

## **Matter 6 – Infrastructure, Transport and Healthy Communities**

Matter 6, Issue 1 – Whether the approach to Infrastructure Provision is legally compliant, justified, effective, consistent with national policy and positively prepared?

*Q1. Is Strategic Policy 23: Infrastructure Provision sound?*

*d) Would this policy potentially prevent development proposed in the Plan from being built as envisaged and if so how will this be addressed?*

6.1.1 As set out in its formal representation to the Horsham District Local Plan (HDLP) Regulation 19 consultation, Crawley Borough Council (CBC) is particularly concerned about the impacts on the infrastructure, especially transport, within Crawley borough from strategic development's proposed on the administrative boundary with Crawley borough.

*Q2. Is Strategic Policy 24: Sustainable Transport sound?*

*a) With reference to the relevant evidence, would the Plan be effective in ensuring that any significant impacts from the development proposed on the transport network (in terms of capacity and congestion), highway safety and habitats can be cost effectively mitigated to an acceptable degree?*

### Transport Modelling

6.1.2 CBC strongly contends that transport modelling at the detailed design stage, particularly for the strategic allocation West of Ifield, must take into account the development levels and locations within Crawley borough, using the Crawley Town Model in addition to the Horsham Transport Model. This should not be based on whether the impacts are severe above an already overcapacity network. Development should either have zero impact or result in improvements which reduce the congestion levels.

6.1.3 In its formal representation to the HDLP Regulation 19 consultation, CBC raised a query in relation to the transport modelling Horsham District Council (HDC) undertook in respect of the proposed West of Ifield scheme. This appeared to cover the 1,600 dwellings which are projected to come forward during the proposed HDLP period (up to 2040). However, the site is being allocated for the full identified capacity of the site (i.e. 3,000 dwellings), which exceeds this figure.

6.1.4 CBC is concerned that the allocation is proposed without its full implications for transport infrastructure having been taken into account. Therefore, if an application were to come forward for a further 1,500 dwellings in the absence of an updated Plan, the existing allocation would suggest that the development was acceptable in principle, and yet the transport impacts would not have been tested at a strategic level. This does not appear to have been addressed.

6.1.5 CBC confirms that Scenario 3 of the [Crawley Transport Study \(June 2022\)](#) includes allowance for West of Ifield (at 3,750 dwellings) but does not include allowance for the Gatwick Northern Runway Project (subject to ongoing DCO process) nor the Crabbet Park allocation proposed in the draft Mid Sussex District Plan. These proposals all potentially impact on the Strategic Road Network, as well as individual junctions within Crawley borough.

6.1.6 The Horsham – Crawley Joint Note – Development Assumptions (including West of Ifield), provided in Appendix 1, was prepared in 2021 to provide a point of comparison

between the transport modelling for the two local plans, as far as impacts within Crawley are concerned. The Note shows projected impacts for both models after taking into account adjustments for sustainable mitigation but before allowing for physical mitigations to the highways network, including the scheme for the A23/Ifield Avenue junction which forms part of the mitigation package for the Crawley Borough Local Plan. The Crawley modelling shows a wider range of junctions in Crawley featuring as congestion ‘hotspots’ in the preferred scenario, and this variance is attributed to the more granular level of detail in the Crawley model.

*c) What is the latest position with regard to when a “full” Crawley Western Multi Modal Corridor or sections of it is/are required to be completed to facilitate the development proposed in the Plan?*

