SURREY
COUNTY COUNCIL

WOKING BOROUGH COUNCIL LOCAL DEVELOPMENT FRAMEWORK

Green Belt Boundary Review Sensitivity Test

Strategic Transport Assessment

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Strategic Transport Assessment

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1 INTRODUCTION

1.1 Overview

1.1.1 In 2010 Surrey County Council assisted Woking Borough Council by undertaking a strategic transport assessment to inform the Core Strategy. Surrey County Council's Transport Studies Team was commissioned by the borough council to evaluate the transport implications for future developments proposed in their Core Strategy, with the aim of helping to inform the decision of identifying a preferred option.

1.1.2 With the use of Surrey County Council's strategic transport modelling tool, Surrey County Council issued the *"Transport Evaluation for Woking Borough Council's Core Strategy, 2026 Transport Assessment Report (December 2010)"*, which investigated the transport impacts of the following development scenarios:

- Scenario A = committed development only in the borough of Woking;
- Scenario B = scenario A plus planned development in the borough of Woking within the timescale of the Core Strategy;
- Scenario C = scenario B plus 350 residential dwellings on green belt land at Mayford; and
- Scenario D = scenario B plus 500 residential dwellings on green belt land at Mayford.

1.1.3 Since Surrey County Council undertook the strategic transport assessment in 2010 to support future development in the borough, Woking Borough Council adopted their Core Strategy in 2012. The borough council are now identifying specific locations for development, to meet its housing need to 2027.

1.1.4 Woking Borough Council have commissioned consultants to undertake a Green Belt Boundary Review on their behalf. The Green Belt Boundary Review makes recommendations to the council about land that could be taken out of the green belt to meet development needs.

1.1.5 To assist with decision making regarding recommendations made in the Green Belt Boundary Review, Surrey County Council have again been commissioned by the borough council to undertake more transport modelling but this time to specifically analyse the potential green belt sites that are thought to be deliverable. The Woking Borough Council Local Development Framework Green Belt Boundary Review Sensitivity Test, Strategic Transport Assessment is a strategic transport modelling study that aims to inform the decision making surrounding the suitability of green belt release in the borough.

1.1.6 This study aims to evaluate the transport implications of the following green belt scenarios:

- Scenario D = scenario B (as in the Surrey County Council 2010 Core Strategy strategic transport assessment) plus 500 residential dwellings on green belt land at Mayford;
- Scenario E = scenario B (as in the Surrey County Council 2010 Core Strategy strategic transport assessment) plus 573 residential dwellings on green belt land at Byfleet and Pyrford; and

- Scenario F = scenario B (as in the Surrey County Council 2010 Core Strategy strategic transport assessment) plus 592 residential dwellings on greenbelt land at West Byfleet.

1.1.7 It should be noted that this green belt sensitivity test makes use of some scenarios that were present in the Surrey County Council 2010 Core Strategy strategic assessment. However, due to changes in the modelling methodology since 2010, it is not possible to compare the model outputs presented in this document to the model outputs contained in the 2010 Surrey County Council report entitled *"Transport Evaluation for Woking Borough Council/s Core Strategy, 2026 Transport Assessment Report (December 2010)".*

1.2 Objectives

1.2.1 The purpose of this study was to evaluate the highway impacts of the preferred green belt locations identified by Woking Borough Council and the Green Belt Boundary Review.

1.2.2 The main objectives of the study were to:

- Identify the quantum and locations of additional residential development for the specified green belt scenarios;
- Calculate the quantum and distribution of vehicle trips resulting from the development;
- Forecast the traffic impacts of the specified green belt scenarios;
- Act as a starting point for identifying the locations that may require further investigation regarding traffic impacts; and
- Report the main traffic impacts.

2 STRATEGIC TRANSPORT MODEL

2.1 Model and Scope

2.1.1 Surrey County Council's strategic transport model, SINTRAM version 3.3 (SINTRAM33_Wok_Greenfield_140115) was used for the assessment, with OmniTRANS modelling program version 5.0.34.

2.1.2 SINTRAM is a strategic highway model for the county of Surrey. The model encapsulates the road network of Surrey and surrounding local authorities. **Figure 2.1** presents the entire model area.

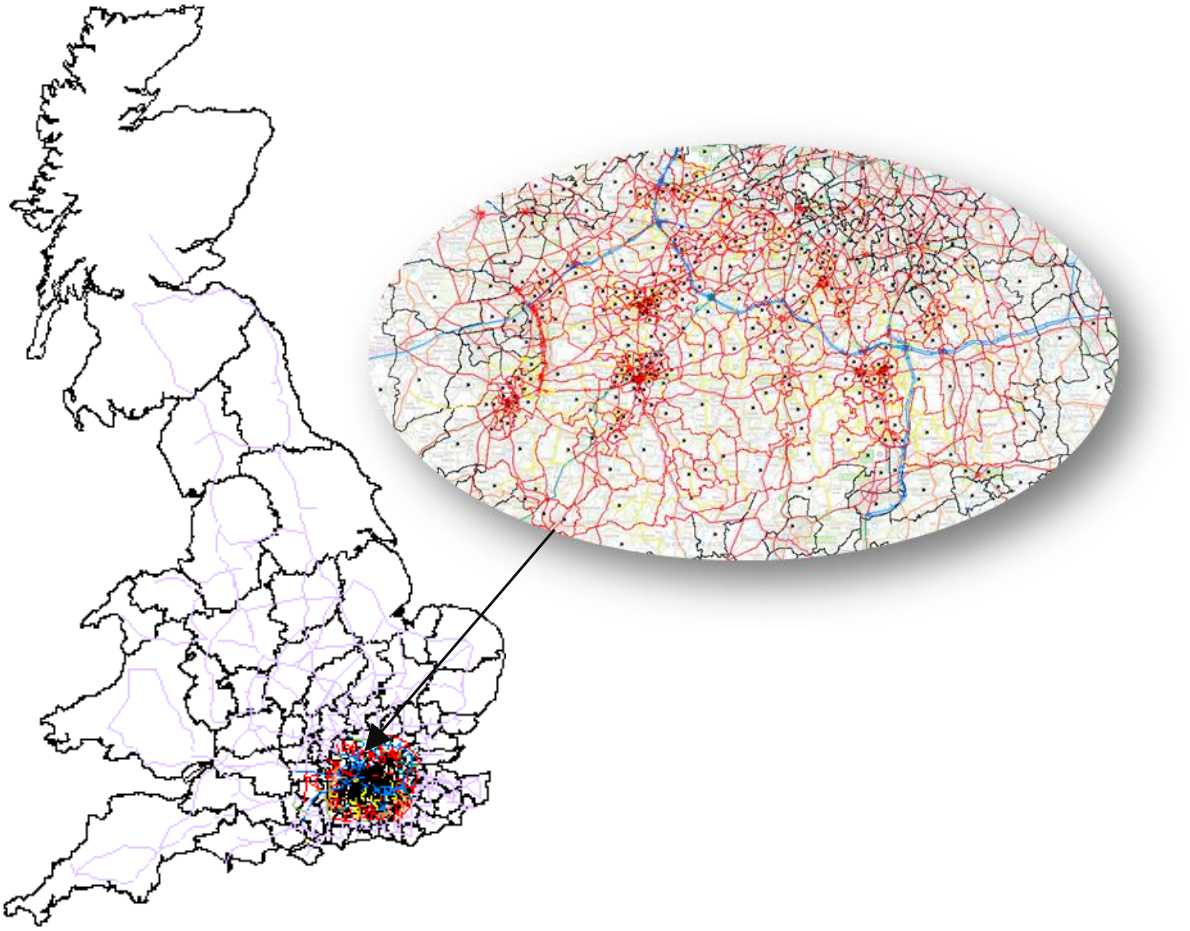


Figure 2.1: Model extent

2.1.3 All motorways as well as A and B roads, together with most local roads are represented within SINTRAM. Where traffic junctions and traffic signals have a significant effect in terms of delay or route choice, details of their layout and/or timing of the signals have been included in the model.

2.1.4 Strategic models, such as SINTRAM, use aggregate descriptions of traffic such as flow, density, speed and the relationships between them. The model is unable to answer detailed questions regarding traffic interactions, such as queuing and individual driver behaviour. It can however, provide approximate answers to transport problems across a vast geographical area, including the level of vehicle demand, junctions and stretches of road which will be operating above their theoretical capacity, and highlighting areas where some form of mitigation is likely

to be required to reduce the impact of development sites. This makes SINTRAM a suitable tool for assessing the potential traffic impacts of the green belt sites.

2.2 Base Year

2.2.1 The model base year is 2005.

2.3 Modes of Transport

2.3.1 Vehicle classes that are represented in the model are: car; light goods vehicles (LGV); and heavy goods vehicles (HGV).

2.4 Time Periods

2.4.1 The model represents the weekday AM peak hour of 0800 – 0900.

2.5 Study Area and Zones

2.5.1 A zone represents a geographical area where vehicle trips are generated by the land uses contained within.

2.5.2 The borough of Woking is split into 38 zones, listed below and shown in **Figure 2.2.**

- 78: Mayford
- 92: Arthurs Bridge
- 93: Brookwood
- 96: Byfleet
- 117: Egley Road
- 132: Goldsworth (east)
- 165: Hook Heath
- 167: Horsell
- 168: Horsell Common
- 185: Kingfield
- 186: Knaphill / St. Johns
- 259: Parley Drive
- 261: Maybury East
- 262: Maybury Road Area
- 263: Maybury
- 267: Westfield
- 268: Hoebridge
- 269: Mount Hermon
- 274: West Byfleet Town Centre
- 275: Woking Town Centre
- 277: Old Woking
- 280: West Byfleet – Parvis Road
- 283: Pyrford
- 284: Pyrford Green
- 292: Kingsway
- 299: Sheerwater
- 301: Six Crossroads
- 311: Brewery Road
- 469: Worplesdon Station & Sutton Green
- 474: Triggs Lane
- 514: Woking Hospital
- 515: Woking Leisure Centre
- 516: Woking Station
- 517: Heathside
- 521: Goldsworth (east)
- 522: Goldsworth (east)
- 524: Carthouse Lane
- 525: Carthouse Lane

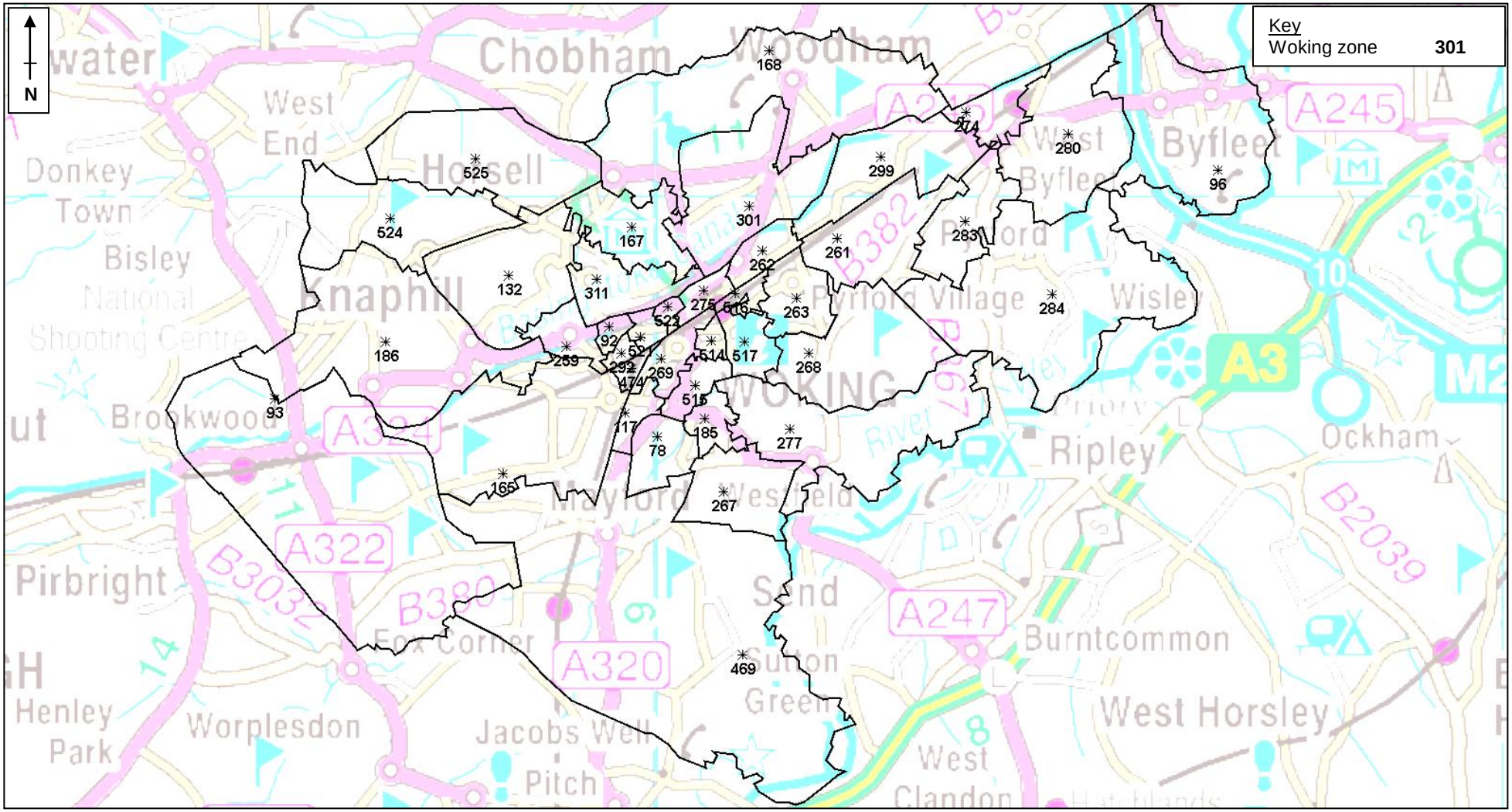


Figure 2.2: Zone plan

2.6 Assignment

2.6.1 All model matrices (base and forecasts) were assigned to the network using a fixed trip equilibrium assignment. This was performed using the method of successive averages (MSA) for 30 assignment iterations with a spreadfactor of 2.

2.6.2 The assignment distributes given travel demand, (a set of trips with fixed origins and destinations), on the model highway network according to the most cost efficient route, utilising an iterative process. The resulting assigned traffic flow represents the conditions for the modelled weekday AM peak hour (0800 – 0900) only.

3 MODEL FORECASTING, TRIP GENERATION AND TRIP DISTRIBUTION

3.1 Forecast Year

3.1.1 The model forecast year is 2026.

3.2 Forecast Scenarios

3.2.1 To identify the traffic impacts of the varying deliverable green belt sites, Woking Borough Council have requested that three scenarios are compared to a reference scenario, as described below:

- 2026 scenario B includes all commercial and residential development sites that are committed and planned in the borough of Woking, to the forecast year of 2026. 2026 scenario B of this assessment contains the same development assumptions modelled for the 2026 scenario B in the 2010 Surrey County Council study issued to the borough council in the report entitled, *"Transport Evaluation for Woking Borough Council/s Core Strategy, 2026 Transport Assessment Report (December 2010)";*
- 2026 scenario D includes all of the development sites in scenario B with the addition of 500 residential dwellings on the green belt land at Mayford. 2026 scenario D of this assessment contains the same development assumptions modelled for the 2026 scenario D in the 2010 Surrey County Council study issued to the borough council in the report entitled, *"Transport Evaluation for Woking Borough Council/s Core Strategy, 2026 Transport Assessment Report (December 2010)";*
- 2026 scenario E includes all of the development sites in scenario B with the addition of 573 residential dwellings on the green belt land at Byfleet and Pyrford; and
- 2026 Scenario F includes all of the development sites in scenario B with the addition of 592 residential dwellings on the green belt land at West Byfleet.

3.2.2 2026 scenario B acts as a reference case for all three of the green belt forecast scenarios. This is because 2026 scenario B contains all development that has been committed or planned within the Core Strategy, whereas scenarios D, E and F contain differing locations of green belt release to accommodate differing amounts of residential developments in each green belt location.

3.2.3 A diagrammatic view of the scenarios is shown in **Figure 3.1**.

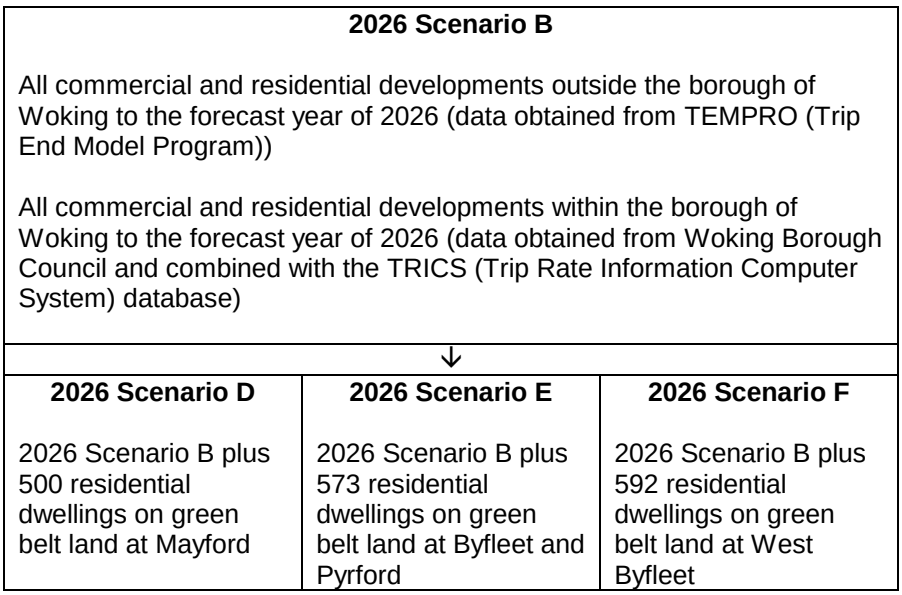


Figure 3.1: Outline of scenarios

3.3 Green Belt Sites

3.3.1 Information regarding the composition of residential development to occur in each of the three green belt forecast scenarios to be considered in this assessment was provided by Woking Borough Council in the format of email correspondence (dated 03/12/15).

3.3.2 For the purposes of this assessment Woking Borough Council suggested that Surrey County Council assume that all residential dwellings to occur in all the green belt sites are houses.

3.3.3 Woking Borough Council provided textual and geographic information for each green belt site assessed in this study. Each of the three green belt sites were matched to a model zone by Surrey County Council.

