Report
March 2023

West of Ifield Transport Strategy

Homes England
Our ref: 23747301

steer

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1 West of Ifield Vision and Principles

Transport Strategy Vision for West of Ifield

1.1 The Transport Strategy for the West of Ifield site has a focus on sustainable transport and draws upon best practice and government guidance to promote active travel and reduce dependency on private vehicles. This is complementary to the wider Horsham District Council (HDC), Crawley Borough Council (CBC) and West Sussex County Council (WSCC) Transport Plan.

1.2 The Transport Strategy, whilst accommodating vehicle ownership and use, seeks to capitalise on changing attitudes and policy towards sustainable transport against the backdrop of the Climate Emergency and legally binding commitments for Net Zero Carbon emissions by 2050. Accordingly, key transport decarbonisation principles including reducing the need to travel, and measures to prioritising active travel and public transport as the natural first choice for journeys are integrated into this Transport Strategy.

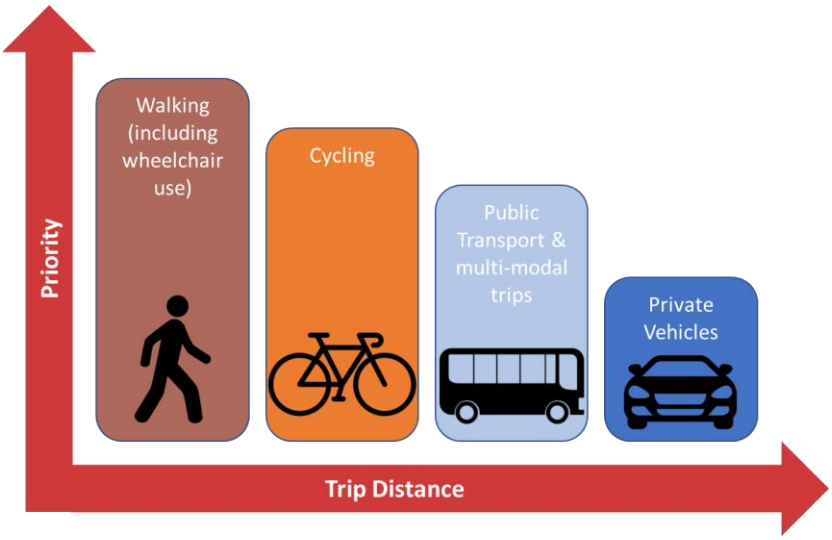
1.3 The Crawley Transport Strategy, *New directions for Crawley – Transport and access for the 21st century* (March 2020), which has an emphasis on encouraging the use of public transport, and active travel in preference to increasing highway capacity, has informed the Transport Strategy for West of Ifield. These themes are consistent with objectives outlined in the draft *West Sussex Transport Plan 2022 to 2036,* particularly the need to reduce travel by car by enabling local living. Policy 42 – *Sustainable Transport* in the emerging HDC Local Plan (Regulation 18) includes the same commitment to developing integrated communities connected by a sustainable transport system *"In order to manage the anticipated growth in demand for travel, development proposals which promote an improved and integrated transport network, with a re-balancing in favour of non-car modes as a means of access to jobs, homes, services and facilities, will be encouraged and supported."*

1.4 This Transport Strategy also promotes flexible design approaches which are integrated into the emerging masterplan to future proof for changing travel behaviours and advances in technology to realise a sustainable community which could form the first phase of a wider strategic development opportunity west of Crawley.

Transport and Movement Principles

1.5 The transport and movement principles include a design approach which reduces the need to travel in the first instance and provides transport infrastructure which enables sustainable travel in accordance with the hierarchy of movement shown in **Figure 1.1**.

Figure 1.1: Hierarchy of movement



1.6 The key transport and movement principles for West of Ifield include:

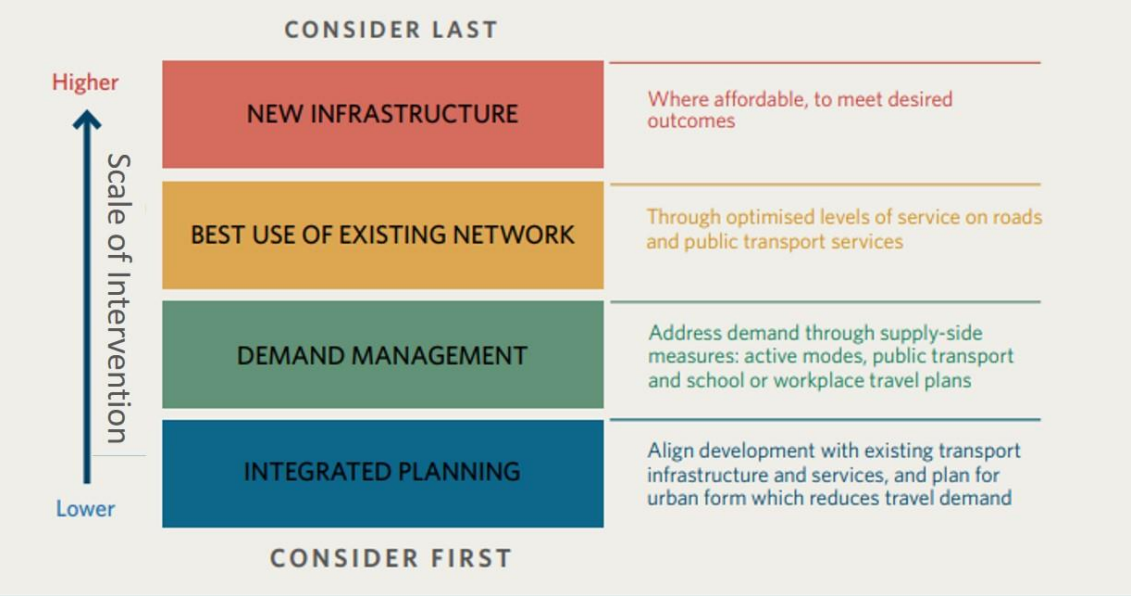
- High-quality walking and cycling routes that are safe, accessible, inclusive and connected between key destinations to support a 15-minute neighbourhood, both for new communities as well as being fit to serve existing neighbouring communities
- Permeable streets which ensure walking and cycling are the most convenient option and allow for a variety of uses, including play.
- Positively provide for new and active forms of transport (e.g. electric scooters and e- cycles) and anticipate the onset of 'mobility as a service'.
- Provide new high frequency segregated "fastway" bus routes allowing for reliable, convenient and fast access to employment centres and key destinations such as Crawley Town Centre, Horsham and Manor Royal, whilst facilitating new active and public transport connections to Ifield station to encourage public transport use for longer journeys.
- Mobility hubs integrated with bus stops providing cycle parking, shared mobility, delivery lockers and digital pillars.
- Car parking minimised and managed and located to encourage sustainable transport as the default choice, with the ability to be repurposed over time.
- Freight enabled but with its impact on the communities (both new and existing) minimised.
- Flexible design to accommodate changing travel behaviours and advances in technology.

2 Overarching Transport Strategy

Overview

2.1 Homes England are committed to developing the required infrastructure to create a sustainable neighbourhood which enables 'good' travel habits from the outset. As shown in **Figure 2.1**, the overarching transport strategy and design approach for the masterplan is predicated on reducing the need to travel in the first instance and provides transport infrastructure which enables sustainable travel.

Figure 2.1: Travel Demand Management Hierarchy



Transport Strategy Summary

2.2 Building on the transport and movement principles outlined in section 1 and as described in detail in subsequent sections, the transport strategy for West of Ifield can be summarised as follows:

- **A development which reduces the need to travel** – providing a good mix of land uses of appropriate scale and range of amenities which residents use on a daily basis to reduce requirements for external travel.

- **A 15-minute neighbourhood** – a highly connected and accessible network of neighbourhood and local centres providing access for residents to the range of amenities such as shops, schools, offices, parks and other community infrastructure using active modes as the primary choice of travel. Also providing arterial mobility corridors connecting into surrounding neighbourhoods and the existing and future network of off-site routes towards key transport nodes and employment destinations.

- **Preferential permeability** – ease of access to all destinations for micro mobility modes such as walking and cycling and road designs informed by Travel Demand Management

(TDM) best practice for private vehicles, thereby reducing propensity for short distance car trips. Combined with the hierarchical mobility corridors will mean most journeys of sub 15 minutes will be easier by active travel measures.

- **Providing for new and active forms of transport** – ambitious cycle parking targets for one cycle parking space per bedroom and accessible bike storage with battery charging provision to encourage cycling as a primary mode. Positively providing for new technologies including e-scooters and anticipating the onset of 'mobility as a service'.

- **Mobility hubs** – designed to facilitate access between various transport modes and strategically situated to provide first and last mile personal transport solutions and raise the profile of public transport and shared mobility. Will be integrated at high quality bus stops with high frequency services and which are within 400m (5 minute walk) of around 90% of homes.

- **High frequency bus services** – a high frequency (10 minute) bus route connecting West of Ifield with Crawley Town Centre, Three Bridges station, Manor Royal and Gatwick Airport from Phase 1. A bus (and cycle) gate and segregated infrastructure within the development and targeted bus priority measures on congested parts of the route to enhance journey times over private vehicle use. Gradual phasing of a second route (10-minute frequency) along the new multi-modal link road when commercially viable providing further direct connections to Manor Royal and Gatwick with benefits for existing Ifield West residents.

- **Encouraging rail use** – working with Network Rail (Great British Railways) and CBC to identify potential improvements at Ifield station and facilitating sustainable connections from the development. Also facilitating fast and frequent bus access to Crawley and Three Bridges rail stations for enhanced rail services.

- **Reduced car reliance** – a car parking strategy which acknowledges current demand but, coupled with provision of infrastructure/other support for alternative modes, provides the flexibility and mechanism to reduce or repurpose parking over time with behavioural changes and advances in technology. Significant Car Club provision to reduce car ownership, particularly for less frequently used cars. Low traffic neighbourhoods and potential for modal restrictions on Rusper Road to alleviate residents existing and future congestion concerns and provide an enhanced mobility and bus corridor.

- **Residential Travel Plan** – a package of measures and incentives available to residents to enable sustainable travel behaviour and a mechanism to review and monitor the effectiveness of the measures in place with clear time commitments

3 Homes England Commitment

Background

3.1 Homes England has been set up to drive positive market change. They are committed to delivering the appropriate infrastructure at the appropriate time to ensure that alongside delivering much needed homes it is achieved in a way that complements and enhances existing communities rather than being a burden. Providing sufficient infrastructure to enable sustainable communities both within the masterplan and links to existing communities is an important benefit for the wider area beyond west of Ifield.

What makes Homes England different to 'traditional' developers?

3.2 As a Government Agency, Homes England are committed to accelerating the delivery of new homes alongside the necessary infrastructure in order to promote sustainable pattern of development for new communities whilst also providing benefit to existing communities.

3.3 In its capacity as master developer, Homes England are already making significant investment in critical infrastructure necessary to unlock land to deliver new homes, while also ensuring that their investment supports wider sustainability objectives including the national target of reaching net zero by 2050, and those of local delivery partners.

3.4 In relation to West of Ifield, Homes England has clearly set out its commitment to bring forward a sustainable development that is based on 15-minute neighbourhood principles. Specifically, in relation to transport, this means reducing the need to travel and providing the framework and infrastructure necessary to support sustainable travel patterns which build on the site's unique advantages in terms of access to both established public transport networks, as well as regional employment centres and major town centres.

3.5 It is considered that much of what is proposed for West of Ifield shares the level of ambition of delivery partners to substantially increase the use of sustainable transport modes and move progressively towards a low carbon future.

Evidence

3.6 Homes England has delivered a number of similar developments such as Burgess Hill and Northstowe. Both have sought to maximise the use of sustainable transport and have required significant infrastructure investment. In both instances, this has been done early in the development programme to ensure the impact of the development is minimised and that the opportunity to embed sustainable practices into the development from the outset are maximised.

Burgess Hill, West Sussex

3.7 £63m direct initial investment up to 2023 to deliver road, bridges, landscaping, drainage and utility works to accelerate the delivery of 3,500 homes with at least £39m invested by the end of 2021. Committed infrastructure delivery to date includes £7.6m for the Eastern Bridge and Link Road (contract let) and c.£4.5m for the Crawley Western Link. Homes England's investment has leveraged additional public investment in the wider area – including £17m investment in

the A23000, £6.7m HIF Funding for offsite sewerage treatment works and additional LEP Local Growth Deal Funding for the Burgess Hill area.

3.8 The Brookleigh (Northern Arc) features continuous pedestrian and cycle infrastructure along its length providing an east-west connection between the A273 and A2300 in the west and Maple Drive in the east. This will facilitate connections between the various land uses on the site. To provide greater active mode permeability a secondary network of walking and cycling routes will be provided to offer an alternative corridor to the Brookleigh (Northern Arc) which also provides a safer movement corridor for mobility scooters. The secondary pedestrian and cycle route should create a safe and convenient link connecting neighbourhoods, neighbourhood centres, schools and employment areas within Brookleigh (Northern Arc). They will also integrate the new settlement and existing residents of Burgess Hill by providing substantial north-south connections.

3.9 In addition, the Green Circle will provide a recreational route through the site contributing towards the aspirations for a circular route around Burgess Hill.

3.10 The Green Super Highway will be designed as a dedicated walking and cycling east-west route through the centre of the community. The route will be the primary sustainable movement corridor with footpaths and cycleways connecting green spaces, community facilities, neighbourhoods and the employment area in the west. A bridleway is also being provided in the western part of the Green Super Highway creating a loop that extends the Green Circle.

