

MID SUSSEX TRANSPORT STUDY

LOCAL PLAN REVIEW

Scenario 6 Interim Report

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SYSTRA

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1. INTRODUCTION

1.1 Work Undertaken

1.1.1 Mid Sussex District Council (MSDC) commissioned SYSTRA to:

- Build a strategic highway model to underpin the Mid Sussex Transport Study (MSTS); and
- Update the Mid Sussex Transport Study to test the impact of proposed development on the strategic and local transport network and upon significant routes in Ashdown Forest (adjacent to but outside of Mid Sussex District).

1.1.2 The work is further divided into the following stages:

- 2019 Base Year Highway Model Production and Validation
- 2039 Reference Case Scenario;
- 2039 Local Plan Review Scenarios
- 2039 Local Plan Review Scenarios including potential mitigation

1.2 Current Position and Next Steps

1.2.1 This report is part of an iterative process to test the impact of development and the potential mitigations to reduce those impacts. This report includes some initial proposed mitigation and testing. The next steps will be to undertake further investigations into the mitigation results, and work forward an approach will seek to address areas remaining in the 'severe' category.

1.3 Highway Model

1.3.1 The Mid Sussex Strategic Highway Model (MSSHM) was first developed by SYSTRA in 2018, with a 2017 base year. This has subsequently been updated to a 2019 base year.

1.3.2 The model development and validation is summarised in the 2019 Base LMVR Report which can be found here: <https://www.midsussex.gov.uk/media/8669/lmvr-report-with-appendices.pdf>

1.3.3 The MSSHM was produced in accordance with standard good practice as set out in the Department for Transport's (DfT) transport analysis guidance (TAG), in particular TAG Unit M3-1 Highway Assignment Modelling. As such, the approaches to data processing, matrices and network production, along with model calibration are consistent with those of similar strategic highways models. The model's base year is 2019.

1.3.4 The model production made appropriate use of existing data and existing models in the area. A small programme of surveys was undertaken to fill in some gaps in data. Figure 1 shows the highway model extent.

Figure 1. MSHM Model Extent



1.4 Transport Study

- 1.4.1 The impacts on the highway network of the agreed development scenarios were assessed based on the National Planning Policy Framework (NPPF). The assessment of impacts were based on criteria agreed by MSDC and West Sussex County Council (WSCC). These were derived using WSCC's position statement in relation to the NPPF which sets out their interpretation of terms defining traffic impacts.
- 1.4.2 Where junctions or roads sections are assessed to be adversely impacted by development traffic, the potential impact of sustainable transport mitigation is assessed after which potential highway mitigation schemes are tested. These mitigations aim to remove all 'severe' impacts.
- 1.4.3 Additionally, a safety review is currently being undertaken to provide a junction and road-section based assessment of accident clusters, cross-referenced to national accident rates available from the DfT and forecast traffic flow changes as a result of the scenarios compared to the Reference Case. This is described in **Chapter** Error! Reference source not found. **Next Steps – Safety Impacts.**

1.5 Scenarios Tested

2039 Reference Case

- 1.5.1 The Reference Case represents the road network in 2039, and includes any committed highway infrastructure, development in the district and background growth to this date. This acts as a baseline when assessing the impacts of the development scenarios.

2039 Scenario 6

- 1.5.2 The 2039 development scenarios are being refined as part of the Council's plan making process, including sustainability appraisal, to help inform preparation of the Local Plan Review and select a preferred option. Scenario 6 builds on the Reference Case and assesses proposed Local Plan development and supporting infrastructure in 2039.

2039 Scenario 6m2

- 1.5.3 Building off Scenario 6, Scenario 6m2 tests the potential impact of initial car trip rate reductions as a result of home working, internalisation, future employment distribution, access and proximity to existing services, and mode share assumptions for trips to and from the scenario's site developments.

2039 Scenario 6m5

- 1.5.4 Building off Scenario 6m2, Scenario 6m5 includes testing of an initial Highway Mitigation package.

1.6 Report Structure

1.6.1 The chapters in this report are:

- Chapter 1 Introduction
- Chapter 2 2039 Reference Case Preparation
- Chapter 3 2039 Scenario 6 and 6m2 Preparation
- Chapter 4 Scenario 6 Capacity Impacts
- Chapter 5 Scenario 6m2 with Car Trip Rate Reduction Capacity Impacts
- Chapter 6 Scenario 6m5 Strategic Modelling Mitigation Testing
- Chapter 7 Next Steps – Highway Mitigation
- Chapter 8 – Next Steps Safety Impacts

2. 2039 REFERENCE CASE PREPARATION

2.1 Introduction

- 2.1.1 This chapter describes the production of the 2039 Reference Case matrices and network, using the 2019 Base model as the starting point.
- 2.1.2 The 2039 Reference Case represents a benchmark against which the development scenarios are tested and compared. This enables separation of impacts resulting from the Scenarios from impacts due to background growth, committed development and infrastructure. The 2039 Reference Case includes the development sites that were in the previously modelled Site Allocations Development Plan Document (Sites DPD) which can be found here : <https://www.midsussex.gov.uk/media/3406/mid-sussex-district-plan.pdf>. It also includes the proposed mitigation for the Sites DPD Scenario as referenced in Section 2.8 below.
- 2.1.3 The following sections describe how the development growth was applied by location (external/non-MSDC or MSDC) and method (from the DfT's National Trip End Model or site specific).

2.2 2019-2039 External/Non-MSDC Development Growth (from TEMPro)

- 2.2.1 Travel demand matrices contain the forecast trips between origin and destination zones across the model study area. Forecasts are based on information obtained from the DfT's National Trip End Model (NTEM), obtained using the Trip End Model Presentation Program (TEMPro v8.0 Core Economy). This is compliant with guidance set out in TAG (Transport Assessment Guidance, published by the DfT). The forecasts include:
- population
 - employment
 - households by car ownership
 - trip ends
- 2.2.2 TEMPro is designed to allow analysis of pre-processed data from the NTEM. The pre-processed data is itself the output from a series of models developed and run by DfT's Transport Appraisal and Strategic Modelling (TASM) division. TEMPro can also be used to provide summaries of traffic growth using data from the National Transport Model (NTM).
- 2.2.3 For the transport study the trip ends data were used in the form of origin and destination growth factors. These were extracted for 2019-2039 for the AM (0700-1000) and PM (1600-1900) periods, for the locations required.
- 2.2.4 Tempro v8.0 Core was chosen over Tempro v8.0 High, where previously Tempro v8.0 High was used for Scenario 5, following a West Sussex County Council re-review of planned housing growth in neighbouring districts, where it was found that Tempro v8.0 Core now most closely aligns with forecast housing growth.

2.3 2019-2039 Mid Sussex Development Growth (Site Specific)

- 2.3.1 Reference Case growth in the District was applied on a site specific basis directly to model zones, in preference to using TEMPro, which was used for growth outside the District only.

Reference Case Housing in Mid Sussex District:

- 2.3.2 The housing developments listed in **Appendix A1 - Commitments** are included.
- 2.3.3 In addition, all completions that occurred between the model base year of 2019 and 2023 are included.

Reference Case Employment in Mid Sussex District:

- 2.3.4 The employment developments included are:
- Northern Arc, Business Park: 1,500 employees
 - The Hub, Business Industrial and Storage/Distribution: 50,000 sqm
 - Science and Technology Park (including 154 room hotel): 2,500 employees
- 2.3.5 In addition, the employment sites included in the previous Sites DPD Scenario and listed in **Appendix A2 - Employment Allocations** are included.

2.4 2019-2039 External Development Growth (Site Specific)

- 2.4.1 Some large development sites in neighbouring authorities are included as site specific developments. These are:

Reference Case Housing in Neighbouring Authorities:

- West of Bewbush “Kilnwood Vale” (Horsham District) 2,500 units
- Land North of Horsham “Mowbray” (Horsham District) 2,500 units
- North East Crawley “Forge Wood” (Crawley Borough) 2,000 units

Reference Case Employment in Neighbouring Authorities:

- West of Bewbush “Kilnwood Vale”, Industrial Estate: 721 employees
- Land North of Horsham “Mowbray”, Industrial Estate: 714 employees
- Horley Business Park (Reigate & Banstead Borough) 8,000 sqm

2.5 Freight

- 2.5.1 Growth in freight traffic was derived from national road traffic forecasts taken from the National Transport Model (NTM) in accordance with DfT guidance in paragraphs 7.3.18 to 7.3.19 of TAG Unit M4: Forecasting and Uncertainty.

2.6 Gatwick Airport

- 2.6.1 Gatwick Airport lies to the north west of the District within Crawley Borough Council’s administrative boundary. The airport currently operates as a single runway, two terminal airport, which accommodated 46.6 million passengers during 2019. Gatwick Airport Limited (GAL) has aspirations to increase the number of flights and passenger numbers. Through existing consents and improved operational efficiencies GAL estimate that passenger numbers could increase to 62.7 million per year by 2047.

2.6.2 In addition, GAL are seeking consent to bring the existing Stand-by/Northern runway into routine use. This is a Nationally Significant Infrastructure project. In July 2023, GAL submitted a Development Consent Order (DCO) to the Planning Inspectorate seeking consent to bring the northern runway into routine use along with associated infrastructure including upgrades to the M23 junction 9 spur, new junction layouts at north and south terminals, alterations to Longbridge roundabout at A23/A217 and alterations to Airport Way. The DCO Examination will commence in March 2024, with the Secretary of State for Transport decision expected in Spring 2025.

2.6.3 Forecasting for Gatwick Airport takes account of the advice provided in paragraphs 7.3.9 to 7.3.11 of TAG Unit M4: Forecasting and Uncertainty. Paragraph 7.3.10 states:

*The NTEM dataset includes all trip end productions for surface access trips to airports. However, the NTEM trip end attractions **exclude** surface travel for airline passengers and those escorting them. This may mean that the spatial distribution of the trip end attractions may need to be modified from NTEM levels if there is a major airport within the vicinity of the scheme.*

2.6.4 The airport is in Crawley Borough and so, by default, model growth was applied using TEMPro. Therefore, based on paragraph 7.3.10 of TAG Unit M4 an adjustment was applied to ensure that passenger growth is accounted for. This was based on the trajectories stated above in paragraph 2.6.1 assuming current configuration as a single runway, two terminal airport.