- 6.1.7 In its formal representation to the HDLP Regulation 19 consultation, CBC strongly supported the safeguarding of the area of search for the provision of a full Crawley Western multi-modal corridor from the A264 near Faygate to the A23 south of Gatwick, north of County Oak, should West of Ifield continue to be allocated in the HDLP.
- 6.1.8 CBC has significant concerns about the implications of proposed transport measures on residential neighbourhoods in Crawley from the Strategic Site allocation at West of Ifield. Concerns include the Ruser Road gate and its implications for traffic travelling out of Crawley westwards, and what traffic calming might be needed if traffic is diverted, particularly from Ifield West, along the local road network within the borough. These are the concerns which are created due to the lack of a comprehensive Multi-Modal Transport Corridor being provided from the start.
- 6.1.9 CBC believes that the requirement for the full delivery of the Crawley Western Multi-Modal Transport Corridor, linking the A264 to the A23, north of County Oak, should form a critical part of any further development to the west of Crawley – including the current proposed West of Ifield. This was considered as part of the examination into the now Kilnwood Vale neighbourhood. CBC is extremely concerned that, should West of Ifield be progressed in the HDLP, without such a commitment at this stage to the full delivery of the route, it will never happen. Instead, the vast majority of the road traffic from the currently proposed 3,000 new houses and associated employment and retail development would come directly into Crawley’s local highway network.
- 6.1.10 The Crawley Western Multi-Modal Transport Corridor scheme is a medium-term priority in the West Sussex Transport Plan: [West Sussex Transport Plan 2022-2036](#) which coincides with the proposed anticipated delivery of West of Ifield.
- 6.1.11 The recently adopted Crawley Borough Local Plan (CBLP), paragraph 12.23iii and 12.23x, pages 167 to 168: [Crawley Borough Local Plan 2023 to 2040.pdf](#), confirms that housing development through urban extensions on or close to Crawley’s administrative borough boundaries will be supported by CBC where it can be shown that... *“ii. If development is proposed to the western side of Crawley, the scoping, design and delivery of the comprehensive Western Multi-Modal Transport Link (connecting from the A264 to the A23, north of County Oak, Policy ST4) should be agreed and provided prior to the completion of properties unless otherwise agreed by the three local authorities: Horsham District, Crawley Borough and West Sussex County Councils...”*. The CBLP includes a Strategic Policy ST4 establishing an Area of Search for a Crawley Western Multi-Modal Transport Link for the section which runs through Crawley, from the administrative boundary with HDC to the A23, north of County Oak. This area of search is shown on the CBLP Local Plan Map.

- 6.1.12 As set out in Document DC.04: Crawley Borough Council and Horsham District Council Statement of Common Ground, July 2024, paragraph 7.3f, pages 10 to 11, the councils agree “*f) The parties will work together, with the Highways authority to ensure that any masterplan prepared by the site promoter secures an effective transport strategy to serve the development. This will deliver a multi-modal sustainable transport route that delivers significant active travel options and mitigates adverse impacts of traffic flow into Crawley. The new route must not be an obstacle to the delivery of a comprehensive new corridor link to the west of Crawley, that would connect the A264 near to Faygate to the A23 north of County Oak. Both HDC and CBC will continue to work jointly to seek a clear commitment from Homes England or other appropriate government bodies to the full delivery of the sustainable transport corridor link to support the scale of development proposed in any allocation. To support such a commitment this will include any necessary indicative identification of land within respective Local Plans, and consideration of funding models including developer contributions. The parties are engaging with WSCC and Gatwick Airport regarding the boundaries of airport safeguarding for a potential future southern runway, especially in the vicinity of the multi-modal sustainable transport corridor link along the southern boundary of safeguarding for the airport*”. In addition, paragraph 11.2, page 14, confirms that the two authorities will continue joint work in order “*to ensure that any new development does not become an obstacle to the future provision of a possible new western link road, that would provide a multi-modal transport corridor link equipped with sustainable transport infrastructure for a net zero carbon future*”.
- 6.1.13 On this basis, CBC supports the Area of Search for the full corridor on the Policies Map as this will allow for the timely progression of the transport link.
- 6.1.14 Although the route is not required to support any development within Crawley, its importance to the borough is such that CBC commissioned a study, supported by WSCC, to refine the Area of Search for the section of Crawley Western Multi-Modal Transport Corridor which would run through Crawley: Crawley Western Link Road Northern Section study, 2023, Systra: [Microsoft Word - GB01T21C15-RPT-01 CWLR – NORTHERN SECTION STUDY - REFINED AREA OF SEARCH.docx \(crawley.gov.uk\)](#). HDC, along with Homes England, Gatwick Airport and the Environment Agency, were key stakeholders engaged in the preparation of this study. The study considered the options for routes, taking into account Gatwick Airport Safeguarding and crossing the River Mole, along with other key environmental, social and environmental factors. This study has informed the Area of Search shown on the CBLP Map.
- 6.1.15 In considering the soundness of the CBLP, the Inspectors confirmed in their Final Report, paragraph 256, pages 70 to 71: [Crawley Borough Local Plan Inspectors' final report September 2024.pdf](#), that “*Transport modelling of the Plan’s growth, in combination with potential expansion at Gatwick and a prospective >3,000 home strategic urban extension to the west of the town in Horsham District shows that the road network within the Borough would experience capacity issues. Some junction improvements are identified in the IP during the plan period which would mitigate impacts arising from growth in traffic associated with the Plan’s proposals but a longer-term strategic transport solution, in the form of a potential Western Multi-Modal Transport Link is being contemplated. The principle of the road (including shared transport and active travel facilities) is identified in the West Sussex Transport Plan 2022-2036 as a medium term priority for both Crawley and Horsham*”.