3.3.4 **Table 3.1** contains information for each green belt site assessed in this study.

3.3.5 **Figure 3.2** shows a map, sourced from Woking Borough Council, showing the locations of each green belt site. **Figure 3.3** highlights the model zone that each site was allocated to for this strategic transport sensitivity test.

Scenario	Model Zone	Location	No. of Houses	Woking Borough Council GBBR Site Reference
2026 Scenario D	469	Mayford	500	WGB020a; WGB020c; WGB020d; WGB020e; WGB020f; WGB020g; WGB022a
2026 Scenario E	96 + 284	Byfleet and Pyrford	573 (350 in zone 96) (223 in zone 284)	WGB006a; WGB006b; WGB007, WGB009a
2026 Scenario F	280	West Byfleet	592	WGB004a

Table 3.1: Green belt site summary

3.3.6 The three green belt scenarios under review in this study differ in terms of their location in the borough as well as the number of residential dwellings contained within each site. The number of residential dwellings contained in the green belt sites ranges from 500 to 592, with the Mayford site (represented by scenario D) containing the least and the West Byfleet site (represented by scenario F) containing the most.

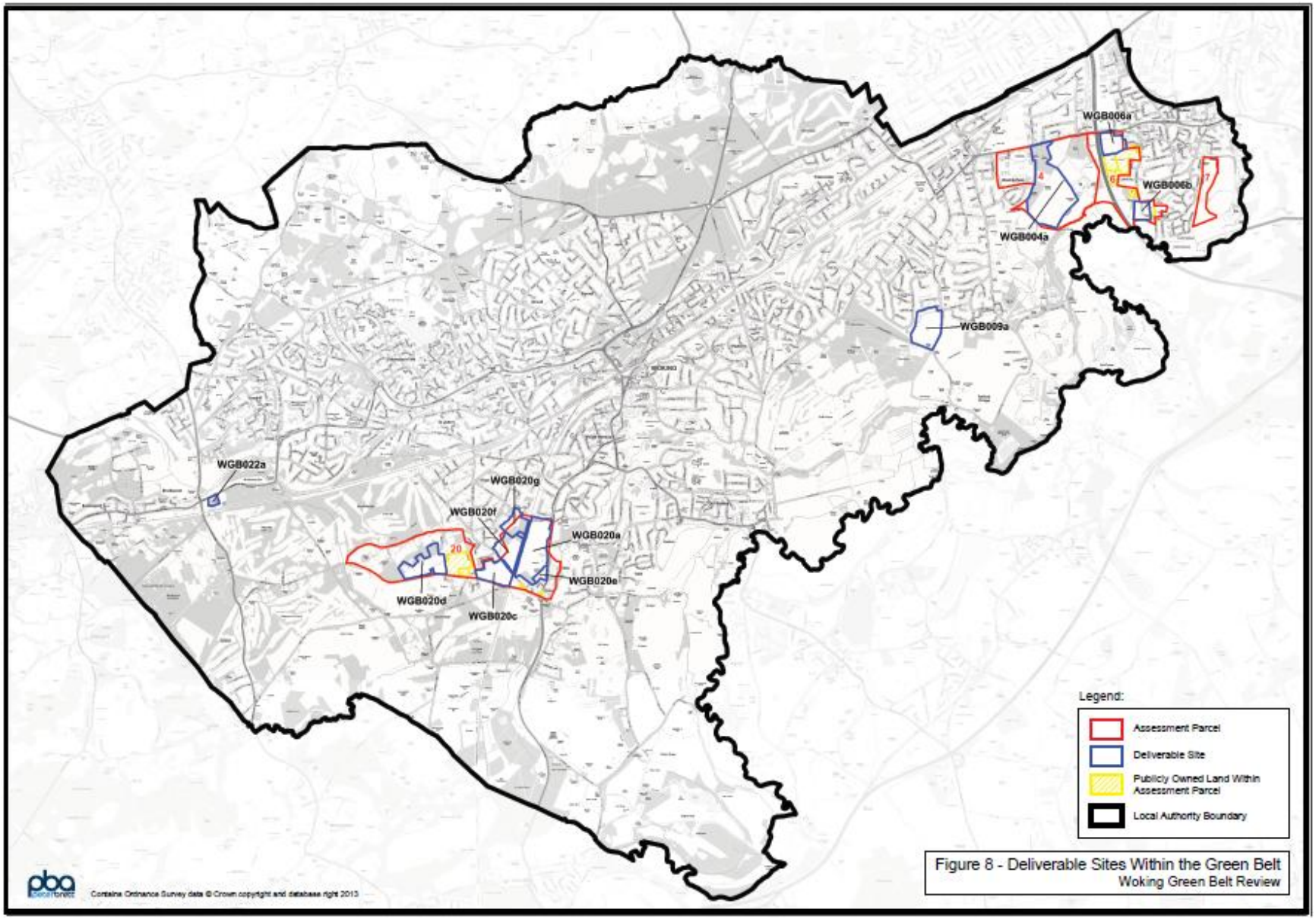


Figure 3.2: Deliverable green belt sites in Woking Borough Council

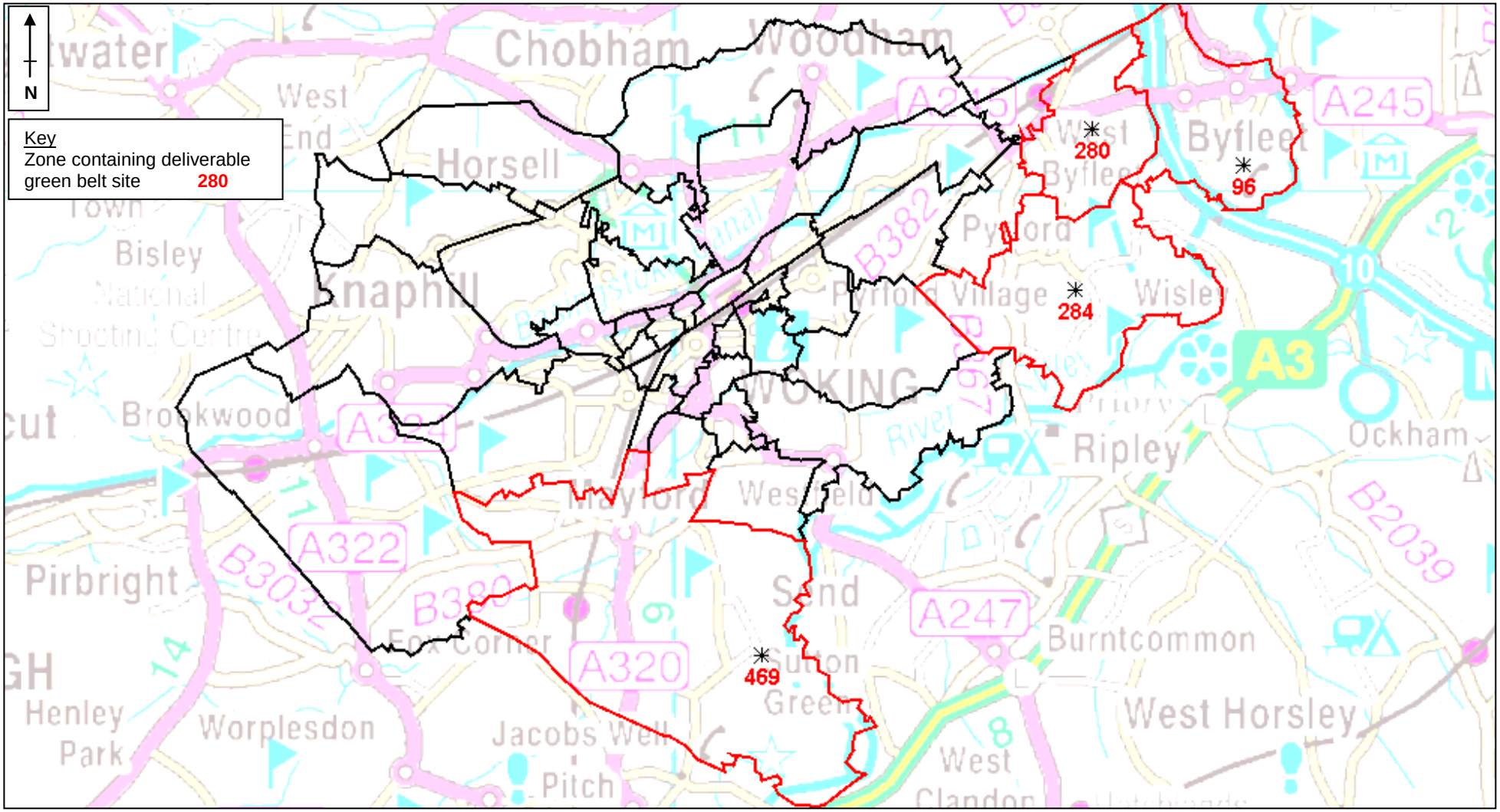


Figure 3.3: Model zones containing deliverable green belt sites

3.4 Vehicle Trip Generation

3.4.1 Vehicle trips generated by each development site were calculated using the information provided by Woking Borough Council and the TRICS database, version 2009(b). This version of TRICS was used to calculate trip generation in the 2010 study undertaken by Surrey County Council *"Transport Evaluation for Woking Borough Council/s Core Strategy, 2026 Transport Assessment Report (December 2010)"*. As 2026 scenario B and D of this green belt sensitivity test are the same as the scenario B and D of the 2010 study, it was appropriate to continue using the same trip generation assumptions.

3.4.2 TRICS is the national standard database system of trip generation and analysis used in the planning application process. The database holds thousands of trip rate surveys generated by different land uses and location type.

3.4.3 The database was interrogated for commercial and residential sites of a similar geographical location and land use in line with guidance from the 2012 Good Practice Guide. The database produces trip rates per 100m² gross floor area (GFA) or by residential unit. The resulting trip rates were applied to the size and composition of each development to estimate the trip generation for each site. Consideration was also made of the previous or existing land use of the development sites and the trips these would have generated. These trips were deducted from those generated by the new development to prevent double counting. However, as this assessment is investigating green belt sites it is assumed that there are no trips generated by any existing land use.

3.4.4 The trip generation was calculated separately for vehicles arriving and departing at each development site. This was also split into the model vehicle types: car; LGV; and HGV; similarly informed by the information contained within the TRICS database.

3.4.5 At this concept stage, all development related trips have been assumed to be new trips. No allowance has been made for linked, pass-by, diverted or transferred trips.

3.4.6 The resulting trip generation provided in **Tables 3.2** to **3.4** details the amount of additional trips generated from each of the deliverable green belt scenarios assessed in each scenario. A summary of all scenarios has also been provided in **Table 3.5**.

3.4.7 It should be noted that the trip generation estimated for this assessment is purely for the purposes of this strategic transport modelling project, aimed at better informing a decision regarding green belt release in the borough of Woking. Under no circumstances should the trip generation estimated for utilisation in this project be used for any other projects of transport modelling, specifically related to these sites.

Zone No.	Zone Name	Vehicle Arrival Trips				Vehicle Departure Trips			
		Total	Car	LGV	HGV	Total	Car	LGV	HGV
469	Worplesdon Station & Sutton Green	78	71	5	1	264	242	18	3
Total		**78**	**71**	**5**	**1**	**264**	**242**	**18**	**3**

Table 3.2: 2026 scenario D trip generation for green belt release in Mayford for the weekday AM peak hour (0800 – 0900)

Zone No.	Zone Name	Vehicle Arrival Trips				Vehicle Departure Trips			
		Total	Car	LGV	HGV	Total	Car	LGV	HGV
96	Byfleet	54	50	4	1	184	170	13	2
284	Pyrford Green	35	32	2	0	118	108	8	1
Total		**89**	**82**	**6**	**1**	**302**	**278**	**21**	**3**

Table 3.3: 2026 scenario E trip generation for green belt release in Byfleet and Pyrford for the weekday AM peak hour (0800 – 0900)

Zone No.	Zone Name	Vehicle Arrival Trips				Vehicle Departure Trips			
		Total	Car	LGV	HGV	Total	Car	LGV	HGV
280	West Byfleet – Parvis Road	92	84	6	1	312	287	22	3
Total		**92**	**84**	**6**	**1**	**312**	**287**	**22**	**3**

Table 3.4: 2026 scenario F trip generation for green belt release in West Byfleet for the weekday AM peak hour (0800 -0900)

Scenario	Vehicle Arrival Trips	Vehicle Departure Trips	Vehicle Total Trips
2026 Scenario D	78	264	**342**
2026 Scenario E	89	302	**391**
2026 Scenario F	92	312	**404**

Table 3.5: Trip generation summary for all green belt release scenarios for the weekday AM peak hour (0800 – 0900)

3.5 Background Growth

3.5.1 Traffic growth forecasts have been based on the development trip generation estimated from TRICS set out above, and TEMPRO.

3.5.2 The reference case for this green belt sensitivity test is 2026 scenario B. 2026 scenario B was established by applying 2005 to 2026 TEMPRO background growth to the 2005 base year for trips in the borough of Woking, as well as the additional trips forecast to be generated from committed and planned developments within Woking's Core Strategy. All other trips external to the study area of the borough had standard TEMPRO 2026 growth factors applied.

3.5.3 Both the 2005 to 2026 background growth and 2026 standard growth growth factors were sourced from TEMPRO version 5.4. Version 5.4 of TEMPRO was used as 2026 scenario B of this sensitivity test was inherited from the 2010 Surrey County Council study named *"Transport Evaluation for Woking Borough Council/s Core Strategy, 2026 Transport Assessment Report (December 2010)",* which made use of this version.

3.6 Vehicle Trip Distribution

3.6.1 The additional trips generated from Woking's committed, planned and green belt development sites in scenarios B, D, E and F follow a smoothed distribution of Woking's existing trips. A smoothed distribution refers to the origin and destination trip ends being averaged for a selected area (i.e. the borough of Woking).

3.6.2 The additional trips derived from Woking's planning data follow this smoothed distribution but have been added to the observed distributions utilised in the SINTRAM model. Observed distributions can be uneven but validate well in terms

of link flows. Combining the two types of distribution enables a more robust forecast.

3.7 Forecast Network

3.7.1 The forecast highway network is an exact copy of the base but with the inclusion of the Sheerwater link road and associated junction changes in the vicinity. The Sheerwater link road is a constructed highway scheme of strategic importance to Woking and the surrounding area.

3.7.2 It should be noted that the 2010 Surrey County Council assessment entitled *"Transport Evaluation for Woking Borough Council/s Core Strategy, 2026 Transport Assessment Report (December 2010)"* did not include the Sheerwater link road in the forecast model highway network as there was no certainty surrounding the scheme. Due to the forecast highway networks differing in a crucial location between the two assessments, it is not possible for the results of any 2026 scenarios of this green belt sensitivity test to be compared to any scenarios in the 2010 Surrey County Council report.

4 MODEL RESULTS AND ANALYSES

4.1 Overview

4.1.1 All results presented within this report represent modelled traffic impacts projected to occur in the borough of Woking only, as a result of additional trips generated from the borough's potential release of green belt land to accommodate development to the forecast year of 2026.

4.1.2 The results presented in this section of the report represent all three green belt scenarios, 2026 scenarios D, E and F. All three green belt scenarios will be referred back to 2026 scenario B, which contains all of Woking's committed and planned development within the timescales of the Core Strategy. Such comparisons allow the potential traffic impacts of each green belt scenario to be identified.

4.2 Network Statistics

4.2.1 **Table 4.1** shows the network summary statistics for the study area of Woking borough, for the weekday AM peak hour, broken down by road type for each green belt scenario.

4.2.2 The network statistics presented in **Table 4.1** are summaries of the projected traffic impacts on the highway network within the Woking borough boundary only, specifically vehicle kilometres travelled, vehicle hours and average speed.

4.2.3 **Table 4.1** indicates that 2026 scenarios D, E and F all generate similarly small changes to the transport network summary statistics of Woking borough. All three scenarios are projected to alter traffic impacts across the roads in the borough by no more than 1%, when compared to the reference case of 2026 scenario B.

4.2.4 Of the three green belt scenarios, scenario D is projected to generate the largest changes in network summary statistics because average speed decreases and vehicle hours and kilometres increase the most when compared to scenario B, during the weekday AM peak hour. Comparisons of network statistics between the 2026 scenario B and scenario D highlight the projected impacts of the borough's proposed green belt release of 500 dwellings at Mayford. In 2026 scenario D vehicle kilometres are estimated to increase by less than 1% (691 veh kms) and vehicle hours by 1% (35 veh hrs), resulting in a 0.5% (less than 1 kph) reduction in average speed.

4.2.5 The total network summary statistics for 2026 scenario E, representing green belt release in Pyrford and Byfleet for approximately 570 dwellings, and 2026 scenario F, representing green belt release in West Byfleet for approximately 590 dwellings, are of a similar magnitude in the weekday AM peak hour. For example, vehicle kilometres and vehicle hours are to increase by less than 1% in each scenario with 292 veh kms and 396 veh kms respectively as well as 20 veh hrs and 15 veh hrs. This results in 2026 scenarios E and F generating a projected reduction in average speed of 0.3% and 0.1% respectively.

4.2.6 **Table 4.1** indicates that all the green belt scenarios are projected to cause a reduction in vehicle kilometres travelled on A principal roads in the borough of Woking but an increase in vehicle kilometres on B roads. This could imply that the green belt releases are causing a switching in routing from A principal roads to B roads with additional growth of traffic utilising B roads. This in part could be due to the potential green belt releases being located in areas of the highway network that causes more of the generated traffic to utilise B roads instead of A roads.

4.2.7 In summary it is projected that the green belt release at Mayford (scenario D) would have the largest impacts on network summary statistics in the borough of Woking, with releases of green belt land at Pyrford and Byfleet (scenario E) as well as release of green belt land at West Byfleet (scenario F) generating slightly smaller impacts.