2.7 Trip Rates

2.7.1 Trip rates for Scenario 6 have been carried forward from Scenario 5, which have been updated from the previous reported scenarios (1-4) for residential development sites for both the Reference Case and Local Plan sites.

2.7.2 The data extracted is for Mixed Use Housing sites for the following location types:

- Town Centre;
- Edge of Town Centre;
- Suburban Area; and
- Edge of Town.

2.7.3 Previously the only housing type used was “Privately Owned Houses and Flats (03/K)” Updated trip rates have also been extracted as a mean average (as agreed with WSCC), where previously the 85%ile was used. Note that the TRICS trips rates presented exclude any sites within London as these are not considered representative of Mid Sussex and the immediate surrounding area.

2.7.4 For the Reference Case Committed Development, all sites combined for all locations have been included. For the Local Plan development, “urban” and “rural” have been separated. As no rural sites were available for extraction in TRICS, “Edge of Town” has been considered as “Rural”, and “Town Centre”, “Edge of Town Centre”, “Suburban Area” as “Urban”.

Table 1. General Vehicle Trip Rates

		Employment	Density	Guide	TRICS	Database	Value	Parameter	AM		PM		
		Use Class	New Class	Use Class					O	D	O	D	
Housing	85%ileunit	Private Houses and Flats		Housing			85%ile	unit	0.397	0.191	0.143	0.486	Previously used in Sc1-Sc4 (residential)
		Houses Privately Owned		C3	03/A		mean	unit	0.385	0.133	0.190	0.352	not used
				C3			85%ile	unit	0.559	0.265	0.225	0.520	not used
		Private Houses and Flats		C3	03/K		mean	unit	0.297	0.126	0.154	0.257	not used
				C3			85%ile	unit	0.397	0.191	0.143	0.486	Previously used in Sc1-Sc4 (residential)
		Flats Privately Owned		C3	03/C		mean	unit	0.149	0.040	0.058	0.138	not used
				C3			85%ile	unit	0.341	0.047	0.098	0.305	not used
B1a	85%ilesqm	General Office		B1a	E(g)(i)	02/A	85%ile	sqm	0.269	3.077	2.587	0.425	maintained
B1a	85%ileemp			B1a	E(g)(i)		85%ile	emp	0.043	0.511	0.394	0.021	maintained
B1b	85%ilesqm	R&D Space		B1b	E(g)(ii)	02/B	85%ile	sqm	0.450	1.606	1.933	0.212	maintained
B1b	85%ileemp			B1b	E(g)(ii)		85%ile	emp	0.183	0.367	0.465	0.045	maintained
B1c	85%ilesqm	Light Industrial		B1c	E(g)(iii)	02/C	85%ile	sqm	0.558	0.990	0.671	0.499	maintained
B1c	85%ileemp			B1c	E(g)(iii)		85%ile	emp	0.300	0.700	0.844	0.067	maintained
C1	85%ileemp	Hotel		C1	06/A		85%ile	emp	0.284	0.104	0.151	0.252	maintained
C1	85%ilerooms	Hotel		C1	06/A		85%ile	rooms	0.284	0.104	0.151	0.252	maintained
B1	85%ilesqm	Office / R&D / Light Industrial		B1	02/B		85%ile	sqm	0.450	1.606	1.933	0.212	maintained
B1	85%ileemp			B1			85%ile	emp	0.183	0.367	0.465	0.045	maintained
B2	85%ilesqm	Industrial / Manufacturing		B2	02/D		85%ile	sqm	0.468	1.000	0.737	0.263	maintained
B2	85%ileemp			B2			85%ile	emp	0.300	0.700	0.844	0.067	maintained
B8	85%ilesqm	Storage & Distribution		B8	02/F		85%ile	sqm	0.136	0.634	0.607	0.102	maintained
B8	85%ileemp			B8			85%ile	emp	0.171	0.667	0.440	0.100	maintained
E	85%ilesqm	Retail		E			85%ile	sqm	3.428	3.532	6.281	5.140	maintained
Fp	85%ilesqm	Primary School		Fp			85%ile	sqm	4.717	5.818	0.903	0.323	maintained
Fp	85%ilepupils	Primary School		Fp			85%ile	pupils	0.388	0.482	0.060	0.034	maintained
Fs	85%ilepupils	Secondary School		Fs			85%ile	pupils	0.179	0.237	0.041	0.039	maintained
Housing	Meanunit	M - MIXED PRIVATE/AFFORDABLE HOUSING		Housing	03/M		Mean	unit	0.367	0.134	0.162	0.315	Used for Sc5 RefCase Resi Dev
Updated Sc5 new triprates & mean avg													
Urban	Meanunit	M - MIXED PRIVATE/AFFORDABLE HOUSING		Urban	03/M		Mean	unit	0.340	0.111	0.149	0.307	Local Plan Urban Resi Sites
Rural	Meanunit	M - MIXED PRIVATE/AFFORDABLE HOUSING		Rural	03/M		Mean	unit	0.373	0.139	0.164	0.316	Local Plan Rural Resi Sites

2.7.5 Full TRICS outputs are included in **Appendix E – TRICS Outputs**.

2.8 Committed Infrastructure in 2039 Reference Case

2.8.1 The reference case schemes from the previous Sites DPD modelling were carried forward to the 2039 Reference Case. These are shown in **Table 2**. The dualling of the A2300 includes the closure of the Bishopstone Lane/A2300 junction for vehicular use.

Table 2. Reference Case Infrastructure

Location			Description	Status
Burgess Hill	A2300		Dualling and junction improvements	Completed
	The Hub	A2300/Cuckfield Rd	Roundabout improvements	Comitted
		Gatehouse Lane	Signal controlled crossing	Comitted
	East Kings Way	B2113 Keymer Rd/Station Rd/Junction Rd/ Silverdale Rd	Traffic signals	Comitted
		Valebridge Rd / Janes Lane / Junction Rd	Traffic signals	Comitted
		Kings Way/B2113 Folders Lane	Traffic signals	Comitted
		B2113 Station Rd/Church Rd/Mill Rd	Traffic signals	Comitted
		B2113 Folders Lane/Keymer Road	Roundabout	Comitted
		Junction Rd / Cants Lane	Traffic signals	Comitted
Copthorne	A264	A264/ Brookhill Rd /A2220	Roundabout improvements	Completed
		Dukes Head A264/B2028 Roundabout	Roundabout improvements	Comitted
	Hassocks Stonepound	A273/B2116 Stonepound Crossroads	Traffic signals improvements	Completed
Haywards Heath	Penland Farm	Hanlye Lane, Borderhill Lane	Roundabout	Comitted
	Fox Hill	B2112 Fox Hill south of Hurstwood lane	Extension of 30mph speed limit	Completed
	Relief Road (east)	A272 Rocky Lane/Hurstwood Lane	Traffic Signals	Comitted
	Fox Hill	B2112, Colwell Rd	Roundabout improvements	Completed
Crawley	Copthorne	M23 J10	Junction improvements	Comitted
	Tinsley	Gatwick road	Roundabout improvements	Comitted
	Pound Hill	A2011 to B2036 Link Road and junctions	Link road and junction improvements	Comitted
	Tinsley	Radford Road/B2036 Balcombe Road	Traffic signals	Comitted
	Tinsley Green	Steers Lane / Radford Rd	Traffic signals	Completed
		Steers Lane / B2036	Traffic signals	Completed
	Hazelwick	A2011/A2004/Gatwick Rd/Hazelwick Ave	Signalised roundabout	Comitted
	Fernhill	B2036 Balcombe Road / B2037 Antlands Lane	Roundabout improvements	Comitted
	Manor Royal	Gatwick Road	Roundabout improvements	Comitted
	Cheals Junction	A23 Crawley Ave/A2220 Horsham Rd	Roundabout slip lane	Completed
	Pease Pottage	M23 J11	Signalised gyrator	Completed
	Smart Motorways	M23	Motorway improvements	Completed

2.8.2 The following mitigation associated with the Sites DPD Scenario was also included.

- Sustainable transport trip reductions for the Sites DPD developments
- Ansty A272/B2036 - minor widening on A272 western and eastern arms

2.8.3 In addition, the following mitigation associated with the Sites DPD Scenario as proposed by the Science and Technology Park was included:

- A2300/A23 Hickstead, Eastern Roundabout
- A23 Southbound upgraded merge and diverge between A2300 and Mill Lane
- A2300/Cuckfield Road roundabout upgrade and new S&T Park access/Cuckfield Road roundabout
- A2300/Northern Arc Roundabout
- Additional Northern Arc Infrastructure including new roads and junctions
- A272 Cowford Road/A23 Slips - Signalisation

2.8.4 One additional scheme was also included:

- New access road from A272/A23 northbound roundabout for Marylands Nursery

3. 2039 SCENARIO 6 & 6M2 PREPERATION

3.1 Introduction

3.1.1 This section describes the preparation of 2039 Scenarios 6 & 6m2

3.2 Site Specific Growth

3.2.1 Scenario trip matrices were prepared for the AM peak and PM peak hours. The trip rates that were derived from TRICS for the committed Reference Case developments were used again to calculate trip generation for the development sites.

3.2.2 Scenario 6 assesses the impact of an additional 25 housing development sites some of which also include employment, retail and community uses. The sites are listed in **Appendix A3 - DPR Transport Scenario 6**.

3.2.3 In addition, **windfall sites** are assumed to be 1488 units by 2039, distributed pro-rata across the Reference Case housing developments¹.

3.2.4 **Table 3** summarises the total housing units growth considered.

Table 3. Total Housing units growth Considered in Mid-Sussex in Scenario 6

SCENARIO	TOTAL UNITS CONSIDERED	DIFFERENCE FROM REF
2039 Reference Case	13,884	
2039 Scenario 6	20,505	6,621
2039 Scenario 6 including windfall	21,993	8,109

3.2.5 Figure 2 shows the location of the SHLAAID (Strategic Housing Land Availability Assessment ID) site in Scenario 6 as referenced in Appendix A3. Figure 3 shows the number of units for each site².