Northstowe, Cambridgeshire

3.11 £55m of completed infrastructure investment within the first phase to provide highway and utility infrastructure to unlock Phase 2a and accelerate the delivery of 3,500 homes, with further investment planned for future phases. The implementation of strategic infrastructure at Northstowe began in June 2018 and strategic infrastructure works are well advanced. The Southern Access Road West dual carriageway is due to open prior to occupation of the first homes in Phase 2 while the first phase of the Secondary School is already open and a reserved matters application has been approved for an initial parcel of circa 460 homes within Phase 2A.

3.12 The Northstowe Area Action Plan calls for high quality public transport and associated infrastructure, including a dedicated local busway, to be included within Northstowe, as well as a dedicated, accessible network of non-motorised rights of way. This includes cycle, pedestrian and horse riding routes, both within Northstowe and connecting to the wider rights of way network.

3.13 A priority busway through the centre of Northstowe will link to the Cambridge Guided Busway, as well as being used by local bus services. High quality bus stops will mean that the majority of residents are within only 400m of a bus stop.

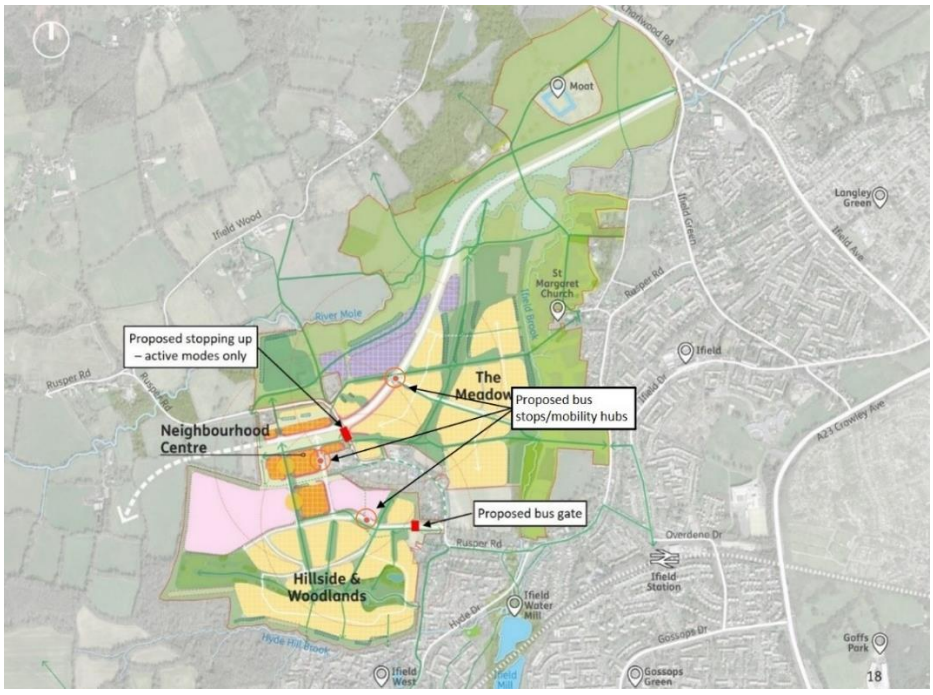
4 Emerging Masterplan

Overview

4.1 The emerging masterplan, as shown in **Figure 4.1**, is being structured on the transport and movement principles set out within this strategy. In accordance with the travel demand hierarchy in Chapter 2, the masterplan is predicated on reducing the need to travel in the first instance by providing a mix of uses to meet the needs of future residents.

4.2 This will include a secondary school and a primary school, flexible office space, recreational facilities and a number of everyday amenities within the neighbourhood centre including a foodstore, cafes and restaurants, community uses and entertainment spaces. All plots are connected to key segregated and arterial mobility corridors encouraging multi-modal active travel as the primary choice within the masterplan and to nearby destinations.

Figure 4.1: Emerging Masterplan



[Note – 'proposed bus gate' label to be updated to include cyclists/pedestrians too.

4.3 Where travel is required beyond the development, active modes are enabled in the first instance via dedicated active travel facilities which connect to the existing and enhanced off-site infrastructure. These will connect the development to key destinations including Crawley town centre and Manor Royal within 15 minutes. Enhanced and new active travel routes will also provide access to the countryside for both existing and new communities.

4.4 Modal restrictions are also designed into the masterplan which include a bus gate at Rusper Road to protect the existing Ifield community from additional development traffic, and the potential stopping of Rusper Road south of the Crawley Western Link to prevent rat-running, significantly enhance the local environment and allow Rusper Road to function as a key public transport and active travel

mobility corridor. Options for Rusper Road have been discussed with WSCC, HDC and CBC and their feedback is being used to inform ongoing consultation with local stakeholders to determine the most appropriate solution for the corridor. Our preferred option is shown in Figure 10.3.

5 Walking, Cycling and Active Mobility Strategy

Vision for Walking, Cycling and Active Mobility

Ensuring the site is accessible for pedestrians, cyclists and other mobility users forms a key part of the design principles for the development The "15-minute neighbourhood" principle of locating key amenities within a 15-minute active travel journey of all residential areas as well as legible, low-traffic streets will ensure from the outset that these are preferred modes for internal journeys. High-quality, direct mobility corridors will connect the site to Ifield Station, Crawley Town Centre and Manor Royal, providing an attractive alternative to private vehicle use. Secure cycle parking for each home, at transport hubs and within the neighbourhood centre will further promote cycling as an alternative to driving as well as enabling onward journeys by public transport.

5.1 As per DfT policy, an increase in cycling can not only improve air quality, but also combat climate change, improve health and wellbeing and also reduce congestion on roads[1]. It is therefore imperative that cycling forms a key part of the transport strategy for the masterplan.

Internal Provision

5.2 There will be a comprehensive, permeable network of walking and cycling routes throughout the development. The provision of a direct network of routes aims to make active travel the most convenient choice for short journeys within the development in order to minimise the number of vehicle trips between on-site origins and destinations.

5.3 There will be a number of important walking connections within the development, including direct connections between residential areas, the neighbourhood centre as well as proposed education and recreational facilities.

5.4 The network also provides the connections to the edge of the development to enable good connectivity with the adjacent communities and active mobility corridors. Routes will be segregated from traffic and provide direct connections within the masterplan, avoiding level changes and road crossings where possible.

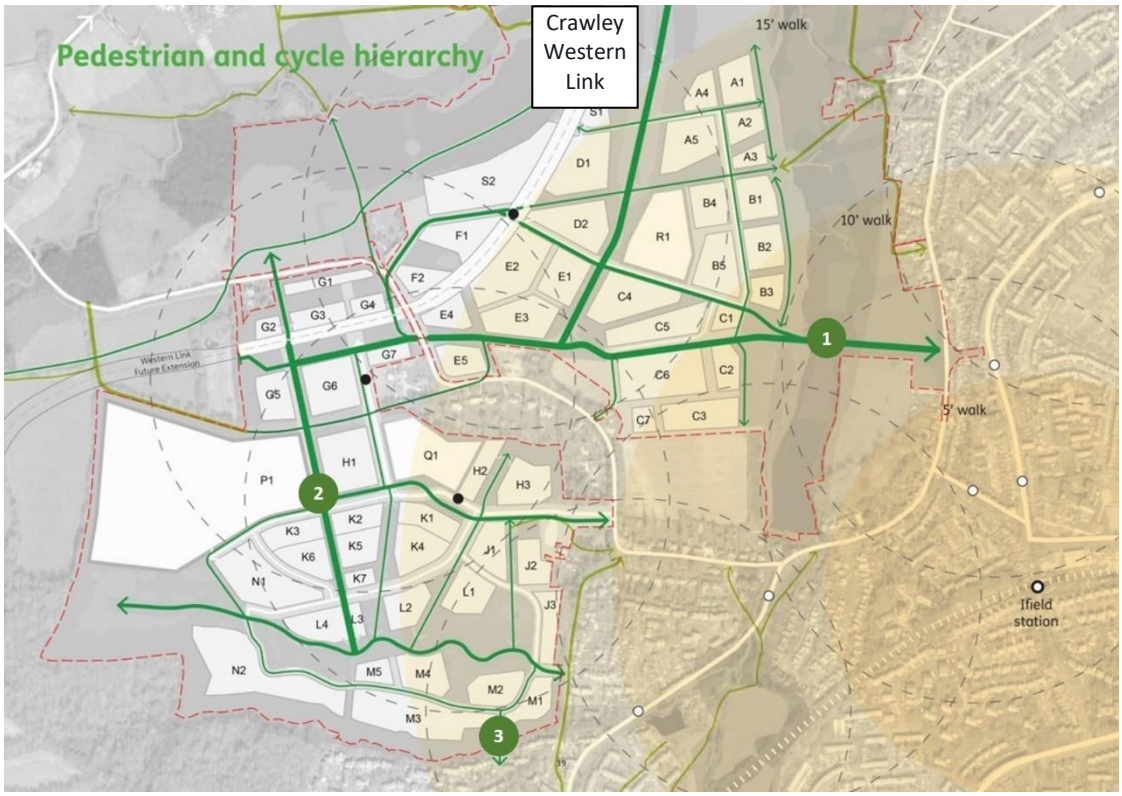
5.5 A clear hierarchy of mobility corridors for active travel have been established within the emerging masterplan following the principles set out below and as shown in **Figure 5.1**:

1. Traffic-free segregated 3m wide cycle routes along green corridors and providing strategic connections (e.g. across Ifield Meadows). The type of access along the green corridors will need to be sensitively handled, design will need to consider ecology and other constraint
2. Crawley Western Link – 3.5m wide cycle lanes and 2.6m wide footways on both sides of the carriageway.

[1] DfT (2020) Gear Change, a Bold Vision for Cycling and Walking, p8

3. Primary streets – 2.5m wide cycle lanes and 2.5m wide footways on both sides of the carriageway.
4. Neighbourhood centre – low-traffic (occasional servicing), low-speed (20 mph) 4m wide route with cycling on street and 2.5m wide footways with additional retail/communal spill-out space.
5. Secondary streets – low traffic 20mph streets with cycling on-street and 2.5m wide footways on both sides of the carriageway.
6. Residential streets – low speed (20mph), connecting individual plots as 'mews' type streets – cycling on-street and 2m wide footway on on-side or shared surface streets.

Figure 5.1: Active Travel Hierarchy and Mobility Corridors



5.6 The east-west Ifield Meadows route (route 1) forms a key mobility corridor connecting the masterplan and neighbourhood centre with the external network. This will be delivered in Phase 1 to facilitate active travel as a primary choice for trips towards Crawley and other key employment centres.

5.7 The north-south route (route 2) forms a green spine through the masterplan, connecting the residential plots in the south with the proposed school plots, neighbourhood centre, east-west arterial route and to recreational amenities north of the Crawley Western Link.

5.8 As shown in Figure 5.1, additional segregated routes are proposed connecting into the primary arterial routes. Dedicated active travel only connections are also proposed to the south of the masterplan to integrate the development with the existing Ifield West community (route 3).

5.9 Cycle route widths are designed in accordance with Department for Transport minimum standards as set out in the Local Transport Note 1/20 and **Table 5.1**.

5.10 Cycling opportunities will also be provided within the internal streetscape. The primary vehicle routes will have segregated cycle lanes on both sides of the street, with priority for cyclists across adjoining junctions and accesses. Secondary and residential streets will be low traffic,

low-speed environments and will provide for cycling within the carriageway. The emerging streetscape typologies are presented in **Appendix A**.

Table 5.1: Cycle lane and track widths

Cycle Route Type	Direction	Peak hour cycle flow	Desirable minimum width	Absolute minimum width
Protected space for cycling (including light segregation, stepped cycle track or 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
		300-1,000	3.0	2.5
		>1,000	4.0	3.0
Cycle Lane	1 way	All – cyclists able to use carriageway to overtake	2.0	1.5

Source: Department for Transport (2020) Cycle Infrastructure Design

5.11 As the masterplan is developed further, pedestrian, cycle and active travel priority measures and schemes will be considered for inclusion.

5.12 An example of a pedestrian priority scheme is “School Streets”. A School Street is a road outside a school with a temporary restriction on motorised traffic at school drop-off and pick-up times. The restriction applies to school traffic and through traffic. The result is a safer, healthier and pleasant environment for everyone. School Street schemes offer a proactive solution for school communities to tackle air pollution, poor health and road danger reduction. School Streets are in place around the UK, though are not yet active in Crawley or Horsham.

Cycle Parking

5.13 Cycle parking will be provided at a level above West Sussex County Council’s minimum residential standards to enable cycling as a primary choice of travel. A target of one cycle parking space per bedroom is proposed across the masterplan which will include secure charging facilities for electric bikes for every dwelling.

5.14 Given the space constraints in meeting this provision within each individual home, alternative and innovative ways of accommodating cycles drawing upon international best practice are being explored.

Integrated Cycle Storage

5.15 Cycles are more likely to be favoured as a primary choice of travel where access to cycle storage is the most convenient. Ways in which secure and covered cycle parking can be integrated at the front of each property as per the example below are therefore being considered and will be secured through the Design Code.

5.16 The minimum cycle parking standards as set out in WSCC’s will be met through this personal and secure type of cycle parking provision. The wider ambition to provide one cycle parking space per bedroom will therefore be met by the addition of shared storage solutions, as set out in the sections below.