Statistic	Road Type	2026 Scenario B	2026 Scenario D	2026 Scenario E	2026 Scenario F
Vehicle Kilometres (veh kms)	A Principal Road	70,287	70,160	69,911	69,588
	B Road	28,503	29,102	29,160	29,402
	Minor Road	62,642	62,860	62,653	62,838
Total		**161,432**	**162,122**	**161,724**	**161,828**
Vehicle Hours (veh hrs)	A Principal Road	1,702	1,705	1,699	1,682
	B Road	721	741	740	747
	Minor Road	1,516	1,528	1,521	1,525
Total		**3,940**	**3,975**	**3,960**	**3,954**
Average Speed (kph)	A Principal Road	41.3	41.1	41.2	41.4
	B Road	39.5	39.3	39.4	39.4
	Minor Road	41.3	41.1	41.2	41.2
Average		**41.0**	**40.8**	**40.8**	**40.9**
Absolute difference from 2026 scenario B					
Vehicle Kilometres (veh kms)	A Principal Road		-127	-376	-698
	B Road		599	656	898
	Minor Road		219	12	196
Total			**691**	**292**	**396**
Vehicle Hours (veh hrs)	A Principal Road		3	-4	-20
	B Road		20	19	26
	Minor Road		12	5	9
Total			**35**	**20**	**15**
Average Speed (kph)	A Principal Road		-0.1	-0.1	0.1
	B Road		-0.2	-0.1	-0.2
	Minor Road		-0.2	-0.1	-0.1
Average			**-0.2**	**-0.1**	**-0.1**
Percentage difference from 2026 scenario B					
Vehicle Kilometres (veh kms)	A Principal Road		-0.2%	-0.5%	-1.0%
	B Road		2.1%	2.3%	3.2%
	Minor Road		0.3%	0.0%	0.3%
Total			**0.4%**	**0.2%**	**0.2%**
Vehicle Hours (veh hrs)	A Principal Road		0.2%	-0.2%	-1.2%
	B Road		2.7%	2.6%	3.6%
	Minor Road		0.8%	0.3%	0.6%
Total			**0.9%**	**0.5%**	**0.4%**
Average Speed (kph)	A Principal Road		-0.4%	-0.3%	0.2%
	B Road		-0.6%	-0.3%	-0.4%
	Minor Road		-0.4%	-0.3%	-0.3%
Average			**-0.5%**	**-0.3%**	**-0.1%**

Table 4.1: Network summary statistics for Woking borough, weekday AM peak hour (0800 – 0900)

4.3 Level of Service (LOS)

4.3.1 Level of service (LOS) is a term used to qualitatively describe the operating conditions of a section of road or turning movement at a junction based on factors such as speed, travel and time delay. The level of service is designated with a letter A to F, with A representing the best operating conditions and F the worst. **Table 4.2** describes the performance rating of each letter A to F.

A	Free flow	Traffic flows at or above the posted speed limit and motorists have complete mobility between lanes.
B	Reasonable free flow	LOS A speeds are maintained, manoeuvrability within the traffic stream is slightly restricted. Motorists still have a high level of physical and psychological comfort.
C	Stable flow	Ability to manoeuvre through lanes is noticeably restricted and lane changes require more driver awareness. Most experienced drivers are comfortable, roads remain safely below but efficiently close to capacity, and posted speed is maintained. This is the target LOS for some urban and most rural roads.
D	Approaching unstable flow	Speeds slightly decrease as traffic volume slightly increases. Freedom to manoeuvre within the traffic stream is much more limited and driver comfort levels decrease.
E	Unstable flow operating at capacity	Flow becomes irregular and speed varies rapidly because there are virtually no useable gaps to manoeuvre in the traffic stream and speeds rarely reach the posted limit. Any disruption to traffic flow such as merging or lane changes will create a shock wave affecting traffic upstream. Drivers' level of comfort becomes poor.
F	Forced or breakdown of flow	Every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required. Travel time cannot be predicted, with generally more demand than capacity.

Table 4.2: A to F level of service (LOS) categories

4.3.2 The methodology for calculating the LOS is set out in The Highway Capacity Manual (1994) and has been applied to the analysis of both link flow and junction delay to aid the interpretation of the model results. The calculated LOS has been colour coded using the traffic light colours: green; amber; and red in **Tables 4.3** to **4.8**.

4.4 Ratio of Flow to Capacity (RFC)

4.4.1 Another tool for assessing the performance of a stretch of road is the ratio of flow to capacity (RFC) measure.

4.4.2 A RFC value between 0.85 and 1, suggests the stretch of road is beginning to struggle with the weight of traffic causing delay, queues and driver stress. Whereas, a value greater than 1 means that the stretch of road has a higher level of traffic flow than its theoretical capacity resulting in flow breakdown and extensive queuing.

4.4.3 An RFC below 0.85 is considered acceptable as there is still scope to accommodate future growth.

4.4.4 As with LOS, RFC has been applied to the analysis of link flow to aid the interpretations of the model results. All presented RFC values between 0.85 and 1, have been highlighted in orange, and in red for RFC values greater than 1.

4.4.5 **Appendix A** should be referred to for plots for the borough indicating links that are to incur RFC values equal to or greater than 0.85, for all modelled 2026 green belt release scenarios in the weekday AM peak hour. Such plots provide a borough overview of RFC information provided in **Tables 4.3** to **4.8**.

4.5 Increase in Flow

4.5.1 **Tables 4.3** to **4.5** present the top ten links in each of the three green belt scenarios which have the greatest increase in flow when compared to 2026 scenario B in the weekday AM peak hour, as well as RFC and LOS values.

Rank	Name	Link Ref	Flow (vph)		Absolute increase in Flow (vph)	% Increase in Flow	RFC (pcu)		LOS	
			2026 Scen B	2026 Scen D			2026 Scen B	2026 Scen D	2026 Scen B	2026 Scen D
1	B367 Coldharbour Road southbound, Pyrford	16704, 1	232	399	167	72%	0.14	0.25	A	B
2	Wych Hill Lane eastbound, Mount Hermon	14393, 1	828	990	162	20%	1.08	1.30	F	F
3	B367 Coldharbour Road southbound, Pyrford	15110, 1	369	518	149	40%	0.48	0.67	D	E
4	B367 Coldharbour Road southbound, West Byfleet	15109, 1	456	589	134	29%	0.59	0.77	D	E
5	Sutton Green Road southbound, Sutton Green	15898, 1	465	592	127	27%	0.49	0.63	D	D
6	B367 Church Hill southbound, Pyrford	16705, 2	752	877	125	17%	0.46	0.54	D	D
7	A322 Bagshot Road southbound, Brookwood	16716, 1	551	671	120	22%	0.49	0.60	D	D
8	High Street southbound, Horsell	14503, 1	376	490	114	30%	0.49	0.64	D	D
9	B367 Newark Lane southbound, Pyrford	16701, 2	765	875	110	14%	0.47	0.54	D	D
10	Horsell Birch southbound, Horsell	16668, 2	458	565	107	23%	0.59	0.73	D	E

Table 4.3: Top ten links with the highest increase in absolute flow between 2026 scenario B and scenario D during the weekday AM peak hour (0800 – 0900)

Rank	Name	Link Ref	Flow (vph)		Absolute increase in Flow (vph)	% Increase in Flow	RFC (pcu)		LOS	
			2026 Scen B	2026 Scen D			2026 Scen B	2026 Scen D	2026 Scen B	2026 Scen D
1	B367 Coldharbour Road southbound, Pyrford	16704, 1	232	414	182	79%	0.14	0.25	A	B
2	Wych Hill Lane eastbound, Mount Hermon	14393, 1	828	983	155	19%	1.08	1.29	F	F
3	B367 Coldharbour Road southbound, Pyrford	15110, 1	369	521	152	41%	0.48	0.68	D	E
4	B367 Newark Lane southbound, Pyrford	16701, 2	765	908	143	19%	0.47	0.56	D	D
5	B367 Coldharbour Road southbound, West Byfleet	15109, 1	456	595	139	31%	0.59	0.78	D	E
6	B367 Church Hill southbound, Pyrford	16705, 2	752	871	120	16%	0.46	0.54	D	D
7	A320 Guildford Road northbound, Town Centre	14482, 2	1,358	1,464	106	8%	0.88	0.95	E	E
8	York Road northbound, Mount Hermon	16740, 2	542	648	105	19%	0.70	0.84	E	E
9	York Road northbound, Mount Hermon	16738, 1	361	464	103	29%	0.47	0.60	D	D
10	B382 Old Woking Road northbound, Maybury	14735, 1	1,270	1,365	94	7%	0.77	0.83	E	E

Table 4.4: Top ten links with the highest increase in absolute flow between 2026 scenario B and scenario E during the weekday AM peak hour (0800 – 0900)

Rank	Name	Link Ref	Flow (vph)		Absolute increase in Flow (vph)	% Increase in Flow	RFC (pcu)		LOS	
			2026 Scen B	2026 Scen D			2026 Scen B	2026 Scen D	2026 Scen B	2026 Scen D
1	B367 Coldharbour Road southbound, Pyrford	16704, 1	232	443	211	91%	0.14	0.27	A	C
2	B367 Coldharbour Road southbound, Pyrford	15110, 1	369	562	194	53%	0.48	0.73	D	E
3	B367 Coldharbour Road southbound, West Byfleet	15109, 1	456	636	180	40%	0.59	0.83	D	E
4	B367 Church Hill southbound, Pyrford	16705, 2	752	919	167	22%	0.46	0.57	D	D
5	B367 Newark Lane southbound, Pyrford	16701, 2	765	922	157	21%	0.47	0.57	D	D
6	Wych Hill Lane eastbound, Mount Hermon	14393, 1	828	935	107	13%	1.08	1.22	F	F
7	A245 Parvis Road westbound, West Byfleet	10336, 1	1,829	1,921	92	5%	1.61	1.68	F	F
8	York Road northbound, Mount Hermon	16738, 1	361	447	86	24%	0.47	0.58	D	D
9	A245 Old Woking Road westbound, West Byfleet	10685, 1	1,927	2,011	84	4%	1.69	1.76	F	F
10	A320 Guildford Road northbound, Town Centre	14482, 2	1,358	1,435	78	6%	0.88	0.93	E	E

Table 4.5: Top ten links with the highest increase in absolute flow between 2026 scenario B and scenario F during the weekday AM peak hour (0800 -0900)

2026 Scenario D

4.5.2 Comparisons between the 2026 scenario B and D provides an indication of the forecast traffic impacts to be generated from the proposed 500 dwellings on green belt land at Mayford. The majority of links presented in **Table 4.3** are located in the east of the borough, specifically in Pyrford, Horsell and Sutton Green, all with a southbound direction of travel.

4.5.3 All links stated in **Table 4.3** are to incur the largest absolute increases in flow, of approximately 110 to 170 vehicles per hour when compared to 2026 scenario B, with the majority of links projected to incur a level of service value of D or E as a result of the proposed green belt release at Mayford. Even though the level of service values are reasonably high, only one of the ten links forecast to incur the greatest increases in flow in scenario D is projected to have a RFC value greater than 0.85. This link being Wych Hill Lane in an eastbound direction of travel in Mount Hermon, with a forecast RFC value of 1.30 in scenario D, formerly 1.08 in scenario B. This link is forecast to become more congested as a result of a 20% (162 vehicles per hour) increase in vehicles utilising this link in the AM peak hour.

4.5.4 Some of the greatest increases in flow in scenario D are forecast to occur on the B367 Coldharbour Road/Newark Lane corridor in a southbound direction of travel. An increase in flow on this corridor could be thought of as unusual as the green belt release assessed in scenario D is located to the west of this corridor, in the Mayford area of the borough. An explanation as to why increases in flow are not occurring in direct proximity to the green belt site is that the additional trips generated from the proposed 500 dwellings are causing vehicles to re-route and find alternative routes to reach their destination as efficiently as possible. This is apparent in scenario D as vehicles that were originally travelling southbound via Holly Bank Road/Hook Hill Lane and the A320 in scenario D are now utilising an alternative route southbound, specifically the B367 Coldharbour Road/Newark Lane southbound corridor. **Figure 4.1** graphically illustrates a reduction in vehicles travelling south in the vicinity of the green belt site in Mayford but an increase in vehicles travelling south in Pyrford, with both the changes in flows being of similar proportions.

4.5.5 In summary the potential green belt release at Mayford is generating additional trips and delay in the vicinity of the site. The resultant impact of additional congestion in Mayford is that vehicles are utilising alternative routes, specifically in a southbound direction of travel, enabling trips to travel via the most efficient routes.

2026 Scenario E

4.5.6 Comparisons between the 2026 scenarios B and E portray the forecast traffic impacts related to the proposed green belt release of 573 dwellings at Pyrford and Byfleet.

4.5.7 **Table 4.4** indicates that the majority of the largest increases in flow in scenario E are projected to occur in the vicinity of the potential green belt site, predominantly in the east of the borough. The projected largest increases in flow in scenario E are of a similar magnitude to those increases projected to occur as a result of the green belt release assessed in scenario D, as the ten largest increases in flow range from approximately 95 to 180 vehicles per hour in the AM peak hour.

4.5.8 Generally the links highlighted in **Table 4.4** form corridors of the B367 Coldharbour Road/Newark Lane in a southbound direction of travel and Wych Hill Lane with York Road in an eastbound/northbound direction of travel. The ten links projected to incur the largest increases in flow, as a result of the potential release

of green belt land at Byfleet and Pyrford, generally have LOS values of D or E with RFC values less than 0.85.

4.5.9 Of the ten links shown in **Table 4.4**, two links are projected to have RFC values greater than 0.85 in scenario E, Wych Hill Lane and York Road. However, it should be noted that both these links are forecast to have RFC values over 0.85 in the reference case of scenario B. This implies that the additional trips generated from the green belt release in scenario E did not cause the stated links to be over capacity, but do, however, cause the projected congestion on such links to worsen.

4.5.10 It is expected that the largest increases in flow and congestion are to be experienced on links located in the vicinity of the green belt sites in Byfleet and Pyrford, specifically links in the east of the borough.

2026 Scenario F

4.5.11 Comparing 2026 scenario B to scenario F gives an indication of any traffic impacts to be generated from the additional trips produced from the 592 dwellings on green belt land located in West Byfleet.

4.5.12 **Table 4.5** lists similar links to those presented in **Table 4.4** (representing the impacts of scenario E). Similar to scenario E, scenario F is projected to generate largest increases in flows in the east of the borough. The ten links projected to incur the largest increases in flow of approximately 80 to 210 vehicles per hour are on the corridors of the B367 Coldharbour Road/Newark Lane southbound, A245 Parvis Road/Old Woking Road westbound and Wych Hill Lane and York Road northbound.

4.5.13 The LOS values for the majority of links listed in **Table 4.5** range between D and F. RFC values of the ten specified links in scenario F are generally below 0.85 with the exception of Wych Hill Lane, A245 Parvis Road/Old Woking Road and A320 Guildford Road. The increases in flow generated from scenario F have not caused these specified links RFC values to increase by a considerable amount as all such links were already projected to be over capacity in the reference case of 2026 scenario B. Therefore, the green belt release at West Byfleet is exacerbating existing congestion issues on these stated links.

4.5.14 **Figures 4.1** to **4.3** present the changes in flow between the 2026 scenario B and the three green belt forecast scenarios for the entire study area of Woking borough, during the weekday AM peak hour. Therefore **Figures 4.1** to **4.3** are graphical representations of **Tables 4.3** to **4.5**, but for all model links within the borough of Woking.

4.5.15 Bandwidths coloured blue show an increase in flow, whereas those coloured red present a decrease in flow, with their size being proportional to the increase or decrease.

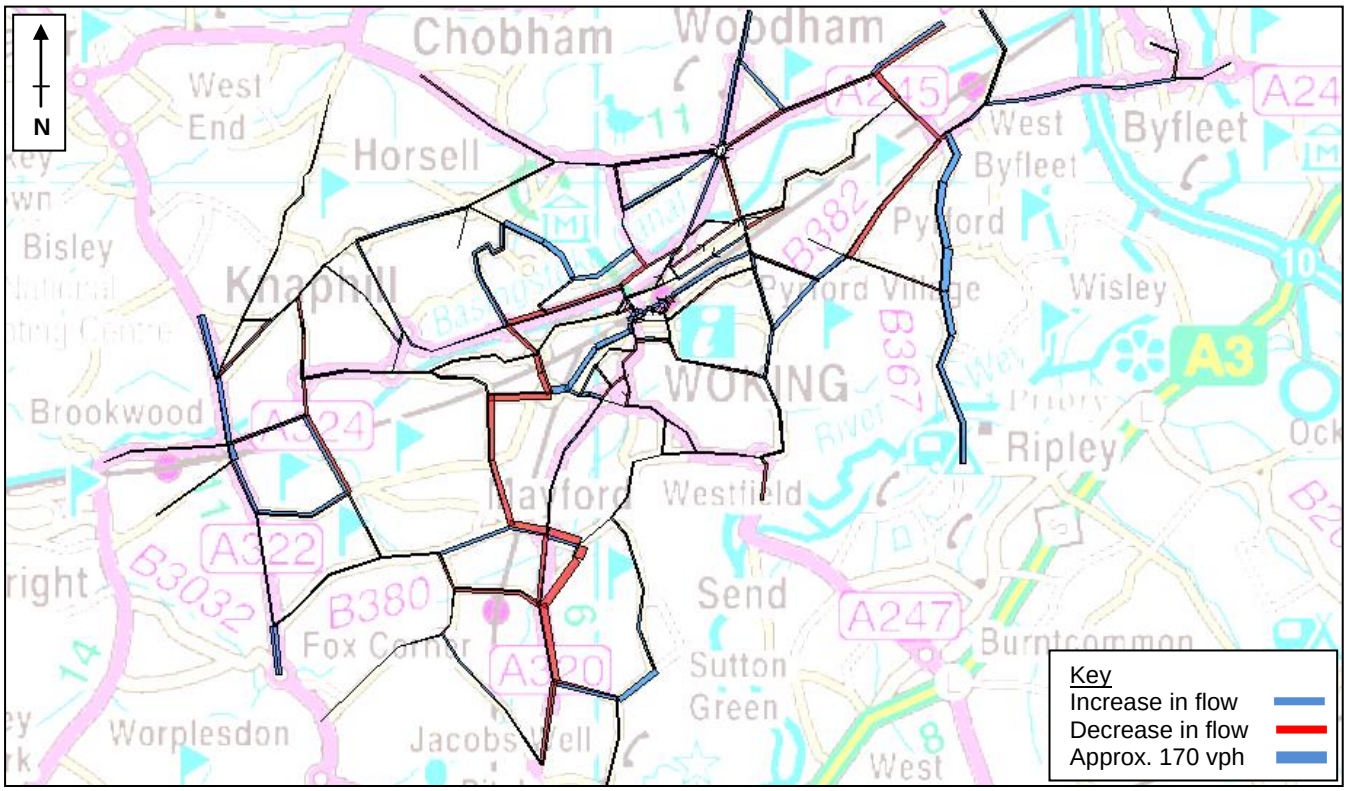


Figure 4.1: Flow difference plot between 2026 scenario B and scenario D for the weekday AM peak hour (0800 -0900)