¹ It is noted that the council's position on windful allowance of 1,488 dwellings has since increased to 1,768 over the plan period. An increase of 280 dwellings across the district over the whole plan period up to 2039 is not however considered likely to materially alter the model outcomes.

² It is noted that the proposed yield has altered for some of the sites since the modelling commenced, however the changes are not however considered likely to materially alter the model outcomes.

Figure 2. Scenario Map with SHLAAID

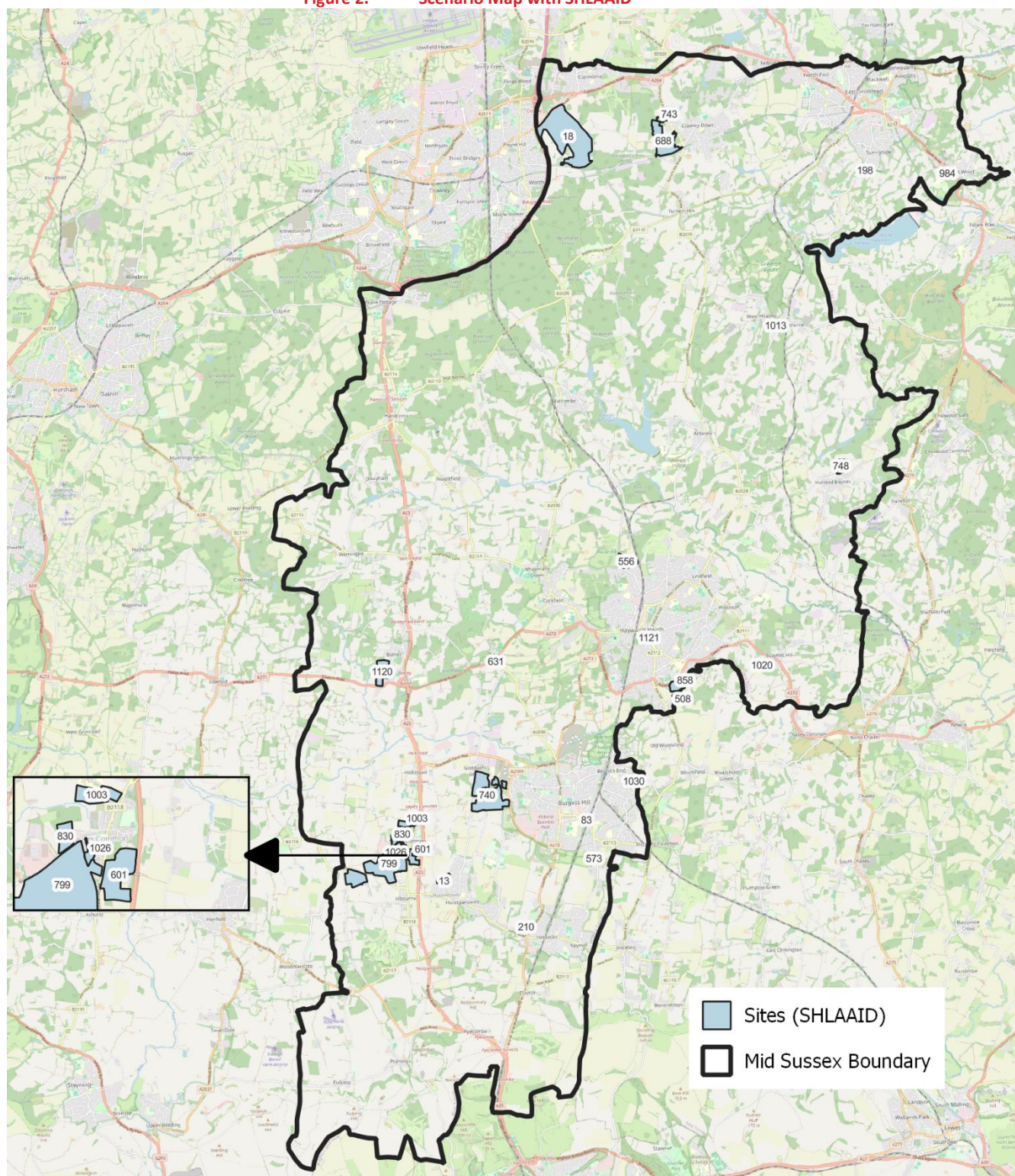
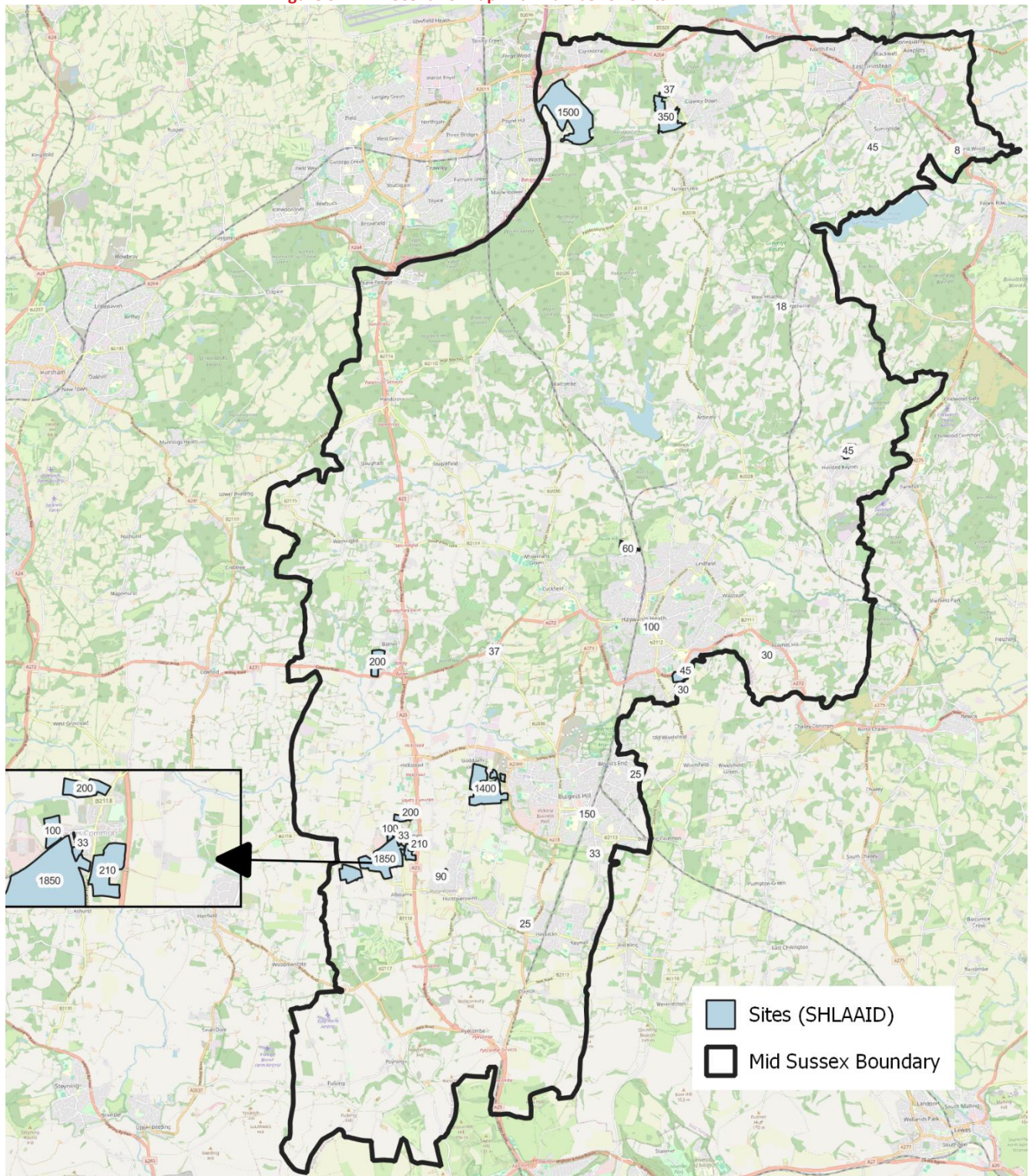


Figure 3. Scenario Map with Number of Units



Development Zones – Representation of Sites

- 3.2.6 The larger developments sites were allocated to their own zone with appropriate access roads included. Smaller development sites were contained within existing zones in the model.

Trip Distribution

- 3.2.7 Trip distributions were taken from the main model zones that the development is located in or near to and based on Census Journey Work 2011 for commuting trips and existing local model matrices for other purposes.

Scenario 6 with Car Trip Rate Reduction (Scenario 6m2)

- 3.2.8 Scenario 6 uses the trip rates detailed in section 2.7, with no further adjustments considered. Scenario 6m2 takes into account additional mode shift reductions that have been applied to the Local Plan development sites. These reductions have been applied on the trip rates, or on an O-D level where appropriate. Only trips to/from Local Plan sites have been adjusted.
- 3.2.9 Mode shift assumptions have been agreed with the Local Highway Authority, WSCC.

3.3 Mode shift assumptions for Scenario 6m2

Home Working

- 3.3.1 MSDC has provided Economic Growth Assessment extracts from the *Northern West Sussex Economic Growth Assessment Focused Update for Mid Sussex (Lichfields March 2022)* to inform home working assumptions which are used to consider the reductions.
- 3.3.2 Paragraph 2.12 states:
The District supports a much lower level of out-of-work benefit claimants than other parts of the South East and the United Kingdom. Moreover, Mid Sussex resident occupations are also generally higher skilled, with a greater percentage of residents employed in SOC Major Group 1- 3. Mid Sussex has 64.3% of resident occupations falling within the 3 highest SOC groups, which consist of managers and director jobs, compared to both the South East (50.7%) and the UK (45.6%). Compared to the 2020 EGA (i.e. 2018 data), this portion has increased by 11.9%.
- 3.3.3 It is considered that Mid Sussex could have a higher homeworking proportion than the south-east and UK as a whole. Therefore, a 20% reduction on all Local Plan sites has been assumed and applied to commuter trips. This differs from the previously run Scenario 5m2, where 20% was only assumed for the more significant Local Plan sites, and only 5% for smaller sites.