Figure 5.2: Integrated Cycle Storage

Source: Dundashill, Glasgow

Garden Cycle Storage

5.17 Where the size of the property allows, secure cycle shelters will be provided within the front garden. Cycle shelters will be simple to use and be aligned with the design and functionality of the property, examples of potential cycle shelters are shown in **Figure 5.3** and **Figure 5.4**.

Figure 5.3: Garden Cycle Storage

Source: Treesaurus

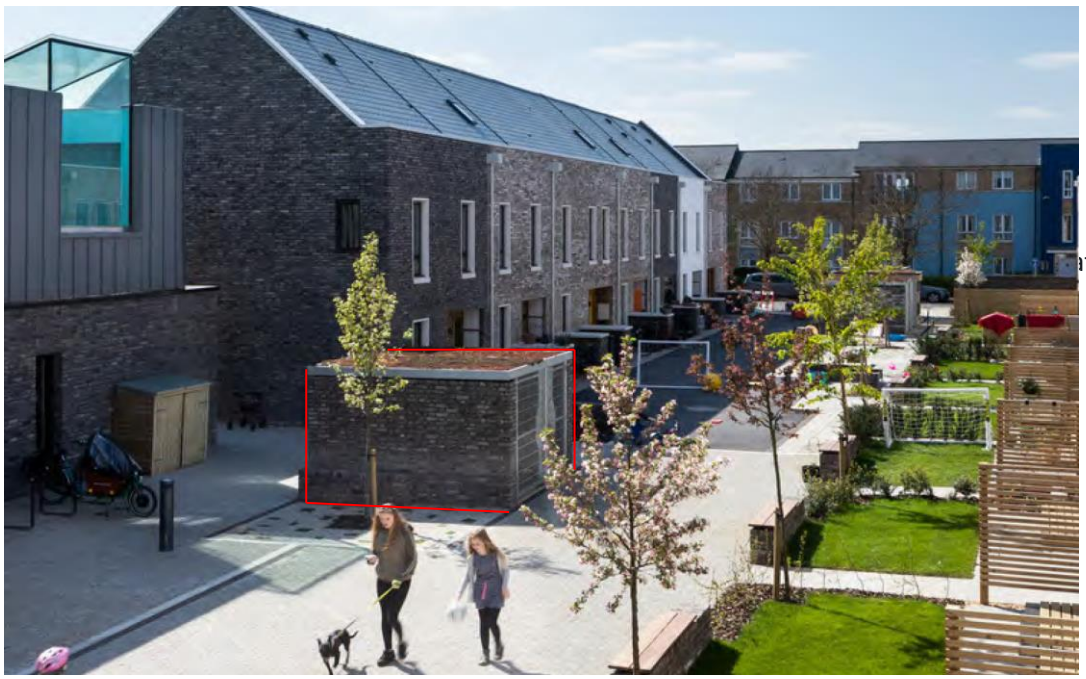
Figure 5.4: Combined Bin and Cycle Storage

Source: Atlantic Bike

Courtyard/Shared Cycle Storage

5.18 Where the property has insufficient space to accommodate all cycle parking on-plot, shared cycle parking will be located in courtyards or shared spaces to the side or rear of the property. An example of cycle parking within a shared sheltered arrangement is shown in **Figure 5.5.**

Figure 5.5: Shared Secure Cycle Parking



5.19 ative,

5.20

Figure 5.6: On-street cycle parking

Source: Cyclehoop

Non-residential Cycle Parking

5.21 Cycle parking will also be provided in the public realm, in the neighbourhood centre where retail, employment and leisure amenities will be located as well as at transport and mobility hubs. Cycle parking in the public realm will be accessible for different types of cycles and users and will complement or enhance the surrounding public realm. An example of public realm cycle parking is shown in **Figure 5.7**.

Figure 5.7: Planter Cycle Parking

Source: Front Yard Company

5.22 Long stay cycle parking for non-residential uses will be located within the floorspace for each non-residential use. An example of potential cycle parking is shown in Figure 5.8.

Figure 5.8: Example of Office internal cycle parking with integrated equipment storage

Source: Office Cycle Parking with clothes/equipment storage – Hammersmith, Archello.com

5.23 Parking standards are provided in Appendix C.

Accessible Cycle Parking

5.24 Cycle parking for non-standard cycles will also be provided within the public realm of the site for non-residential land uses in line with local policy and guidance. An example of accessible cycle parking is shown in Figure 5.9.

Figure 5.9: Example of Accessible Cycle Parking

Ebike and Shared Cycle/Scooter Schemes

5.25 Opportunities to safeguard for Ebike and shared cycle/scooter schemes are also being considered within the design of the masterplan. This includes consideration of the space and infrastructure requirements at mobility hubs, including charging requirements. A recent study demonstrated that, 48% of electric bike rental users were using the car on a daily basis to go to work before testing the bike. At the end of their rental period, just 18% went back to using a car.[2]

5.26 Cycle hire schemes have also led to an increased proportion of cycle trips. Across Glasgow and Edinburgh bike share trips increased by 38% between June & September 2020 compared with the same period the year before. It also attracted 18,000 new uses who hadn't cycled for a year or longer. This demonstrates the positive impact of providing cycles to those who have not got

[2] Ademe (2021) Evaluation study of bike services,

their own bike to encourage sustainable behaviours[3]. In addition, the same study found that 33% of people went on to purchase their own bike – locking in those positive behaviours.

5.27 Initial discussions will be held with operators to help determine the scale of development required to make such schemes commercially viable and to inform trigger points for delivery. Multiple options for the funding and delivery are being considered, including potential commercial opportunities with operators and delivery of a scheme as part of Homes England's stewardship arrangements.

External Connections

5.28 Equally as important as the on-site provision are the off-site mobility corridors and how the proposed network integrates with the existing and future network. There is significant potential for using active modes as a primary choice of travel from West of Ifield for external trips given its proximity to key transport nodes, employment centres and surrounding amenities.

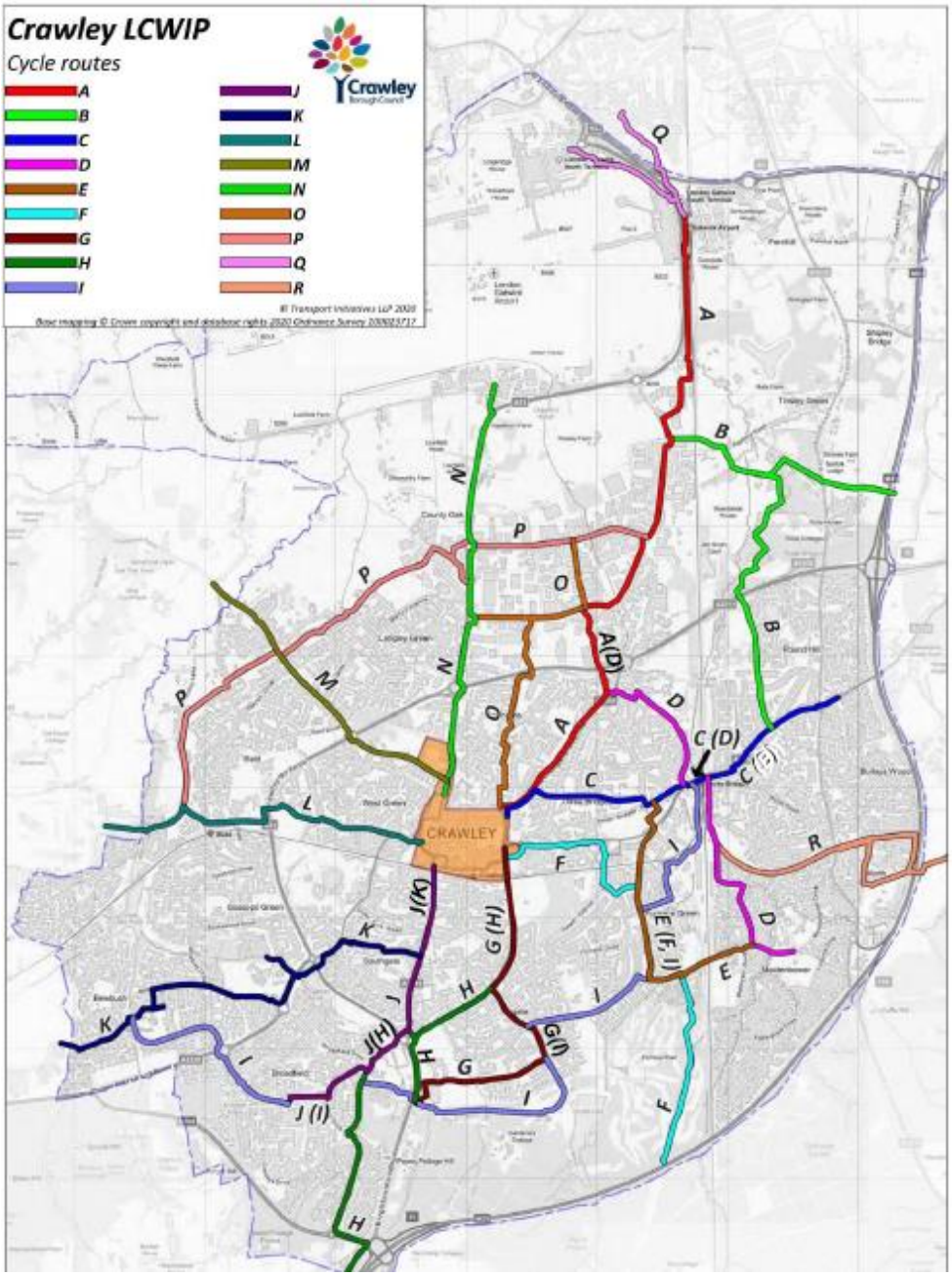
5.29 Crawley Borough Council has developed a Local Cycling and Walking Infrastructure Plan (LCWIP), a costed plan which identifies and prioritises physical infrastructure schemes along specific corridors to enable a significant increase in cycling and walking. The LCWIP provides:

- 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.

5.30 LCWIP cycle routes are shown in **Figure 5.10**. Key elements of the improvements identified include the widening of routes where possible, traffic calming and cycle priority at junctions and better crossings.

[3] Evaluation report into free bike share initiatives in Glasgow & Edinburgh June – Sept 2022, comouk.

Figure 5.10: Crawley LCWIP Cycle Routes



Source: Crawley Borough Council (2020) Crawley Local Cycling and Walking Infrastructure Plan

5.31 Routes L and P in particular are of significant strategic importance to West of Ifield in providing direct connections to Crawley Town Centre and Manor Royal. Indicative costs to deliver routes L and P have been identified by CBC at £853k and £1.21m respectively.

5.32 The LCWIP identifies a number of potential sources of funding for these routes as follows:

- DfT funding through national Cycling and Walking Investment Strategy (CWIS)
- The Towns Fund
- Direct developer investment as part of a regeneration scheme
- Section 106 and Community Infrastructure Levy (CIL) from new development
- Crawley Growth Programme (extension to the existing programme)
- Future High Street funds
- Air quality improvement funds.

5.33 Recognising the strategic importance of routes L and P, Homes England supports the further detailed design work which CBC are progressing and are committed to funding the sections adjacent to the development that mitigate its impact. Additionally, WSCC Walking and Cycling Strategy 2016-2026 describes potential routes connecting Horsham and Crawley as a key priority. Homes England is committed to contributing towards the delivery of these routes which will be secured through s106 negotiations.

5.34 The internal routes shown in Figure 5.1 have been overlain on the key LCWIP routes to demonstrate the future connectivity of West of Ifield by active modes. **Figure 5.9** illustrates the key mobility corridors.

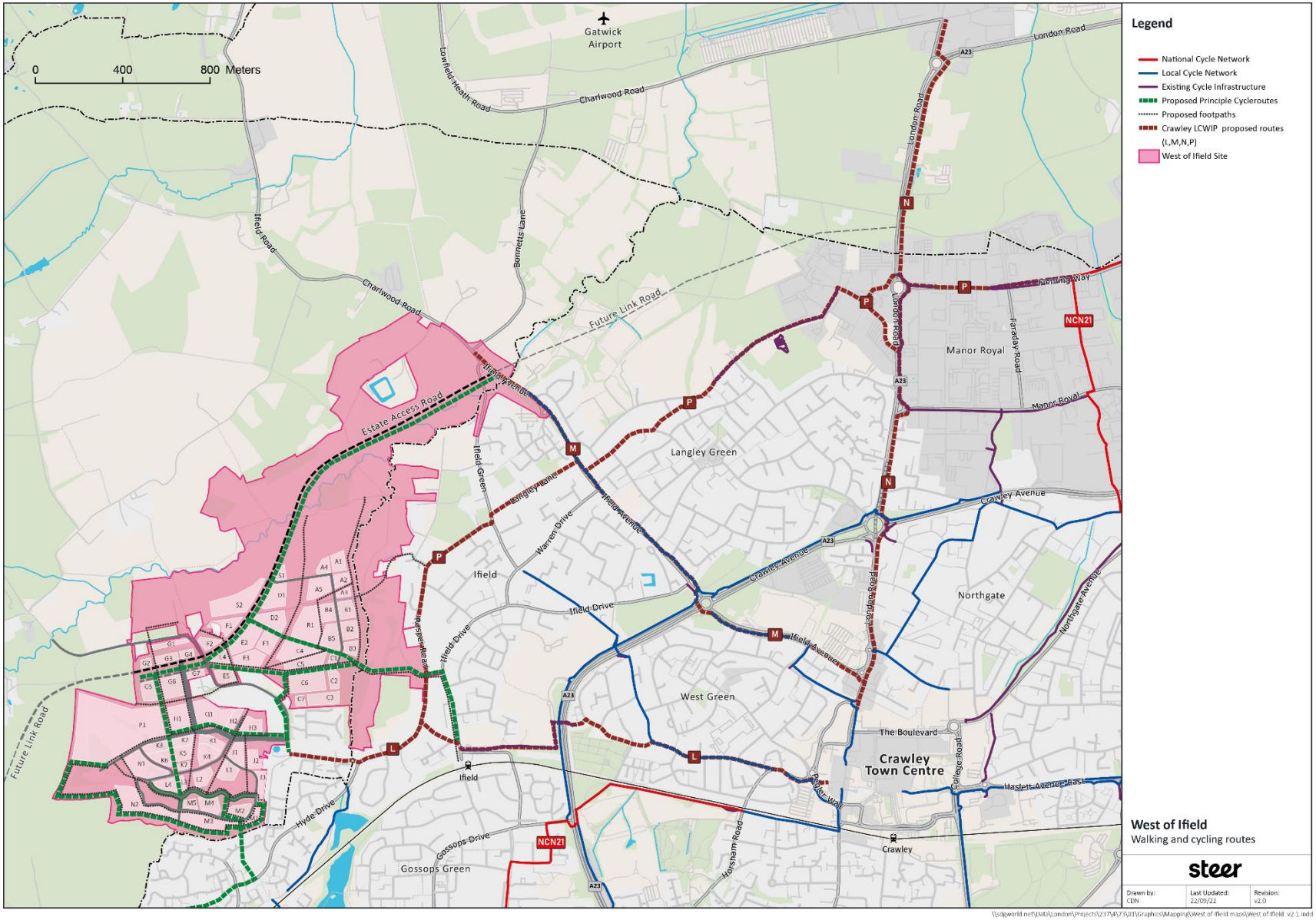
Promoting Cycling

5.35 A range of initiatives will be designed in and safeguarded within the masterplan from the outset and implemented through Residential and School Travel Plans to enable modal shift towards cycling, these could include:

