crawley's residential streets are leafy and attractive with little traffic, many busy streets can feel unsafe for residents, particularly for children. Coming into Three Bridges or Crawley stations, people enter an unwelcoming, vehicle-dominated space presenting immediate barriers to walking or cycling. Road traffic at key gateways to Crawley generates congestion, noise and exhaust emissions contributing to poor air quality and climate change.

Key challenges include:



1. Vehicle emissions around the Hazelwick Roundabout and roads approaching it are the major source of pollutants above nationally acceptable levels, leading to Crawley Borough Council declaring it an Air Quality Management Area.



2. Traffic congestion affects businesses and people working for them, particularly around Manor Royal. This is largely at rush hour peaks, affecting delivery and other business traffic and holding up bus services.



3. Street infrastructure in need of major upgrades, especially at road junctions, means fewer people walking and cycling. This can feel unsafe and unattractive for pedestrians.



4. Commuter car parking can spill over from workplaces into residential streets and other areas. Limited residential street space means verge parking can obstruct walkways and damage street landscapes.

5. Squeezed space is unattractive for cycling and walking and can mean conflict, particularly for prams and mobility scooters.



6. The cost of public transport can be prohibitive and time-tables may not always meet needs.



Current local challenges



8. School runs and car-dominated streets reduce activity amongst children – contributing to obesity, diabetes, respiratory and cardiovascular disease.

7. Larger, traffic-heavy roads cause severance where people are deterred from moving across the streets, affecting access to retail business and services.





9. Increasing car parking takes up valuable land, impacts on the natural environment and can increase car use and create conflict.



10. Routine local travel by car, such as school runs, can mean children develop less familiarity with their neighbourhoods and local residents and have reduced confidence.

11. Potholes, broken pavements and other road damage affect all street users and are a drain on local authority budgets.



12. Noise from road traffic and aircraft impacts residents, business and visitors to Crawley, which can affect mental health.



With the dominance of road traffic and limitiations of other means of transport, it is not surprising that some businesses see car travel as the only real option for their staff. However, increasing parking only makes car commuting more attractive which increases peak time congestion and calls for increased road space – which, in turn, increases local road traffic. At the same time, the increasing volume of vehicles makes business environments less attractive.

Real solutions for commuters lie in tackling the barriers to choosing more sustainable means of transport and providing more flexible ways of working.

Clean air and active health

High levels of pollutants from traffic increase heart and respiratory disease, lung cancer, strokes and asthma, premature deaths and child development problems. Lack of routine exercise like walking and cycling can lead to obesity, diabetes, heart disease and cancers.

Air quality

Local authorities have to take action on air quality where levels of specified contaminants exceed acceptable levels. Crawley declared an Air Quality Management Area (AQMA) in 2016 as a response to unacceptable levels of nitrogen oxides, largely due to road traffic. This AQMA centres on Hazelwick Roundabout, extending along Hazelwick Avenue, Crawley Avenue, Northgate Avenue and part of Gatwick Road. Air quality inside a car can be several times worse than that in the street outside.

Public Health England (PHE) advocates improving air quality through action on:

- Investment in clean public transport, walking and cycle paths
- Low emission vehicles
- Ensuring clean air zones and separating people from polluted roads
- Idling of road vehicles, especially close to schools.

Movement for health

There is strong evidence that physical activity improves physical and mental health, and that walking and cycling make important contributions to overall physical activity levels. Active travel can include use of public transport as stages of walking or cycling are normally necessary for using buses and trains.

We need to provide an environment that supports walking and cycling that is accessible to all, including people with disabilities and long-term conditions. Using bikes can be the key to mobility for people with physically limiting conditions.



Air pollution contributes to cancer, asthma, heart disease, stroke and dementia.



*"**Physical inactivity** is responsible for one in six deaths and is believed to cost the UK £7.4 billion each year, including £900 million to the NHS".*

NICE, 2019

Planning for people and places

Transport and access developed around the new town of Crawley at a time when far fewer families owned cars and cycling and walking were common ways of getting around. As road traffic has grown, this has impacted on life in Crawley.

Direct impacts are well known: increasing carbon emissions, traffic congestion, poor air quality, ever increasing demand for parking, street 'severance' (where busy roads divide communities, reduce safety and restrict access to facilities) and rising highway maintenance costs.

Wider consequences are less obvious: poor health due to car dependency and reduction in physical activity, isolation of people who do not drive and fewer people on streets which are made less attractive due to traffic. Streets with lower footfall can lead to an increase in crime and anti-social behaviour and a loss of sense of community.

Traditionally, dealing with growing traffic has been on a 'predict and provide' basis, where traffic levels are predicted, based on historic trends, and the highway network is expanded to provide for these. Expanding road space has been shown to generate traffic movements, over and above expected growth and does not solve congestion. It has been described as 'planning for vehicles'.

Newer thinking now proposes a 'plan and provide' approach, where we decide what is needed for better access and quality of environment and provide streets and spaces to achieve that. This is described as 'planning for people and places'.

We all know

that **walking, cycling** and taking the **bus** are **best** for our health and environment, reduce traffic and save money

but sometimes feel

it can be **hard** to see how these can work for us

and forget we said

"I got stuck in **traffic**"
"I couldn't find a **parking** place"
"I don't have **time** for exercise".

which means

we can **benefit** from including walking, cycling or taking the bus in our **routine**, more than we think.