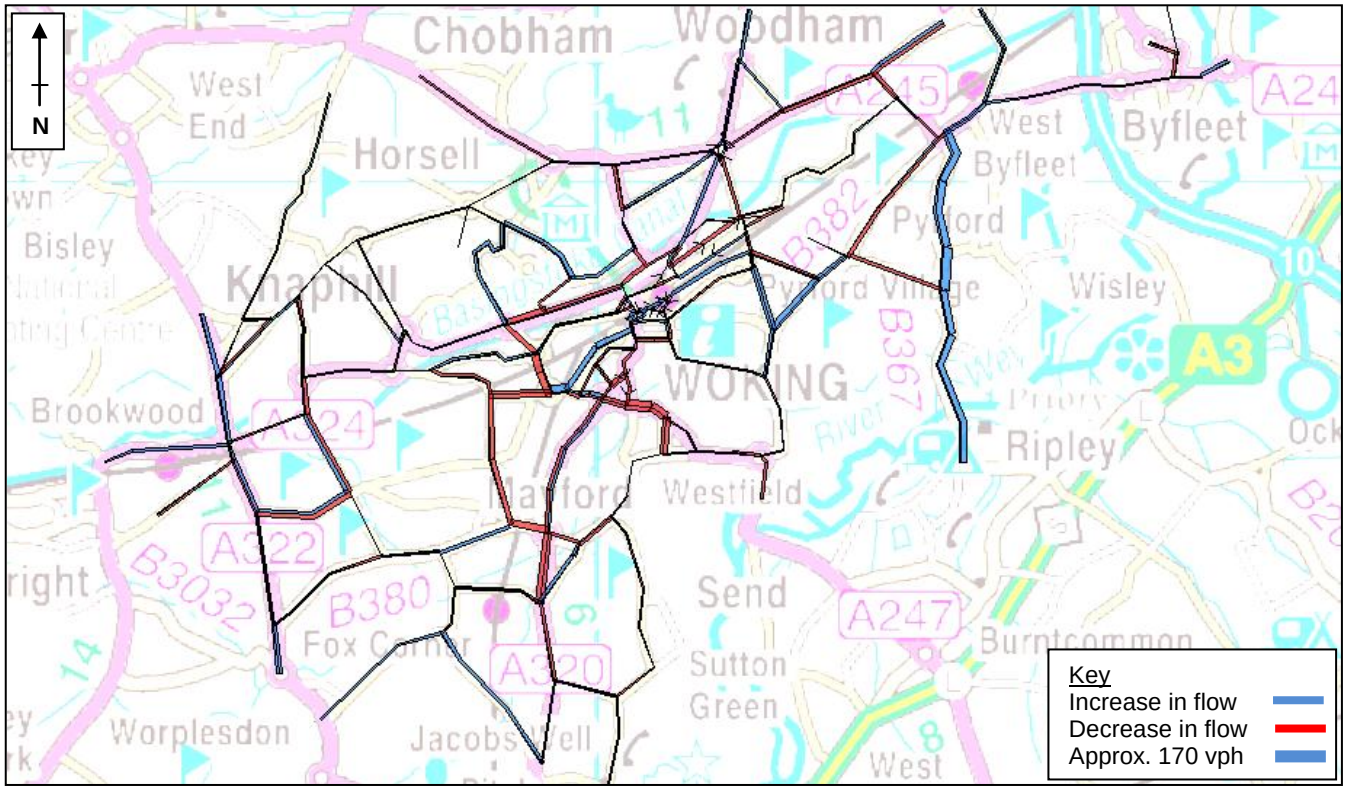


Figure 4.2: Flow difference plot between 2026 scenario B and scenario E for the weekday AM peak hour (0800 – 0900)

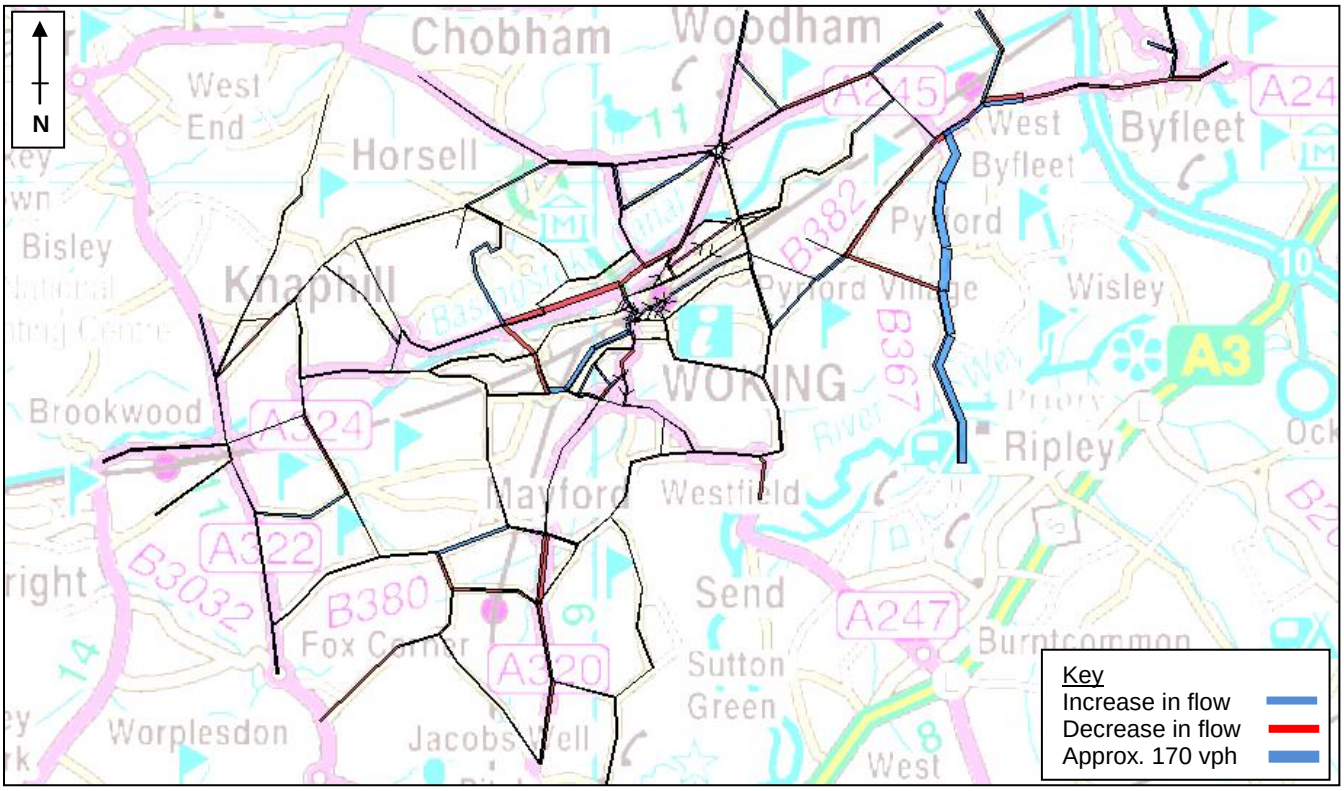


Figure 4.3: Flow difference plot between 2026 scenario B and scenario F for the weekday AM peak hour (0800 – 0900)

4.5.16 **Figure 4.1** indicates that the largest increases in flow generated by the green belt release at Mayford, represented in scenario D, is apparent on the B367 Coldharbour Road/Newark Lane southbound corridor in the east of the borough. As previously stated in **paragraphs 4.2.6** and **4.5.4** it appears that development of the green belt land is causing vehicles to alter their travel patterns due to an increase in congestion in the south of the borough. **Figure 4.1** indicates that southbound travel on routes such as the A320 and Holly Bank Road/Hook Hill Lane is decreasing but southbound travel on the B367 Coldharbour Road/Newark Lane is increasing by approximately the same proportion.

4.5.17 **Figure 4.2** graphically represents the differences in flow between 2026 scenario B and scenario E, representing green belt development at Pyrford and Byfleet, as shown in **Table 4.4** but for the entire borough of Woking. The plot indicates that the largest increases in flow are apparent on roads in the east of the borough, specifically the B367 Coldharbour Road/Newark Lane in a southbound direction of travel.

4.5.18 **Figure 4.3** indicates that as a result of the potential green belt development in West Byfleet the largest increases in flow are projected to be in similar areas of the borough to scenario E, again specifically highlighting the B367 Coldharbour Road/Newark Lane southbound corridor.

4.6 Increase in RFC

4.6.1 **Tables 4.6** to **4.8** present the top 10 links in each of the three green belt forecast scenarios that have the largest RFC values of all links in the borough of Woking. The flows and LOS values are also presented for each scenario in question, as well as 2026 scenario B, which acts as a reference case for all green belt scenarios.

4.6.2 All ten links listed as having the largest RFC values are greater than 1 in all three green belt scenarios as well as the reference case of scenario B and subsequently all links within **Tables 4.6** to **4.8** are to provide a LOS categorised as F, suggesting high levels of congestion and flow breakdown to be experienced on the stated links.

4.6.3 **Tables 4.6** to **4.8** indicate that all RFC values of the stated links show very little variation from the reference case of scenario B. Congestion on the referred links is forecast to either remain constant, show minimal signs of improvement or minimal signs of worsening. This along with other information provided in **Tables 4.6** to **4.8**, infers that the greatest RFC values are not present on links forecast to experience the largest increases in traffic flow from the green belt sites, but on links with existing congestion issues in scenario B. For example, the link with the largest RFC value in all three green belt scenarios, (the B382 Woking Road northbound at Pyrford), is to experience increases in flow of no more than approximately 20 vehicles per hour (relating to a 2% increase). The RFC values of this link were already very high in 2026 scenario B as a result of background growth to this forecast year as well as the borough's committed and planned development contained within the Core Strategy. This indicates that congestion which is apparent in 2026 scenario B is to be further exacerbated by increases in traffic flow generated from the proposed green belt releases.

4.6.4 All three green belt scenarios assessed in this study are forecast as having similar links with the greatest RFC values in the borough of Woking. The links with the greatest RFC values are specifically found within the following corridors: B382 Woking Road northbound at Pyrford; A245 Old Woking Road/Parvis road eastbound and westbound at West Byfleet; Monument Road northbound at Sheerwater; and A247 High Street eastbound at Old Woking.

Rank	Name	Link Ref	Flow (vph)		Absolute increase in Flow (vph)	% Increase in Flow	RFC (pcu)		LOS	
			2026 Scen B	2026 Scen D			2026 Scen B	2026 Scen D	2026 Scen B	2026 Scen D
1	B382 Woking Road northbound, Pyrford	15112, 1	1,481	1,504	23	2%	1.91	1.94	F	F
2	B382 Woking Road northbound, West Byfleet	15111, 2	1,465	1,487	22	2%	1.89	1.92	F	F
3	A245 Old Woking Road eastbound, West Byfleet	10685, 2	2,105	2,097	-8	0%	1.81	1.80	F	F
4	B382 Woking Road southbound, Pyrford	15112, 2	1,443	1,347	-96	-7%	1.90	1.77	F	F
5	A245 Old Woking Road westbound, West Byfleet	10685, 1	1,927	1,969	42	2%	1.69	1.72	F	F
6	B382 Woking Road southbound, West Byfleet	15111, 1	1,393	1,306	-87	-6%	1.83	1.72	F	F
7	Monument Road northbound, Sheerwater	16746, 2	1,367	1,324	-43	-3%	1.77	1.72	F	F
8	A247 High Street eastbound, Old Woking	15164, 1	1,274	1,280	6	0%	1.66	1.67	F	F
9	A245 Parvis Road eastbound, West Byfleet	10336, 2	1,928	1,931	3	0%	1.66	1.67	F	F
10	A245 Parvis Road westbound, West Byfleet	10336, 1	1,829	1,875	47	3%	1.61	1.64	F	F

Table 4.6: Top ten links with the highest increase in RFC values in 2026 scenario D during the weekday AM peak hour (0800 – 0900)

Rank	Name	Link Ref	Flow (vph)		Absolute increase in Flow (vph)	% Increase in Flow	RFC (pcu)		LOS	
			2026 Scen B	2026 Scen E			2026 Scen B	2026 Scen E	2026 Scen B	2026 Scen E
1	B382 Woking Road northbound, Pyrford	15112, 1	1,481	1,501	19	1%	1.91	1.94	F	F
2	B382 Woking Road northbound, West Byfleet	15111, 2	1,465	1,488	24	2%	1.89	1.92	F	F
3	A245 Old Woking Road eastbound, West Byfleet	10685, 2	2,105	2,142	37	2%	1.81	1.84	F	F
4	B382 Woking Road southbound, Pyrford	15112, 2	1,443	1,372	-71	-5%	1.90	1.80	F	F
5	B382 Woking Road southbound, West Byfleet	15111, 1	1,393	1,333	-61	-4%	1.83	1.75	F	F
6	A245 Old Woking Road westbound, West Byfleet	10685, 1	1,927	1,991	64	3%	1.69	1.74	F	F
7	Monument Road northbound, Sheerwater	16746, 2	1,367	1,321	-46	-3%	1.77	1.71	F	F
8	A245 Parvis Road eastbound, West Byfleet	10336, 2	1,928	1,926	-2	0%	1.66	1.66	F	F
9	A245 Parvis Road westbound, West Byfleet	10336, 1	1,829	1,867	38	2%	1.61	1.64	F	F
10	A247 High Street eastbound, Old Woking	15164, 1	1,274	1,248	-27	-2%	1.66	1.63	F	F

Table 4.7: Top ten links with the highest increase in RFC values in 2026 scenario E during the weekday AM peak hour (0800 – 0900)

Rank	Name	Link Ref	Flow (vph)		Absolute increase in Flow (vph)	% Increase in Flow	RFC (pcu)		LOS	
			2026 Scen B	2026 Scen F			2026 Scen B	2026 Scen F	2026 Scen B	2026 Scen F
1	B382 Woking Road northbound, Pyrford	15112, 1	1,481	1,505	23	2%	1.91	1.94	F	F
2	B382 Woking Road northbound, West Byfleet	15111, 2	1,465	1,492	27	2%	1.89	1.92	F	F
3	B382 Woking Road southbound, Pyrford	15112, 2	1,443	1,384	-59	-4%	1.90	1.82	F	F
4	A245 Old Woking Road eastbound, West Byfleet	10685, 2	2,105	2,086	-19	-1%	1.81	1.79	F	F
5	Monument Road northbound, Sheerwater	16746, 2	1,367	1,376	9	1%	1.77	1.78	F	F
6	B382 Woking Road southbound, West Byfleet	15111, 1	1,393	1,344	-49	-4%	1.83	1.76	F	F
7	A245 Old Woking Road westbound, West Byfleet	10685, 1	1,927	2,011	84	4%	1.69	1.76	F	F
8	A245 Parvis Road westbound, West Byfleet	10336, 1	1,829	1,921	92	5%	1.61	1.68	F	F
9	A247 High Street eastbound, Old Woking	15164, 1	1,274	1,269	-5	0%	1.66	1.66	F	F
10	Wych Hill Lane westbound, Mount Hermon	15180, 2	1,188	1,220	32	3%	1.55	1.59	F	F

Table 4.8: Top ten links with the highest increase in RFC values in 2026 scenario F during the weekday AM peak hour (0800 – 0900)

4.7 Increase in Junction Delay

4.7.1 **Tables 4.9** to **4.11** present increases in average junction delay, for all arms of the junction, per vehicle as well as the projected level of service value for each stated junction. Values for 2026 scenario B are also presented as a reference case for each of the three green belt forecast scenarios.

2026 Scenario D

4.7.2 **Table 4.9** presents the ten junctions which are forecast to have the greatest increase in average junction delay in scenario D, when compared to scenario B.

4.7.3 **Table 4.9** indicates that the majority of the largest increases in average junction delay in scenario D are estimated to occur at junctions in the east of the borough, specifically in the vicinity of the links that are to incur some of the largest increases, a result of the re-routing impacts generated from the green belt release in Mayford as previously explained in **paragraph 4.5.4**.

4.7.4 The junctions listed to experience the greatest increases in average delay range from 6 to 53 seconds per vehicle. The greatest increase in average delay of 53 seconds (a 196% increase) occurs at the priority junction of the B382 Old Woking Road with East Hill in Pyrford. This junction is already forecast to have a moderately high LOS value of D in the 2026 scenario B but the additional flow generated from the green belt release at Mayford is expected to worsen the LOS value to F. It should also be noted that this junction is expected to experience the largest increase in average junction delay in scenarios E and F, with similar magnitudes of increased delay per vehicle.

4.7.5 **Table 4.9** suggests that some junctions that are already forecast to generate large average delay per vehicle with poor LOS values of F in 2026 scenario B, are to deteriorate further as a result of the green belt release in Mayford exacerbating the delay at such junctions. Examples of such junctions that already had a LOS value of F in scenario B, which are to also experience some of the largest increases in junction delay are: the priority junction of Maybury Hill and Pembroke Road; Six Crossroads roundabout; signal junction of A245 Parvis Road/Woking Road with Camphill Road; and the signal junction of A322 Bagshot Road with A324 Brookwood Lye Road/Connaught Road.

2026 Scenario E

4.7.6 **Table 4.10** shows the largest increases in junction delay forecast as a result of the additional traffic flows generated from the green belt release at Pyrford and Byfleet. The majority of the junctions forecast to incur the greatest increases in average junction delay are located in the east of the borough, in the vicinity of the proposed green belt release sites assessed in scenario E.

4.7.7 Similar to scenario D the junction of the B382 Old Woking Road with East Hill is to projected to experience the largest increase in average delay per vehicle, 42 seconds (a 155% increase).

4.7.8 Two junctions on the A245 corridor, specifically the junction of A245 Parvis Road/Woking Road with Camphill Road and the junction of A245 Parvis Road with A318 Sopwith Drive, are both forecast to incur additional delay of approximately 16 seconds per vehicle in the AM peak hour, when compared to scenario B. However, it is important to note that both these junctions on the A245 already had a very poor LOS value of F in the reference case of scenario B, therefore implying that the additional trips generated from the green belt release at Pyrford and Byfleet is exacerbating an existing issue.

2026 Scenario F

4.7.9 **Table 4.11** presents the ten junctions in the borough of Woking which have been projected to experience the greatest increases in average junction delay per vehicle in scenario F, representing green belt release in West Byfleet.