- 6.1.16 Paragraph 257 goes on to state that *“The issue of a western multi-modal link comes into particular focus should strategic growth be allocated to the west of the town in Horsham District. Without a strategic transport solution connecting the A23 to the north of Crawley with the A264 near Kilnwood Vale, growth around Crawley would be restricted. The benefits of delivering a strategic multi-modal link are positively identified in the DtC SoCGs with WSCC and Horsham District Council. The long-term potential to reduce demand on Junctions 10 and 11 of the M23 has National Highways’ support. Importantly, the link also offers the potential to improve and prioritise other modes of transport around and within Crawley.”*
- 6.1.17 The study included some land within Horsham district due to the importance of crossing the River Mole in accordance with Environment Agency advice and connections to the middle section of the route being proposed by Homes England as part of the West of Ifield scheme. It is critical that the Area of Search within Horsham, and shown on the Policies Map aligns with that being proposed in Crawley. CBC is keen to liaise with HDC and repeats its offer to share GIS data as necessary to ensure there is consistency between the two Local Plans with regards to alignment of the Area of Search. In particular, there remains two key concerns:
1. the search corridor shown on the HDLP Map extends into the CBC administrative boundary. CBC believes this is not necessary. The CBLP Local Plan Map shows the Area of Search which falls within the borough of Crawley up to the administrative boundary with HDC.
  2. the search corridor version shown on the HDLP Map within Crawley’s boundary is different to the version set out on the adopted CBLP Local Plan Map. Should the HDLP Map continue to identify the corridor as it extends into Crawley, the correct alignment corresponding to the CBLP Map needs to be illustrated.
- 6.1.18 In addition, the study considered the design principles of the Multi-Modal Transport Corridor, in order to ensure the intended outcomes from the provision of the new infrastructure are achieved. These should be secured along the entire length of the route, as appropriate to the locations, to ensure the transport corridor is a seamless single entity for the users in order to maximise its effectiveness for public transport and active travel modes.
- 6.1.19 CBC strongly believes, if development at the West of Ifield is allocated, the HDLP should provide greater commitment and certainty for the delivery of the Multi-Modal Transport Corridor as a full link, recognising its importance for any proposed strategic development to the west of Crawley. The HDLP should establish a requirement for the developer of the proposed Strategic Site to deliver/source funding for the full length of the route in order to prevent all traffic coming in through residential areas of Crawley.

*Q4. Is Policy 26: Gatwick Airport Safeguarding sound?*

*a) Is it clear what constitutes minor development in criterion 2?*

- 6.1.20 CBC supports Main Modification HM042 to Policy 26, as set out in HDC’s schedule of Suggested Modifications Version 2 (November 2024), Submission Document SD14, clarifying the safeguarding policy in relation to minor development.
- 6.1.21 This Modification reflects the wording agreed with Gatwick Airport Limited during the CBLP examination. This wording was required by the Inspectors for soundness prior to the adoption of the CBLP and it would be beneficial if the two Local Plan policies regarding safeguarding are consistent.