Copyright Living Streets

New directions, new thinking

Urban design

When good urban design provides attractive walking spaces and safe, connected, direct cycle routes, links with accessible rail and bus services and good service information, people use them.

Business benefits from people-friendly streets. Where walkable places attract people, businesses fare better, attracting customers and staff. Higher housing densities around public transport hubs, known as 'Transit Oriented Development', with well-connected cycling and walking routes make these modes of travel natural choices. This development approach is less wasteful of scarce land and improves accessibility for everyone. It creates a more attractive, active neighbourhood, encouraging use of local retail and services.

In the past, development was designed around car and service vehicle access. Car use needs to fit into development designed around people's needs, providing real choice and flexibility in travel, where parking measures are enforced and car club and rental is convenient.

New urban planning approaches use smart traffic management which separates vehicles going past an area from those that need to access it. 'Through' traffic is channelled onto key main routes. Streets within residential and business areas are filtered to enable easy, direct walking and cycling – and sometimes bus access – throughout, while motor vehicles can reach their destinations but not cut through. In these calmer streets, walking or cycling can be the safe, quick and most attractive option.

Managing vehicle demand

Cars can provide a very useful, independent and flexible mode of travel, but come at a cost. Fuel is the smallest part of total costs to the car user. Most is for the car itself, insurance, maintenance and duty, so the full cost of a car journey is rarely acknowledged.

Costs to the community (including car owners) arise from carbon emissions, poor air quality, congestion, road building and maintenance, public health effects, collisions and isolation of

On average, over the last **20 years** people are **travelling less** and making fewer trips. Commuter trips are down by a **5th**

NTS 2017

 is up

 is up

 in Crawley is up

All Change 2018 and Metrobus



Copyright Sustrans

New directions, new thinking

non-car users. Take up and fragmentation of land for vehicle use is at the expense of space for housing and business development, wildlife and amenity and affect safety and access.

Shared mobility through car clubs and hire is more efficient, so when you need to use a car, cost is incurred only at the time of the trip. It is available when you need it, and the responsibilities and expense of owning a car that otherwise sits unused for most of the time, taking up valuable space, is left to the shared car company. This also increases options for use of electric cars with dedicated charging spaces.

Shared car use could be a particular advantage to people living in Crawley town centre or neighbourhoods with good rail and bus connections and limited parking. It is also a practical option for households with two cars, where the less-used vehicle can be replaced with a car club account, reducing household costs, hassle and local parking demand.

Digital technology

Digital communications is reducing the need to travel. Fast broadband can enable business flexibility for working from home or on the move. The Manor Royal Business Improvement District has invested in a faster digital network and Crawley Borough Council aims to enable the roll out of gigabit full-fibre internet access.

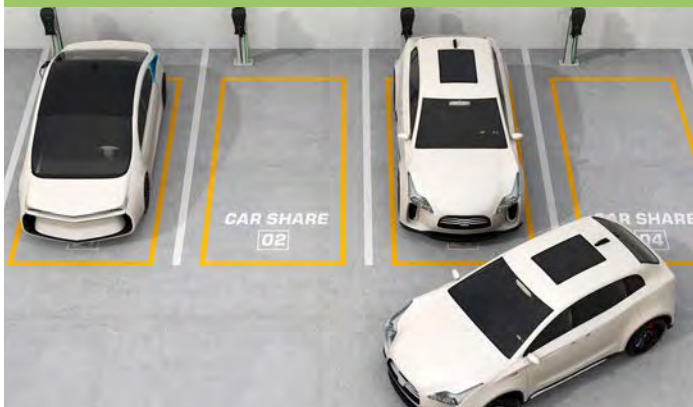
Mobility as a Service (MaaS) uses smart digital technology to connect all elements of your journey easily with personalised journey planning across all modes of publicly available transport, integrated with tracking services and online ticketing at the right time. It is becoming a reality for many in cities, and is expected to start to become available in Crawley in 2020.

As the technology advances and becomes even more embedded in daily life, personal ownership of cars is becoming less appealing. This is reflected in the national decline in young people having driving licences.



Over
2/3
Crawley households have **one car** or none

Over half of Crawley residents do not have daily access to a car.



Ideas and options

With so much innovation across the country, there is a lot of experience and knowledge that Crawley can draw on for new ideas on improving how people can move around the town.

These may include:



Copyright Sustrans

1. Neighbourhood street planning – Low traffic neighbourhoods make residential streets safer and work better for residents, with more community interaction and healthy, physical activity. Vehicle 'filtered' streets with continuous and connected walking and cycling to reduce local congestion, increase safe access to schools and public services and improve local retail business in the parades.


Copyright Waltham Forest Council

3. Pedestrian priority – Walking infrastructure improvements shifting the emphasis of motor traffic flow to people at crossings, junctions and entrances, particularly through reprioritising traffic signals.



4. School run programme – A culture shift in how young people get to school to develop active travel for health and action on climate heating. This can include piloting 'school streets', where vehicle filtering on streets by schools encourages safe walking and cycling to school.