Internalisation

- 3.3.4 To account for internalization for Large Local Plan sites, primary schools have been allocated an 80% reduction on overall trip rates. Retail and Employment trips have also been allocated a 5% reduction in trip rates.

Distance Based Trip Reductions

- 3.3.5 It is proposed to apply distance based car trip reductions based on a similar approach to that used in the Crawley and Horsham Studies. These reductions are due to site developers being subject to delivery of travel planning measures and will be applied to non-committed development sites only. Short distance trips are the most likely to switch from car to active modes and therefore this is reflected in this approach. Longer distance trips are more likely to switch to public transport (PT). The proposed trip length reductions are shown in the table below as used in the Crawley/Horsham studies. The underlying data for the Crawley/Horsham study was derived from the DfT Sustainable Travel Towns Study and the National Travel Survey data.

- 3.3.6 Adjustments have been made at an O-D level to trips to/from the Local Plan sites.

- 3.3.7 The profile banding of O-D trips adjusted are detailed in the table below.

	Up to 1km	1-3 km	3-5 km	5-10 km	10-50km	Over 50km
Car Trip Reduction	-22%	-14%	-10%	-6%	-3%	0%

- 3.3.8 Only short trips are expected to be impacted by this mode shift. These short distance trips are made by road users that are considered less likely to be using the strategic road network, which are typically longer distance trips.

Future Employment Distribution and Location and Proximity to Existing Services

- 3.3.9 An additional 1-2% reduction to trip rates has been applied to large and medium size Local Plan sites to account for the changes in the future of employment distribution.
- 3.3.10 Sites considered as an urban extension (non-rural) have been allocated an additional 1% trip rate reduction as it is expected that existing services will benefit these new Local Plan development trips.

4. 2039 SCENARIO 6 CAPACITY IMPACTS

4.1 Introduction

4.1.1 This chapter reports on the outputs from the modelling and specifically the forecast impact(s) on junction operational performance as a result of development related traffic growth in Scenario 6 compared to the Reference Case. The following items are included:

- Traffic Flow Impacts
- Impacts on the M23 and A23 Strategic Road Network
- Identification of Junctions with Capacity Impacts
- Cross Boundary Impacts

4.1.2 Reporting includes assessment of locations in neighbouring authorities.

4.2 Traffic Flow Impacts

4.2.1 Appendix D includes highway traffic flow difference plots to identify the impact of Scenario 6 on traffic movements compared to the Reference Case.

4.2.2 In addition to the new traffic directly associated with the Local Plan sites, these plots highlight any re-routing of traffic that may result from localised congestion or redistribution of existing trips. These plots identify where the net change to traffic flow is most pronounced.

4.2.3 For the flow difference plots the absolute difference traffic volume (in passenger car units, PCUs) is identified adjacent to the appropriate link. Blue lines identify a reduction against the comparative scenario and green lines an increase. In addition, the scale of the change is represented graphically with the coloured lines of varying width.

4.3 Impacts on the M23 and A23 Strategic Road Network

M23 Junctions 9, 10, and 11

4.3.1 Table 4 shows model results at the approach arms and main circulatory links at Junctions 9, 10 and 11 of the M23. The following results are shown for Scenario 6 alongside the Reference Case, for the AM and PM peak models:

- Demand in vehicles
- Ratio of flow to capacity (RFC)
- Average vehicle delay in seconds
- Average queue length in passenger car units (PCUs)

Table 4. Scenario 6: M23 Junctions 9, 10 and 11 – Approach Arm Results

Area	Junction	Approach Arm	2039 Reference Case				2039 Scenario 6											
			AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)
M23	Junction 9	M23 Southbound off-slip (N)	1369	58.3	11.3	3.7	1712	93.0	29.1	8.2	1316	56.1	11.1	3.5	1712	93.0	29.1	8.2
		M23 Northbound off-slip (S)	1613	44.9	1.0	0.0	917	25.1	0.7	0.0	1722	47.0	1.0	0.0	938	25.5	0.7	0.0
		Gatwick Spur (W)	1028	52.9	3.0	0.0	1715	79.9	3.0	0.0	1022	52.6	3.0	0.0	1750	80.4	3.0	0.0
		Gatwick Spur (W)	1028	66.8	3.0	0.0	1715	89.8	3.0	0.0	1022	66.7	3.0	0.0	1750	91.1	3.0	0.0
		M23 Spur Road (W) - Stopline	1028	52.9	3.0	0.0	1715	79.9	3.0	0.0	1022	52.6	3.0	0.0	1750	80.4	3.0	0.0
		M23 Spur Road (W) - Freeflow	1292	65.0	2.6	0.0	1401	64.7	2.6	0.0	1293	65.0	2.6	0.0	1413	64.4	2.6	0.0
		Circulatory North	909	86.4	31.5	5.2	1618	99.8	62.0	7.4	904	85.9	31.1	5.2	1676	101.8	96.9	20.7
		Circulatory East	2279	38.3	0.5	0.0	3330	53.1	0.6	0.0	2221	37.3	0.5	0.0	3388	53.2	0.6	0.0
		Circulatory South	1369	31.0	0.6	0.0	1712	37.1	0.6	0.0	1316	29.8	0.6	0.0	1712	36.5	0.6	0.0
		Circulatory West	0	0.0	0.4	0.0	0	0.0	0.4	0.0	0	0.0	0.4	0.0	0	0.0	0.4	0.0
M23	Junction 10	M23 Southbound off-slip (N)	1759	88.7	24.5	8.4	1275	57.4	14.8	4.6	1703	84.2	21.8	7.9	1389	61.0	16.0	5.3
		Copthorne Way (E)	720	35.2	18.5	2.9	1395	79.6	88.8	19.6	976	46.3	20.4	3.9	1498	84.2	93.2	22.7
		M23 Northbound off-slip (S)	1451	63.5	42.5	13.1	1115	65.9	79.4	12.5	1561	67.1	45.1	14.1	1139	66.9	88.7	15.3
		A2011 Crawley Avenue (W)	1798	83.8	21.3	8.3	2213	75.2	14.0	6.8	1776	82.4	20.8	8.0	2216	74.7	14.0	6.7
		Circulatory North	1488	99.6	61.8	7.9	1405	102.4	115.6	24.4	1507	99.9	63.7	7.7	1430	103.0	126.3	28.3
		Circulatory East	1812	78.8	16.5	6.9	1209	44.6	12.8	4.0	1814	78.8	16.7	7.0	1286	46.7	13.5	4.5
		Circulatory South	1434	74.2	22.7	8.2	1365	59.4	13.3	4.5	1599	81.6	25.5	9.7	1453	62.2	13.8	4.9
		Circulatory West	716	47.2	18.2	2.7	711	62.6	30.0	3.6	944	60.3	19.5	3.6	767	66.2	30.2	3.9
		Circulatory North	1155	55.1	17.0	4.7	1017	75.8	28.1	6.1	1202	57.1	17.3	4.9	1002	74.1	27.7	5.9
M23	Junction 11	Brighton Road (S)	1260	54.7	22.0	7.0	719	33.2	19.4	3.8	1277	54.8	22.1	7.0	712	32.9	19.4	3.7
		M23 Northbound off-slip (SW)	1126	31.2	9.8	2.8	625	18.5	9.1	1.7	1204	32.7	9.9	3.0	637	18.7	9.1	1.7
		A264 (W)	982	45.2	20.8	5.4	805	35.4	19.6	4.0	1028	46.9	21.0	5.7	827	36.4	19.7	4.2
		A23 Brighton Road (N)	1001	45.0	13.7	3.5	1964	85.9	27.5	11.8	1038	46.2	14.0	3.6	2064	89.5	30.3	12.9
		Circulatory NE	1124	61.3	16.2	4.4	1938	72.5	11.5	4.8	1185	63.8	16.5	4.7	2041	75.8	12.1	5.2
		Circulatory South	2279	54.4	11.0	6.2	2955	66.6	12.9	9.1	2387	56.5	11.1	6.6	3043	68.1	13.2	9.5
		Circulatory SW	1109	96.2	47.7	6.3	900	75.4	23.8	4.5	1125	96.4	48.7	6.3	909	75.8	23.9	4.5
		Circulatory West	2236	64.6	60.6	16.9	1525	44.5	18.6	6.6	2330	66.2	66.4	21.3	1546	44.9	18.7	6.7
		Circulatory North	2722	84.0	16.5	10.2	2011	62.9	18.9	9.6	2805	85.2	16.9	10.6	2049	63.8	18.7	9.6

4.4 Identification of Junctions with Capacity Impacts

4.4.1 The impact of development was assessed based on the National Planning Policy Framework (NPPF) using criteria agreed by MSDC and WSCC. These were derived using WSCC's position statement in relation to the NPPF which sets out their interpretation of terms defining traffic impacts, namely "significant amount of movement" and "severe impacts". In addition, a "showstopper" is defined as a location where the impacts do not have a reasonable prospect of being able to comply with NPPF paragraph 32.

4.4.2 An approach was devised to identify junctions forecast to experience 'severe' impacts in the future due to the strategic developments. This uses appropriately selected criteria to reflect the interpretation of the NPPF. A 'severe' impact is defined as a junction with any approach arm experiencing both of the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **95%** or more in any peak, in any Scenario; and
- an increase in average delay of **30 seconds** or more to an average delay of **two minutes** or more in any peak hour, in any Scenario

4.4.3 A 'significant' impact is a junction with any approach arm experiencing the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **85%** or more in any peak hour, in any Scenario

4.4.4 The criteria for defining and categorising capacity impact into Significant/Severe have been agreed with West Sussex County Council.

4.4.5 Table 5 shows how many junctions are forecast to be impacted significantly or severely in Scenario 6 when compared to the Reference Case.