4.7.10 A number of junctions shown within **Table 4.11** replicate the junctions stated within **Table 4.10**, scenario E. This is because the green belt release sites assessed in each of these two scenarios are located in very similar locations of the borough: Pyrford as well as Byfleet; and West Byfleet.

4.7.11 The ten largest increases in average junction delay in scenario F ranges from 3 to 48 seconds per vehicle.

4.7.12 The junctions to incur some of the largest increases in average delay are located on the corridors that are forecast to incur some of the largest increases in flow in scenario F. **Paragraph 4.5.12** identifies the corridors of the A245 Parvis Road/Woking Road and B367 Coldharbour Road/Newark Lane as having some of the greatest increases in flow as a result of the green belt release at West Byfleet. Consequently junctions such as the B367 Coldharbour Road/Church Hill with Pyrford Common Road, the A245 Parvis Road with A318 Sopwith Drive and the A245 Parvis Road/Woking Road with Camphill Road are listed as experiencing some of the largest delays in scenario F. This confirms a correlation between increase in flow and increase in junction delay at these locations.

4.7.13 **Figures 4.4** to **4.7** present graphical representations of the average junction delay for all modelled junctions in the borough of Woking for 2026 scenario B and all three green belt forecast scenarios during the weekday AM peak hour. Therefore **Figures 4.4 to 4.7** present information shown in **Tables 4.9** to **4.11** but for all junctions.

4.7.14 The size of the circles are proportional to the average delay forecast at each model junction, thus allowing proportional comparisons to be made between the plots.

Rank	Name	Type	Junction Ref.	Average Junction Delay per Vehicle (secs)		Absolute Increase (secs)	LOS	
				2026 Scen B	2026 Scen D		2026 Scen B	2026 Scen D
1	B382 Old Woking Road, East Hill	Priority	98991	27	80	53	D	F
2	B367 Coldharbour Road/Church Hill, Pyrford Common Road	Priority	99715	23	61	38	C	F
3	Maybury Hill, Pembroke Road	Priority	98856	53	84	31	F	F
4	Six Crossroads Roundabout	R'about	99727-32	224	246	22	F	F
5	A320 Guildford Road, A320 Victoria Road	Priority	41953	7	25	18	A	D
6	A245 Parvis Road/Woking Road, Camphill Road	Signal	42740	105	117	12	F	F
7	Blackhorse Road, Heath House Road	Priority	99720	28	39	11	D	E
8	A322 Bagshot Road, A324 Brookwood Lye Road/Connaught Road	Signal	42679	212	221	9	F	F
9	B380 Smarts Heath Road, Smarts Heath Lane	Priority	99058	9	16	7	A	C
10	Chobham Road, High Street	Signal	41907	63	70	6	E	E

Table 4.9: Top ten junctions with the highest increases in average junction delay between 2026 scenario B and scenario D in the weekday AM peak hour (0800 – 0900)

Rank	Name	Type	Junction Ref.	Average Junction Delay per Vehicle (secs)		Absolute Increase (secs)	LOS	
				2026 Scen B	2026 Scen E		2026 Scen B	2026 Scen E
1	B382 Old Woking Road, East Hill	Priority	98991	27	69	42	D	F
2	Maybury Hill, Pembroke Road	Priority	98856	53	86	33	F	F
3	A320 Guildford Road, A320 Victoria Road	Priority	41953	7	32	25	A	D
4	Six Crossroads Roundabout	R'about	99727-32	224	249	25	F	F
5	A245 Parvis Road/Woking Road, Camphill Road	Signal	42740	105	121	17	F	F
6	A245 Parvis Road, A318 Sopwith Drive	R'about	99146	92	108	16	F	F
7	Chobham Road, High Street	Signal	41907	63	71	7	E	F
8	B367 Coldharbour Road/Church Hill, Pyrford Common Road	Priority	99715	23	29	6	C	D
9	Blackhorse Road, Heath House Road	Priority	99720	28	33	5	D	D
10	B380 Smarts Heath Road, Smarts Heath Lane	Priority	99058	9	13	5	A	B

Table 4.10: Top ten junctions with the highest increases in average junction delay between 2026 scenario B and scenario E in the weekday AM peak hour (0800 – 0900)

Rank	Name	Type	Junction Ref.	Average Junction Delay per Vehicle (secs)		Absolute Increase (secs)	LOS	
				2026 Scen B	2026 Scen F		2026 Scen B	2026 Scen F
1	B382 Old Woking Road, East Hill	Priority	98991	27	75	48	D	F
2	B367 Coldharbour Road/Church Hill, Pyrford Common Road	Priority	99715	23	66	43	C	F
3	Maybury Hill, Pembroke Road	Priority	98856	53	86	33	F	F
4	A245 Parvis Road, A318 Sopwith Drive	R'about	99146	92	120	28	F	F
5	Six Crossroads Roundabout	R'about	99727-32	224	236	12	F	F
6	A245 Parvis Road/Woking Road, Camphill Road	Signal	42740	105	116	11	F	F
7	B380 Smarts Heath Road, Smarts Heath Lane	Priority	99058	9	20	11	A	C
8	A320 Claremont Avenue, A247 Kingfield Road/Wych Hill Lane	Priority	41577	44	49	5	E	E
9	A320 Guildford Road, A320 Victoria Road	Priority	41953	7	12	5	A	B
10	Wych Hill Lane, York Road	Priority	98866	22	25	3	C	D

Table 4.11: Top ten junctions with the highest increases in average junction delay between 2026 scenario B and scenario F in the weekday AM peak hour (0800 – 0900)

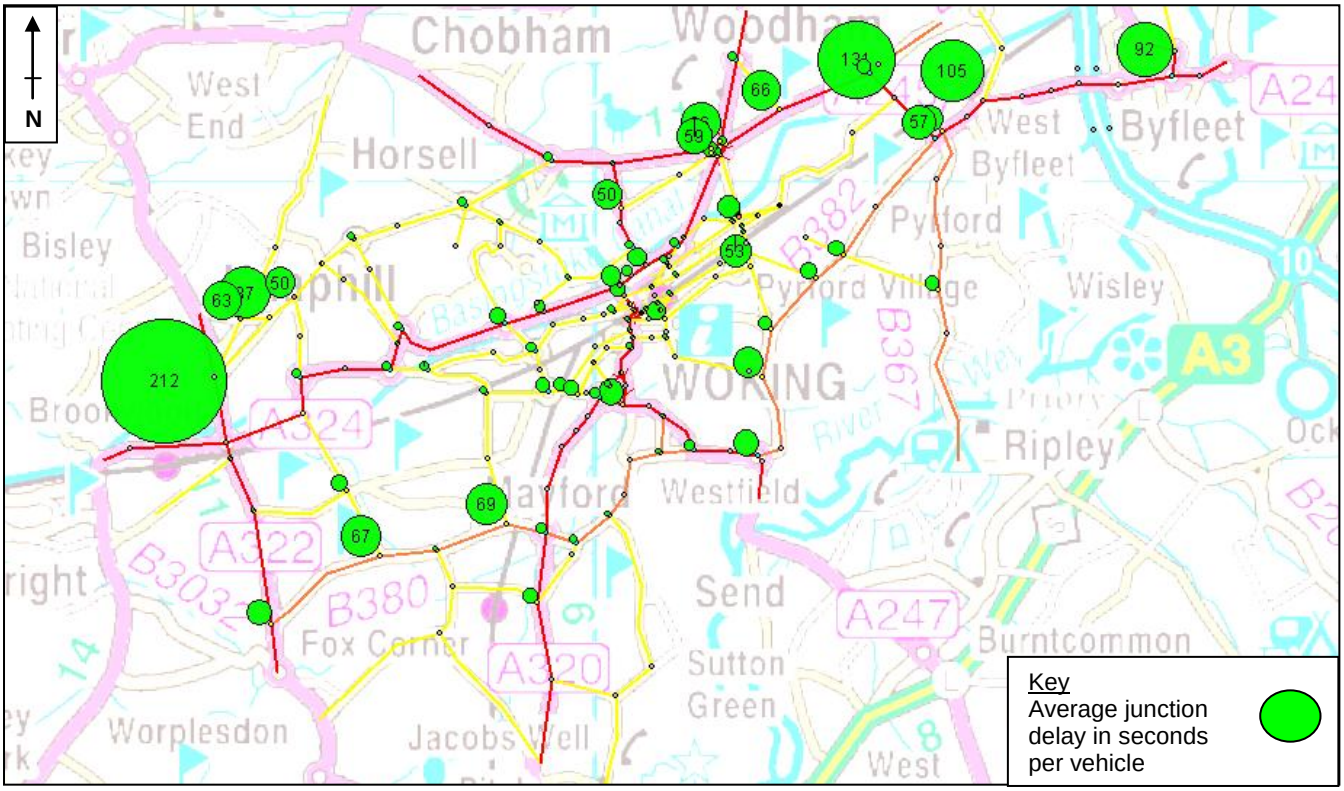


Figure 4.4: 2026 scenario B average junction delay for the weekday AM peak hour (0800 -0900)

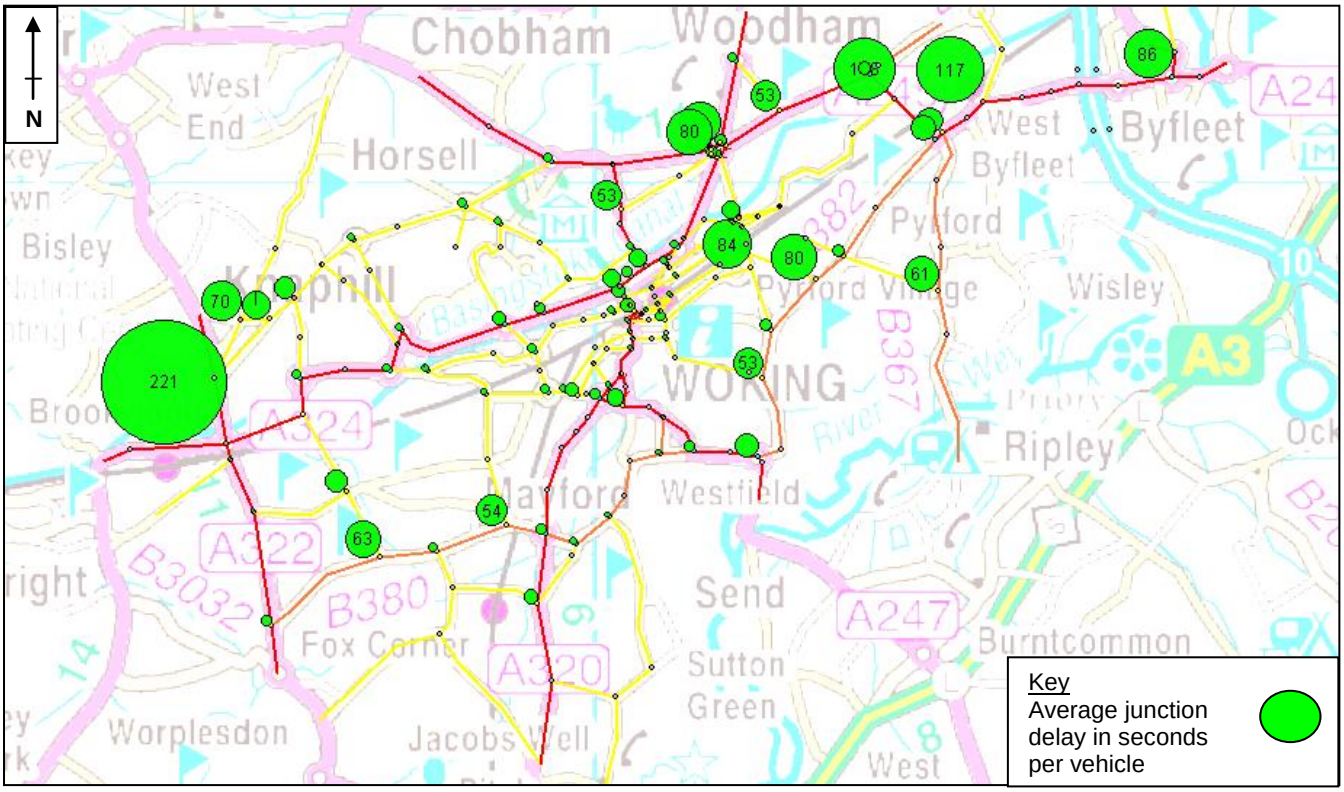


Figure 4.5: 2026 scenario D average junction delay for the weekday AM peak hour (0800 – 0900)

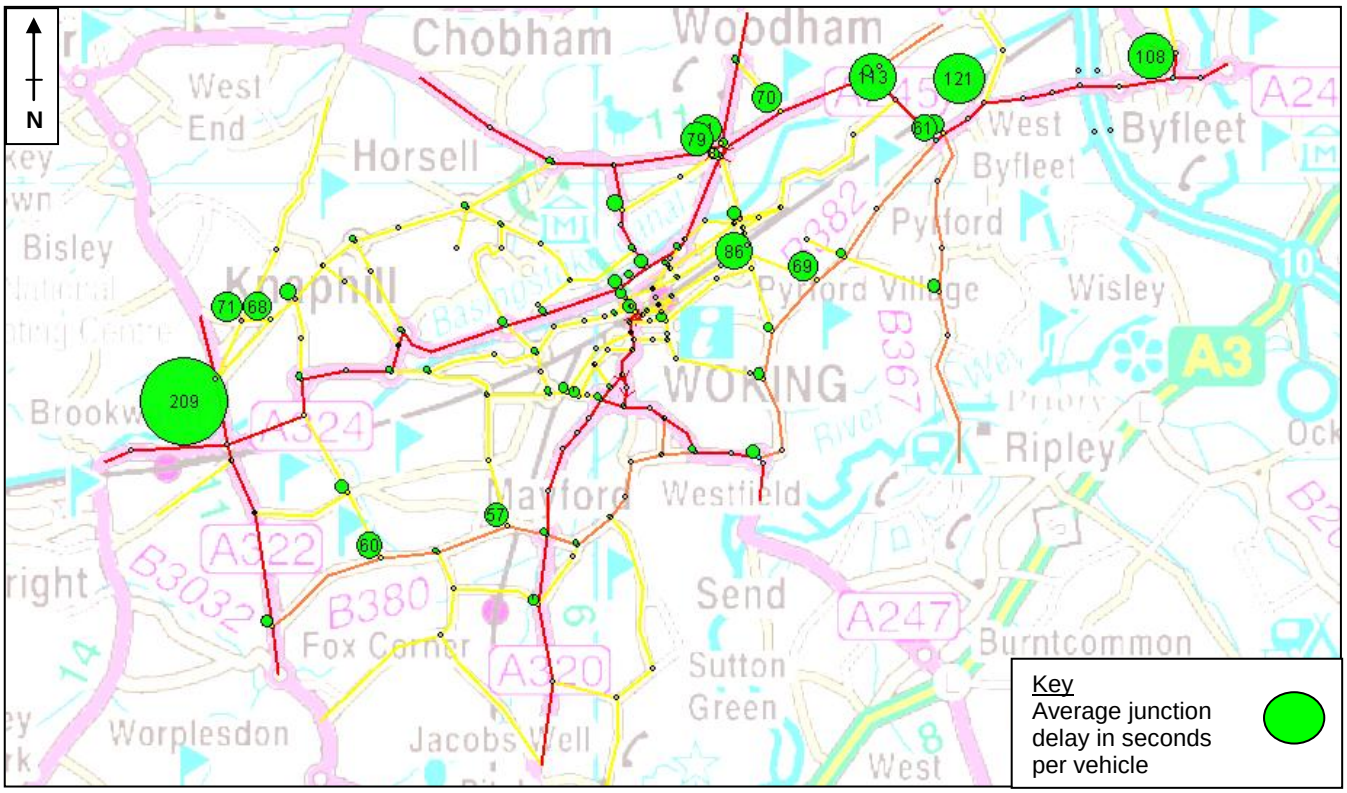


Figure 4.6: 2026 scenario E average junction delay for the weekday AM peak hour (0800 – 0900)

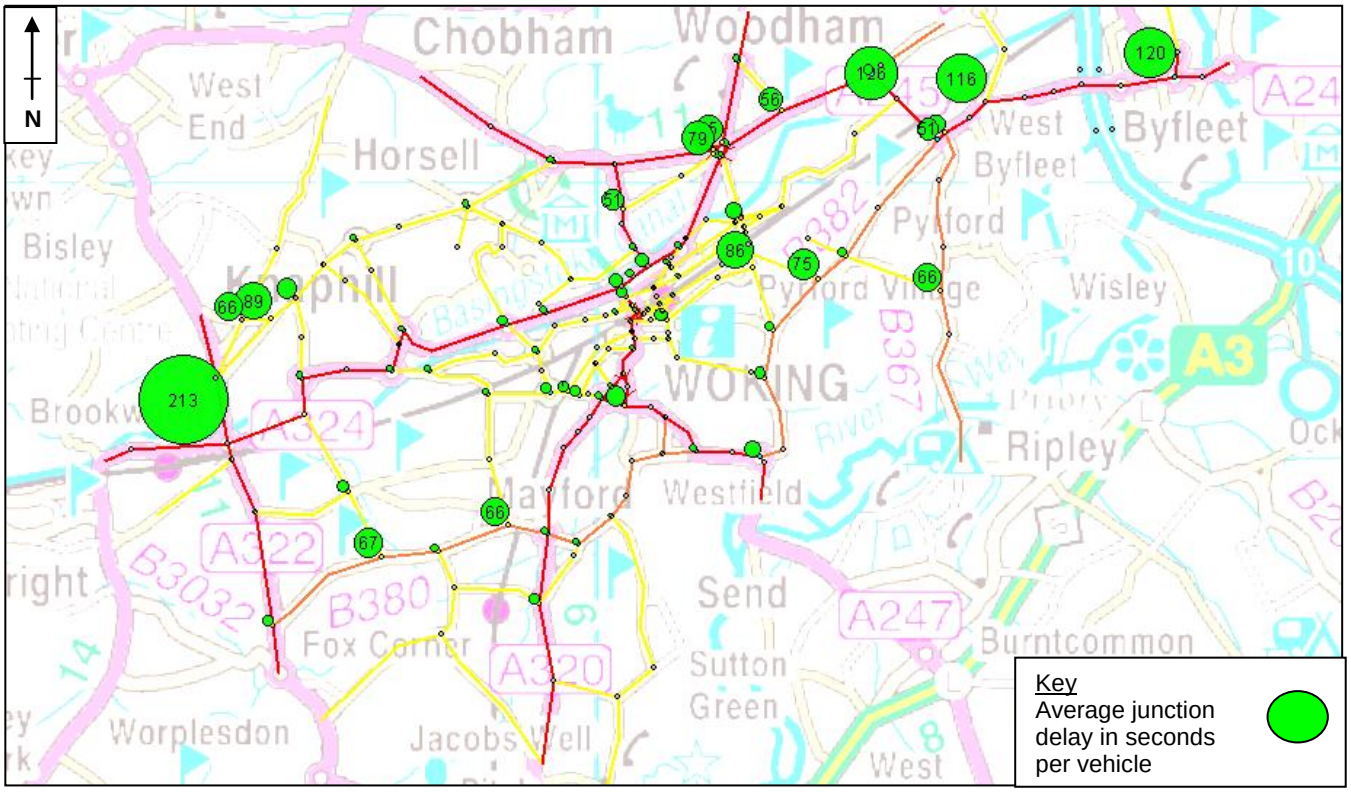


Figure 4.7: 2026 scenario F average junction delay for the weekday AM peak hour (0800 – 0900)

4.8 Journey Times along Key Routes

4.8.1 Journey times along some key routes within the borough of Woking have been compared between the reference case of scenario B and all green belt forecast scenarios, as displayed in **Table 4.12**. The routes that have been analysed are: the A320; A247; A245; and A324. Only these routes have been analysed as they are thought to be the primary routes travelling in north to south and east to west directions through the borough.