2. Better road design, rethinking traffic flows – Focusing on efficient urban design for safe, attractive streets for all users. This means selected clear, priority 'through' routes for motor vehicles and controlled access for neighbourhood streets, rather than designing for greater vehicle numbers and speeds. Better design can identify more efficient car parking space and release land from highways for other uses such as housing or business.


Copyright Sustrans

5. 20mph – Speed limits in the neighbourhoods, extending to all but 'through' routes for motorised traffic.



Ideas and options

6. Manage demand – On the busiest parts of the road network as we cannot build our way out of congestion. This can include economic and technology-based systems such as Pay-as-You-Go car use, managed parking and Mobility as a Service systems, making sustainable travel more attractive.

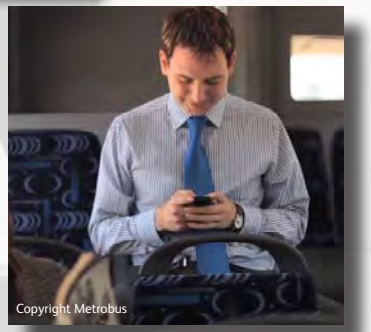


8. Integrated ticketing – To ease transition from one mode of transport to another.





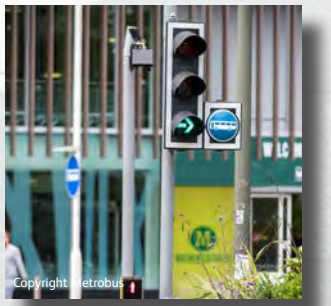
10. Cross discipline coordination – Tying in developing active travel measures with environmental health, personal health and wellbeing, housing, land use planning and sport. This can help optimise resources and draw together expertise and knowledge.



9. Business support on travel – Direct staff support to larger companies to advise, encourage and help enable the shift in staff commuter journeys away from single occupancy car trips. Improving sustainable access for work has many business and staff benefits in addition to reducing congestion and parking demand. The Bike It programme shows that one-to-one organisational support works in changing travel behav**iour.**



7. Bikeshare – including electric bikes – Town-wide bike hire is operating in many cities and has potential for Crawley to improve the transport mix, particularly for 'first or last mile' parts of journeys.



11. Bus Rapid Transit and priority measures – Use of traffic signals, detection systems, bus stop positioning and bus lanes to prioritise bus traffic over other road traffic to improve journey times.

Many schemes can be piloted to trial ideas. This will develop local community feedback and learning on improving street infrastructure, to identify best practice and good urban design for Crawley neighbourhoods.

Crawley Borough Council

Crawley Borough Council aims to lead by example and adopt measures to reduce car use by single occupants for council-related travel by commuting staff and visitors. The council already provides:

- Bike purchase incentive schemes
- Pool bikes for work-related trips or to try out bike riding
- Discount cards for savings on train and bus journeys
- Flexible staff working, including working from home to reduce the need to travel.

Further measures could include:

- Revised council business travel procedures to encourage walking, cycling and using public transport
- Reviewing car parking subsidies
- Fleet vehicle review, including a shift to electric vehicles, including e-bikes, cargo bikes and participation in a car club
- A new staff travel plan to support sustainable commuting with personal travel planning
- Prioritising walking, cycling and bus access to council-owned properties and events
- Improving communications on public transport, walking and cycling to staff and visitors.



Action planning

The **New Directions for Crawley** plan is to undertake a technical transport study to create a framework for future decision-making, guided by a principle of planning for people and places.

Using a range of available economic, census, transport and employment data, the study will identify where people need to get to and from and model the impacts these trips have on traffic and space. This will provide evidence to enable us to develop an action plan with clear options and ambitious targets and timescales beyond currently planned activity.

This action plan will need to align with the aims of the emerging Crawley Local Plan, the West Sussex County Council's planned revised Local Transport Plan, the Transport for the South East (TfSE) strategy and the National Planning Policy Framework.

TfSE priorities can guide targets for the Crawley plan:

- Cut carbon emissions to zero
- Reduce the need to travel – particularly by car
- Protect and enhance the natural and built environment
- Net gain in biodiversity
- Minimise resource consumption by the transport sector
- Active travel networks to improve health
- Improved air quality
- Affordable, safe and accessible network
- Integrated, seamless, passenger-focused network
- Improved connectivity between hubs
- Reliable journeys for people and goods
- Resilience to weather and incidents
- Integrated land use planning with transport
- Smart digital technology, managing demand


Copyright Sustrans



Action planning

New Directions for Crawley was submitted for public consultation on the issues and options to develop the strategy. An action plan will now be developed with stakeholder engagement. This will not only establish understanding of new approaches, but provide key local knowledge and technical detail to inform the plan and Crawley's future transport policies and strategy.

Funding

The question will arise on how the improvements will be funded. This is always difficult, but as a rapidly developing town with an evidence-based strategy for transport and access, Crawley will be in a good position to access funds such as:

- The Towns Fund – government programme in development
- Section 106 and Community Infrastructure Levy from new development
- Crawley Growth Programme (extension to the existing programme)
- Future High Street funds
- Air quality improvement funds
- Potential national CWIS budget.

Collaborative working with other sectors such as health, education and communities, for joined up outcomes, can also provide leverage for effective funding.

Framework indicators and targets will be determined by the study.