- Sustainable Travel Vouchers and Travel Manager to educate / promote initiatives
- Secure cycle parking in all dwellings and for non-residential uses
- Cycle confidence training course
- Shared cycle/e-bike hire

5.36 An outline Residential Travel Plan (RTP) will be prepared to set out the deliverable interventions that are aimed at embedding sustainable travel patterns in both the short- and long-term in accordance with the phasing of the development. It is envisaged that a detailed RTP would accompany each Reserved Matters application for a particular phase(s). Success would be monitored by the Travel Plan Coordinator with triggers set for sustainable travel interventions and targets updated to ensure they remain relevant to emerging travel trends and technological advances.

Figure 5.11: On-site and off-site mobility corridors



6 Bus Strategy

Vision for Bus

Bus journeys will form a major part of the public transport offer for local journeys, providing fast and frequent services to key employment and retail sites such as Manor Royal, Gatwick Airport and Crawley Town Centre from first occupation. High quality bus stops will be strategically located to capture the majority of households within a five- minute walk, whilst ensuring that a suitable number of stops are provided to prevent hindrance to bus journey times. Bus stops will be highly accessible integrated mobility hubs which provide first and last-mile sustainable travel opportunities. The provision of bus segregation and priority measures will generate favourable journey times in comparison to car use.

6.1 Travel by bus is a key element of the transport strategy. Recognising the location of key employment areas, it is anticipated that travel by bus will be able to replace journeys by private car by offering a faster, more reliable journey time alternative. The proposed bus strategy offers a phased approach, providing a good level of service initially (15 min frequency) to instil sustainable travel behaviours, but recognising the gradual build-up in patronage and the requirement for services to become commercially viable and achieving a 10 min 'Fastway' service thereafter. It also recognises the future potential for strategic development beyond West of Ifield and is futureproofed to allow for a Fastway public transport corridor along the alignment of the Crawley Western Link.

6.2 The bus strategy has been developed in discussion with Metrobus, the main bus operator within the Crawley area and the most likely provider of new bus services to the site, and input from WSCC, HDC and CBC. Consultation with Metrobus and other stakeholders will continue in refining the masterplan and leading up to a planning submission for West of Ifield. The strategy comprises two "Fastway" services which will serve the site and provide connections to the wider area.

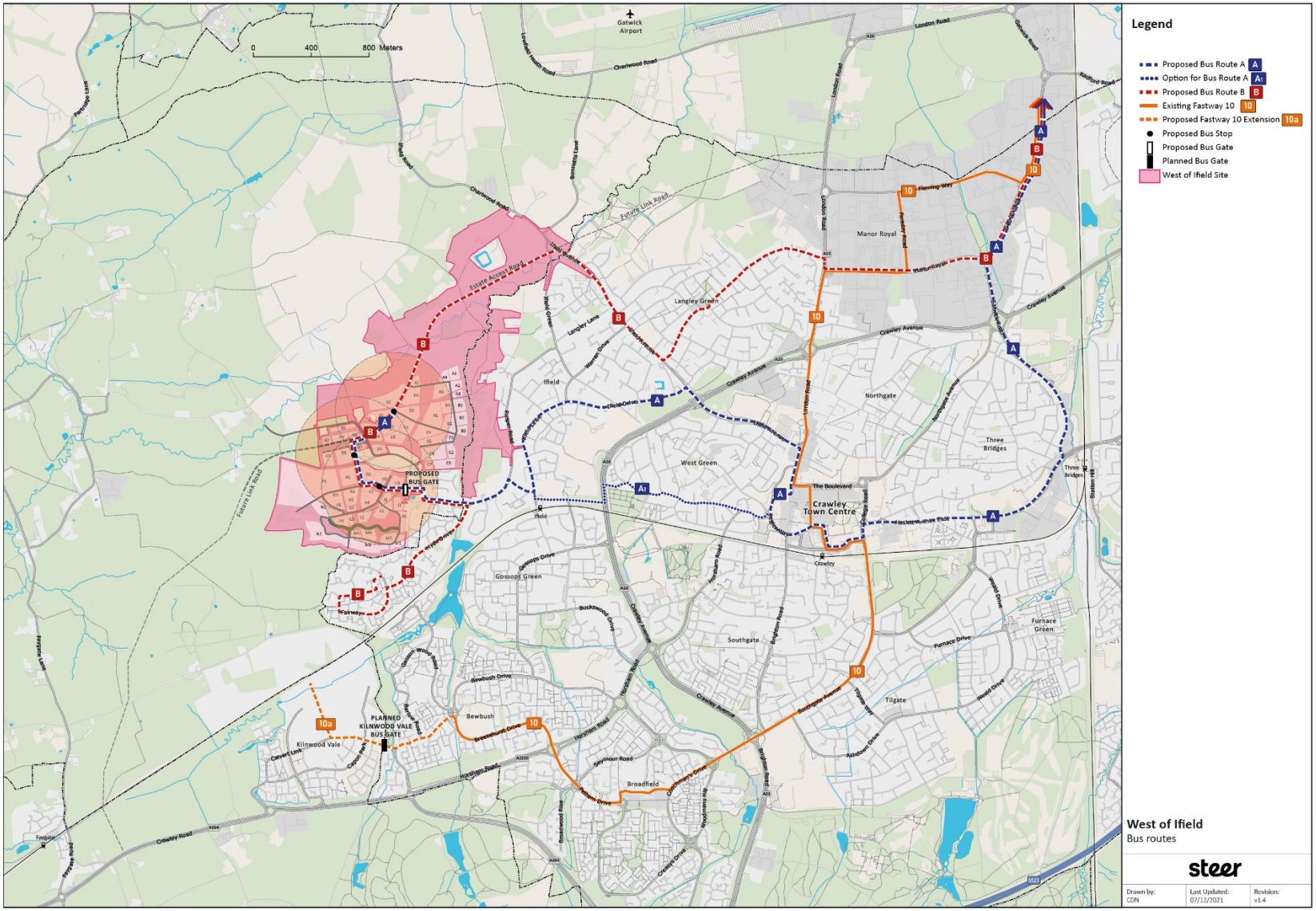
6.3 Metrobus currently operates a Fastway service along three routes. Fastway has been specially designed to travel within dedicated public transport right of ways to avoid congestion hot-spots, thereby ensuring faster travel speeds and lower journey times than private cars, thus providing car competitive public transport alternatives. Satellite-based technology displays real time information to passengers, tracks the location of vehicles to help maintain schedules and gives priority at traffic lights. The environmentally friendly, low-emission buses also have low-floor access for mobility impaired passengers and parents with toddlers and pushchairs.

6.4 Bus patronage in Crawley increased by 160% between 2003 and 2013, this increase was attributed to Metrobus and the introduction of Fastway services to the area. The West of Ifield bus strategy seeks to integrate Fastway principles to ensure new routes are provided which are quicker than travelling by car and provide a 'walk-up' level of service which makes travel by bus the natural choice.

6.5 In accordance with Fastway and Bus Rapid Transit (BRT) principles, routes will provide segregated bus infrastructure where necessary to limit interaction with other vehicles and possible congestion issues. Three high quality bus stops as part of integrated mobility hubs are proposed within the development. These are located to ensure that most of development is within 400m of a bus stop,

whilst ensuring that the number of stops is limited to enhance bus journey times through the development. The proposed bus routes and stops are set out in **Figure 6.1** and summarised below.

Figure 6.1: Proposed Bus Routes



Route A

6.6 Proposed Route A has a terminus within the development and utilises a proposed bus gate at the Rusper Road entrance to separate buses from general development traffic and enhance the attractiveness of the direct route to Crawley over a more elongated route by private vehicles along the first phase of the Crawley Western Link.

6.7 Rusper Road would benefit from modal restrictions south of the Crawley Western Link to prevent rat-running and significantly enhance its function as a key public transport corridor. The note at **Appendix B** and analysis in Chapter 10 explores the options in further detail, but a number of options exist for enhancing bus access, accommodating cycles and providing continued local vehicle access. These options are forming part of ongoing consultation with the local community before the appropriate solution is presented and evidenced within the Transport Assessment supporting the planning submission.

6.8 Beyond Rusper Road, two options have been considered for continuing the bus route to Crawley Town Centre. Route A continues via Ifield Drive and via Ifield Avenue to Crawley Town Centre. Route A1 considers a more direct alignment from Overdene Drive, across Crawley Avenue and onto Quantock Close continuing via The Dingle and Ifield Road to Crawley Town Centre.

6.9 A summary of the options, available widths on each corridor, and key constraints associated with each option are summarised below and in **Figure 6.2**. The more detailed analysis of each option is presented in **Appendix B**.

Route A1

6.10 This more direct route is not considered feasible given a number of constraints, both to the west and east of Crawley Avenue. On the west side of Crawley Avenue, notwithstanding the requirement for land which sits outside the control of Homes England, the provision of a dedicated bus link would have significant construction and environmental complexities.

6.11 However, the key constraints in providing a dedicated bus route through this alignment exist to the east of Crawley Avenue. The location of Snell Hatch Cemetery, directly bounding the railway presents a barrier to the most direct east-west connection.

6.12 The use of Quantock Close and The Dingle has therefore been explored as a bus corridor. The principle of routing any buses along this corridor is likely to be contentious given the quiet residential nature of these streets and cul-de-sacs, but there are also physical constraints to even the most minimal of interventions.

6.13 Within the available highway, there is insufficient space to widen meaning that buses would share the carriageway with general traffic. There are other pinch points where the overall available public highway width reduces to 9m, meaning that the two-way passing of buses would be constrained. Any significant works to accommodate a high-frequency bus route would require significant third party land acquisition, whilst there is further uncertainty around the necessary changes to Traffic Regulation Orders to remove a significant amount of on-street parking along The Dingle, Goffs Lane and Ifield Road.

6.14 In summary, Route A1 is not required to achieve the objectives and required outcomes for West of Ifield which can be met through Route A described below. However, it is recognised that if physical constraints could be resolved in the future, that the link would deliver benefits for the West of Ifield. Whilst this link will not be delivered by the development, should CBC be considering a scheme then Homes England would be supportive of working jointly to determine feasibility and delivery options.

6.15 Given the constraints identified above, Route A which utilises the existing highway network via Ifield Drive is the most feasible in terms of deliverability whilst still providing a direct connection to Crawley Town Centre.

6.16 There are opportunities to enhance bus service journey time and reliability along this segment, either taking a do-minimum approach by extending double yellow line restrictions along its full length, or by widening areas along both Ifield Drive and Ifield Avenue to provide dedicated bus lanes in each direction. The latter would have implications for existing on-street parking in some areas, but could be beneficial, particularly on the approach to the junction between Ifield Drive and Ifield Avenue. The scale of any interventions necessary to improve bus reliability along this route will be confirmed by future modelling and detailed within the Transport Assessment which will support the planning submission.

6.17 There are committed improvements at the Ifield Drive junction with Ifield Avenue, which include signalisation of the junction and widening of the northbound approach to provide a dedicated left turn lane. Similarly, a local widening scheme is identified by CBC for the A23 Ifield Roundabout to mitigate the impacts of future growth scenarios (even without West of Ifield) assessed within the Crawley Transport Study (May 2021). These improvements would address existing and future capacity issues (including with West of Ifield) to the benefit of bus journey times along Route A.

6.18 However, there is potential for bus priority interventions at the junction, subject to the need from a journey time/reliability perspective which will be confirmed by future modelling and presented within the Transport Assessment. As considered in further detail in the note at **Appendix B** there is potential for a dedicated approach lane and bus head-start signal on Ifield Drive with the planned signalisation of the junction. The Crawley Transport Study (May 2021) also identifies a *'short bus lane on Ifield Avenue on approach to Ifield roundabout for buses towards Crawley'* as a potential bus priority measure.