Appendix 1: Horsham – Crawley Joint Note – Development Assumptions  
(Stantec)

**Job Name:** Horsham Transport Study and Crawley Transport Study  
**Job No:** 45539/48559  
**Note No:** TN08  
**Date:** 30th April 2021  
**Prepared By:** Robert Dziurla/Norbert Moyo  
**Subject:** **Horsham – Crawley Joint Note – Development Assumptions (Including West of Ifield)**

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## **1. Introduction**

- 1.1. This note provides an overview of the input assumptions and outputs for each common Strategic Sites input within the Crawley Strategic Development Options Transport Study and the Horsham Local Plan Transport Assessment.
- 1.2. The note aims to provide a high-level overview of the forecasting methodology for both models, setting out the general forecasting methodology of both models and highlighting any variance in the overall modelling methodology. This will be followed by outlining the strategic site assumptions including internalisation assumption and sustainable transport assumptions resulting in the reduction of the car trip rates.
- 1.3. Due to the proximity of the neighbouring local planning authorities, the strategic local plan development site of West of Ifield has been implemented within both transport studies 'Local Plan' scenarios. The impacts and forecasting methodology of this site will be set out in detail as well as analysing the cumulative impacts.
- 1.4. Further considerations outlined within this report include a comparison of Trip Generation (i.e. number of vehicle trips to/from each site after internalisation has been considered), and key impacts on the network – setting out links and junctions where impacts are seen. A high level indication of the development sites which have the greatest impact at these locations will be provided.

## **2. Forecasting Methodology - Overview**

- 2.1. The following section sets out the key overall forecasting methodology parameters used to underpin both the Crawley Strategic Development Options Transport Study and the Horsham Local Plan Transport Assessment.

### **Future Forecasting**

- 2.2. The Horsham base model has been validated to 2019 data whilst the Crawley model is set to 2015.
- 2.3. The forecast year for the Horsham Local Plan Transport Assessment was set to 2036 and covers the end of the Local Plan period, whilst the Crawley Transport Study forecasting year has been set to 2035. This was consistent with the end of the Crawley Local Plan at the start of the study. The horizon year of the Crawley Local Plan now extends to 2037. The horizon year of the Horsham Local Plan now extends to 2038.

- 2.4. It was considered that the additional one-to-two-year background growth attributable to neighbouring authorities, would be within the uncertainties inherent in forecasting over long periods usually covered by Local Plans (i.e. 15 to 20 years). Therefore, it is considered that the transport model is, to all intents and purposes, robust and adequate in its representation of prospective 2037 and 2038 travel demand and associated predicted transport network conditions.

### Reference Case Forecast Modelling Overview

- 2.5. A Reference Case forecast model has been developed to represent future traffic conditions at the end of the plan period (2036), without the consideration of the Local Plan development. For both the Horsham and Crawley model the same reference case forecast methodology has been applied, in accordance with DfT guidance.
- 2.6. For both models, the reference case includes all committed development within the respective study area district, including development within the adopted Local Plan, as well as any committed development within neighbouring authorities.
- 2.7. For neighbouring authorities only, a further level of growth is added in order to more accurately represent expected development growth up to the respective forecast year. This growth is derived from the Department for Transport National Trip End Model (NTEM) which includes housing, jobs and geodemographic predictions for all planning authorities.
- 2.8. For each of the neighbouring authorities, the housing and job numbers within NTEM are adjusted downwards, based on the authorities committed development information, which avoids any double counting. This results in the combination of the adjusted NTEM growth and the specific committed developments within the neighbouring authorities matching expected NTEM growth. Further information on this is found in the respective full transport assessment reports.
- 2.9. It is noted that in the Horsham model, the treatment of Crawley followed the standard forecasting process of including committed development information provided and then capping growth in Crawley to NTEM, as set out in DfT Guidance. However, in the Crawley model, the development growth assumptions for the borough were more complex. CBC provided far more detail on future growth projections, including committed development, which are higher than NTEM development growth assumptions. These locally based projections have been used rather than revert to NTEM in the case of the Crawley model and this is the appropriate approach in the case of modelling impacts of Crawley's Local Plan update.