Crawley's Local Plan

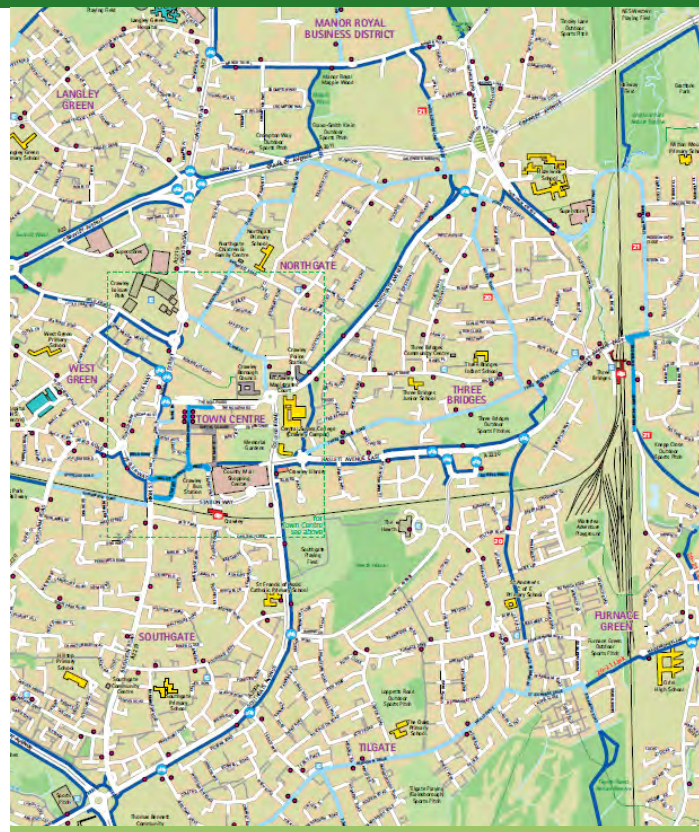
The Crawley Borough Local Plan sets out the framework to guide development in the borough, currently being revised to take it to 2035. Development should be concentrated in locations where sustainable travel patterns can be achieved through the use of the existing transport network, including public transport routes and the cycling and walking network. Developers may be required to help improve these transport networks.

Many aspects of the Local Plan are impacted by transport and access across the borough. These include:

- **Pollution** – vehicle emissions affecting air quality
- **Climate change** – more than 30 per cent of Crawley's carbon emissions are from motor vehicles
- **Flooding** – car parking and roads affect the area of permeable land surface available for water absorption
- **Noise** – where road traffic noise can affect quality of life
- **Character** – traffic levels, on-street parking and road space can affect the town's streets
- **Land supply** – significant space is given over to car parking and unused highway land take
- **Green infrastructure and biodiversity** – highways and road traffic can be highly damaging to natural space, soils, waterways and wildlife
- **Health** – motor vehicle use affects air quality and levels of physical activity.

Transport and access challenges are presented by an increasing population and development in Crawley of at least 5,100 homes, including new developments within Forge Wood (1,900) and the town centre (2,000). Further traffic pressures arise from other development beyond the town boundary and potential growth of Gatwick Airport.

Crawley's urban design guidance explains that all development should make places that connect with each other and are easy to move through, putting people before traffic and integrating land uses and transport networks. An important function of the street is to accommodate movement. This should broaden transport choices for all and not focus solely on motorised vehicles, as it has in the past. Streets should provide space for electric vehicles, cyclists, pedestrians and people with particular mobility needs to all move comfortably.





Appendix I

The following are relevant excerpts from Crawley's emerging Local Plan policies:

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.

CL4 Effective use of land: sustainability, movement and layout

5. In order to encourage walking and cycling the layout and movement pathways of new schemes must:

   i. Understand and respond to the wider borough pattern of movement, demonstrating how new walking and cycling connections will enhance and integrate schemes with Crawley town centre, local centres, transportation hubs, schools, employment areas

   ii. Connect new development to areas of rural open space and /or large urban areas of green open space

   iii. 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

   iv. Arrange layout so that buildings are orientated to overlook these movement corridors in order to provide passive supervision and safety.



_Copyright Sustrans

"Good walking access adds more to the value of homes than good car or rail access".

(Land value and transport: modelling and appraisal final report, Institute for Transport Studies, University of Leeds, 2019)

In addition to the above, larger schemes will be required to:

6. Submit a transport assessment (see Policy ST1)
7. Establish a form of development based on sustainable and compact layout and scale
8. Be planned and located adjacent to stations, stops or interchanges along existing segregated, high capacity, high frequent public transport corridors and their stops/ interchanges. A contribution may be required to fund or part-fund the expansion of the same (see Policy ST1 and the Planning Obligations Annex)
9. Be designed and laid out so that it ensures future inhabitants are within five to eight minutes' walking distance of rail stations or bus stops.

CL5 Form of new development: layout, scale and appearance

e. Achieve minimum densities in line with the following density categories. This is required in order to take advantage of sustainable transport options and encourage significant levels of modal share.

i. **High density:** A minimum of 200 dwellings per hectare

ii. **Medium density:** Within a range of 100-200 dwellings per hectare

iii. **Lower medium density:** Within a range of 60-100 dwellings per hectare in areas within 5-8 minutes' walking distance of stops along Fastway Route 10, south of Crawley Avenue to the Broadfield Barton Fastway stop.