Table 5. Scenario 6: 'Severe' and 'Significant' Junction Impacts

ID	Area	Junction	Ref v2019	Scenario v Ref	'Severe' change in Ref v2019 also?	Number of junction arms meeting 'Severe' criteria		Total over capacity demand where 'Severe'	Average change in delay where 'Severe' (secs)
						AM	PM	AM+P	AM+P
N1	Copthorne	A264 / A2220 Copthorne	SEVERE	SEVERE	YES	1	0	200	59
N4	Copthorne	B2028 / B2037 Copthorne		SIG.		0	0	0	0
N6	East Grinstead	A22 / Imberhorne Lane		SIG.		0	0	0	0
N8	Turners Hill	B2110 / B2028 Turners Hill	SEVERE	SEVERE	YES	1	0	90	89
N10	West Hoathly	Selsfield Road / Vowels Lane		SIG.		0	0	0	0
N11	Crawley	A2220 / B2036 (CRAWLEY)	SIG.	SIG.		0	0	0	0
N13	Crawley	A2220 Haslett Avenue / St. Mary's Drive (CRAWLEY)		SIG.		0	0	0	0
N13a	Crawley	A2220 Haslett Avenue / Station Hill (CRAWLEY)	SIG.	SIG.		0	0	0	0
N14	Crawley	B2036 Balcombe Road / Worth Road (CRAWLEY)	SIG.	SIG.		0	0	0	0
N15	Crawley	Gatwick Road / Manor Royal (CRAWLEY)	SIG.	SIG.		0	0	0	0
N16	Crawley	B2036 Balcombe Rd / B2037 Antlands Ln (CRAWLEY)	SIG.	SIG.		0	0	0	0
N17	Tandridge	Redehall Road / B2037 (TANDRIDGE DISTRICT)	SIG.	SIG.		0	0	0	0
N18	Handcross	A23 / B2110 Northbound On-Slip		SIG.		0	0	0	0
N21	Balcombe	Haywards Heath Road / Bramble Hill	SIG.	SIG.		0	0	0	0
N22	Balcombe	B2036 / B2110		SIG.		0	0	0	0
N24	Pease Pottage	Horsham Road / B2114 Brighton Road	SIG.	SIG.		0	0	0	0
N25	Crawley	Hazlewick Avenue / Bycroft Way (CRAWLEY)	SIG.	SIG.		0	0	0	0
N27	Handcross	B2114 / B2110 Handcross	SIG.	SIG.		0	0	0	0
N29	Crawley	B2036 / Radford Road	SIG.	SIG.		0	0	0	0
C1	Handcross	B2114 Junction, Handcross		SIG.		0	0	0	0
C5	Haywards Heath	B2114 / B2036 Whitemans Green	SEVERE	SIG.		0	0	0	0
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	SEVERE	SIG.		0	0	0	0
C7	Ansty	A272 / B2036	SIG.	SEVERE		0	1	94	67
C10	Bolney	A23 / A272 Bolney Road	SIG.	SIG.		0	0	0	0
C10a	Bolney	London Road / A272 Cowfold Road	SIG.	SIG.		0	0	0	0
C11	North Chailey	A272 / A275 North Chailey	SIG.	SEVERE		0	1	2	200
C12	Haywards Heath	A273 / Isaac's Lane / Traustein Way	SIG.	SIG.		0	0	0	0
C14	Haywards Heath	A272 / Rocky Lane	SIG.	SIG.		0	0	0	0
C15	Haywards Heath	B2272 / Bolnore Road	SEVERE	SIG.		0	0	0	0
C17	Haywards Heath	B2112 / B2272	SIG.	SIG.		0	0	0	0
S1	Burgess Hill	A23 / A2300 Southbound On-Slip	SIG.	SIG.		0	0	0	0
S2	Burgess Hill	A23 / A2300 Eastern Roundabout	SEVERE	SEVERE	YES	1	0	200	62
S3	Burgess Hill	A2300 / Cuckfield Road	SIG.	SEVERE		1	0	87	122
S5	Burgess Hill	A2300 / Northern Arc Spine Road	SIG.	SIG.		0	0	0	0
S6	Burgess Hill	Junction Road / B2113, Burgess Hill	SEVERE	SEVERE	YES	1	0	48	72
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint		SIG.		0	0	0	0
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	SEVERE	SEVERE	YES	2	1	146	158
S9	Pyecombe	A23 / A281 Southbound On-Slip	SIG.	SIG.		0	0	0	0
S10	Ditchling	B2112 / B2116 Ditchling (LEWES DISTRICT)	SIG.	SIG.		0	0	0	0
S21	Burgess Hill	B2112 / Green Road (LEWES DISTRICT)		SIG.		0	0	0	0
S22	Burgess Hill	Valebridge Road / Junction Road / Leylands Road	SIG.	SEVERE		1	0	46	71
S23	Burgess Hill	A273 / B2036 / Marchants Way	SIG.	SIG.		0	0	0	0
S26	Burgess Hill	A273 / York Road		SIG.		0	0	0	0
S32	Burgess Hill	B2036 / Lower Church Road / Royal George Rd.	SIG.	SIG.		0	0	0	0
S33	Burgess Hill	A273 Jane Murray Way / B2036 London Road	SIG.	SIG.		0	0	0	0
S34	Burgess Hill	B2036 Cuckfield Road / A273 Isaacs Lane	SIG.	SIG.		0	0	0	0
S35	Sayers Common	A23 / B2118 Sayers Common	SIG.	SEVERE		1	0	95	175
S36	Burgess Hill	Wivelsfield Green (LEWES DISTRICT)		SIG.		0	0	0	0
S38	Burgess Hill	A23 / A2300 Western Roundabout	SIG.	SEVERE		1	0	4	215
S39	Burgess Hill	A23 / A2300 Northbound On-Slip	SIG.	SIG.		0	0	0	0
S41	Pyecombe	A23 / A273 Northbound On-Slip	SIG.	SIG.		0	0	0	0
S44	Burgess Hill	Valebridge Road / Janes Lane	SIG.	SIG.		0	0	0	0
S45	Burgess Hill	A2300 / A273 Jane Murray Way	SIG.	SEVERE		1	0	151	70
S46	Burgess Hill	A23 / B2117 Southbound On-Slip	SIG.	SEVERE		0	1	22	165
S47	Burgess Hill	B2036 London Road / Dunstall Avenue / Maple Drive	SIG.	SIG.		0	0	0	0
Number of Junction with SEVERE Impacts			12	13	5	11	4	1287	1593
Number of Junction with SIGNIFICANT impacts			44	42					

4.4.6 **Scenario 6** has **42** junctions that are significantly impacted and **13** that are severely impacted.

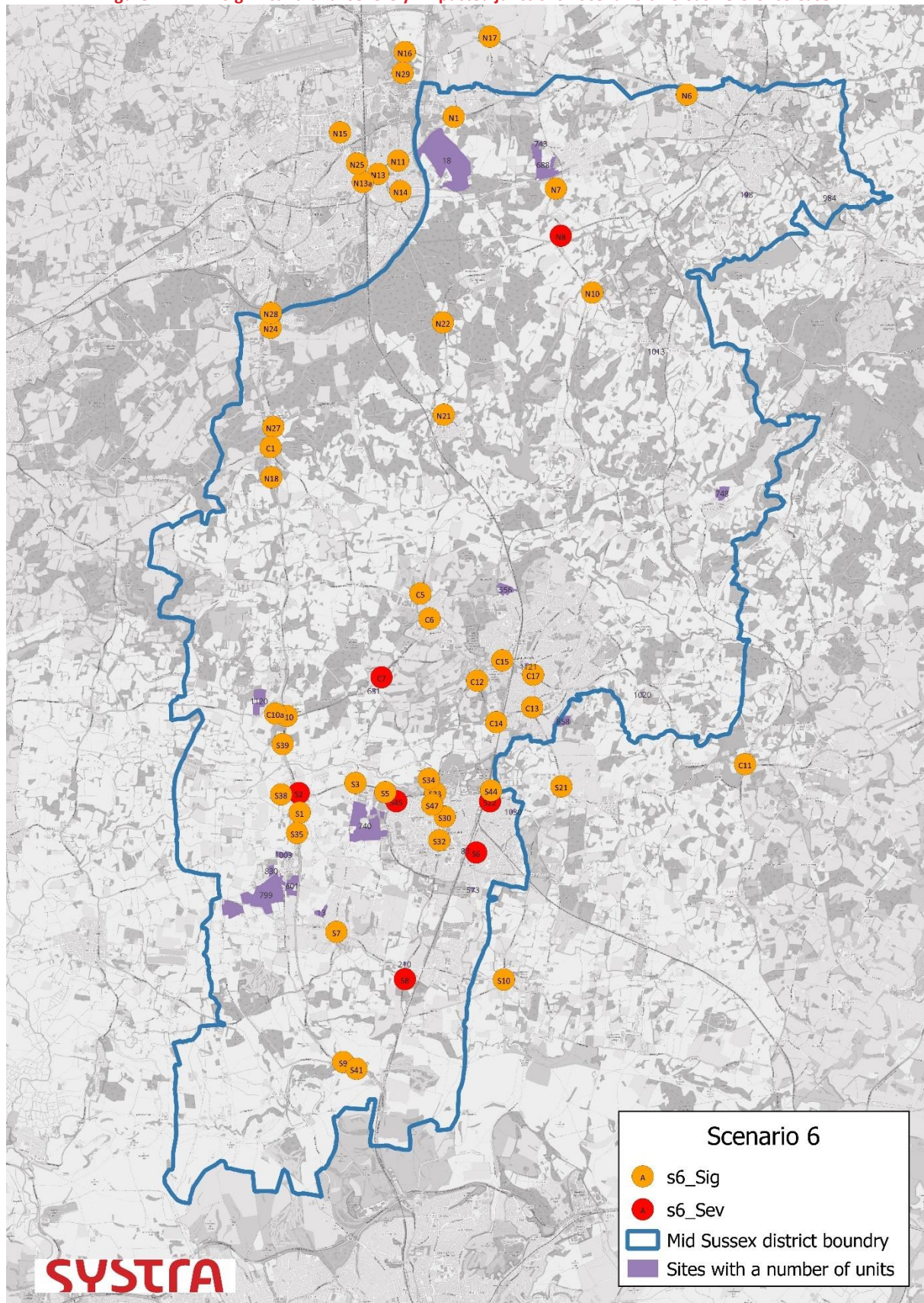
Severe Junctions:

- N1: A264 / A2220 Copthorne
- N8: B2110 / B2028 Turners Hill
- C7: A272 / B2036 Ansty
- C11: A272 / A275 North Chailey
- S2: A23 / A2300 Eastern Roundabout
- S3: A2300 / Cuckfield Road
- S6: Junction Road / B2113, Burgess Hill
- S8: A273 / B2116 Hassocks (Stonepound)
- S22: Valebridge Road / Junction Road / Leylands Road
- S35: A23 / B2118 Sayers Common
- S38: A23 / A2300 Western Roundabout
- S45: A2300 / A273 Jane Murray Way
- S48: A23 / B2117 Southbound On-Slip

4.4.7 Figure 4 shows the locations of the significant and severely impacted junctions in Scenario 6.

4.4.8 **Appendix B1** summarises the results for all Scenarios (6, 6m2, 6m5) and **Appendix C** shows detailed results by approach arm.