6.19 Provision of dedicated bus infrastructure at these locations to improve bus reliance and journey times would be subject to further modelling, feasibility and viability assessment, however not withstanding this, the existing Ifield Drive/Ifield Avenue route towards Crawley provides a suitable corridor for a high-frequency bus service.

Route B

6.20 Proposed Route B seeks to provide a direct connection from West of Ifield to the Manor Royal and Gatwick Airport key employment centres. To the north, it would take advantage of the first phase of the Crawley Western Link which will provide dedicated bus lanes in each direction and continue via Ifield Avenue and Stagelands through Langley Green to Manor Royal.

6.21 To the south, the route would continue via the Rusper Road bus gate and terminate at the Ifield West Community Centre. This route is therefore considered to provide significant benefits for future residents at West of Ifield, but also the existing Ifield West community who currently have just one service (Route 2) to Crawley Town Centre at a 10-minute frequency.

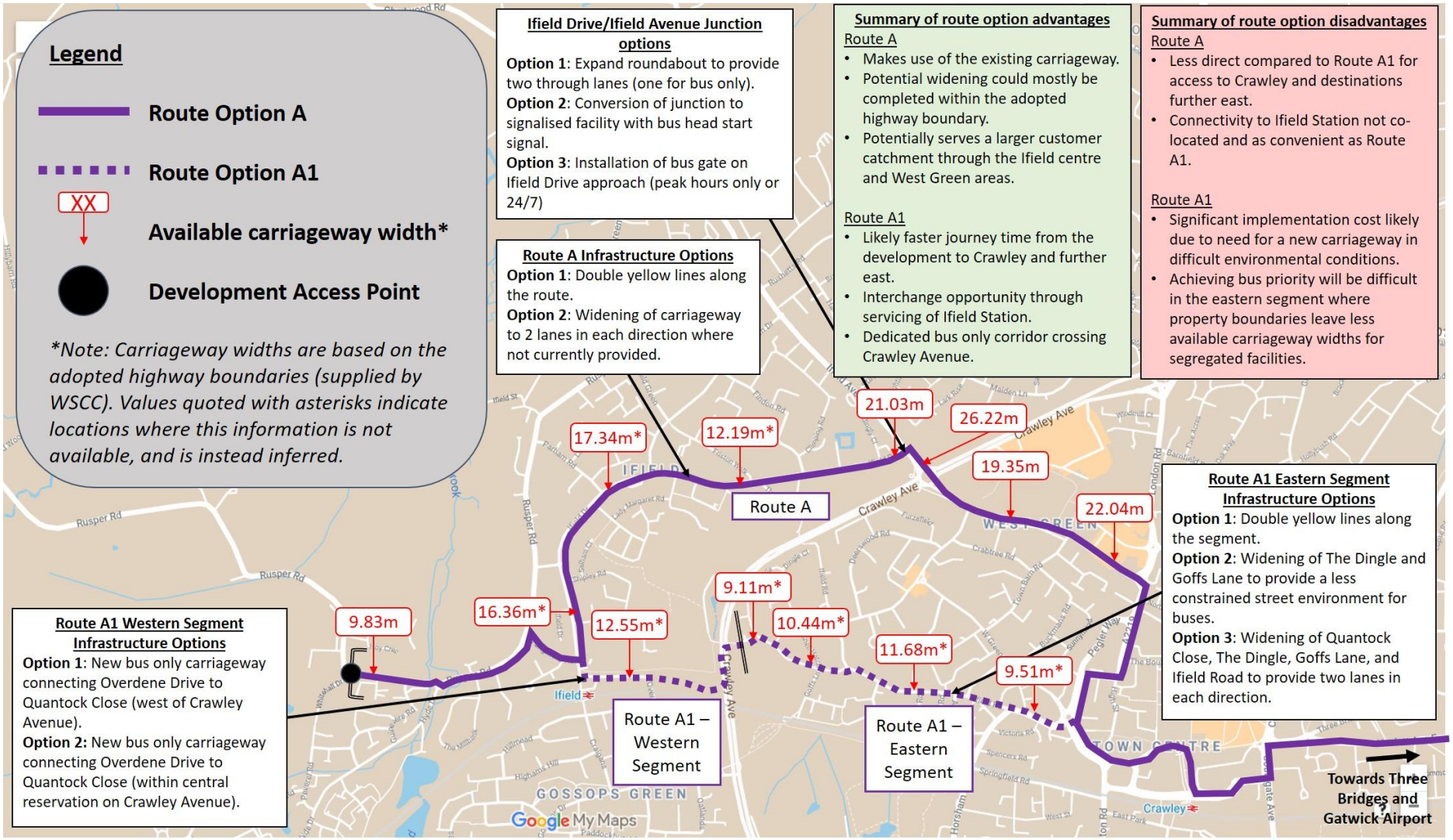
Fastway 10

6.22 The Fastway 10, which provides a bus every 8 minutes between Bewbush, Crawley Town Centre, Manor Royal and Gatwick will be extended to the Kilnwood Vale development via a new bus gate on Sullivan Drive. There are currently no proposals to extend the Fastway 10 beyond the 'station square' area within Kilnwood Vale and extending this route any further north into the existing Ifield West community and onwards to West of Ifield would be to the detriment of

reliability and journey times on the existing service, and would generate limited additional patronage.

6.23 Whilst the Fastway 10 service is not relied upon to provide the level of bus service required at West of Ifield, the benefits of a future extension are acknowledged and should be considered as part of any future expansion in the wider West Crawley Area. Nonetheless, the interchange opportunities which the Fastway 10 service provides at Crawley Town Centre would be attractive for connection bus trips between proposed Route A and the Fastway 10 to provide enhanced journey times to Manor Royal.

Figure 6.2: Route A Options Assessment



Bus Stops and Mobility Hubs

6.24 Consideration has been given to the location of bus stops within the emerging masterplan, as shown in Figure 6.1. The provision of three bus stops, located on the primary arterial street network are proposed to reduce the need for buses to traverse more complex routes within the masterplan, but are also strategically located to ensure that around 90% of the development falls within a 400m (approx. 5-minute walk) distance of a bus stop and high frequency service.

6.25 High quality bus stops will be provided drawing on the emerging Metrobus trials within Crawley to incorporate 'superhub' type bus stops which provide enhanced seating and shelters, real time bus information, integrated ticketing and cycle stands. These will form the mobility hubs within the masterplan which also have the potential to incorporate shared mobility, car clubs and delivery lockers.

Bus Incentives

6.26 High frequency bus services will be available from the day residents move into the development. Bus incentives will be made available to all new residents as part of the Residential Travel Plan. Measures which will be explored include offering sustainable travel vouchers, for example a £66 voucher could be used to purchase a 4-week "Crawley Metrorider" ticket for £65.75 (Current Price) which would grant unlimited bus travel for a four-week period. This type of incentive has been very successful at Chelmsford Garden Village comprising the Beaulieu and Channels developments delivering 9,850 homes, whereby 800 free 'taster' bus passes were distributed to 341 households as part of the first phase. As a result of this early incentive, more than half the households subsequently purchased a bus season ticket of some form.

6.27 These types of measures, which will be set out within the outline RTP supporting the planning application, along with the other sustainable transport measures outlined within this strategy, will further encourage permanent modal shift away from private vehicles and towards more sustainable modes of travel. The outline RTP will establish timescales for the implementation of specific measures and subsequent updates to the RTP accompanying each Reserved Matters application for a particular phase(s) will monitor the success of specific measures and refine future targets accordingly.

Local Policy

6.28 The Crawley 2021 Draft Infrastructure Plan states that there is potential for increasing frequency of bus services to meet additional demand generated by new development. Further bus priority measures could be provided and are essential to deliver very high levels of bus use and corresponding reductions in car use, as achieved by the introduction of Fastway.

6.29 A new bus lane is planned for Manor Royal as well as a new bus station associated with the Station Gateway project.

Bus services to new neighbourhoods will need to operate on a commercial basis and may require a subsidy from developers in early years when occupancy of new development is small.

Bus Frequency & Phasing

6.30 To achieve the targeted bus mode shares from the outset, a high frequency bus route will be provided from day one and subsidised by Homes England. Route A will provide connections to the key employment areas of Crawley Town Centre, Manor Royal and Gatwick Airport, and Ifield, Crawley and Three Bridges rail stations at an initial 15-minute frequency, moving to a 10-min frequency as the development is built out

6.31 It is intended that Route B would be introduced as a commercially viable service requiring zero net subsidy. The route extends to the existing Ifield West community which will improve connectivity for existing residents and aid the viability of the service. Whilst the introduction of the route could be phased with a reduced frequency initially, it is anticipated that a 10-minute frequency route would become commercially operable prior to full occupation.

6.32 As set out in the accompanying Trip Generation and Scenario Planning Scoping Note, it is proposed to assess two scenarios within the Transport Assessment which will inform the bus infrastructure and service provision requirements. Scenario 2 comprises a 24% bus mode share and Scenario 3 comprises a 35% bus mode share. The bus trips associated with these two scenarios are set out in **Table 6.1**.

Table 6.1: West of Ifield – Bus Trip Generation Forecasts

	Mode Share	AM Peak (0800 – 0900)			PM Peak (1700 – 1800)		
		Arrive	Depart	Two-Way	Arrive	Depart	Two-Way
Bus Trips – Scenario 2	24%	316	315	631	491	329	820
Bus Trips – Scenario 3	35%	378	475	853	768	511	1,279

6.33 As shown in Table 6.1, assuming a 24% mode share once the development is fully built out there would be 491 arrivals during the PM peak hour (busiest direction flow). Based upon an average loading of 40 passengers per bus, approximately 6 buses (one-way) per route would be required during the PM peak to accommodate demand. This supports the bus strategy outlined above with 6 buses (10-minute headway) on both routes providing 12 buses per hour arriving at West of Ifield.

6.34 Bus use will be incentivised and encouraged, both through specific measures within the outline Residential Travel Plan and through good design which improves the attractiveness of bus use over private vehicles. Should the upper end ambitious target of 35% be achieved for bus mode share for external trips, 768 arrivals by bus could be expected during the PM peak hour. Based upon an average loading of 40 passengers per bus, approximately 19 buses (one-way) would be required during the PM peak to accommodate demand. This would suggest a service requirement of one bus every 6-8 minutes on both routes which is comparable to the existing Fastway 10 route within Crawley and would generate additional revenue for the bus operator.

6.35 Further consideration of the bus infrastructure, service requirements, demand and operating costs is to be completed following agreement on the approach to trip generation and scenario planning with WSCC, HDC and CBC. Further work will also consider the phasing of bus services and infrastructure to support the development and sustain the ambitious target mode shares.

6.36 Funding for bus services by Homes England will be subject to approval of the Full Business Case by HM Treasury.

7 Rail Strategy

Vision for Rail

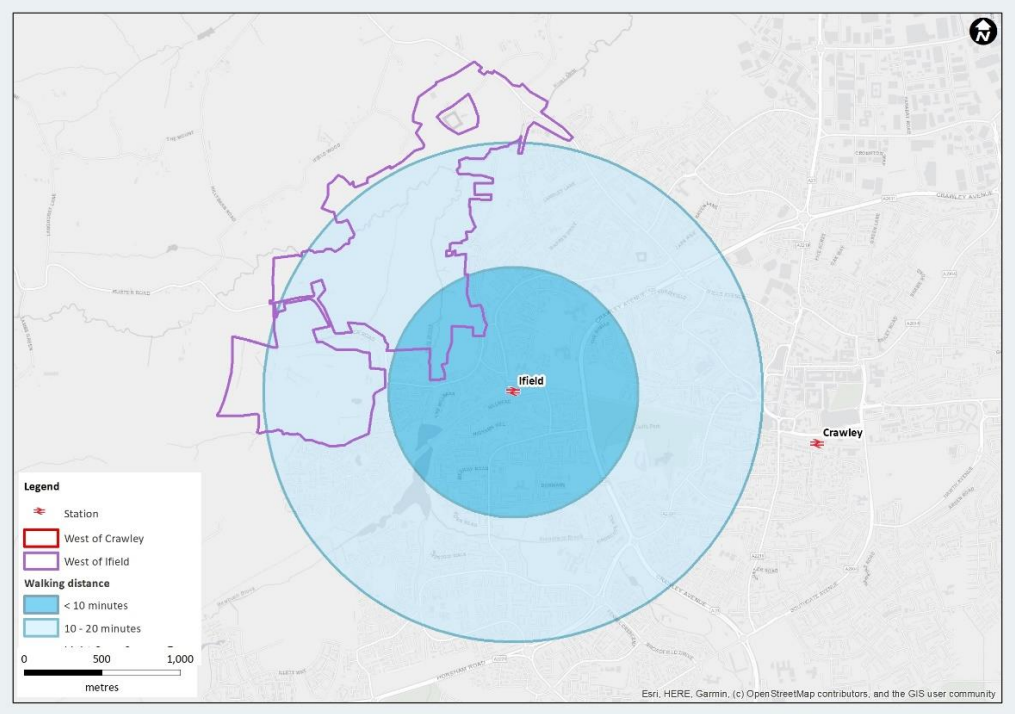
Rail will have an important role in facilitating journeys by means other than the private car, particularly for longer journeys to destinations not immediately served by bus. Wider Network Rail aspirations to upgrade Ifield station are supported, whilst the walking, cycling and mobility strategy will ensure that good connections are provided from the site. The strategic opportunities to harness and facilitate improved rail access as part of the wider Land West of Crawley Strategic Opportunity are also recognised.