### Horsham Reference Case Model

- 2.10. For the Horsham Reference Case Forecast, the following table summarises the total level of development within Horsham and Crawley, noting the growth within Crawley is set to NTEM level, whilst the total growth within Horsham is attributed to committed development only. Any additional growth associated with Local Plan sites is added within the Local Plan development scenarios.

*Table 2-1: Horsham Model Reference Case Forecast Development Growth*

Authority	Households Growth (2019-2036)	Employment Growth - Jobs (2019 -2036)
<b>Crawley</b> (NTEM + Committed Developments)	4,677	4,657
<b>Horsham</b> (Committed Developments Only)	6,026	10,392

### **Crawley Reference Case Model**

- 2.11. For the Crawley Reference Case scenario, the same methodology has been developed, with NTEM growth being applied on top of committed developments in neighbouring authorities, including Horsham, such that the neighbouring authorities match NTEM growth levels. Whilst within Crawley only committed development growth is being applied within the Reference Case forecasts.
- 2.12. The following table summarises the total level of development growth within the reference case scenario within Horsham and Crawley, noting the growth within Horsham is set to NTEM level, whilst the total growth within Crawley is attributed to committed development only and additional growth associated with Local Plan sites is added within the Local Plan development scenarios.

*Table 2-2: Crawley Model Reference Case Forecast Development Growth*

<b>Authority</b>	<b>Households Growth (2015-2035)</b>	<b>Employment Growth - Jobs (2015 -2035)</b>
<b>Crawley (Committed Developments Only)</b>	7,317	8,547
<b>Horsham (NTEM + Committed Developments)</b>	16,431	5,064

### **Reference Forecast Model Variance**

- 2.13. The reference case forecast variance in growth between the models stems from a combination of the following issues:
- For the Horsham Model, the Crawley household and employment growth was capped to NTEM level (for the Crawley borough area), with the addition of only high level committed development information. Whilst within the Crawley model study a more detailed level of development information was provided by CBC, which resulted in more committed developments than the National Trip End Model forecasts.
  - For the Crawley Model, Horsham household growth was capped to NTEM level, whilst for the Horsham model committed household developments within Horsham are low due to a large majority of household development growth expected to be covered by the Local Plan sites.
  - For the Crawley Model, the Horsham employment growth was capped to NTEM level (for the Horsham district area), with the addition of only high level committed development information. Whilst within the Horsham model study a more detailed level of employment development information was provided by HDC, which resulted in more employment site committed developments than the National Trip End Model forecasts.
  - Accounting for the 4-year variance in committed development and NTEM growth projections also adds to the growth variance.

### **LGV and HGV Growth Assumptions**

- 2.14. LGV and HGV growth has been derived from the DfT Road Traffic Forecasts (RTF18) in the same manner for both the Horsham and Crawley forecasts. The variance of growth stems from the Crawley Model having more years of growth due to the earlier model base year of 2015.
- 2.15. The following table provides LGV and HGV Growth rates for the two models scenario years, within the respective model areas.

Table 2-3: LGV and HGV Growth

Model	LGV Growth	HGV Growth
<b>Crawley Model</b> (2015-2035)	31.2%	9.1%
<b>Horsham Model</b> (2019-2036)	25.1%	8.8%

### 3. Strategic Development Site Assumptions

#### Trip Rates

- 3.1. The following section identifies the variance of TRICS trip rate assumptions and the impacts of sustainable travel proposals, and the resulting trips displaced into person trips using public transport, cycling and walking.