More people in Crawley
travel to work by bus
than anywhere else in West Sussex
(and it's going up).





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 CL4 and CL5). 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.

Developments should meet the access needs they generate and not cause an unacceptable impact in terms of increased traffic congestion or highway safety.

[A] 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.



Copyright Living Streets

"Not everyone drives: people who are young, elderly, with disabilities or ill health, on low income, who cannot or do not want to drive, are disenfranchised by car-centred policies".

Crawley Borough Council



West Sussex Transport Plan

Local Transport Plan (LTP)

The LTP's objectives for the county are:

1. Promoting economic growth
2. Tackling climate change
3. Providing access to services, employment and housing
4. Improving safety, security and health.

The LTP recognises that over-reliance on car-based transport excludes people. It points out that older people have problems accessing services, as a significant proportion have no access to a car, and that affordability and availability of public transport services are key concerns for young people in West Sussex. It aims to tackle obesity by encouraging active travel, using sustainable modes of transport.

The LTP tells us that 46 per cent of respondents to the West Sussex Household Travel Survey said that lack of safe cycle routes is a moderate or severe problem and 37 per cent said the same about walking routes.

It recommends that new development places work, education, leisure and food retail opportunities close together so that people have less need to travel enabling disadvantaged people to access employment opportunities, key services, social networks and goods. It suggests tackling speed limits, including allowing reductions to 20mph in urban areas.

More than **one in five** year 6 **children** in Crawley are **obese**



At morning peak nearly **one in five** cars are taking Crawley children **to school**



The West Sussex LTP identifies challenges facing Crawley, including:

- Large housing developments overloading highways and public transport and the need for good connectivity with local and town centre facilities, especially by walking and cycling
- Road congestion causing unreliable journey times and poor air quality
- HGVs diverting onto unsuitable residential roads
- Localised school run congestion
- Insufficient pedestrian and cycling facilities – disjointed cycle and walking networks with inadequate signing or safe crossing points, poor surfacing and lack of secure public cycle parking
- Residents' concern over high speed of traffic within residential and built up areas
- The need to integrate Crawley's railway stations with other transport modes and outdated passenger facilities.

The LTP's aims for Crawley are:

- To shift to sustainable modes of transport
- Improving the existing cycle and pedestrian network through: improved signing, connecting routes, particularly reducing severance caused by the A23 ring road, repairing and maintaining surfaces
- To reduce the speed of traffic within residential and built-up areas
- Short-term measures for better interchange between public transport modes at all stations
- Ensuring best possible rail service provision to Crawley.

Planning policies of both Crawley Borough Council and West Sussex County Council recognise the benefits of and need for changing the patterns of building development and transport infrastructure to enable sustainable travel and access.



"New and upgraded roads should prioritise pedestrians, cyclists and public transport over motorised vehicles".

NICE, 2019



Copyright Living Streets

Cycling and Walking

The Government's 2017 Cycle and Walking Investment Strategy (CWIS) aims to double numbers of cycling trips and significantly increase walking by 2025. Having shown commitment to supporting cycling and walking as key transport elements, it is hoped that the Department for Transport (DfT) will develop its ambitions for the CWIS. It proposed Local Cycle and Walking Infrastructure Plans (LCWIP) as a way of local authorities progressing the CWIS.

West Sussex County Council developed its Walking and Cycling Strategy in 2016 and its Cycling Design Guide in 2019. With DfT funding, in 2018 WSCC coordinated a partnership programme to develop LCWIPs across the county with a number of local authorities, including Crawley. The first stages of the Crawley LCWIP were completed in December 2019.

DfT guidance on developing LCWIPs establishes a systematic, evidence-based and strategic approach to identifying and planning cycling and walking corridors and provides tools to help evaluate routes.

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, planning . The initial network plan is shown on the next page of this appendix
- A **walking zone** and route plan for improvements. The town centre has been evaluated as a core walking zone, along with a route to Crawley Leisure Park. Manor Royal will be next evaluated as a walking zone, using the same assessment tool to identify the types of improvements needed
- A prioritised **programme of infrastructure improvements** for future investment. A systematic approach to prioritising routes includes value for money and funding, benefits to communities and other schemes they relate to
- A **report** with the analysis to support the improvements, informing other policies, strategies and delivery plans and help guide development.