4.8.2 **Table 4.12** indicates that the green belt development at Mayford causes the journey time on the A320 in a northbound and southbound direction of travel to increase by a projected 30 seconds (3% increase). The A320 is the principal A road located in closest proximity to the green belt release site assessed in scenario D, and consequently it is unsurprising that this corridor is impacted by a minimal increase in travel time.

4.8.3 However, the green belt development at Mayford, (scenario D), is projected to generate vehicles to seek alternative routes due to an increase in vehicles in the south of the borough, as previously explained in **Sections 4.5** and **4.7.** This explains why some routes such as the A247 are projected to experience a minor decrease in journey time, with reductions no larger than 5%.

4.8.4 The time taken to travel the A245 corridor in a westbound direction is to increase the most as a result of the green belt release site assessed in scenario E, land at Pyrford and Byfleet. The journey time of the A245 westbound is projected to increase by 44 seconds, although this is thought to be a minimal amount as it relates to a 3% increase when compared to the reference case of 2026 scenario B. The A245 is located in close proximity to the green belt sites included in scenario E explaining the increase in journey time on this route. **Table 4.12** does indicate that some routes such as the A247 are projected to experience a reduction in journey times by up to 14% (approximately 49 seconds) but this is thought to be a result of minor re-routing occurring on links in proximity to the green belt site.

4.8.5 **Table 4.12** indicates that the proposed green belt development at West Byfleet, represented in scenario F, is thought to have minimal impacts on the journey times of all principal A roads analysed in this study. The largest increase in journey time projected to occur in scenario F is 26 seconds, a 2% increase, on the A245 westbound corridor during the AM peak hour. An increase in journey time on the A245 correlates with the location of the proposed green belt site.

Route	Start Point	End Point	Length (km)	Modelled Journey Times (mins:secs)				Difference from 2026 Scenario B (mins:secs)			Percentage Change from 2026 Scenario B		
				2026 Scen B	2026 Scen D	2026 Scen E	2026 Scen F	2026 Scen D	2026 Scen E	2026 Scen F	2026 Scen D	2026 Scen E	2026 Scen F
A320 NB	Burdenshott Road	Martyr's Lane	9.5	19:27	19:58	20:04	19:39	00:30	00:37	00:12	3%	3%	1%
A320 SB	Martyr's Lane	Burdenshott Road	9.6	18:03	18:34	18:45	17:47	00:30	00:41	-00:16	3%	4%	-2%
A247 EB	A320 Guildford Road	B382 Old Woking Road	2.2	05:50	05:34	05:00	05:50	-00:16	-00:49	00:00	-4%	-14%	0%
A247 WB	A320 Guildford Road	A320 Guildford Road	2.2	04:48	04:34	04:10	04:53	-00:14	-00:38	00:05	-5%	-13%	2%
A245 EB	A3046 Chobham Road	B374 Brooklands	8.2	22:28	21:30	22:46	22:23	-00:58	00:18	-00:05	-4%	1%	0%
A245 WB	B374 Brooklands	A3046 Chobham Road	8.3	23:28	22:59	24:12	23:53	-00:29	00:44	00:26	-2%	3%	2%
A324 EB	B3012 Gole Road	A320 Victoria Way	7.7	17:16	17:15	17:02	17:09	-00:01	-00:14	-00:08	0%	-1%	-1%
A324 WB	A320 Victoria Way	B3012 Gole Road	7.7	17:14	17:26	17:13	17:06	00:13	-00:01	-00:08	1%	0%	-1%

Table 4.12: Journey time comparison on key route for the weekday AM peak hour (0800 – 0900)

4.9 Strategic Road Network (SRN)

4.9.1 The borough of Woking does not contain any sections of the strategic road network. However, it is located in relative proximity to junctions of the A3 and M25, with the A3 traversing south of the borough through the borough of Guildford. The M25 is located to the east of Woking, which is also contained in Guildford borough as well as neighbouring Runnymede borough.

4.9.2 The junctions of the A3 that are located close to the southern boundary of Woking borough are: Burntcommon (A3 with B2215 London Road and A247 Clandon Road); and Ockham Interchange (A3 with B2215 Portsmouth Road and B2039 Ockham Road).

4.9.3 The junctions of the M25 that are located to the east of the Woking borough boundary are: M25 junction 10 Wisley Interchange (M25 with A3); and M25 junction 11 (M25 with A320 St. Peter's Way).

4.9.4 **Table 4.13** presents the modelled link flows for the on and off slip roads of the specified A3 and M25 junctions, by direction, together with the predicted changes in flow from the 2026 scenario B for each of the three green belt forecast scenarios.

4.9.5 **Table 4.14** presents the estimated RFC values for the stated strategic road network access and egress links. A value between 0.85 and 1, suggests the stretch of road is beginning to struggle with the weight of traffic causing delay, queues and driver stress. It should be noted that the RFC values represent the ratio of flow to capacity of the slip roads in question not the junctions that the slips feed into/from.

4.9.6 All three of the green belt sites are projected to have a minimal impact on the strategic road network in the vicinity of Woking borough. Traffic flows utilising the on and off slips of the specified A3 and M25 junctions are thought to either remain constant, or increase/decrease by no more than approximately 35 vehicles per hour.

4.9.7 Therefore, it is estimated that if green belt land was developed in any of the three locations assessed in this study it is thought that a minor amount of additional traffic generated from the developments would utilise the strategic road network in the vicinity of Woking.

4.9.8 Due to the forecast impacts on the strategic road network being minimal it was not thought necessary to undertake any further analysis, such as merge and diverge layout assessments, at the time of this study being undertaken.

Link Ref.	Name	Flow (vph)				Difference from 2026 Scenario B		
		2026 Scen B	2026 Scen D	2026 Scen E	2026 Scen F	2026 Scen D	2026 Scen E	2026 Scen F
12275,2	M25 Junction 10 Wisley Interchange on slip clockwise	2,768	2,762	2,795	2,776	-6	27	8
11929,1	M25 Junction 10 Wisley Interchange off slip clockwise	1,712	1,655	1,729	1,699	-57	17	-13
9452,1	M25 Junction 10 Wisley Interchange on slip anti-clockwise	1,382	1,386	1,375	1,387	3	-7	4
10437,1	M25 Junction 10 Wisley Interchange off slip anti-clockwise	2,103	2,116	2,099	2,104	13	-4	2
12281,2	M25 Junction 11 on slip clockwise	909	918	915	926	9	6	17
10707,1	M25 Junction 11 off slip clockwise	1,601	1,609	1,604	1,614	8	3	13
16474,2	M25 Junction 11 on slip anti-clockwise	1,230	1,213	1,237	1,189	-17	6	-41
16473,1	M25 Junction 11 off slip anti-clockwise	1,241	1,218	1,218	1,243	-23	-23	2
15577,2	A3 Ockham on slip northbound	1,198	1,208	1,218	1,200	10	20	2
15576,1	A3 Ockham off slip southbound	556	549	579	567	-7	23	11
9504,1	A3 Burntcommon off slip northbound	1,561	1,553	1,541	1,555	-8	-20	-6
15493,2	A3 Burntcommon on slip southbound	543	565	580	573	22	37	30

Table 4.13: Flows for the strategic slip roads in the vicinity of Woking borough during the weekday AM peak hour (0800 – 0900)

Link Ref.	Name	RFC (pcu)			
		2026 Scen B	2026 Scen D	2026 Scen E	2026 Scen F
12275,2	M25 Junction 10 Wisley Interchange on slip clockwise	0.78	0.78	0.78	0.78
11929,1	M25 Junction 10 Wisley Interchange off slip clockwise	0.49	0.48	0.50	0.49
9452,1	M25 Junction 10 Wisley Interchange on slip anti-clockwise	0.40	0.40	0.40	0.40
10437,1	M25 Junction 10 Wisley Interchange off slip anti-clockwise	0.60	0.61	0.60	0.60
12281,2	M25 Junction 11 on slip clockwise	0.27	0.27	0.27	0.27
10707,1	M25 Junction 11 off slip clockwise	0.49	0.49	0.49	0.49
16474,2	M25 Junction 11 on slip anti-clockwise	0.34	0.33	0.34	0.33
16473,1	M25 Junction 11 off slip anti-clockwise	0.34	0.33	0.33	0.34
15577,2	A3 Ockham on slip northbound	0.36	0.36	0.37	0.36
15576,1	A3 Ockham off slip southbound	0.17	0.17	0.18	0.18
9504,1	A3 Burntcommon off slip northbound	0.48	0.47	0.47	0.47
15493,2	A3 Burntcommon on slip southbound	0.47	0.49	0.51	0.50

N.B. Presented RFC values represent the ratio of flow to capacity of the slip road in question not the junctions that the slip feeds into/from.

Table 4.14: RFC values for the strategic slip roads in the vicinity of Woking borough during the weekday AM peak hour (0800 – 0900)

4.10 Cross Boundary Impacts

4.10.1 As well as considering the potential traffic impacts generated from the borough's potential green belt release, it is important to consider such impacts on the highway network within neighbouring local authorities.

4.10.2 As such, proposed increases in flow on key links crossing Woking's boundary have been specifically assessed in comparison to 2026 scenario B, for all three green belt forecast scenarios.

4.10.3 **Table 4.15** displays the projected flows for specific links located at the borough boundary that facilitate vehicles travelling from Woking into, and through, neighbouring authorities. **Figure 4.8** illustrates the locations of cross boundary links presented in **Table 4.15**.

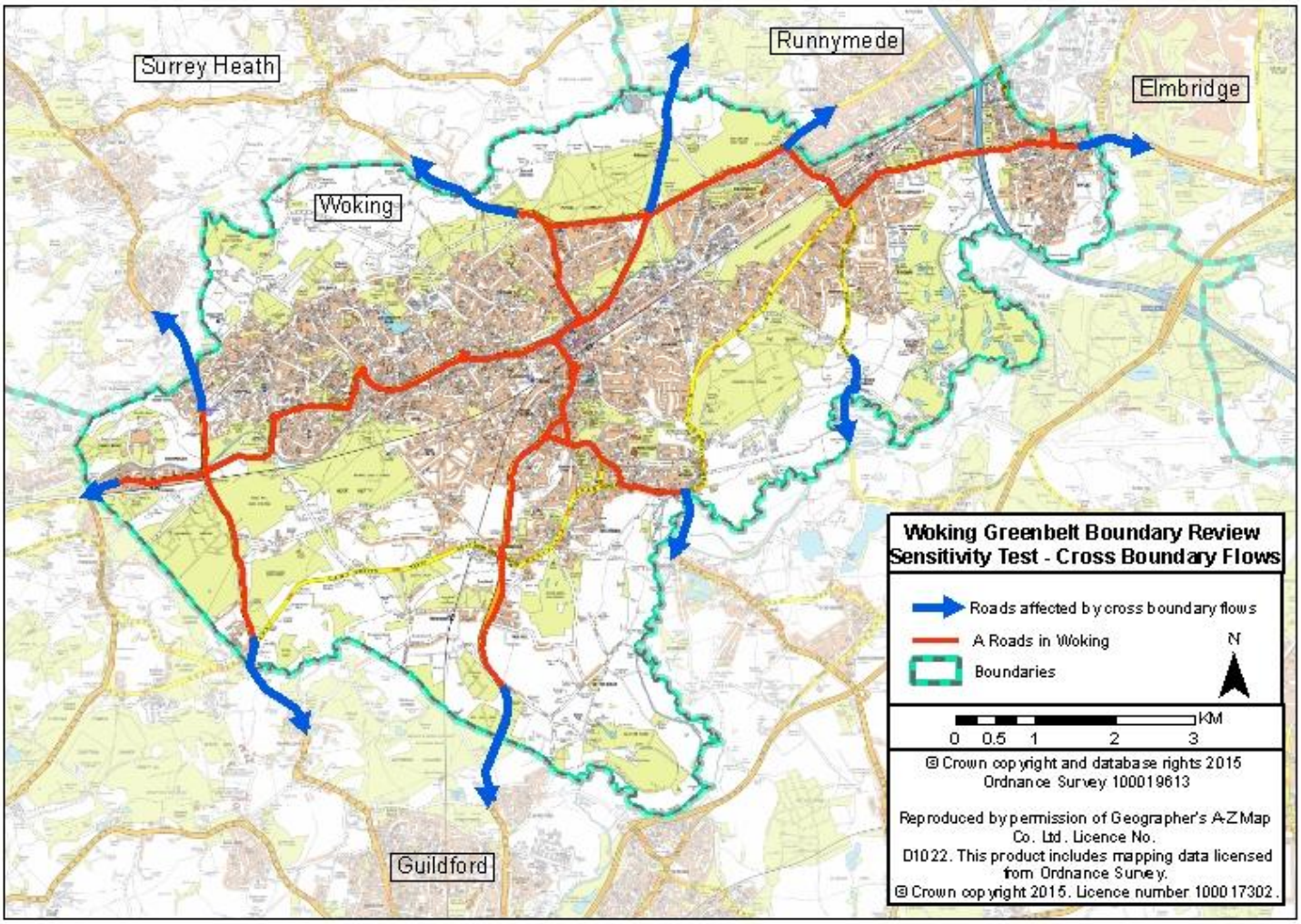


Figure 4.8: Location of major cross boundary links from Woking to neighbouring local authorities

Link Ref.	Name	Direction of Travel	Local Authority Trips Travelling to	Flow (vph)				Difference from 2026 Scenario B			RFC (pcu)			
				2026 Scen B	2026 Scen D	2026 Scen E	2026 Scen F	2026 Scen D	2026 Scen E	2026 Scen F	2026 Scen B	2026 Scen D	2026 Scen E	2026 Scen F
15363, 2	A320 Guildford Road	Northbound	Runnymede	1,082	1,106	1,074	1,110	24	-9	28	0.94	0.96	0.93	0.96
10322, 2	B385 Woodham Lane	Northbound	Runnymede	1,586	1,664	1,650	1,630	78	65	45	0.97	1.01	1.00	0.99
16663, 2	A245 Byfleet Road	Eastbound	Elmbridge	1,810	1,809	1,875	1,778	-1	65	-33	1.11	1.11	1.15	1.09
16705, 2	B367 Newark Lane	Southbound	Guildford	752	877	871	919	125	120	167	0.46	0.54	0.54	0.57
16698, 2	A247 Broadmead Road	Southbound	Guildford	712	669	654	657	-43	-58	-55	0.44	0.42	0.41	0.41
15896, 2	A320 Guildford Road	Southbound	Guildford	1,057	1,000	1,031	1,000	-57	-26	-57	0.79	0.75	0.77	0.75
9870, 1	A322 Worplesdon Road	Southbound	Guildford	1,185	1,226	1,217	1,174	40	32	-11	1.04	1.08	1.07	1.03
11101, 2	A324 Connaught Road	Westbound	Guildford	1,191	1,196	1,233	1,152	5	42	-39	1.07	1.08	1.11	1.04
14524, 2	A322 Guildford Road	Northbound	Surrey Heath	969	1,024	991	969	55	22	1	0.85	0.89	0.87	0.85
14719, 2	A3046 Chobham Road	Northbound	Surrey Heath	956	960	921	946	4	-34	-10	0.83	0.84	0.80	0.82

Table 4.15: Cross boundary impacts generated from potential green belt release during the weekday AM peak hour (0800 – 0900)

4.10.4 **Table 4.15** indicates that all three of the green belt release scenarios have similar projected impacts on cross boundary traffic flows to neighbouring local authorities. In general the cross boundary impacts generated from the green belt releases are thought to be minimal, as flows on stated links are either to remain constant, experience a minimal increase or decrease in flow during the weekday AM peak hour.

4.10.5 The greatest cross boundary flow projected to occur is on the B367 Newark Lane travelling in a southbound direction into the borough of Guildford, in all of the green belt scenarios, with an increase in flow ranging between approximately 120 to 170 vehicles per hour (a maximum increase of 22%). Scenario F is estimated to generate the largest of the cross boundary flows on this road. However, it should be noted that even with this link forecast to incur increases in flow, the level of congestion is not thought to increase by a vast amount as the RFC value is 0.46 in 2026 scenario B and increases to 0.57 in scenario F.

4.10.6 As previously highlighted, the location of the green belt sites is expected to have a minor impact on the routing of vehicles travelling in the borough of Woking. Such re-routing impacts are displayed by analysing the cross boundary flows. In all scenarios a minor decrease in flow, no more than approximately 60 vehicles per hour (8%), is apparent on both the A320 and A247 in a southbound direction of travel but a similar increase in flow is apparent on the B367 Newark Lane southbound corridor. Therefore, it is assumed that not only will each of the green belt scenarios generate additional trips, but such increases in trips may also impact on the routing in Woking.

4.10.7 A number of the cross boundary links displayed in **Table 4.15** are forecast as having RFC values greater than 0.85. This implies that the amount of flow travelling out of the borough on the links, such as the A245 Byfleet Road, is near to or does exceed the links theoretical capacity, suggesting that congestion will occur on these sections of the highway network in the AM peak hour. However, **Table 4.15** indicates that such high RFC values were already forecast to occur on such links in the reference case of 2026 scenario B. Therefore such estimated high RFC values on cross boundary links are not just attributed to the proposed green belt releases. Such projected congestion and capacity issues could be related to an existing problem, committed or planned development contained in the borough's Core Strategy or from general growth to 2026 in the surrounding area.