#### TRICS Trip Rate – Pre-Sustainable Mitigation

- 3.2. Table 3-1 and 3-2 highlight vehicle trip rates for the reference case committed developments of the Horsham and Crawley models (before sustainable mitigation). Variances in reference case trip rates between the two studies are due to differing locational characteristics between developments in the two areas.

Table 3-1: Horsham Reference Case Trip Rates

Land use	AM			PM		
	Departure	Arrivals	Total	Departure	Arrivals	Total
B1a, Offices (per 100 SQM)	0.159	1.534	1.693	1.296	0.168	1.464
B1c, Light Industry (per 100 SQM)	0.191	0.507	0.698	0.487	0.102	0.589
B8, Warehousing (per 100 SQM)	0.059	0.074	0.133	0.092	0.044	0.136
C3, Suburban per unit	0.405	0.172	0.577	0.155	0.355	0.51

Table 3-2: Crawley Reference Case Trip Rates

Land use	AM			PM		
	Departure	Arrivals	Total	Departure	Arrivals	Total
B1a, Offices (per 100 SQM)	0.115	1.027	1.142	0.985	0.101	1.086
B1c, Light Industry (per 100 SQM)	0.029	0.224	0.253	0.23	0.028	0.258
B8, Warehousing (per 100 SQM)	0.049	0.121	0.170	0.076	0.017	0.093
C3, Town Centre per unit	0.183	0.054	0.238	0.069	0.146	0.215
C3, Suburban per unit	0.315	0.106	0.421	0.15	0.328	0.478

#### Strategic Site Internalisation

- 3.1. Within Horsham Model, for both residential and employment-based trips, further internalisation rates have been applied to development sites classified as having mixed land use. This assumption is based on the assumed increased level of active mode within the developments due to the close proximity of commuting and other journey types from dwelling within the site to employment land use within the site. For Crawley, internalisation has not been applied for West of Ifield as lower suburban residential trip rates have been used on the assumption that these already capture the internalisation.

- 3.2. This internalisation car trip reduction in Horsham was calculated at 12%. The internalisation factor has been derived from local census information, calculating the percentage of active mode trips taken within a select census output area.

### Sustainable Transport Measures

- 3.3. Through the implementation of sustainable travel plans and sustainable travel measures a further distance-based reduction factor has been applied to strategic sites within the Crawley and Horsham models.
- 3.4. The distance-based reduction has been derived using empirical evidence from the DfT Sustainable Travel Towns study. As such the same distance-based reduction factors have been applied to both the Horsham and Crawley Models.

Table 3-3: Sustainable Measure Trip Reductions

	Up to 1km	1.1 – 3km	3.1 – 5km	5.1 – 10km	10.1 – 50km	Over 50km	Total
<b>Car Trip Reduction</b>	-22%	-14%	-10%	-6%	-3%	0%	-9%

### Site Specific Sustainable Transport Measures

- 3.5. In addition to the soft sustainable transport measures outlined above, further physical site-specific mitigation measures have been applied to Local Plan developments within both models, including West of Ifield.
- 3.6. Within both models, for West of Ifield, a proposed high-quality bus corridor between the site and Crawley Town Centre are assumed to provide a 12% reduction in car trips between the development and zones classified as being within Crawley Town Centre and employment zones in Manor Royal.
- 3.7. For completeness the following site-specific sustainable mitigation have been applied to all sites within Horsham.

Table 3-4: Horsham Sustainable Mitigation – Site Specific Car Trip Reduction

Development Type	Estimated % car trip reduction	End Destination Reduction
Adjacent to larger village, fewer opportunities to access town facilities	Low % car trip reduction < 4%	Horsham Town Centre
Adjacent to larger village or town, moderate access to town facilities	Medium % car trip reduction - Overall 5% to 7%	Horsham Town Centre, Crawley Town Centre
New settlement with built-in opportunities for active & sustainable travel	Medium / high % car trip reduction – 7% to 10%	Horsham Town Centre
Adjacent to larger village or town, good access to town facilities	Medium / high % car trip reduction – 7% to 10%	Horsham Town Centre & Worthing
Good access to larger built-up area	High % car trip reduction – 10% to 12% up to 12% to 15%*	Horsham Town Centre, Crawley Town Centre
Adjacent to larger built-up area	Very high % car trip reduction – 12% to 15%	Crawley Town Centre and Manor Royal employment zones