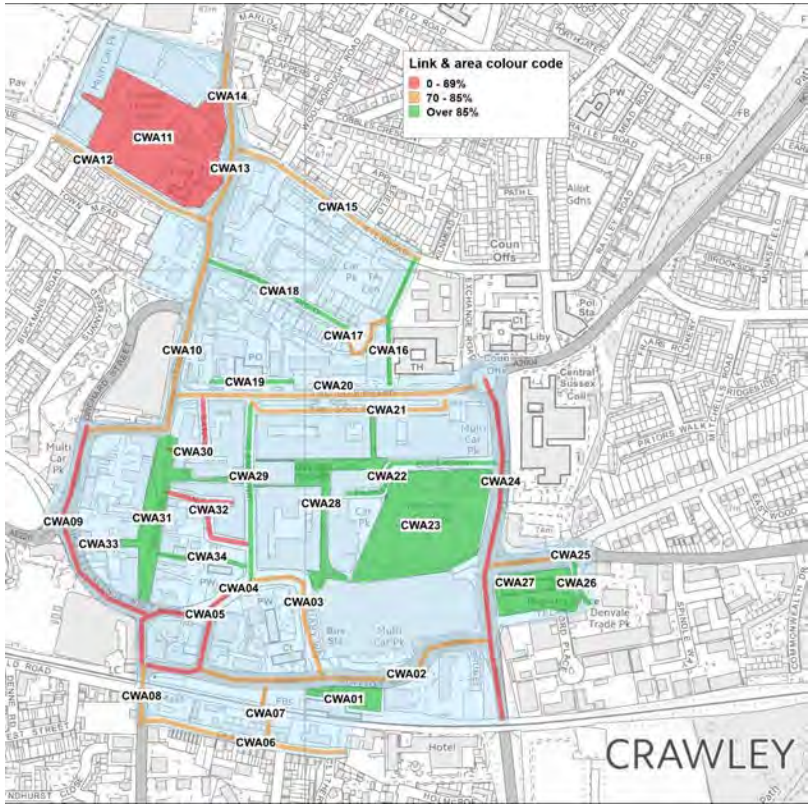




The Plan extends across the whole town. Crawley Borough Council worked with the Crawley Cycling and Walking Forum to develop the network plan and undertook a community consultation to help identify improvements needed and priorities. The process has benefited from:

- A detailed audit in 2016 of the existing **Crawley Cycle Network** by Transport Initiatives consultancy
- **Crawley Growth Programme** cycle scheme proposals to support access at Manor Royal and the town centre
- **The Manor Royal Business Improvement District's** 'grey' and 'green' street audits for walking.

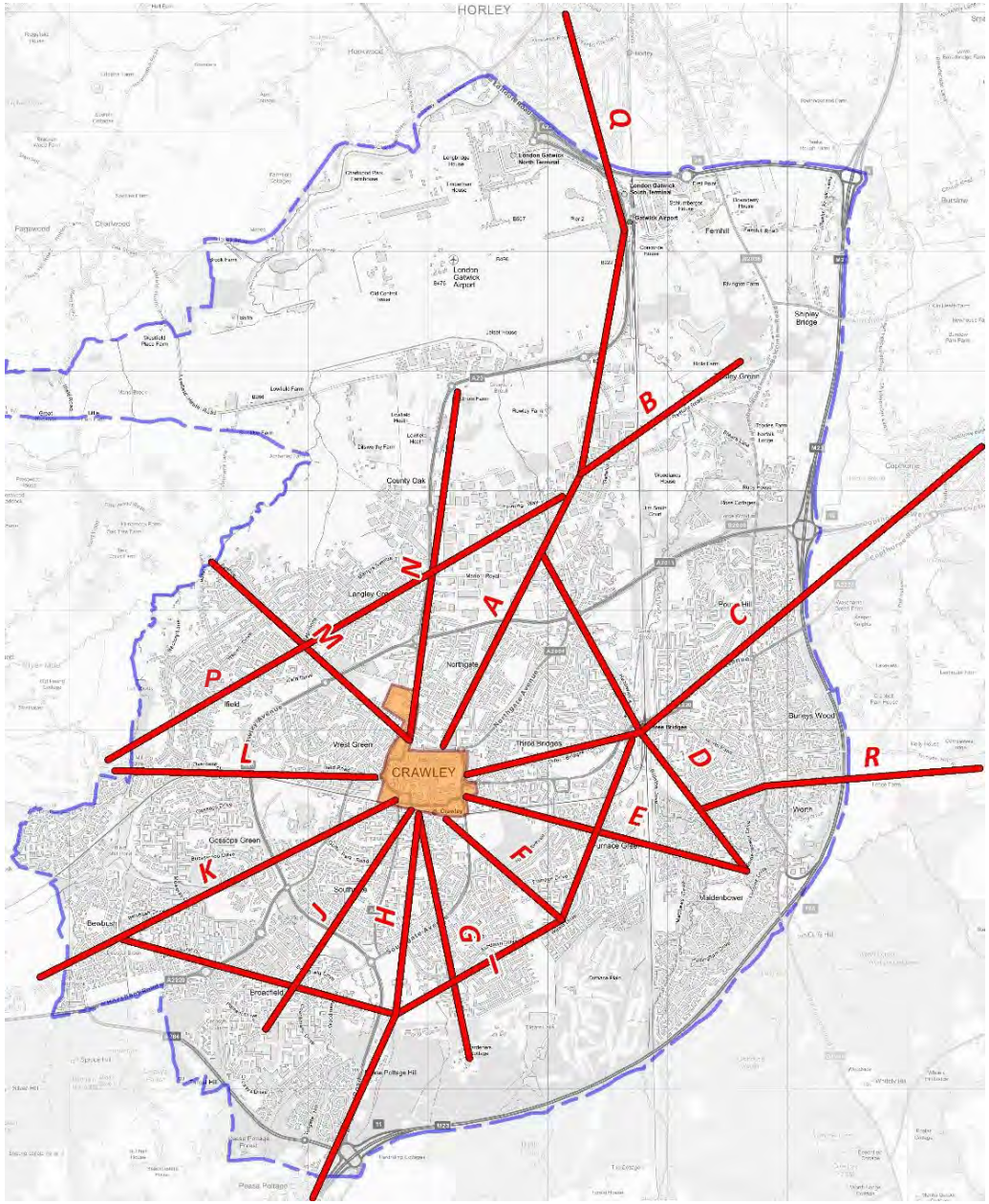
Walking zone and route assessments and the cycle route network plan will be included in development of the action plan.