Figure 4. 'Significant' and 'severely' impacted junctions - Scenario 6 versus Reference Case



5. SCENARIO 6 WITH CAR TRIP RATE REDUCTION (6M2) CAPACITY IMPACTS

5.1 Introduction

5.1.1 This chapter describes the results of Scenario 6m2 which based on research and analysis by SYSTRA which is detailed in Chapter 3.3 of this report, and was also informed by submissions made by the large site promoters, tests the potential impact of initial car trip rate reductions as a result of home working, internalisation and mode share assumptions for trips to and from the large sites.

5.1.2 The impacts of Scenario 6m2 compared to the Reference Case are summarised by the following categories:

- Traffic Flow Impacts
- Impacts on the M23 and A23 Strategic Road Network
- Identification of Junctions with Capacity Impacts

5.1.3 Reporting includes assessment of locations in neighbouring authorities.

5.2 Traffic Flow Impacts

5.2.1 Appendix D – includes highway traffic flow difference plots to identify the impact of Scenario 6m2 on traffic movements compared to the Reference Case.

5.3 Impacts on the M23 and A23 Strategic Road Network

				Ref Case	Scenario 6m2				Ref Case	Scenario 6m2			
Location	Ref Case No. of Lanes	Max. Vehicles per hour per lane	Max. Vehicles per hour	AM Dem (Veh)	AM Dem (Veh)	Diff from 2039 Ref	% Diff	PM Dem (Veh)	PM Dem (Veh)	Diff from 2039 Ref4	% Diff		
M23 / A23													
Northbound													
A273 DIVERGE	1	1200	1200	783	834	51	6%	920	941	20	2%		
A273 MERGE	1	1200	1200	289	322	33	11%	149	169	20	13%		
A281 DIVERGE	1	1200	1200	324	290	-34	-11%	354	343	-10	-3%		
A281 MERGE	1	1200	1200	271	67	-204	-75%	53	37	-16	-30%		
B2117 DIVERGE	1	1200	1200	395	515	119	30%	497	673	176	35%		
B2118 MERGE	1	1200	1200	431	1015	584	135%	372	634	262	70%		
A2300 DIVERGE	1	1200	1200	242	311	69	28%	69	77	9	13%		
A2300 MERGE	1	1200	1200	1463	1552	89	6%	1642	1643	1	0%		
A272 DIVERGE	1	1200	1200	614	566	-48	-8%	501	600	99	20%		
A272 MERGE	1	1200	1200	239	226	-13	-5%	196	205	9	5%		
B2115 DIVERGE	1	1200	1200	296	314	17	6%	138	163	25	18%		
B2115 MERGE	1	1200	1200	369	400	32	9%	214	224	9	4%		
B2110 DIVERGE	1	1200	1200	354	396	42	12%	172	193	21	12%		
B2110 MERGE	1	1200	1200	1034	1021	-14	-1%	619	594	-25	-4%		
J11 DIVERGE	2	1350	2700	1786	1936	150	8%	1638	1648	10	1%		
J11 MERGE	1	1350	1350	1047	1013	-34	-3%	1200	1157	-43	-4%		
J10a MERGE	1	1350	1350	485	488	3	1%	275	267	-8	-3%		
J10 DIVERGE	2	1350	2700	1451	1444	-7	-1%	1115	1131	16	1%		
J10 MERGE	2	1350	2700	1026	1143	118	11%	1519	1552	33	2%		
J9 DIVERGE	2	1350	2700	1613	1687	75	5%	917	993	75	8%		
J9 MERGE	2	1350	2700	1410	1329	-81	-6%	1498	1444	-54	-4%		
M23 / A23													
Southbound													
J9 DIVERGE	2	1350	2700	1369	1298	-72	-5%	1712	1674	-38	-2%		
J9 MERGE	2	1350	2700	909	964	54	6%	1618	1654	37	2%		
J10 DIVERGE	2	1350	2700	1759	1754	-4	0%	1275	1320	45	4%		
J10 MERGE	2	1350	2700	1099	1205	106	10%	1239	1256	16	1%		
J10a DIVERGE	2	1350	2700	680	682	2	0%	736	762	26	4%		
J11 DIVERGE	2	1350	2700	1155	1147	-8	-1%	1017	984	-33	-3%		
J11 MERGE	1	1350	1350	1460	1474	13	1%	1724	1796	72	4%		
B2114 DIVERGE	1	1200	1200	312	309	-3	-1%	661	627	-35	-5%		
B2110 MERGE	1	1200	1200	308	330	23	7%	272	282	9	3%		
B2115 DIVERGE	1	1200	1200	344	340	-4	-1%	401	390	-11	-3%		
B2115 MERGE	1	1200	1200	228	246	18	8%	577	634	57	10%		
A272 DIVERGE	1	1200	1200	272	296	24	9%	349	416	67	19%		
A272 MERGE	1	1200	1200	468	514	46	10%	721	795	74	10%		
A2300 DIVERGE	2	1200	2400	1500	1506	6	0%	1193	1242	49	4%		
A2300 MERGE	1	1200	1200	773	827	55	7%	759	840	81	11%		
B2118/Mill Lane DIVERGE	1	1200	1200	519	759	240	46%	574	988	414	72%		
B2117 MERGE	1	1200	1200	526	855	328	62%	191	389	199	104%		
A281 MERGE	1	1200	1200	331	361	30	9%	13	13	0	-3%		
A273 DIVERGE	1	1200	1200	211	276	65	31%	25	38	13	52%		
A273 MERGE	1	1200	1200	869	803	-66	-8%	1205	1143	-63	-5%		

M23 Junctions 9, 10, and 11

5.3.1 Table 6 shows model results at the approach arms and main circulatory links at Junctions 9, 10 and 11 of the M23. The following results are shown for Scenario 6m2 alongside the Reference Case, for the AM and PM peak models:

- Demand in vehicles
- Ratio of flow to capacity (RFC)
- Average vehicle delay in seconds
- Average queue length in passenger car units (PCUs)

Table 6. Scenario 6m2: M23 Junctions 9, 10 and 11 – Approach Arm Results

Area	Junction	Approach Arm	2039 Reference Case								2039 Scenario 6m2							
			AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)
M23	Junction 9	M23 Southbound off-slip (N)	1369	58.3	11.3	3.7	1712	93.0	29.1	8.2	1298	55.4	11.0	3.5	1674	91.0	26.5	7.9
		M23 Northbound off-slip (S)	1613	44.9	1.0	0.0	917	25.1	0.7	0.0	1687	46.6	1.0	0.0	993	27.2	0.7	0.0
		Gatwick Spur (W)	1028	52.9	3.0	0.0	1715	79.9	3.0	0.0	1024	52.8	3.0	0.0	1655	77.4	3.0	0.0
		Gatwick Spur (W)	1028	66.8	3.0	0.0	1715	89.8	3.0	0.0	1024	66.1	3.0	0.0	1655	89.3	3.0	0.0
		M23 Spur Road (W) - Stopline	1028	52.9	3.0	0.0	1715	79.9	3.0	0.0	1024	52.8	3.0	0.0	1655	77.4	3.0	0.0
		M23 Spur Road (W) - Freeflow	1292	65.0	2.6	0.0	1401	64.7	2.6	0.0	1269	63.9	2.5	0.0	1443	66.9	2.7	0.0
		Circulatory North	909	86.4	31.5	5.2	1618	99.8	62.0	7.4	964	91.4	37.7	5.7	1654	102.3	105.9	24.5
		Circulatory East	2279	38.3	0.5	0.0	3330	53.1	0.6	0.0	2261	38.0	0.5	0.0	3329	52.6	0.6	0.0
		Circulatory South	1369	31.0	0.6	0.0	1712	37.1	0.6	0.0	1298	29.4	0.6	0.0	1674	36.0	0.6	0.0
		Circulatory West	0	0.0	0.4	0.0	0	0.0	0.4	0.0	0	0.0	0.4	0.0	0	0.0	0.4	0.0
M23	Junction 10	M23 Southbound off-slip (N)	1759	88.7	24.5	8.4	1275	57.4	14.8	4.6	1754	88.5	24.3	8.4	1320	58.4	15.6	5.0
		Copthorne Way (E)	720	35.2	18.5	2.9	1395	79.6	88.8	19.6	932	44.9	20.0	3.8	1521	86.1	88.7	21.6
		M23 Northbound off-slip (S)	1451	63.5	42.5	13.1	1115	65.9	79.4	12.5	1444	63.0	42.1	12.9	1131	66.6	81.4	13.1
		A2011 Crawley Avenue (W)	1798	83.8	21.3	8.3	2213	75.2	14.0	6.8	1769	82.6	20.8	8.1	2178	74.5	13.9	6.7
		Circulatory North	1488	99.6	61.8	7.9	1405	102.4	115.6	24.4	1473	98.6	54.3	7.8	1423	103.8	141.0	33.7
		Circulatory East	1812	78.8	16.5	6.9	1209	44.6	12.8	4.0	1844	80.2	17.2	7.3	1184	43.4	13.0	3.9
		Circulatory South	1434	74.2	22.7	8.2	1365	59.4	13.3	4.5	1571	80.9	25.2	9.6	1449	62.5	13.8	4.9
		Circulatory West	716	47.2	18.2	2.7	711	62.6	30.0	3.6	848	55.2	18.3	3.2	798	69.5	30.4	4.1
M23	Junction 11	M23 Southbound off-slip (NE)	1155	55.1	17.0	4.7	1017	75.8	28.1	6.1	1147	54.7	17.0	4.6	984	73.0	27.4	5.8
		Brighton Road (S)	1260	54.7	22.0	7.0	719	33.2	19.4	3.8	1269	55.0	22.1	7.0	663	30.7	19.2	3.5
		M23 Northbound off-slip (SW)	1126	31.2	9.8	2.8	625	18.5	9.1	1.7	1211	33.4	10.0	3.0	637	18.8	9.1	1.7
		A264 (W)	982	45.2	20.8	5.4	805	35.4	19.6	4.0	899	41.2	20.3	4.8	833	36.7	19.8	4.2
		A23 Brighton Road (N)	1001	45.0	13.7	3.5	1964	85.9	27.5	11.8	1010	45.3	13.9	3.5	2010	87.8	28.9	12.4
		Circulatory NE	1124	61.3	16.2	4.4	1938	72.5	11.5	4.8	1094	59.4	15.9	4.3	2033	76.0	12.2	5.2
		Circulatory South	2279	54.4	11.0	6.2	2955	66.6	12.9	9.1	2241	53.4	11.0	6.1	3017	67.8	13.3	9.5
		Circulatory SW	1109	96.2	47.7	6.3	900	75.4	23.8	4.5	1097	94.8	42.7	6.2	849	71.2	22.6	4.2
		Circulatory West	2236	64.6	60.6	16.9	1525	44.5	18.6	6.6	2308	66.3	76.4	27.6	1486	43.4	18.9	6.5
		Circulatory North	2722	84.0	16.5	10.2	2011	62.9	18.9	9.6	2668	81.2	15.2	9.1	2037	63.7	19.0	9.8