- 3.8. Further sustainable mitigation and car trip reductions based on the propensity to cycle tool was applied solely to the potential Kilnwood Vale and West of Ifield developments within the Crawley model, which were included in Crawley model Scenario 3. A 5% reduction was applied to car commute and car other trips for trips made within Crawley Borough in addition to the 12% reduction rate and the distance-based reduction mentioned above.

## 4. West of Ifield

### Development Mix Quantum Assumptions

- 4.1. The following tables provide the development mix assumptions between the Crawley Study and the Horsham Local Plan Transport Assessment for the West of Ifield Development. Assumptions for development to the west of Ifield is only included in Development Scenario 3 in the Crawley Local Plan Transport Modelling.

Table 4-1: West of Ifield Development Quantum

Horsham 2036 (Local Plan Preferred Scenario)		Crawley 2035 (Development Scenario 3)	
Dwellings	Employment (GFA sqm)	Dwellings	Employment (GFA sqm)
2,800	33,750	3,750	25,000

- 4.2. With regard to the employment split, the following highlights the specific breakdown of employment land use type within both models. In the Crawley model, the 25,000 sqm employment assumed for West of Ifield, was split equally into B1, B2 and B3 land uses.
- 4.3. For the Horsham model, the employment GFA quantum was based on the quantum provided by HDC, which provided B1 and B2/B8 totals, it has been assumed that the B2/B8 split was equal.

Table 4-2: West of Ifield Employment Land Use Type

Horsham 2036 (Local Plan Preferred Scenario)			Crawley 2035 (Development Scenario 3)		
B1	B2	B8	B1	B2	B8
10,000	11,875	11,875	8,333	8,333	8,333

### West of Ifield Modelling Outputs

- 4.4. With the application of the above-mentioned trip rates and sustainable measure trip rate reductions, the following table shows the finalised modelling trip generation outputs from both the Crawley and the Horsham models.

Table 4-3: West of Ifield Modelled Trip Rates (pre-trip reduction)

	Horsham 2036 (Local Plan Preferred Scenario)		Crawley 2035 (Development Scenario 3)	
	Total Trips OUT	Total Trips IN	Total Trips OUT	Total Trips IN
AM Peak	1,079	593	1,204	537
PM Peak	732	1,214	698	1,253

Table 4-4: West of Ifield Modelled Trip Rates (post-trip reduction)

	Horsham 2036 (Local Plan Preferred Scenario)		Crawley 2035 (Development Scenario 3)	
	Total Trips OUT	Total Trips IN	Total Trips OUT	Total Trips IN
AM Peak	1,001	556	1,025	413
PM Peak	687	1047	619	897

- 4.5. Appendix A provides flow plots of flows with origins and destination within the West of Ifield, highlighting the variance between the two models.

### Key Impacts on Network

- 4.6. The following section outlines the key impacts from the preferred final scenarios within the Crawley Town Area, for both models, before any junction specific Local Plan physical mitigation proposals. The tables below highlight the Volume over Capacity (V/C) changes at junctions earmarked as congestion hotpots.
- 4.7. V/C of 100% indicates that an arm at a junction is at capacity and over 100% that it is operating over capacity and therefore will experience excessive delays. The colour coding is as follows:
- White – V/C < 85% - The junction is operating well within capacity.
  - Amber – V/C between 85% and 100% - The junction is performing close to, but within capacity.
  - Red – V/C between 100% and 110% - At least one arm of the junction is over capacity.
  - Purple – V/C >110% - At least one arm of the junction is well over capacity.
- 4.8. As both models combine the impacts of all local plan developments, the impacts cannot be solely attributed to West of Ifield, however due to the size and proportion of Local Plan impacts stemming from West of Ifield, it can be assumed that the majority of Impacts stem as a result of the West of Ifield site. It should be noted that in the Crawley model, the West of Ifield site is only modelled in Scenario 3 (Local Plan Scenario 3 in Table 4-6 and Table 4-7). It should be noted that the results that are presented do not include the Crawley Western Link Road (CWLR) which was tested as a sensitivity test.