LCWIP – Crawley town centre Walking zone assessment

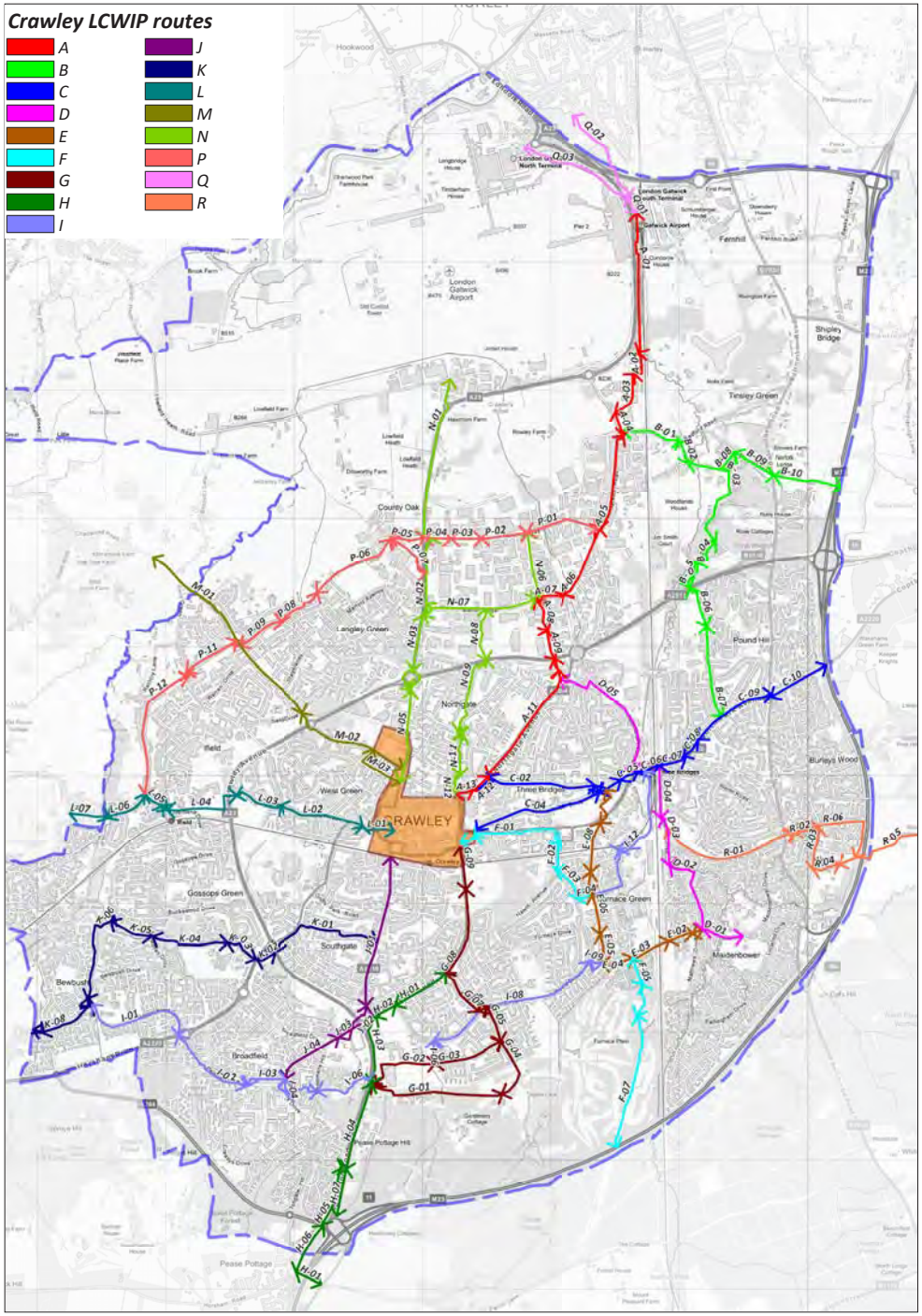
Links and areas classified as poor (pink), adequate (amber) or good (green) by percentage against assessment tool criteria. Full report includes crossings.

Crawley LCWIP Movement Corridors



A	Gatwick Airport to Town Centre via Manor Royal and Northgate
B	Forge Wood to Manor Royal
C	Copthorne to Town Centre via Three Bridges
D	Maidenbower to Manor Royal via Three Bridges
E	Maidenbower to Town Centre via Furnace Green
F	Tilgate to Town Centre
G	Tilgate Nature Centre to Town Centre
H	Pease Pottage to Town Centre via K2/Tilgate
I	Bewbush to Three Bridges via Broadfield & K2/Tilgate
J	Broadfield to Town Centre
K	Kilnwood Vale to Town Centre
L	Ifield to Town Centre
M	Ifield Avenue to Town Centre
N	Lowfield Heath to Town Centre
P	Ifield to Manor Royal
Q	Gatwick Airport to Horley
R	Worth Way

Key movement corridors identified through LCWIP process.
Corridors Q and R not further evaluated at this stage.