4.10.8 As cross boundary flows out of Woking borough are forecast to occur as a result of the varying green belt developments, it is important to note that such increases in flow could also impact on junctions outside of the borough. This assessment only analyses traffic impacts generated on the highway network in Woking, although it is feasible that junctions outside of the borough could potentially be impacted by cross boundary flows. For example, the cross boundary flow projected on the A245 Byfleet Road eastbound in scenario E could potentially impact on the operation of the junction of A245 Byfleet Road with B365 Seven Hills Road. Similarly the cross boundary flows projected southbound on the B367 Newark lane could potentially alter the operation of junctions in Ripley village in the southern neighbouring borough of Guildford. Therefore it is advised that cross boundary flows and potential impacts on junctions external to Woking, are analysed in greater detail when identifying a preferred option of green belt development.

4.10.9 It should be noted that the forecasting utilised for areas external to Woking borough was obtained from national forecasts as stated in **Section 3.5**. Traffic growth in neighbouring local authorities was therefore taken into account but not in

the same amount of detail, as TEMPRO was used. Hence, potential developments that may occur within neighbouring Local Plans, such as the Wisley Airfield development at Guildford, will not have been considered in detail in this assessment. As such the analysis of cross boundary flows travelling into or through the borough Woking, generated from potential neighbouring local authorities' large developments, has not been assessed in relation to Woking's proposed green belt developments.

4.11 Network Hotspots and Mitigation

4.11.1 To summarise the traffic impacts identified in this study **Table 4.16** lists the junctions and sections of roads which are forecast to experience the greatest increases in flow and vehicle delay in all three green belt scenarios when compared to the reference case of scenario B, during the weekday AM peak hour. Such areas where flow and delay is to increase have been termed 'hotspots'. The hotspots are either existing problem areas that are further exacerbated by the green belt scenarios or are new problem areas.

4.11.2 **Figures 4.9** to **4.11** are graphical representations of **Table 4.16**, and as such map the links and junctions forecast to be under most stress in each of the green belt scenarios.

Area	Type	Location	Scenario		
			D	E	F
Pyrford	Link	B367 Coldharbour Road/Newark Lane, southbound	✓	✓	✓
	Junction	B382 Old Woking Road with East Hill	✓	✓	✓
	Junction	B367 Coldharbour Road/Church Hill with Pyrford Common Road	✓	X	✓
West Byfleet	Link	A245 Parvis Road/Old Woking Road, westbound	X	X	✓
	Junction	A245 Parvis Road/Old Woking Road with Camphill Road	✓	✓	✓
	Junction	A245 Parivs Road with A318 Sopwith Drive	X	✓	✓
Mount Hermon	Link	Wych Hill Lane, eastbound	✓	✓	✓
	Link	York Road, northbound	X	✓	✓
Horsell	Link	High Street/Horsell Birch, southbound	✓	X	X
Maybury	Junction	Maybury Hill with Pembroke Road	✓	✓	✓
	Junction	Six Crossroads Roundabout	✓	✓	✓
Town Centre	Junction	A320 Guildford Road with A320 Victoria Road	✓	✓	X

Table 4.16: 2026 green belt scenario network hotspots, weekday AM peak hour (0800 – 0900)

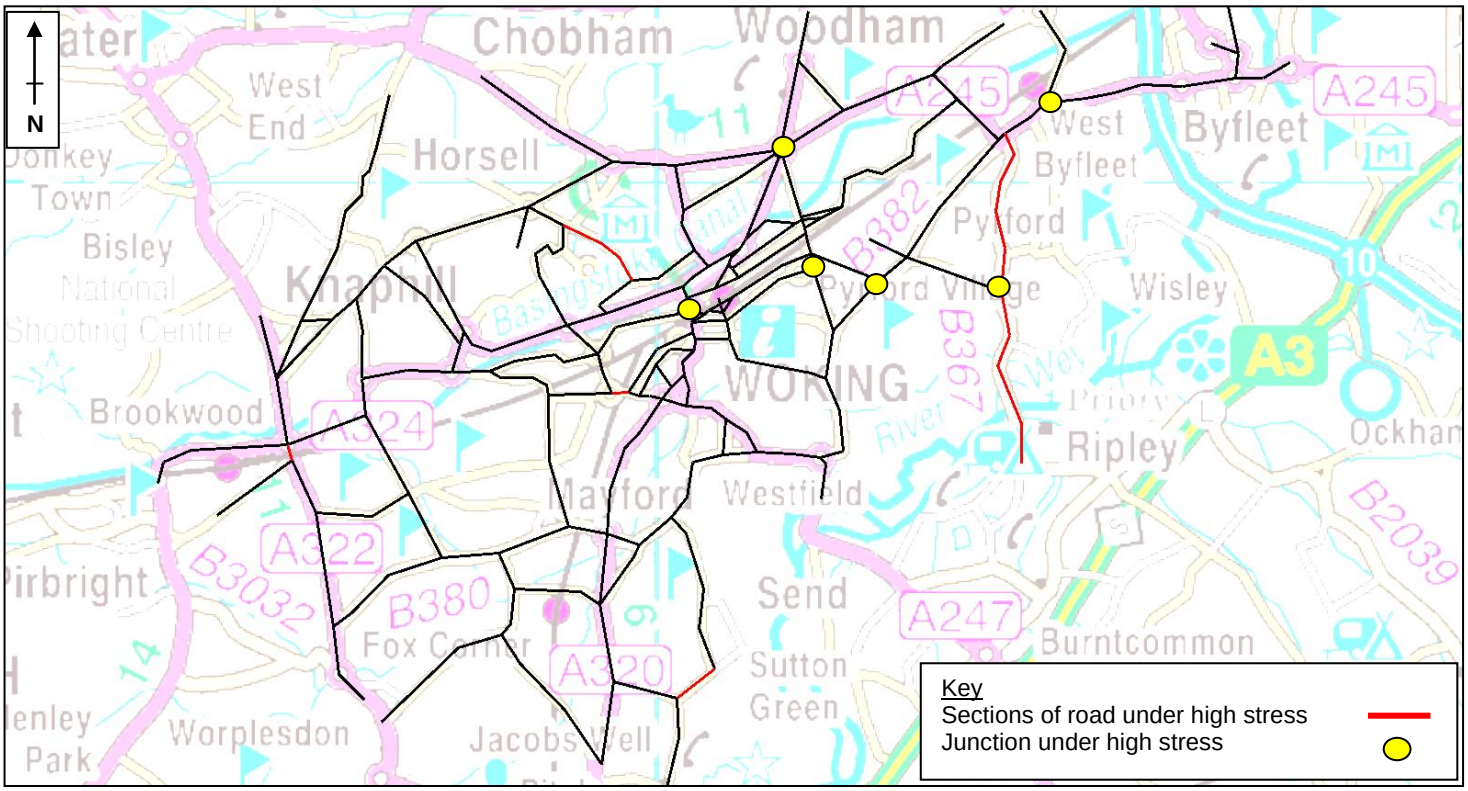


Figure 4.9: 2026 scenario D network hotspots, weekday AM peak hour (0800 – 0900)

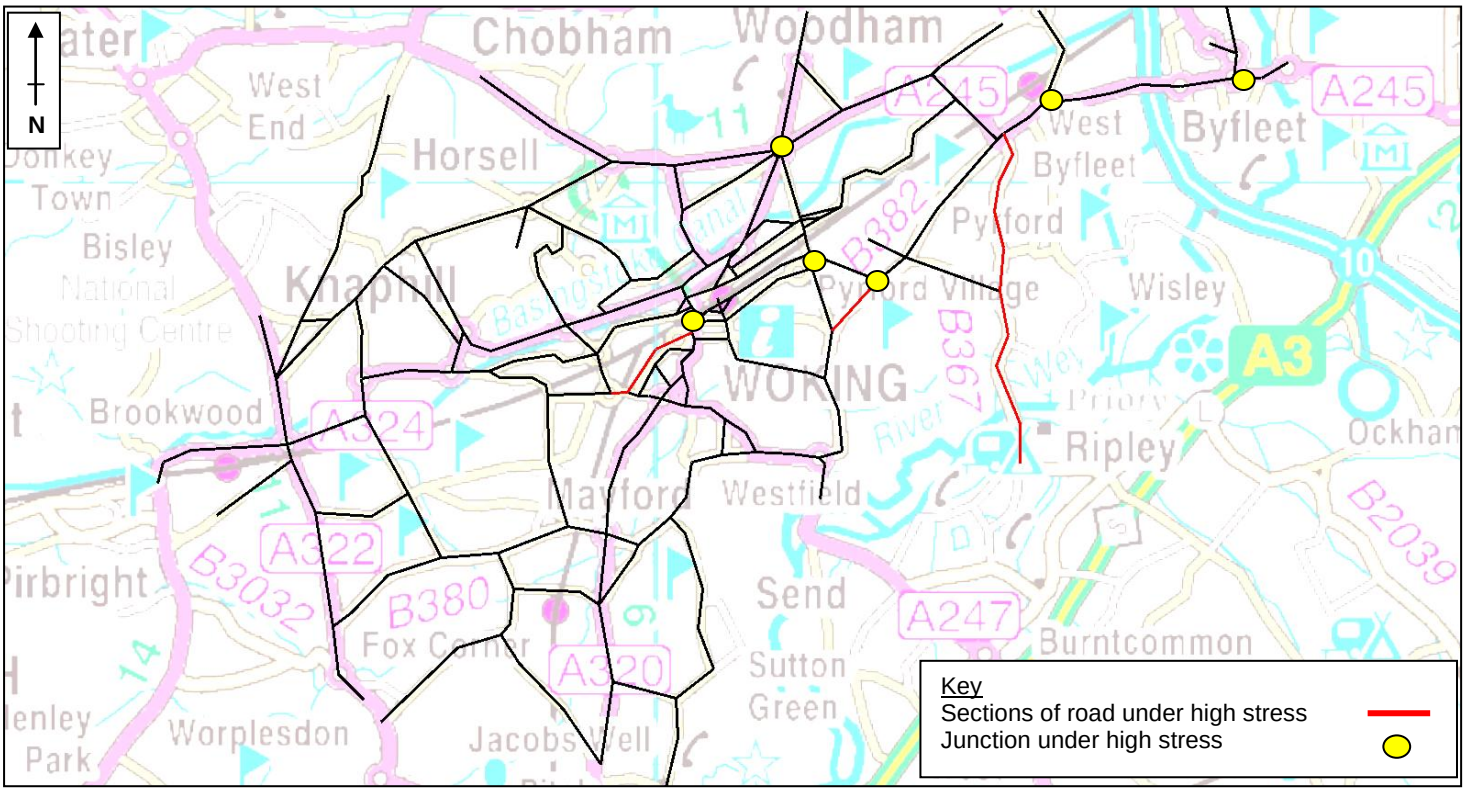


Figure 4.10: 2026 scenario E network hotspots, weekday AM peak hour (0800 – 0900)

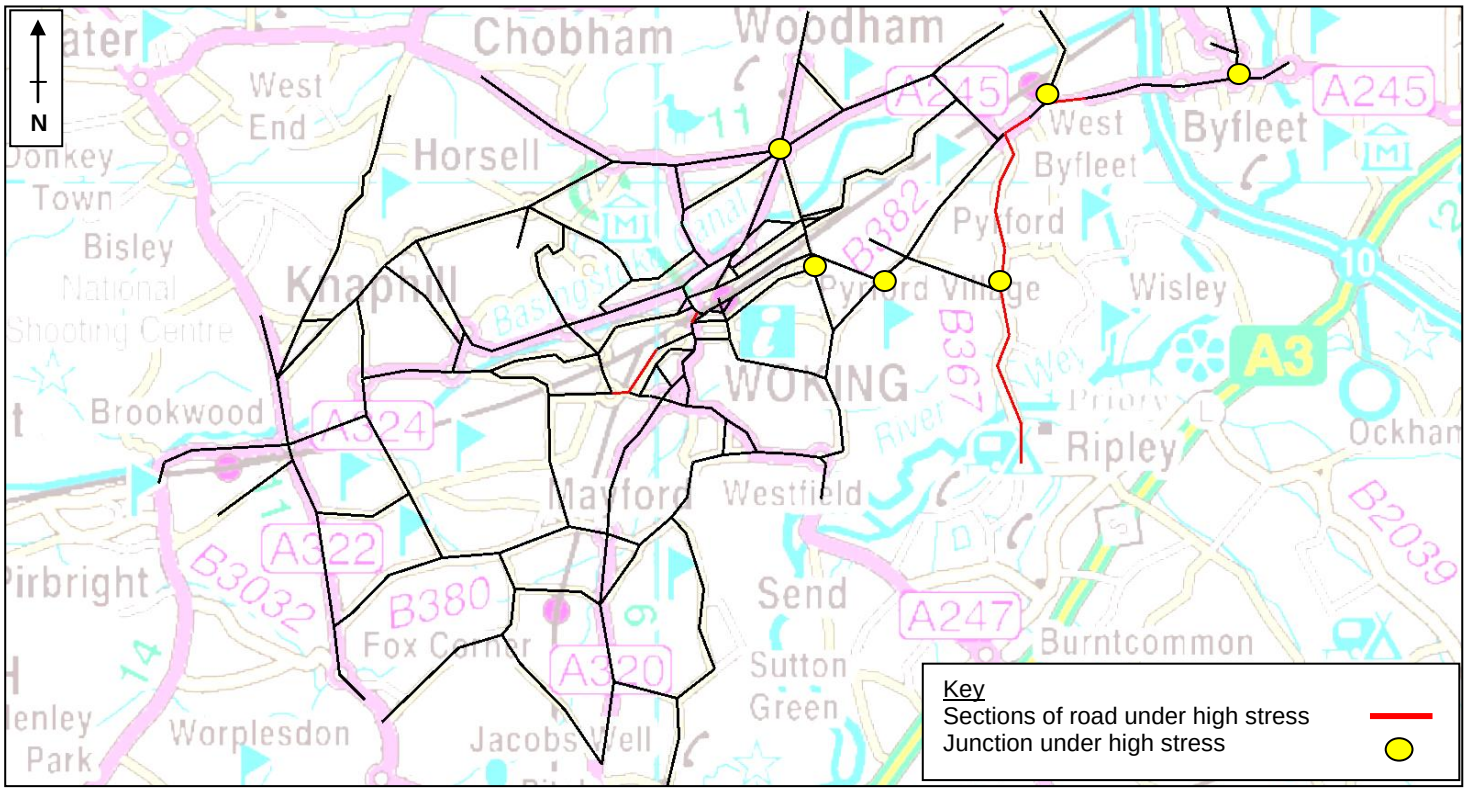


Figure 4.11: 2026 scenario F network hotspots, weekday AM peak hour (0800 – 0900)

4.11.3 **Table 4.16** summarises the links and junctions stated in **Tables 4.3** to **4.5** and **4.9** to **4.11**. Such tables present the areas of the highway network estimated to incur the largest increases in flow and average junction delay as a result of the proposed green belt sites being assessed. Therefore **Table 4.16**, as well as all the aforementioned tables, only list those links and junctions that experience the largest increases in flow and average delay arising from each scenario, these being termed 'hotspots'. For example, the green belt release sites in Pyrford and Byfleet as well as the site in West Byfleet, represented by scenarios E and F, have the greatest impact on links and junctions in the east of the borough that are in close proximity to the sites, such as Pyrford, West Byfleet and Maybury. It is possible for other areas of the highway network, from those already stated, to incur additional delay but of a smaller scale.

4.11.4 However, it is not just links and junctions that are located in the vicinity of the green belt sites that are projected to be impacted most. Scenario D, representing the green belt site at Mayford in the south of the borough, is estimated to impact on links and junctions in the east of the borough too. This is due to additional development impacting on the routing that vehicles use due to increases in flow generating additional congestion.

4.11.5 Hotspots are areas of stress where drivers are subject to considerable delay and are likely to require mitigation to facilitate any new development in the local area. This could be 'hard' or 'soft' measures, or most likely a combination of both. Hard engineering measures could involve increasing the number of lanes of the carriageway or introducing a cycle lane, whilst soft measures could be the implementation of a travel plan to encourage travel by sustainable modes.

All such methods of mitigation should be considered when examining the feasibility of the proposed green belt sites in Woking, in conjunction with the scale and nature of the traffic impacts presented by this study.

5 NEW DCLG GUIDANCE FOR PLAN MAKING IN RELATION TO TRASNPORT EVIDENCE

5.1.1 The Department for Communities and Local Government (DCLG) released new Planning Practice Guidance in October 2014 entitled "Transport Evidence Bases in Plan Making[1]."

5.1.2 The guidance emphasises the importance of local authorities undertaking robust transport assessments to understand and assess the potential implications of varying forecast development scenarios within Local Plans.

5.1.3 The October 2014 guidance states that to support decision making surrounding developments contained in local authorities Local Plans, it is important to consider the following key transport impacts:

- proposed impacts on the highway network;
- improvements to sustainable transport as well as shift to these modes where appropriate;
- accessibility; and
- opportunities to reduce the need to travel where appropriate.

5.1.4 This strategic transport assessment focuses on the highway impacts of proposed green belt developments in Woking's Local Plan only. Therefore it does not interrogate the potential effects on sustainable travel and accessibility. Consequently it is recommended that further analysis is undertaken, focusing on sustainable travel and accessibility, to support this highway assessment and to ensure decision making, with regards to transport, is fully informed whilst following latest government guidance.

[1] http://planningguidance.planningportal.gov.uk/blog/guidance/transport-evidence-bases-in-plan-making/transport-evidence-bases-in-plan-making-guidance/

6 SUMMARY

6.1.1 The traffic impacts of deliverable green belt release sites have been assessed using Surrey County Council's strategic highway transport model for the forecast year of 2026.

6.1.2 Only the weekday AM peak hour was considered in this study.

6.1.3 Three potential green belt scenarios were created and compared against a reference case which contains all committed and planned development in Woking Borough Council's adopted Core Strategy, as well as growth in traffic in the rest of the country to the forecast year of 2026. The reference case was termed 2026 scenario B in this assessment. The details of the three green belt scenarios that were assessed are as follows:

- Scenario D = contains all of the development forecast within scenario B plus 500 residential dwellings on green belt land at Mayford;
- Scenario E = contains all of the development forecast within scenario B plus 573 residential dwellings on green belt land at Byfleet and Pyrford; and
- Scenario F = contains all of the development forecast within scenario B plus 592 residential dwellings on greenbelt land at West Byfleet.