Table 4-5: Horsham Model Crawley Junction V/C Hotspots AM

Label	Junction Name	Reference Case	Preferred Scenario
C6	Ifield Avenue/ Stagelands		
C8	Ifield Roundabout, Ifield Ave SB approach		
C9	Bewbush Drive/Mowbray Drive		

Table 4-6 Horsham Model Crawley Junction V/C Hotspots PM

Label	Junction Name	Reference Case	Preferred Scenario
C1	A264/A2220 Bewbush Manor roundabout		

Label	Junction Name	Reference Case	Preferred Scenario
C2	A2220/A264 Horsham Road Roundabout		
C3	Cheals Roundabout, Horsham Rd WB approach		
C4	Ifield Roundabout, A23 EB Approach		
C5	Cheals Roundabout, Crawley Ave NB approach		
C6	Ifield Avenue/ Stagelands		
C7	Ifield Avenue / Warren Drive		
C8	Ifield Roundabout, Ifield Ave SB approach		

Table 4-7: Crawley Model Junction V/C Hotspots AM

Label	Junction Name	Reference Case	Development Scenario 3
2	Bewbush Manor Roundabout/A264/Sullivan Drive		
12	A2011 Crawley Avenue/B2036 Balcombe Road		
21	Southgate Avenue/College Road/Haslett Avenue East		
22	Southgate Avenue/Southgate Drive		
27	Airport Way/Northway Roundabout/ North Terminal Approach		
37	M23 J11 Roundabout circulatory NB off slip node		

Table 4-8: Crawley Model Junction V/C Hotspots PM

Label	Junction Name	Reference Case	Development Scenario 3
1	A264 Crawley Road/Faygate Lane roundabout		
2	Bewbush Manor Roundabout/A264/Sullivan Drive		
3	Broadfield Roundabout		
5	Gossops Drive/Buckswood Drive		
7	Cheals Roundabout/A2220 Horsham Road/Crawley Avenue		
8	Ifield Roundabout/Ifield Avenue/A23 Crawley Avenue roundabout		
12	A2011 Crawley Avenue/B2036 Balcombe Road		
14	B2036/Radford Road		
19	Southgate Avenue/Ashdown Drive		
20	Southgate Avenue/Hawth Avenue		
22	Southgate Avenue/Southgate Drive		
23	A2004 Southgate Avenue/Station Way		
28	A217/A23 London Road/Povey Cross Road		
34	M23 J10 Roundabout NB off slip node		

4.9. The variance of results between the models is attributed to the following.

- Variance in Background growth highlighted within Table 2.1 and Table 2.2
- Base model network calibration – Crawley Town area within the Crawley Model refined and calibrated to greater level of detail, trip and journey information from the mobile phone network data calibrated internally within Crawley to observed junction turning counts and road traffic flows. Whilst within the Horsham model this calibration process was not refined to the same level of detail.
- Loading of trips to the network – Within the Crawley model zones and therefore trips loading onto the network are far more granular than the Horsham model, therefore localised trip loading can be represented more accurately. Whilst within the Horsham model the coarse nature of the zone structure within Crawley results in a wider specific area of Crawley loading onto a few select specific points onto the network.

**DOCUMENT ISSUE RECORD**

Technical Note No	Rev	Date	Prepared	Checked	Reviewed (Discipline Lead)	Approved (Project Director)
45539/5501/TN08	-	08/04/21	RD	NM	PG	PG
45539/5501/TN08	-	30/04/21	RD	NM	PG	PG
45539/5501/TN08	-	12/05/21	RD	NM	PG	PG

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