Ifield Station

7.1 Ifield station currently has a regular service at all times of day. During the morning peak, up to three trains per hour are provided towards London via Crawley, Three Bridges and Gatwick Airport, with two trains per hour towards Horsham. During the evening peak, the same level of service is provided in the opposite direction. During off-peak periods, two trains per hour typically serve Ifield in each direction.

7.2 Figure 7.1 illustrates the walk catchment (800m [10 mins] and 1.6km [20 mins]) from Ifield station in relation to both the West of Ifield area and the Land West of Crawley Strategic Opportunity area. Ifield station presents a good opportunity for future residents at West of Ifield to travel by rail.

Figure 7.1: Ifield Station Walk Catchment



7.3 An indicative catchment analysis considering existing residential and workplace populations within 800m (10 minute walk) and 1.6km (20 minute walk) has been carried out. The potential population and employment numbers for West of Ifield (assuming 3,000 homes and 1,500 jobs) have then been added to the analysis to consider the number of additional people within West of Ifield who would fall within the catchments above. The results are presented in Table 7.1.

Table 7.1: Ifield Station Forecast Catchment Population

Population		Ifield Station	
		800m (10 mins)	1.6km (20 mins)
Residential	Existing	8,000	23,000
	Proposed uplift*	600	7, 350
	Total	**8,600**	**30,350**
	% Change	**+8%**	**+32%**
Workplace	Existing	4,200	10,800
	Proposed uplift*	300	1,500
	Total	**4,500**	**12,300**
	% Change	**+7%**	**+14%**
Combined Population	Existing	12,200	33,800
	Proposed uplift*	900	7,100
	Total	**13,100**	**40,900**
	% Change	**+7%**	**+21%**

**Residential density based on 2.45 residents per household (the average for HDC and CBC). Areas of ancient woodland and floodplain were excluded, and density distributed evenly across developable area.*

7.4 Ifield station would benefit from a combined population and employment uplift of over 7,000 people within a 20-minute walk.

7.5 As described in Chapter 5, connections to Ifield station via a new dedicated pedestrian/cycle link across Ifield Meadows and via improvements to Rusper Road are being prioritised. Further off-site improvements along Ifield Drive between Rudgwick Road and Ifield station will also be important in further encouraging rail use. These off-site requirements will be detailed in the Transport Assessment and secured through s278 works contributions.

7.6 Given that Ifield station will be important (alongside Crawley and Gatwick Airport stations) in providing an alternative to car use for longer distance trips, Homes England have worked with Network Rail (Great British Railways) to identify potential improvements. No works are currently planned at Ifield station to improve platform length and provide step free access, however Homes England commit to improving the links to the station by cycle and high frequency buses and the interchange of these with additional cycle storage provided at the station.

Crawley 'draft' Reg 19 Local Plan Policy ST3: Improving Rail Stations

7.7 Any improvements or developments at or within the vicinity of railway stations will be expected to enhance the specific roles of the individual stations, the sustainable access to individual stations, and at Ifield Station, strengthen its role as a local suburban station meeting the needs of current and future residents in the west of the town.

7.8 Homes England is committed to securing improved pedestrian/cycle connectivity to Ifield station as set out above and will work with Network rail and CBC to identify opportunities for increased cycle parking.

8 Car Parking Strategy

Vision for Car Parking

The car parking strategy seeks to meet initial build-out levels of private vehicle demand, albeit acknowledging that the proposed sustainable transport measures will contribute to limiting demand for car ownership below local levels. However, the design will allow for significant flexibility with a high proportion of unallocated spaces which can be repurposed for other uses over time in response to the onset of behavioural change towards lower car ownership and advances in technology.

8.1 It is anticipated that West of Ifield will be delivered over an approximate 15-year horizon.

8.2 It is widely accepted that the use of the car and associated parking requirements will change drastically within these timeframes. Whilst these changes are expected to take a number of forms, both behavioural changes towards car sharing and use of on-demand services, and technological advances including more electric vehicles, future autonomation and Mobility-as-a-Service, the precise nature of some of these changes is less certain.

8.3 Accordingly, rather than applying a technology-led response at this stage, it is imperative to ensure that minimum car parking requirements, whilst ensuring the urban design is futureproofed and flexible in its ability to adapt to changes over time.

Existing Local Car Ownership

8.4 Car or van availability data from the 2011 Census has been interrogated to consider existing car ownership levels within Crawley wards close to the West of Ifield site. The number of households within the Ifield, Gossops Green, Bewbush and Broadfield wards in relation to the number of cars owned is shown in Table 8.1

Table 8.1: Local Car Ownership – 2011 Census

Number of Cars	Ifield	Gossops Green	Bewbush	Broadfield North
Households				
0	809	416	784	593
1	1,677	961	1,454	1,097
2	889	562	778	591
3	181	141	174	135
4	57	48	44	26
Total Number of Households	3,613	2,128	3,234	2,442
Total Number of Cars	4,226	2,700	3,708	2,788
Cars per Household	1.2	1.3	1.1	1.1

8.5 Local car ownership varies between 1.1 – 1.3 vehicles per household. The Bewbush and Broadfield North wards are afforded with better bus services than Ifield and Gossops Green which is a likely contributing factor to the slightly lower car ownership levels.

8.6 It is also noted that there are no car clubs currently operating within these neighbourhoods, although a car club was launched in Crawley town centre in 2022. The new Co Wheels Crawley Car Club car is funded by Crawley Borough Council using developer contributions and aims to reduce urban congestion and lower emissions by renting out fuel efficient, low emission vehicles on an hourly basis. In accordance with the evidence presented in **Appendix C**, car clubs present the opportunity for significantly reduced car ownership. A comprehensive car club scheme will be implemented at West of Ifield and secured through a s106 planning obligation.

West Sussex County Council (WSCC) Standards

8.7 The WSCC Guidance on Parking at New Developments (2020) has been designed to ensure that sufficient parking is provided to meet the needs of the development while maintaining highway network operations, protecting surrounding communities and pursuing opportunities to encourage use of sustainable modes of transport.

8.8 Areas across the County are divided into "Parking Behaviour Zones", based on the location and connectivity of the area. West of Ifield, although sitting on the edge of the Crawley map, is considered to best reflect PBZ 3 which is attributed to the existing Ifield, Gossops Green, Bewbush and Broadfield North wards.

8.9 The expected parking demand per dwelling for each PBZ is presented in Table 8.2.

Table 8.2: WSCC Residential Parking Demand

Residential Parking Demand (spaces per dwelling)						
No. of Bedrooms	**No. of Habitable Rooms**	**Parking Behaviour Zone**				
		1	**2**	**3**	**4**	**5**
1	1-3	1.5	1.4	0.9	0.9	0.6
2	4	1.7	1.7	1.3	1.1	1.1
3	5-6	2.2	2.1	1.8	1.7	1.6
4+	7+	2.7	2.7	2.5	2.2	2.2

8.10 There is however an acceptance within the WSCC guidance that the ratios above can be applied flexibly to reflect development aspirations for sustainable travel:

"To meet with current and emerging guidance on the promotion of sustainable travel modes and choices, consideration could also be given to reducing the expected level of parking demand by 10%. This is based on the Department for Transport's 'Smarter Choices' research that shows reductions in traffic movements can be achieved by up to 10 to 30% where a range of travel choices are available through provision of travel plans, public transport contributions, and other sustainable travel initiatives."

8.11 This is also the focus of the Crawley Transport Study (May 2021) which has an emphasis on identifying mitigation which is focussing on sustainable transport. *"Increasing investment in more sustainable means of travel, rather than highway infrastructure, is likely to encourage use of sustainable modes and reduce dependency on travel by car. Conversely, increasing capacity in highway will only make car travel more attractive, countering any investment in active travel and public transport*".

8.12 Consideration has also been given to the Draft Crawley Densification Study which has been prepared as part of the Regulation 19 Local Plan evidence base. Whilst this predominantly considers how new compact forms of development could be considered within the existing built-up area boundary, the foundational principles for successful compact form with regards to movement and car parking are equally applicable.

8.13 This includes 5-8 minute access to sustainable transport infrastructure and shops which are key principles of the well-connected West of Ifield masterplan. When coupled with proper cycling infrastructure, car clubs, micro-mobility, and a good range of services and amenities, all of which are to be delivered early, there is a recognition that this reduces the desire for car ownership.

8.14 In line with the transport and movement principles for West of Ifield and strategy for non-car-based trips, it is considered that a 10% reduction should be the starting point for car parking provision at the development. In addition, a reduction of up to 30% is considered an achievable aspiration to further reduce car dominance and parking design will provide flexibility to accommodate a further decrease in demand. A 10% and 30% reduction to PBZ 3 parking demand respectively provides the ratios set out in Table 8.3.

Table 8.3: PBZ 3 Reduction

No. of Bedrooms	No. of Habitable Rooms	PBZ 3 Demand	10% Reduction	30% Reduction
1	1-3	0.9	0.8	0.6
2	4	1.3	1.2	0.9
3	5-6	1.8	1.6	1.3
4+	7+	2.5	2.3	1.8

West of Ifield Parking Demand

Interim Parking Provision

8.15 Based on the WSCC guidance, a 10% reduction to the PBZ 3 car parking ratios is considered appropriate from the outset. In accordance with an indicative masterplan unit mix for 3,000 homes, this equates to the following parking provision.

Table 8.4: West of Ifield Interim Parking Provision

No. of Bedrooms	Number of Units	Parking Standard	Total Spaces
1	450	0.8	360
2	886	1.2	1,063
3	1,071	1.6	1,714
4+	593	2.3	1,364
Total	**3,000**	-	**4,501**

8.16 Overall, the provision set out in Table 8.4 equates to an average of 1.5 spaces per dwelling. This is similar with comparator developments seeking to reduce car use including Elmsbrook (Bicester Garden Town) in Oxfordshire, Poundbury in Dorchester and Northstowe in Cambridgeshire, all of which provide an average of 1.5 spaces per dwelling.

8.17 A high proportion of these spaces will be unallocated to meet visitor demand. The WSCC guidance stipulates that *"no special provision should be made for visitors where at least half of the parking provision associated with the development is unallocated"*.

8.18 Moreover, a high proportion of unallocated spaces from the outset will provide maximum flexibility to repurpose parking over time as demand decrease as anticipated. Whilst the standards set out above represent an average target across the entire development, there is an acknowledgement that some locations will be more accessible than others (e.g. close to bus stops and neighbourhood centre) where lower ratios will apply, including some car-free development. Similarly, higher standards may apply to larger family units within less accessible areas of the masterplan. As the masterplan continues to develop, detailed consideration will be given to how the parking targets set out above and below are integrated on a plot by plot basis.

Unallocated Parking

8.19 Unallocated spaces are those which can be generally used by anyone. Unlike allocated spaces they are not owned and so provide more flexibility, particularly for repurposing. A combination of the following unallocated parking arrangements are being considered within the emerging masterplan

Parking Courts and Grouped Parking

8.20 Parking courts can be controlled by design with controlled access or ANPR technology, or by a third party such as a management company. This ensures, that whilst not being allocated to a specific property, they can be assigned to particular groups of houses or flats. As parking demand decrease, there are opportunities to convert parking courts and grouped on-plot parking areas for other uses (above and beyond the level planned for and required by policy) such as MUGAs, shared garden spaces for resident amenity or future development.

8.21 An example of this type of grouped parking is present at the Marmalade Lane development in Cambridge, as shown in **Figure 8.1**. Just one vehicle crossover is provided to a plot of 42 homes in this co-housing, community led scheme. This allows the parking to be separated from the pedestrian spaces, creating a safer environment which prioritises active travel over car use.

Figure 8.1: Marmalade Lane, Cambridge – Grouped Parking

On-Street Public Highway

8.22 These are the only spaces that will be maintained by WSCC. Parallel parking is considered most appropriate, particularly on higher priority routes manage traffic flow but also provide flexibility for future pick-up and drop-off (PUDO) with a move towards greater sharing opportunities and autonomation, as well as servicing opportunities. Perpendicular parking can be considered in neighbourhood areas on lower priority routes.

On-street Private Roads

8.23 On-street spaces can generally not be allocated to specific residents. These can comprise parallel, echelon or perpendicular bays, although parallel bays provide the most flexibility for future conversion. Whilst these spaces can be controlled by traffic regulation orders or enforcement, the emerging design of the street hierarchy and housing layouts will create effective self-controlling arrangements to reduce the need for such management.

8.24 Phase 1 of the Barton Park development on the outskirts of Oxford provides an example of how a high proportion of unallocated and off-plot car parking is being provided to allow for future flexibility of car parking, as shown in **Figure 8.2**. Over 40% of car parking will be unallocated using the varying arrangements as described above.

Figure 8.2: Barton Park, Oxford – Flexible Car Parking Strategy

Car Club Bays

8.25 The proposed reductions to WSCC parking standards should be supported by a comprehensive car club to reduce the need for car ownership.

8.26 CoMo produce an annual survey of car clubs at a nation-wide level, which contains a wealth of evidence of their effectiveness. The latest 2019 survey revealed that 63% of new members owned at least one car before joining a car club, falling to 54% afterwards. For each car club car, approximately 6.1 private cars are removed from the road, freeing up public space that is currently redundantly used for car parking. Car club cars also tend to operate at a higher level of occupancy than private vehicles: 1.7 compared to 1.55.

8.27 Zipcar suggest that one indicator to the long-term success of a car club is when there are 150-300 units per vehicle. Accordingly, up to 20 car club bays will be provided across the masterplan in addition to the ratios set out above.