5.4 Identification of Junctions with Capacity Impacts

5.4.1 The same categorisation has been used previously in Scenario 6, detailed in Chapter 4.4 in respect of the WSCC Highway network.

5.4.2 The impact of development was assessed based on the National Planning Policy Framework (NPPF) using criteria agreed by MSDC and WSCC. These were derived using WSCC's position statement in relation to the NPPF which sets out their interpretation of terms defining traffic impacts, namely "significant amount of movement" and "severe impacts". In addition, a "showstopper" is defined as a location where the impacts do not have a reasonable prospect of being able to comply with NPPF paragraph 32.

5.4.3 An approach was devised to identify junctions forecast to experience 'severe' impacts in the future due to the strategic developments. This uses appropriately selected criteria to reflect the interpretation of the NPPF. A 'severe' impact is defined as a junction with any approach arm experiencing both of the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **95%** or more in any peak, in any Scenario; and
- an increase in average delay of **30 seconds** or more to an average delay of **two minutes** or more in any peak hour, in any Scenario

5.4.4 A 'significant' impact is a junction with any approach arm experiencing the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **85%** or more in any peak hour, in any Scenario

5.4.5 The criteria for defining and categorising capacity impact into Significant/Severe on the WSCC highway network have been agreed with West Sussex County Council.

5.4.6 Table 7 shows how many junctions are forecast to be impacted significantly or severely in Scenario 6m2 when compared to the Reference Case.

Table 7. Scenario 6m2: 'Severe' and 'Significant' Junction Impacts

2039 Scenario 6m2

ID	Area	Junction	Ref v 2019	Scenario v Ref	'Severe' change in Ref v 2019 also?	Number of junction arms meeting 'Severe' criteria		Total over capacity demand where 'Severe'	Average change in delay where 'Severe' (secs)
						AM	PM	AM+P	AM+P
N1	Copthorne	A264 / A2220 Copthorne	SEVERE	SIG.		0	0	0	0
N6	East Grinstead	A22 / Imberhorne Lane		SIG.		0	0	0	0
N8	Turners Hill	B2110 / B2028 Turners Hill	SEVERE	SEVERE	YES	1	0	23	58
N10	West Hoathly	Selsfield Road / Vowels Lane		SIG.		0	0	0	0
N11	Crawley	A2220 / B2036 (CRAWLEY)	SIG.	SIG.		0	0	0	0
N14	Crawley	B2036 Balcombe Road / Worth Road (CRAWLEY)	SIG.	SIG.		0	0	0	0
N15	Crawley	Gatwick Road / Manor Royal (CRAWLEY)	SIG.	SIG.		0	0	0	0
N18	Handcross	A23 / B2110 Northbound On-Slip		SIG.		0	0	0	0
N22	Balcombe	B2036 / B2110		SIG.		0	0	0	0
N27	Handcross	B2114 / B2110 Handcross	SIG.	SIG.		0	0	0	0
N28	Crawley	M23 / Junction 11 Southbound On-Slip	SIG.	SIG.		0	0	0	0
N29	Crawley	B2036 / Radford Road	SIG.	SIG.		0	0	0	0
C1	Handcross	B2114 Junction, Handcross		SIG.		0	0	0	0
C5	Haywards Heath	B2114 / B2036 Whitemans Green	SEVERE	SIG.		0	0	0	0
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	SEVERE	SIG.		0	0	0	0
C7	Ansty	A272 / B2036	SIG.	SEVERE		0	1	20	50
C10	Bolney	A23 / A272 Bolney Road	SIG.	SIG.		0	0	0	0
C10a	Bolney	London Road / A272 Cowfold Road	SIG.	SIG.		0	0	0	0
C12	Haywards Heath	A273 / Isaac's Lane / Traustein Way	SIG.	SIG.		0	0	0	0
C15	Haywards Heath	B2272 / Bolnore Road	SEVERE	SIG.		0	0	0	0
S1	Burgess Hill	A23 / A2300 Southbound On-Slip	SIG.	SIG.		0	0	0	0
S2	Burgess Hill	A23 / A2300 Eastern Roundabout	SEVERE	SIG.		0	0	0	0
S3	Burgess Hill	A2300 / Cuckfield Road	SIG.	SIG.		0	0	0	0
S5	Burgess Hill	A2300 / Northern Arc Spine Road	SIG.	SIG.		0	0	0	0
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint		SIG.		0	0	0	0
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	SEVERE	SEVERE	YES	1	0	22	55
S9	Pyecombe	A23 / A281 Southbound On-Slip	SIG.	SIG.		0	0	0	0
S22	Burgess Hill	Valebridge Road / Junction Road / Leylands Road	SIG.	SIG.		0	0	0	0
S23	Burgess Hill	A273 / B2036 / Marchants Way	SIG.	SIG.		0	0	0	0
S32	Burgess Hill	B2036 / Lower Church Road / Royal George Rd.	SIG.	SIG.		0	0	0	0
S34	Burgess Hill	B2036 Cuckfield Road / A273 Isaacs Lane	SIG.	SIG.		0	0	0	0
S35	Sayers Common	A23 / B2118 Sayers Common	SIG.	SIG.		0	0	0	0
S38	Burgess Hill	A23 / A2300 Western Roundabout	SIG.	SIG.		0	0	0	0
S39	Burgess Hill	A23 / A2300 Northbound On-Slip	SIG.	SIG.		0	0	0	0
S45	Burgess Hill	A2300 / A273 Jane Murray Way	SIG.	SIG.		0	0	0	0
Number of Junction with SEVERE Impacts			12	3	2	2	1	195	182
Number of Junction with SIGNIFICANT impacts			44	32					

5.4.7 **Scenario 6m2** has **32** junctions that are considered significantly impacted and **3** that are severely impacted.

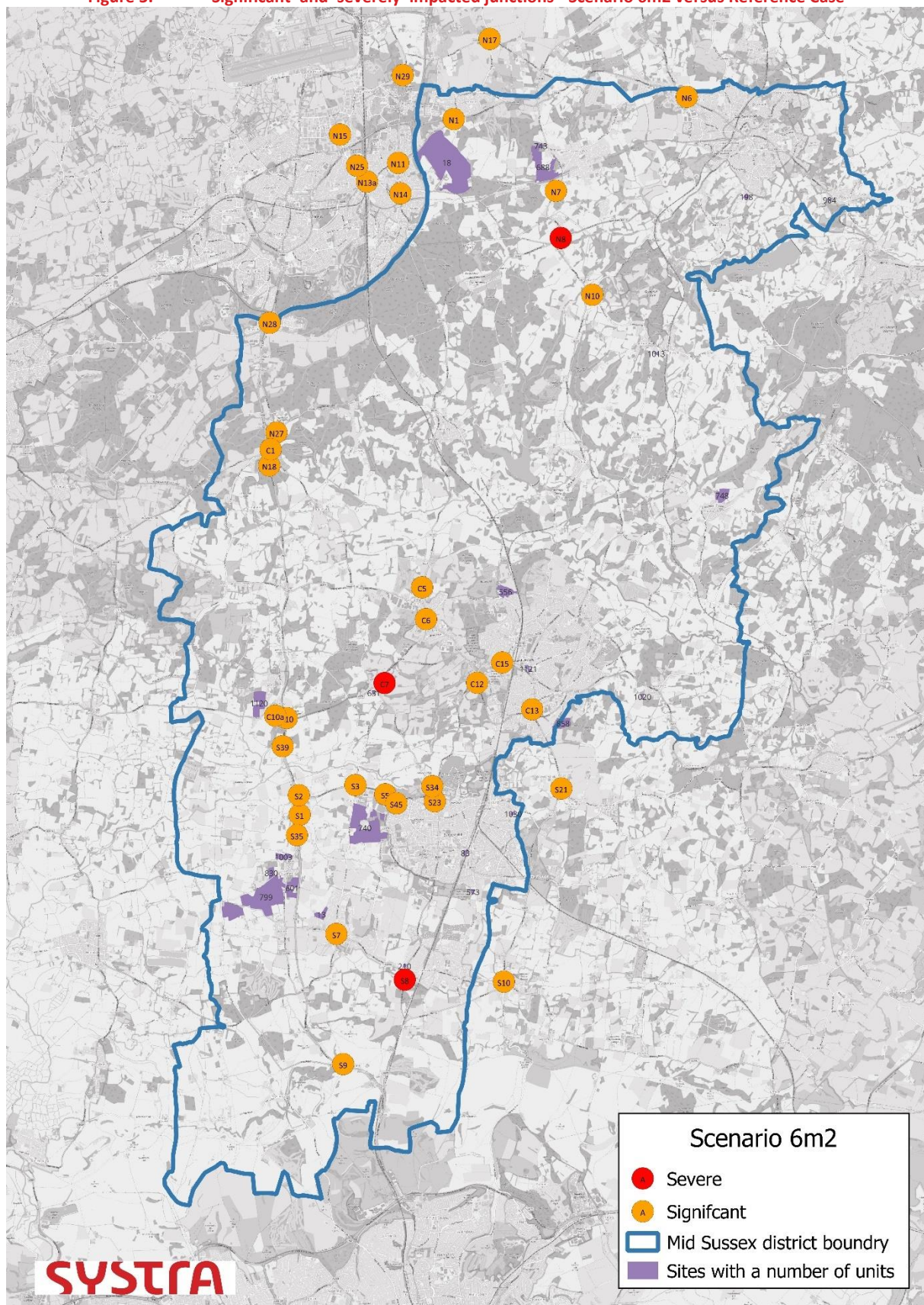
5.4.8 Severe Junctions:

- N8: B2110 / B2028 Turners Hill
- C7: A272 / B2036 Ansty
- S8: A273 / B2116 Hassocks (Stonepound)

5.4.9 Figure 5 shows the locations of the significant and severely impacted junctions in Scenario 6m2.

5.4.10 Appendix B1 shows summary results for all Scenarios (6, 6m2, 6m5) and Appendix C shows detailed results by approach arm.