6.1.4 Scenario F contains the greatest amount of proposed dwellings on any of the identified green belt sites and therefore also contains the largest amount of forecast additional trips.

6.1.5 A number of links and junctions within the borough have been defined as 'hotspots' where drivers would be expected to experience additional delay and as such mitigation may be required to reduce the impact of the preferred green belt site. The location of such 'hotspots' vary according to the green belt scenario in question, although the majority of traffic impacts are projected to occur on links and junctions in close proximity to each of the green belt sites.

6.1.6 All three of the potential green belt locations, Mayford, Pyrford and Byfleet, as well as West Byfleet, are projected to generate traffic impacts of a similar magnitude on the highway network within the borough of Woking. However, the locations of such impacts vary slightly when looking at each green belt location.

6.1.7 The proposed green belt site at Mayford, represented in this assessment as scenario D, generates additional flows and delay in the vicinity of the site which cause some trips to alter their routing when traversing the highway network in Woking. For instance, scenario D is thought to reduce traffic travelling in a southbound direction on the A320 but then increase traffic, by a very similar amount, on the B367 southbound corridor. Thus the green belt site assessed in scenario D impacts on the southern areas of the borough such as Mayford as well as the east of the borough.

6.1.8 Scenarios E and F assess two different green belt developments that are located in similar locations, Pyrford as well as Byfleet and West Byfleet respectively. Unsurprisingly both scenarios are projected to generate a similar quantum of traffic impact on similar links and junctions. In both scenarios some of the greatest traffic impacts are estimated to occur on the A245 Parvis/Old Woking Road in both directions as well as the B367 corridor in a southbound direction of travel. Therefore it is expected that the potential green belt sites located in the west of the borough are to impose the greatest impacts on links and junctions in the surrounding area of the sites.

6.1.9 Hard and soft measures of mitigation are recommended to be explored when assessing the feasibility and sustainability of the varying green belt locations in the borough of Woking. It is also suggested that mitigation for junctions and links are not investigated in isolation, instead a holistic approach is thought preferable to ensure the impacts of the local highway network are kept to a minimum. Partnership working with neighbouring local authorities is also likely to be required for specific 'hotspots', to allow any cross boundary impacts to be reduced.

6.1.10 This study was undertaken at a strategic scale and consequently not all impacts of the green belt sites have been identified. However, it is likely that each green belt site will require an individual transport assessment to be commissioned allowing finer details regarding impacts to be analysed at a refined spatial scale.

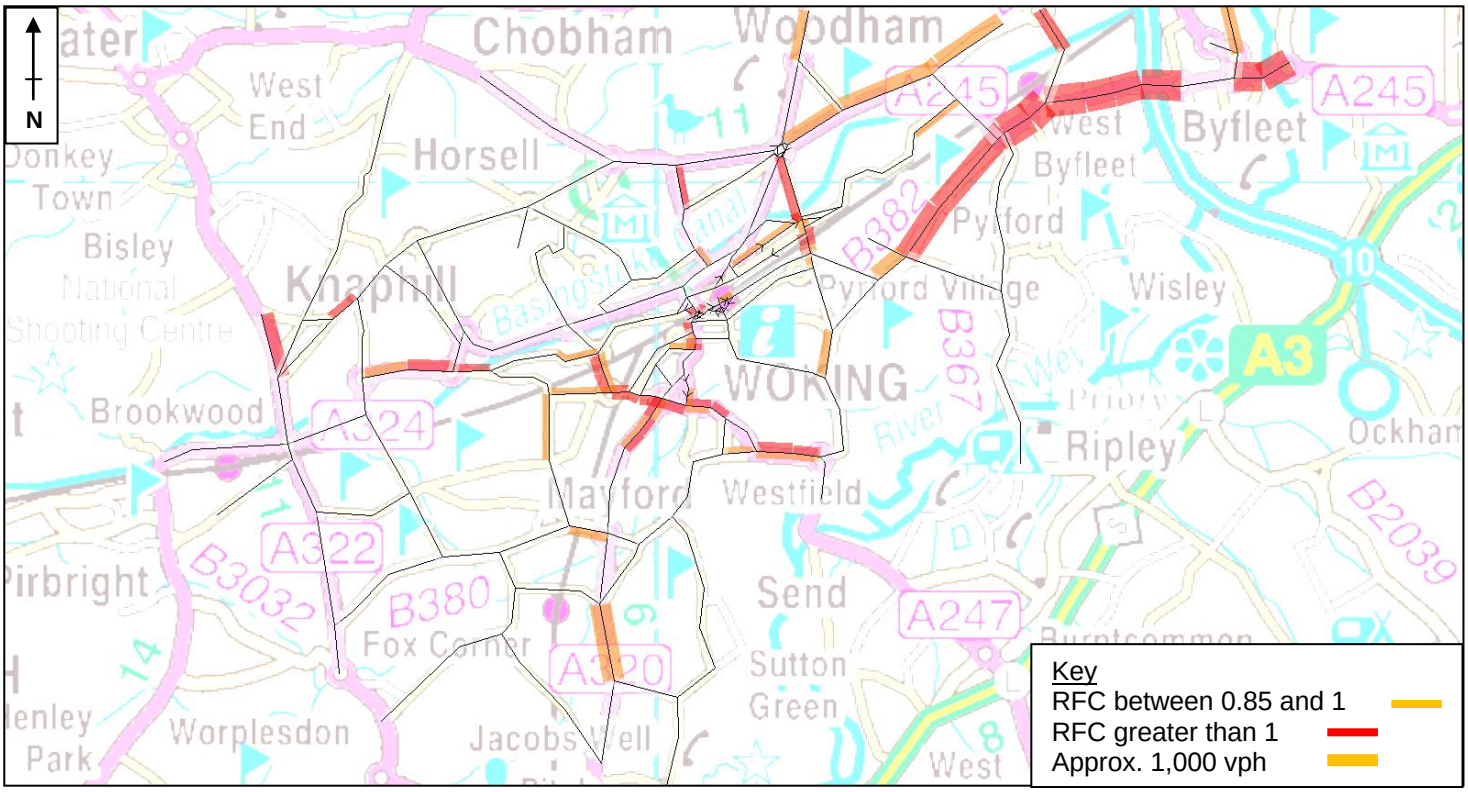
6.1.11 As this strategic sensitivity study is solely based on the highway network, it is highly recommended that further analysis is undertaken to interrogate the potential impacts each green belt site has in relation to sustainable travel and accessibility. This will ensure that the evidence base is robust and conforms to latest government guidance.[2]

[2] http://planningguidance.planningportal.gov.uk/blog/guidance/transport-evidence-bases-in-plan-making/transport-evidence-bases-in-plan-making-guidance/

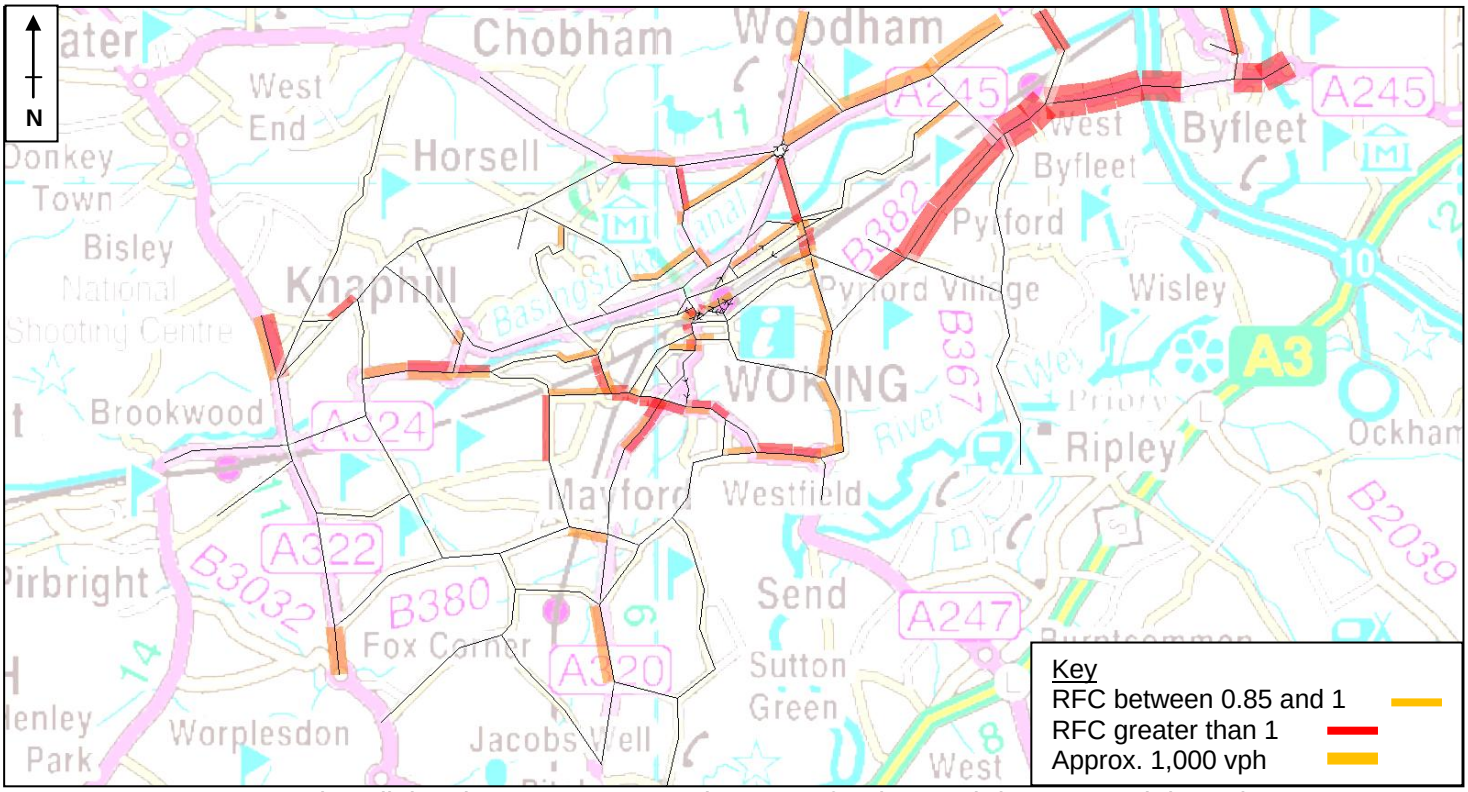
APPENDICES

APPENDIX A:

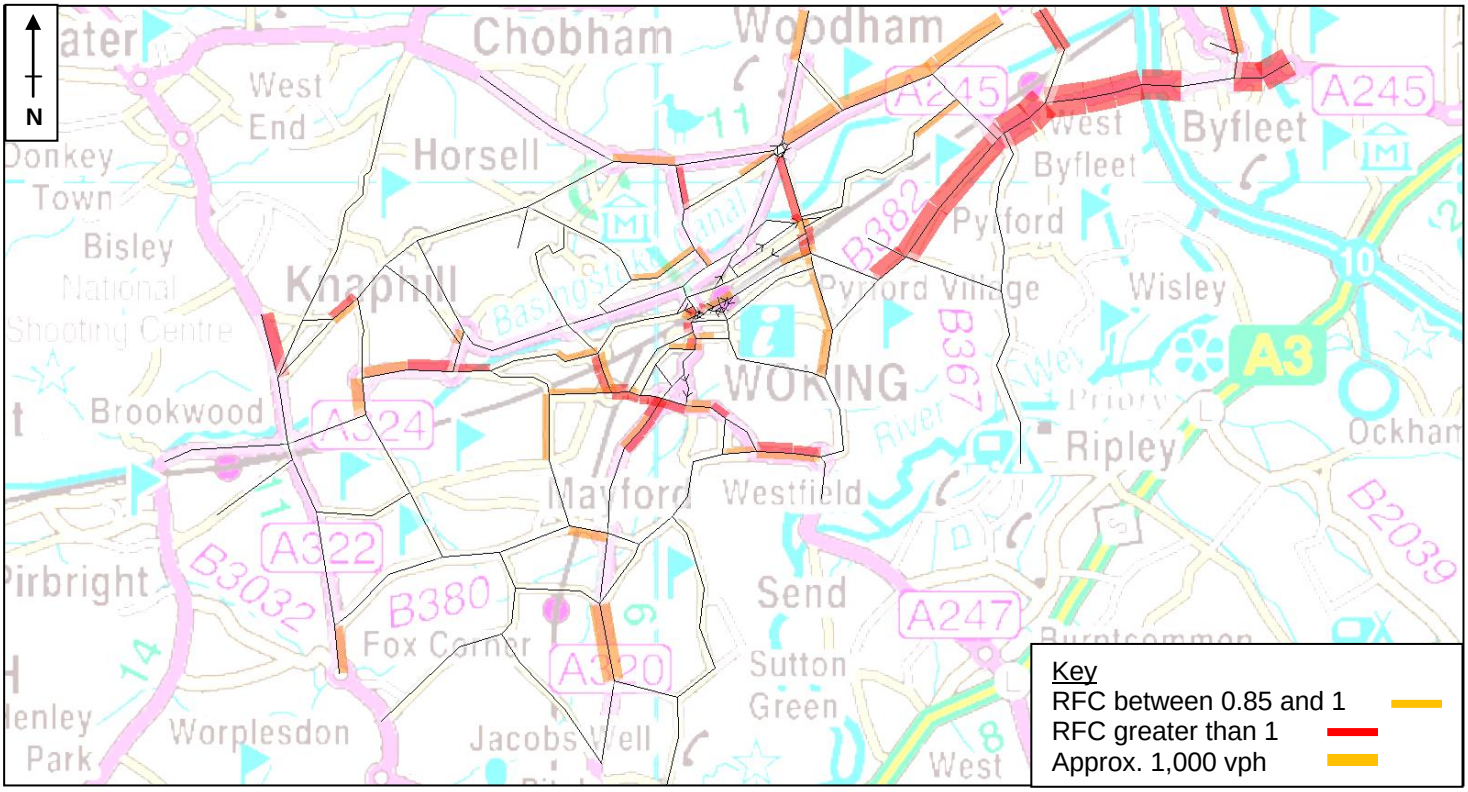
Borough RFC Plots



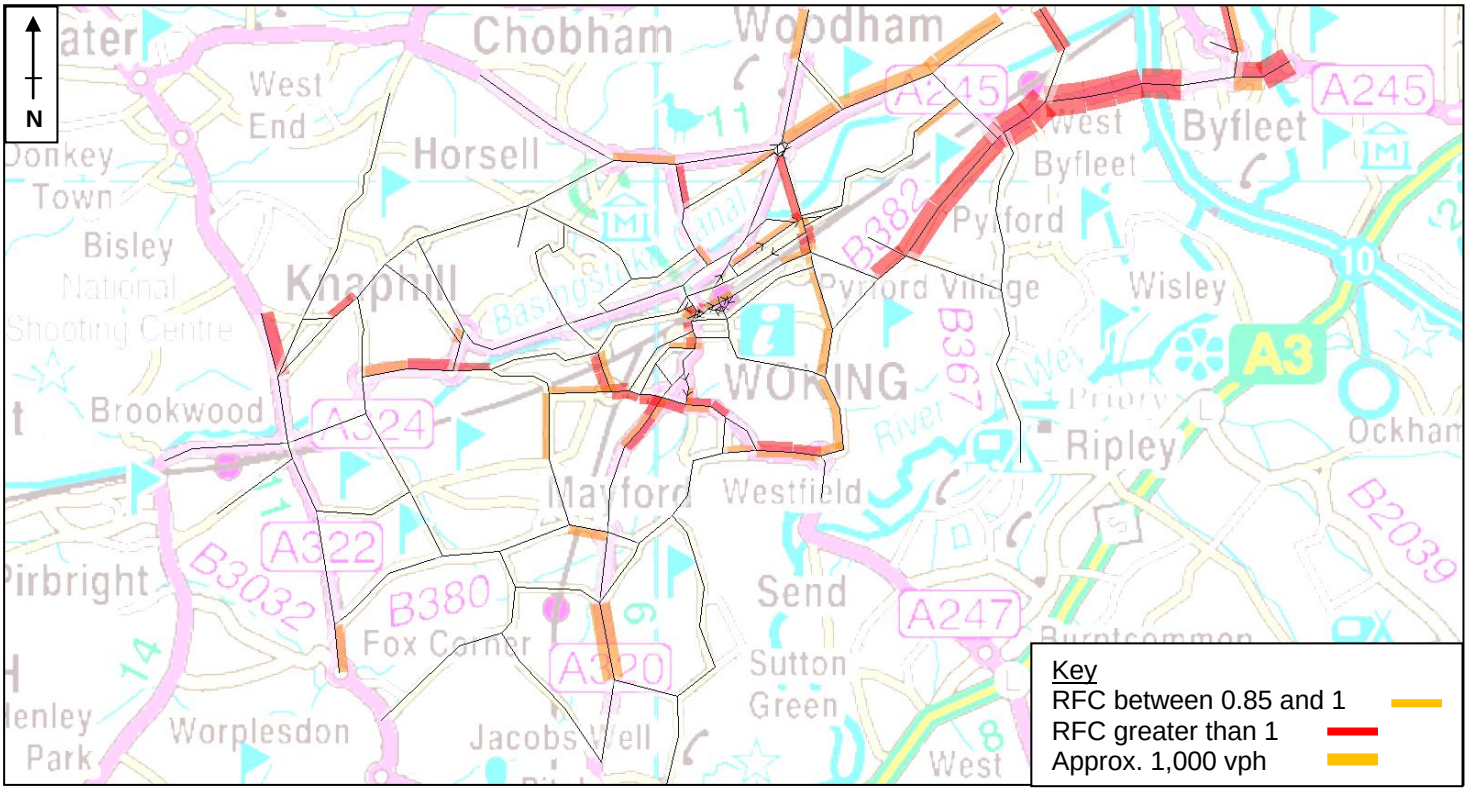
2026 scenario B link values RFC greater than 0.85 for the weekday AM peak hour (0800 – 0900)



2026 scenario D link values RFC greater than 0.85 for the weekday AM peak hour (0800 – 0900)



2026 scenario E link values greater than 0.85 for the weekday AM peak hour (0800 – 0900)



2026 scenario F link values greater than 0.85 for the weekday AM peak hour (0800 – 0900)