Legacy Parking Provision

8.28 As suggested above, further reductions to the parking demand are considered achievable, both as a result of the sustainable travel opportunities to be provided, but also given the projected future reductions in car ownership resulting from the onset of demand responsive autonomous vehicles and other technologies.

8.29 It is considered wholly achievable that future demand at West of Ifield could reduce by 30% from current PBZ 3 demand. These legacy ratios have been reapplied to the indicative masterplan unit mix for 3,250 homes which equates to the following parking provision.

Table 8.5: West of Ifield Legacy Parking Provision

No. of Bedrooms	Number of Units	Parking Standard	Total Spaces
1	450	0.6	270
2	886	0.9	797

3	1,071	1.3	1,392
4+	593	1.8	1,067
Total	**3,000**	-	**3,527**

8.30 The legacy ratios would result in a reduction of 974 (22%) parking spaces when compared to the interim provision. Overall, this would equate to an average of 1.18 spaces per dwelling.

8.31 Whilst the emerging masterplan design allows for flexibility to physically repurpose car parking retrospectively, it is also envisaged that the planning process would serve as a mechanism to apply for reduced car parking ratios over time. Subsequent RMAs and delivery partners would draw on survey evidence from car parking uptake within earlier plots or phases to enable more efficient use of space and designs which are not inhibited by unnecessary parking.

8.32 The applicant will work with the LPA to ensure that the Residential Travel Plan has specific thresholds in it which trigger the re-purposing of parking areas into Net Zero supporting amenity.

Precedents

8.33 In addition to those schemes identified above, other recent development consents have included a similar parking strategy which recognises and a facilitates reduced car ownership over time.

8.34 The parking strategy for the Filton Airfield development in South Gloucestershire (LPA Ref: PT14/3867/O) provides parking in line with South Gloucestershire Council parking standards but recognises the build-up of sustainable travel interventions over time which will reduce the use and ownership of private cars. It also takes a flexible approach so that much of the parking stock can be adapted to meet changes in car ownership and the electrification of the UK vehicle fleet.

8.35 A subsequent Reserved Matters (LPA Ref: P20/10471/RM), accompanied by a parking technical note, was approved for the first residential parcel (302 dwellings) with levels of parking below South Gloucestershire adopted parking standards. Future phases are expected to reduce parking provision further recognising the good access to an array of sustainable travel options and development within walking distance of a large number of services, facilities and employment – similar to the level of provision afforded to future West of Ifield residents.

Non-Residential Car Parking

8.36 The WSCC Guidance on Parking at New Developments (2020) contains initial guidance on the quantum of non-residential car parking to be provided by land use, but acknowledges that a site-specific assessment is more appropriate to "balance operational needs, space requirements, efficient use of land and cost attributed to providing parking and where relevant, attracting/retaining staff".

8.37 The WSCC guidance has been compared to other local and comparator authority parking standards as a reference to deriving appropriate ratios for West of Ifield, as shown in Table 8.6.

Table 8.6: Non-Residential Parking Ratio Comparison

Non-Residential Parking Demand		Other Local and Comparator Parking Standards			
Use Class	**WSCC Guidance**	**South Cambridgeshire**	**East Sussex**	**East Hampshire**	**Surrey**

A1 Food	1 space per 14m²	50m² up to 1,400m², 18m² thereafter	18m²	14m²	14m²
A1 Non-food		50m²	30m²	20m²	30m²
A2 Financial and Professional Services	1 space per 30m²	40m²	30m²	30m²	30m²
A3 Restaurant and Café	1 space per 5m² of public area and 2 spaces per bar	20m²	5m²	5m²	6m²
A4 Drinking Establishments					
A5 Hot Food Takeaways			5m²	5m²	6m²
B1 Business	1 space per 30m², up to threshold of 500m² in less accessible areas	40m²	30m²	30m²	30m² to 100m²
B2 General Industrial	1 space per 40m²	40m²	50m²	45m²	30m²
B8 Storage	1 space per 100m²	100m²	100m²	100m²	100m²
D1 Non-Residential Institutions	Site specific assessment based on travel plan and needs				
D2 Assembly & Leisure	1 space per 22m²	20m²		10m²	

8.38 As set out in the accompanying Trip Generation and Scenario Planning Scoping Note, a high level of trip internalisation is forecast, facilitated by active travel opportunities to a good mix of services and amenities, and working towards the draft Local Plan aspiration to provide 1:1 homes to jobs. Non-residential uses will also be easily accessible to non-West of Ifield residents given its proximity to local neighbourhoods, all of which will be easily accessible by walk/cycle routes and high-quality public transport.

8.39 Accordingly, it is appropriate to reduce the car parking requirements from those set out above. Similar to the approach to residential car parking, 'interim' and 'legacy' ratios have been established, the former which establishes a reduced baseline requirement and the latter which facilitates further reductions resulting from the sustainable travel opportunities to be provided, but also given the projected future reductions in car ownership resulting from the onset of demand responsive autonomous vehicles and other technologies.

8.40 The proposed 'interim' and 'legacy' non-residential car parking ratios for West of Ifield are set out in Table 8.7.

Table 8.7:

West of Ifield Non-Residential Parking Provision

Non-Residential Parking Demand		West of Ifield Targets	
Use Class	**WSCC Guidance**	**Interim Ratios**	**Legacy Ratios**
A1 Food	1 space per 14m^2	1 space per 25m^2	1 space per 40m^2
A1 Non-food		1 space per 35m^2	1 space per 50m^2
A2 Financial and Professional Services	1 space per 30m^2	1 space per 40m^2	1 space per 50m^2
A3 Restaurant and Café	1 space per 5m^2 of public area and 2 spaces per bar	1 space per 20m^2 public area	1 space per 30m^2 public area
A4 Drinking Establishments			
A5 Hot Food Takeaways			
B1 Business	1 space per 30m^2	1 space per 40m^2	1 space per 50m^2
B2 General Industrial	1 space per 40m^2	1 space per 40m^2	1 space per 50m^2
B8 Storage	1 space per 100m^2	1 space per 100m^2	1 space per 80m^2
D1 Non-Residential Institutions	Site specific assessment based on travel plan and needs		
D2 Assembly & Leisure	1 space per 22m^2	1 space per 25m^2	1 space per 30m^2

8.41 As with residential parking, non-residential parking will be provided as a high proportion of unallocated parking to facilitate future reductions in line with the legacy ratio targets. Whilst the above provide a useful reference point, further detailed plot testing to ascertain the appropriate level of car parking at specific locations will be carried out with reference to the development's specific land use, associated trip rates, mode shares and forecast job projections. We will consider whether in some locations, limited shared parking between residential and commercial uses could be advantageous, but this will be considered on a plot by plot basis.

9 Mode Shares

Vision for Modal Share

The masterplan seeks to capture as many trips internally by providing a good mix of land uses and amenities to meet the everyday needs of residents, supported by the on-site mobility infrastructure to prioritise active travel. Where external trips are made, the mode share strategy considers the location of the site, a short distance from key employment, retail and leisure destinations and prioritises active travel and public transport use, whilst recognising that car and rail trips will remain attractive for longer distance travel.

External Mode Shares

9.1 A significant amount of information has been presented to HDC, CBC and WSCC to date which sets out the rationale for the mode shares put forward for West of Ifield. This includes interrogation of local travel patterns and trends, aspirational mode shares from comparable developments and evidence from developments where ambitious targets have been set and attained.

9.2 This has been further supported by details of the emerging transport and movement principles for West of Ifield to justify the appropriateness of the mode shares put forward, but the more detailed elements of the strategy set out within this document should further demonstrate how these mode shares are appropriate.

9.3 A note compiling the previous evidence provided and detailed methodology for deriving the mode shares is included at **Appendix C**. In response to further comments from HDC, CBC and WSCC, the shared ambition to drive higher public transport mode shares at West of Ifield is recognised. A clear strategy with regards to mode share scenario testing is set out within an accompanying Trip Generation and Scenario Planning Scoping Note which considers a scenario to reflect higher bus mode share and the relative infrastructure and service requirements to accommodate increased bus mode share over time. An outline Residential Travel Plan will also be prepared to support the planning application which will set out the deliverable interventions that are aimed at embedding sustainable travel patterns in both the short- and long-term in accordance with the phasing of the development.

9.4 At the request of WSCC and to recognise the distinction between shorter and longer trip behaviour and the ability to provide for shorter journeys by active and other sustainable modes, the following trips by distance by journey purpose have been derived for West of Ifield. These mode shares are considered to represent a sustainable scenario, although business as usual (more car dominated) and more ambitious (higher public transport use) mode shares will also be tested as set out in the accompanying Trip Generation and Scenario Planning Scoping Note.

Table 9.1: West of Ifield Mode Splits – Trips <2km

Method of Travel	Journey Purpose					
	Commuting / Business	Shopping	Other escort	Personal business	Leisure	Other incl. just walk
Train	0%	0%	0%	0%	0%	0%
Bus	10%	9%	4%	8%	7%	0%
Car – driver	26%	17%	32%	19%	20%	0%
Car – passenger	14%	9%	18%	10%	11%	0%
Bicycle / e-bike	13%	2%	2%	3%	8%	0%
Walk	37%	62%	45%	60%	54%	100%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 9.2: West of Ifield Mode Splits – Trips 2km – 5km

Method of Travel	Journey Purpose					
	Commuting / Business	Shopping	Other escort	Personal business	Leisure	Other incl. just walk
Train	1%	0%	0%	0%	0%	0%
Bus	30%	37%	13%	32%	28%	0%
Car – driver	35%	32%	51%	36%	35%	0%
Car – passenger	20%	18%	28%	20%	20%	0%
Bicycle / e-bike	10%	4%	2%	3%	9%	0%
Walk	4%	9%	6%	9%	8%	100%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 9.3: West of Ifield Mode Splits – Trips >5km

Method of Travel	Journey Purpose					
	Commuting / Business	Shopping	Other escort	Personal business	Leisure	Other incl. just walk
Train	12%	1%	1%	2%	6%	0%
Bus	17%	24%	7%	20%	18%	0%
Car – driver	44%	48%	60%	49%	48%	0%
Car – passenger	25%	27%	33%	28%	27%	0%
Bicycle / e-bike	2%	0%	0%	1%	1%	0%
Walk	0%	0%	0%	0%	0%	100%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

9.5 Trips for education purposes have been dealt with separately based on National Travel Survey data and mode share evidence from local schools. The resulting mode shares for West of Ifield trips for education are presented in Table 9.4.

Table 9.4: West of Ifield School Mode Splits

Method of Travel	Primary School				Secondary School			
	<1 mile	1-2 miles	2-5 miles	>5 miles	<1 mile	1-2 miles	2-5 miles	>5 miles
Train	0%	2%	6%	10%	0%	1%	4%	13%
Bus	0%	10%	26%	9%	2%	8%	48%	61%
Car – driver/ passenger	6%	31%	68%	81%	8%	27%	36%	25%
Bicycle	2%	5%	0%	0%	3%	4%	6%	1%
Walk	92%	52%	0%	0%	86%	60%	5%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

9.6 Further detailed analysis on mode shares in relation to external trips for each development land use are presented in the accompanying Trip Generation and Scenario Planning Scoping Note. Responding to feedback from WSCC, HDC and CBC on the ambition for bus mode share, the accompanying note also considers a scenario where significantly higher bus mode share is achieved to inform the service provision and bus infrastructure requirements.

Internal Mode Shares

9.7 For internal trips within the development, the mode shares shown in Table 9.5 have been derived based on comparable developments and the active and sustainable travel opportunities to be provided.

9.8 These take into account the design of the development being such to enable walking, cycling and micro-mobility to be the dominant modes for most journeys. Providing well equipped neighbourhood centres with facilities used on a daily basis such as grocery stores, schools, GPs, community centres etc in close proximity to homes reduces the distances people need to travel significantly. Coupled with a high-quality public transport route through the centre and supporting measures such as bicycle parking (pedal and electric) and pedestrian and cycle wayfinding, the proportion of car borne trips within the development will be low.

Table 9.5: West of Ifield Internal Trip Mode Splits

Method of Travel	Mode Share
Train	0%
Bus	5%
Car – driver	5%
Car – passenger	5%
Bicycle	30%
Walk	55%
Total	**100%**

10 Vehicle Access, Crawley Western Link and Rusper Road

Vision for the Crawley Western Link

Trips by active and sustainable modes are given priority within the masterplan. Whilst there is an acceptance that additional car trips will be generated, the design ensures that non-car based modes provide quicker, more convenient and attractive journeys. The first phase of a Crawley Western Link from Charlwood Road will support the West of Ifield development but will be designed appropriately to provide a future relief function as part of a full Crawley Western Link. Homes England are committed to working with the local authorities and WSCC to support the delivery of the full Crawley Western Link and sustainable transport corridor between the A264 to the A23 in the long-term in realising the wider Land West of Crawley strategic opportunity.