Crawley LCWIP Cycle Routes

Cycle routes identified from movement corridors and assessed for improvement against LCWIP selection tool criteria.

Further discussion

Climate

The Intergovernmental Panel on Climate Change advises that net carbon emissions need to be cut to zero before 2050 and almost halved by 2030. Others regard this as conservative and that more urgent action is required. All are clear that we must contain climate heating below 1.5 degrees over pre-industrial levels by 2050 if catastrophic climate change is to be avoided.

Continuing with 'business as usual' would mean we are headed for 1.5 degrees by 2030 and 3.5 degrees by 2050. Currently, at a little over one degree increase, we are already experiencing climate effects in the UK and around the world.

Gatwick Airport

Gatwick Airport currently serves over 46 million passengers a year, generating around 215,000 tonnes CO2equivalent a year from surface transport (mainly road vehicles). Over half of passengers go to the airport by car.

Gatwick Airport Limited (GAL) provides 68,000 car parking spaces for users of the airport and aspires to have 45 % of passengers using the train by 2030.

Clearly, Gatwick Airport is a key influence on local transport, climate and, land use. Whilst aviation is a national government responsibility and outside the scope of New Directions, Crawley Borough Council places some conditions on GAL to encourage modal shift away from car use to rail and bus and increasing walking and cycling, particularly for local staff. GAL is required to provide funds annually to support local sustainable transport infrastructure improvements. This fund currently supports railway station development, bus services and some cycle facilities.



New technologies

This options and issues document does not consider prospective transport technologies to any extent at this stage, such as Connected and Autonomous Vehicles (CAV), but will need to do this as they emerge and likely patterns of use are understood. This will mean assessing impacts on other services or behaviours as well the potential for the technology itself.

For example, while Autonomous Vehicles replace the driver, they do not replace the private vehicle. Introducing CAVs to the network will require strategies to manage their demand. Autonomous vehicles will need to be designed and regulated to fit into safe, pedestrian-friendly, high quality urban environments. Unintentional reshaping of the urban environment which prioritises free flowing automated vehicles at the expense of walking and cycling or bus services, needs to be avoided.

There are implications for data use and sharing with these new mobility services and guidelines should be introduced at an early stage of their operational development.

Electric vehicles

It is important to shift car use to electric vehicles to cut emissions. This will help improve local air quality, but will not result in the necessary reduction in carbon even if there is a rapid transition. The shift will need to include moving away from private vehicle use and towards 'shared mobility' including public transport, car clubs and car rental and bike hire.

The current share of electric vehicles is around 1.5 per cent and new sales are at 2.5 per cent. Electric vehicle (EV) manufacture is more energy intensive than diesel and petrol cars and, while energy use in running vehicles is more efficient than with fossil fuelled cars, EVs still generate carbon emissions through electricity generation. Taken over the whole life of the vehicle, currently EVs produce around three quarters of the emissions of conventional cars. This will improve as renewable energy makes up more of the share of electricity generation and battery technology improves, particularly in the sourcing and toxicity of the materials involved, but it is unlikely to get us to where we need to be in time to meet carbon targets.

It is estimated that electric vehicles will add 6.8 per cent to global electricity demand in 2040, and drive a growth in demand for lithium-ion batteries from 151 GWh in 2019 to 1,748GWh by 2030.



References and bibliography

1. Crawley Growth Programme
2. Crawley Local Plan 2011-2030 including SPDs and Sustainability Appraisal
3. West Sussex Local Transport Plan 3 – 2011-2026
4. NPPF Chapter 9
5. National Travel Survey, 2017
6. Public Health England – Crawley, 2017-18
7. Cycling and walking for individual, population and health system benefits, PHE, 2018
8. Census 2011
9. Census Bulletin – Travel to work and car or van ownership in West Sussex, WSCC, 2011
10. National Atmospheric Emissions Inventory 2017 – gov.uk
11. All Change, Commission on Travel Demand, 2018
12. Travel Fast or Smart? David Metz, 2016
13. The Value of Cycling, Fiona Raje and Andrew Saffrey, 2016
14. Reaping the Health Dividend, Dr Adrian Davis (DfT), 2014
15. Essential evidence on a page, Dr Adrian Davis 2019
16. The End of the Road, CPRE, 2016
17. Transportfornewhomes.org, 2018
18. https://www.nice.org.uk/news/article/new-and-upgraded-roads-should-prioritise-pedestrians-cyclists-and-public-transport-over-motorised-vehicles, NICE, 2019
19. https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution
20. Better Planning, Better Transport, Better Places, Chartered Institute for Highways and Transportation, 2019
21. Electric Vehicle Charging Strategy, WSCC, 2019
22. The Road to Zero, Department for Transport, 2018
23. Digest of UK Energy Statistics, 2019
24. Electric vehicles from life cycle and circular economy perspectives TERM 2018: Transport and Environment Reporting Mechanism (TERM) report, EEA, 2018
25. Transport for the South East Draft Strategy, 2019
26. Working Together to Promote Active Travel: A briefing for local authorities, PHE, 2016
27. https://climateactiontracker.org
28. Manor Royal Transport Strategy, Steers Davies Gleave, 2017