Design

10.1 The following key design principles are being established for the Crawley Western Link:

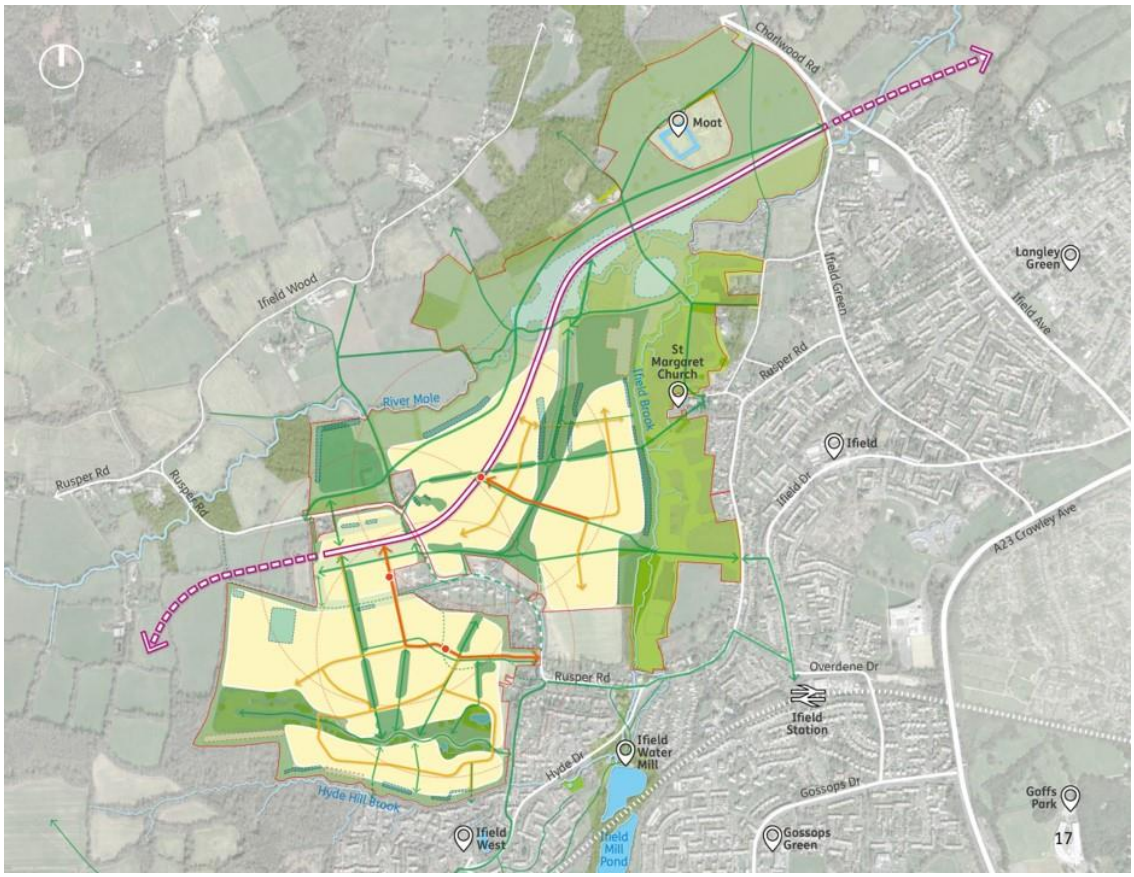
- Single carriageway with a continuous bus lane in each direction.
- Segregated 3.5m wide cycleways separate from footways with priority at junctions.
- Segregated footways, minimum 2.6m and widening in the neighbourhood centre.
- Varying speeds, including 20mph through the neighbourhood centre and 30mph elsewhere were appropriate.
- Bus priority measures at junctions, to be explored further alongside highway modelling.

10.2 These principles are depicted in the illustrative cross-sections provided in **Appendix A**, although the corridor may be narrowed where appropriate to ensure it is sensitive to the surrounding landscapes. The Crawley Western Link design will be secured through the Design Code supporting the outline planning application.

10.3 These principles are not only established for the first phase of the Crawley Western Link (to be delivered by Homes England) but are also applicable to any future delivery of the full Crawley Western Link. The proposed first phase alignment and future safeguarding for the continuation of the full Crawley Western Link is shown in Figure 10.1.

10.4 These principles are aligned with the aspirations set out at Policy ST4 of the Draft Crawley Local Plan (2021) which seeks to safeguard a search corridor for the Crawley Western Link and promotes a route design which accounts for bus priority, future proofing for traffic growth and connectivity for non-vehicular modes of transport between Crawley's urban neighbourhoods and the wider Sussex countryside.

Figure 10.1: Crawley Western Link Alignment



10.5 An indicative section of the Crawley Western Link is shown below in Figure 10.2.

Figure 10.2: Crawley Western Link typical section

Modelling

Overview

10.6 Significant modelling has been carried out using the Crawley Transport Model (CTM) and a number of refinements have been made following WSCC's review of the model pack and ongoing discussions.

10.7 Initial modelling has confirmed that 3,250 homes can be delivered via a first phase of the Crawley Western Link from a single point of access on Charlwood Road. This modelling is considered robust based on the following:

- The 'worst-case' has been assumed with regards to growth at Gatwick Airport, based on the "Gatwick Airport R2 Surface Access Assessment – Technical Report" (Arup, May 2014) and a modal share by car of 60% - more recent 2018 CAA data shows that Gatwick Airport passenger car mode share was down at 55%. It is understood that the Crawley Transport Strategy does not include an indication of DCO growth and therefore the latest CTM does not include such growth.
- No reductions in traffic have been applied on specific transport corridors to account for enhanced bus provision.
- No assumptions have been included with regard to area-wide car travel demand reductions. Considering the timing of the development, current trends for travel reductions supported by enhanced technology and accelerated by COVID-19, significant change is likely to occur over the development period. This is also supported by the shared objectives of HDC, CBC, WSCC and Transport for the South East (TfSE) in reducing travel demand and private car trips over time. The Crawley Transport Strategy acknowledges that "On average, over the last 20 years people are travelling less and making fewer trips, commuter trips are down by a 5th".

Local Plan modelling

10.8 Strategic transport modelling has been carried out by Stantec to support both the HDC and CBC Local Plan review processes, the Crawley Transport Study (May 2021) and Horsham Transport Study (May 2021) respectively.

10.9 This work provides an update to each respective strategic model and includes new committed developments, site allocations, neighbouring authority growth projections and proposed highway schemes as agreed with WSCC. The West of Ifield development is considered in both transport studies 'Local Plan' scenarios.

10.10 Whilst car trip reductions are applied to both models to account for specific sustainable transport interventions associated with West of Ifield, the outputs are considered to present a 'business as usual' scenario representing the highest quantum of additional vehicle trips which could be generated on the surrounding highway network. A comparison between these forecasts and the 'sustainable' and 'ambitious' scenarios to be assessed within the Transport Assessment is presented in the accompanying Trip Generation and Scenario Planning Scoping Note.

Delivery

10.11 As discussed above, Site A will be served by a first phase of Crawley Western Link from Charlwood Road only, supported by an additional bus-only connection to Rusper Road. Initial highway modelling suggests that a connection to the A264 or A23 is not needed to facilitate the development and as identified in the LTP, this is a medium-term priority.

10.12 Given the aspiration for the early delivery of homes and the secondary school (from 2025) it is likely that the first phase of the Crawley Western Link would not be in place during Phase 1 of the development. At this stage, it is anticipated that the first phase of the Crawley Western Link would come in during Phase 2, at which point the bus gate would be implemented at the Rusper Road access to prevent any generally development vehicle traffic. The phased implementation of the Crawley Western Link will be considered further in accordance with the development phasing and infrastructure delivery plan workstreams.

10.13 In the interim it is anticipated that Phase 1 access would be provided from Rusper Road. Local junction modelling will be undertaken and presented within the Transport Assessment supporting the submission to demonstrate that this additional traffic can be accommodated in the interim.

10.14 It is worth noting that the active and sustainable travel alternatives presented in previous chapters will be in place from Phase 1 to ensure that overall dependence on car use is limited from the outset.

Rusper Road

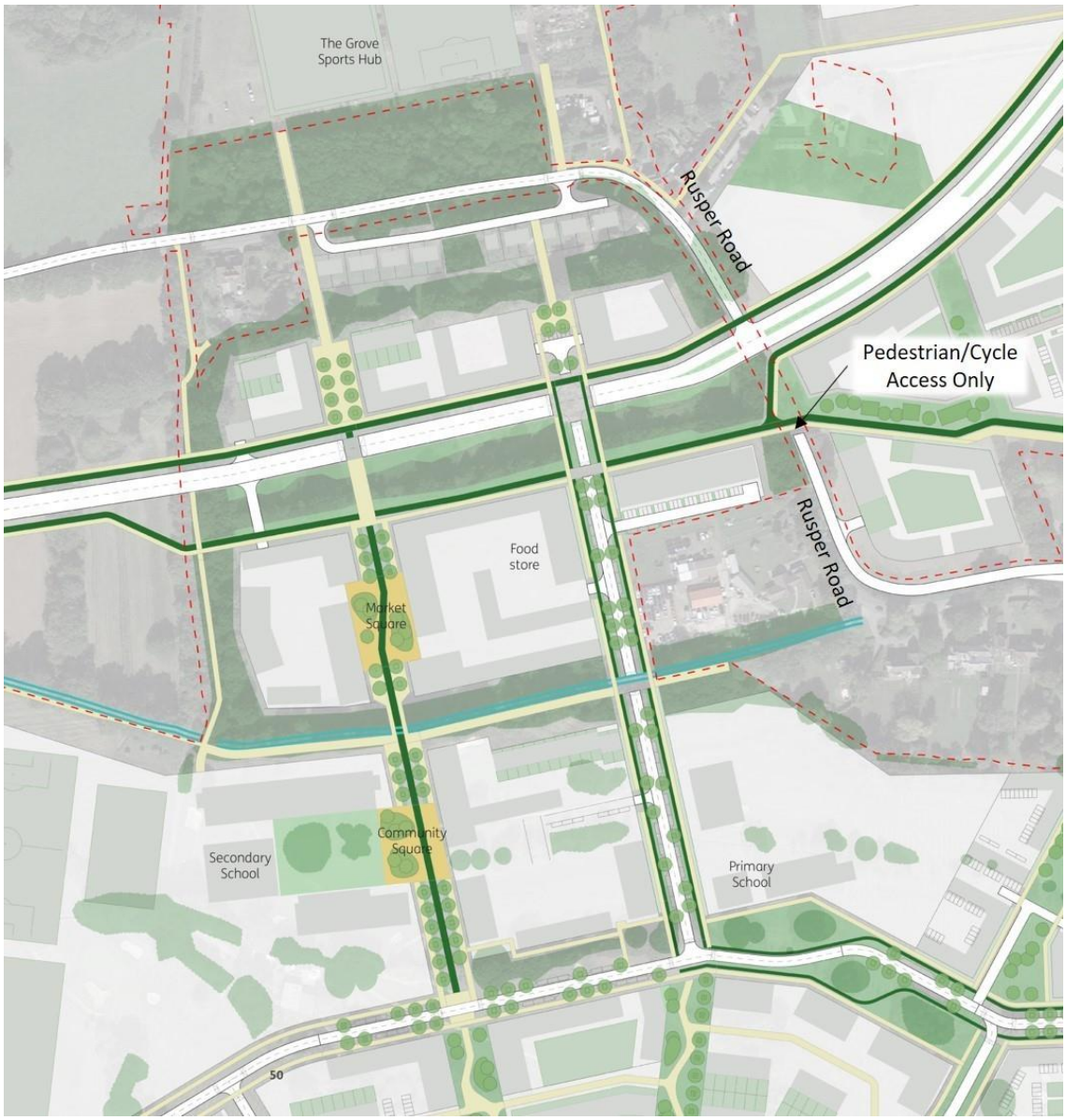
10.15 Options for the interaction between the first phase of the Crawley Western Link and Rusper Road were presented to WSCC, HDC and CBC on 3 December 2020. Feedback from WSCC commented on the need for various options to be modelled to fully aid the understanding of impacts on the surrounding highway. Now that the local plan modelling has been completed and the masterplan work is progressing, this modelling will be completed as discussed further below and in the accompanying Trip Generation and Scenario Planning Scoping Note.

10.16 The emerging preference is to stop Rusper Road south of the Crawley Western Link, prohibiting any vehicular connections between the two. At this point, Rusper Road would become a cul-de-sac, providing vehicular access only to existing homes and permitting only pedestrian and cycle access towards the Crawley Western Link. A visual representing this option is shown in **Figure 10.3**.

10.17 This would provide significant benefits for existing Rusper Road residents south of this point, removing the current rat-running to/from the western side of Crawley and allow Rusper Road to become a low traffic environment with enhanced priority for pedestrians, cyclists and buses to serve the development.

10.18 The diversion for existing Rusper Road through traffic would be via the Crawley Western Link to/from Charlwood Road and Ifield Avenue. The full implications of this option and the alternatives are to be tested using the strategic highway model, discussed with local residents through consultation, and presented for WSCC's, CBC's and HDC's consideration in advance of the planning application coming forward.

Figure 10.3: Preferred Rusper Road Option



10.19 The bus gate at the junction with Rusper Road would facilitate pedestrian and cycle access too. This could take the form of physical infrastructure limiting access, such as rising bollards activated by buses on their approach, or through ANPR CCTV. Such detailed design would be determined through the Reserved Matters application. Examples of potential layouts are shown in Figure 10.4 and Figure 10.5.

Figure 10.4: Potential Bus Gate Design – Winfield Way, Crawley

Figure 10.5: Potential Bus Gate Design – Kingsway Development, Gloucester

Appendices

A Streetscape Typologies and Sections

B Bus Route Infrastructure Options

steer

QUALITY SYSTEM CERTIFICATION
DNV·GL
ISO 9001:2015

C Mode Share Strategy and Evidence

C1

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D Cycle Parking “Standards”

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QUALITY SYSTEM CERTIFICATION
DNV·GL
ISO 9001:2015

E Glossary of Terms

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