Figure 5. 'Significant' and 'severely' impacted junctions - Scenario 6m2 versus Reference Case



6. SCENARIO 6M5 STRATEGIC MODELLING MITIGATION TESTING

6.1 Introduction

- 6.1.1 This chapter reports on the outputs from the modelling and specifically the forecast impact(s) on junction operational performance as a result of development related traffic growth in Scenario 6m5 with mitigation compared to the Reference Case.
- 6.1.2 Scenario 6m2 severe flagged junctions are the same as Scenario 5m2, the same mitigation has been proposed for Scenario 6m5.
- 6.1.3 The analysis includes the following:
- Traffic Flow Impacts
 - Impacts on the M23 and A23 Strategic Road Network
 - Identification of Junctions with Capacity Impacts
- 6.1.4 Reporting includes assessment of locations in neighbouring authorities.

6.2 Scenario 6m5 Mitigation Test – Model Inputs

Model Demand

- 6.2.1 Scenario 6m5 uses the same demand as that used in Scenario 6m2. Please see Chapter 5 for a more detail on the demand assumptions.

Highway Changes

- 6.2.2 Highway changes implemented in the previous modelling for Scenario 5m5 include improvements at 3 junctions listed below. However due to no material delays around Dukes Head Roundabout, and therefore no significant benefit of delivering improvements, this scheme has been dropped from Scenario 6m5 mitigation.

- Hickstead Junction (A2300 j/w A23)
- ~~Dukes Head Roundabout (A264 j/w B2028)~~
- Copthorne Hotel Roundabout (A264 j/w A2220)

- 6.2.3 Within the Strategic Modelling, it should be noted that as part of the forecast modelling, Reference Case schemes are included. These schemes are overlayed on top of the 2019 base scenario network, to build up an accurate representation of the transport network for the 2039 future year. These schemes are included in the 2039 Reference Case and subsequent 2039 Local Plan scenarios. Details of these can be found in Section 2.8. However, it's worth noting 2 key committed schemes that are included in the 2039 forecast years:

- A264 / Brookhill Rd / A2220 Roundabout (Copthorne Hotel Roundabout)
- A23/A2300 Hickstead Eastern Roundabout – Science Park Scheme

6.3 Impacts on the M23 and A23 Strategic Road Network

M23 Junctions 9, 10, and 11

- 6.3.1 Table 8 shows model results at the approach arms and main circulatory links at Junctions 9, 10 and 11 of the M23. The following results are shown for Scenario 6m5 alongside the Reference Case, for the AM and PM peak models:

- Demand in vehicles
- Ratio of flow to capacity (RFC)
- Average vehicle delay in seconds
- Average queue length in passenger car units (PCUs)

Table 8. Scenario 6m5: M23 Junctions 9, 10 and 11 – Approach Arm Results

Area	Junction	Approach Arm	2039 Reference Case								2039 Scenario 6m5							
			AM	AM	AM	AM	PM	PM	PM	PM	AM	AM	AM	AM	PM	PM	PM	PM
			Dem (Veh)	RFC (%)	Delay (s)	Avg Q (pcu)	Dem (Veh)	RFC (%)	Delay (s)	Avg Q (pcu)	Dem (Veh)	RFC (%)	Delay (s)	Avg Q (pcu)	Dem (Veh)	RFC (%)	Delay (s)	Avg Q (pcu)
M23	Junction 9	M23 Southbound off-slip (N)	1369	58.3	11.3	3.7	1712	93.0	29.1	8.2	1314	56.0	11.0	3.5	1674	91.0	26.5	7.9
		M23 Northbound off-slip (S)	1613	44.9	1.0	0.0	917	25.1	0.7	0.0	1669	46.1	1.0	0.0	1004	27.4	0.7	0.0
		Gatwick Spur (W)	1028	52.9	3.0	0.0	1715	79.9	3.0	0.0	1033	53.2	3.0	0.0	1733	80.4	3.0	0.0
		Gatwick Spur (W)	1028	66.8	3.0	0.0	1715	89.8	3.0	0.0	1033	66.3	3.0	0.0	1733	90.2	3.0	0.0
		M23 Spur Road (W) - Stopline	1028	52.9	3.0	0.0	1715	79.9	3.0	0.0	1033	53.2	3.0	0.0	1733	80.4	3.0	0.0
		M23 Spur Road (W) - Freeflow	1292	65.0	2.6	0.0	1401	64.7	2.6	0.0	1269	63.9	2.5	0.0	1395	64.2	2.5	0.0
		Circulatory North	909	86.4	31.5	5.2	1618	99.8	62.0	7.4	973	92.3	39.4	5.7	1662	102.1	100.8	22.3
		Circulatory East	2279	38.3	0.5	0.0	3330	53.1	0.6	0.0	2287	38.4	0.5	0.0	3336	52.6	0.6	0.0
		Circulatory South	1369	31.0	0.6	0.0	1712	37.1	0.6	0.0	1314	29.8	0.6	0.0	1674	35.9	0.6	0.0
		Circulatory West	0	0.0	0.4	0.0	0	0.0	0.4	0.0	0	0.0	0.4	0.0	0	0.0	0.4	0.0
M23	Junction 10	M23 Southbound off-slip (N)	1759	88.7	24.5	8.4	1275	57.4	14.8	4.6	1776	90.3	25.7	8.5	1337	59.0	15.7	5.1
		Copthorne Way (E)	720	35.2	18.5	2.9	1395	79.6	88.8	19.6	969	46.6	20.8	3.9	1547	87.9	96.3	24.9
		M23 Northbound off-slip (S)	1451	63.5	42.5	13.1	1115	65.9	79.4	12.5	1459	63.5	42.4	13.1	1139	67.0	86.4	14.7
		A2011 Crawley Avenue (W)	1798	83.8	21.3	8.3	2213	75.2	14.0	6.8	1797	83.9	21.3	8.3	2203	74.7	13.9	6.7
		Circulatory North	1488	99.6	61.8	7.9	1405	102.4	115.6	24.4	1509	100.8	80.0	13.8	1433	103.8	140.2	33.5
		Circulatory East	1812	78.8	16.5	6.9	1209	44.6	12.8	4.0	1713	74.5	15.3	6.3	1174	42.9	12.8	3.8
		Circulatory South	1434	74.2	22.7	8.2	1365	59.4	13.3	4.5	1551	79.5	24.6	9.3	1474	63.6	14.0	5.1
		Circulatory West	716	47.2	18.2	2.7	711	62.6	30.0	3.6	839	54.6	18.3	3.1	807	70.0	30.6	4.1
M23	Junction 11	M23 Southbound off-slip (NE)	1155	55.1	17.0	4.7	1017	75.8	28.1	6.1	1138	54.3	16.9	4.6	1002	74.1	27.7	5.9
		Brighton Road (S)	1260	54.7	22.0	7.0	719	33.2	19.4	3.8	1269	55.0	22.1	7.0	686	31.7	19.3	3.6
		M23 Northbound off-slip (SW)	1126	31.2	9.8	2.8	625	18.5	9.1	1.7	1208	33.3	10.0	3.0	654	19.2	9.1	1.7
		A264 (W)	982	45.2	20.8	5.4	805	35.4	19.6	4.0	902	41.3	20.3	4.8	829	36.5	19.8	4.2
		A23 Brighton Road (N)	1001	45.0	13.7	3.5	1964	85.9	27.5	11.8	1044	46.8	14.2	3.7	2047	89.1	29.9	12.8
		Circulatory NE	1124	61.3	16.2	4.4	1938	72.5	11.5	4.8	1127	61.1	16.1	4.4	2054	76.5	12.3	5.3
		Circulatory South	2279	54.4	11.0	6.2	2955	66.6	12.9	9.1	2265	53.9	11.2	6.3	3055	68.5	13.4	9.8
		Circulatory SW	1109	96.2	47.7	6.3	900	75.4	23.8	4.5	1099	95.0	43.3	6.2	874	73.0	23.1	4.3
		Circulatory West	2236	64.6	60.6	16.9	1525	44.5	18.6	6.6	2307	66.3	75.4	26.9	1527	44.4	19.1	6.8
		Circulatory North	2722	84.0	16.5	10.2	2011	62.9	18.9	9.6	2671	81.3	15.3	9.1	2061	64.3	18.6	9.6

6.4 Identification of Junctions with Capacity Impacts

6.4.1 The same categorisation has been used previously in Scenario 5, detailed in Chapter 4.4 in respect of the WSCC Highway network.

6.4.2 The impact of development was assessed based on the National Planning Policy Framework (NPPF) using criteria agreed by MSDC and WSCC. These were derived using WSCC's position statement in relation to the NPPF which sets out their interpretation of terms defining traffic impacts, namely "significant amount of movement" and "severe impacts". In addition, a "showstopper" is defined as a location where the impacts do not have a reasonable prospect of being able to comply with NPPF paragraph 32.

6.4.3 An approach was devised with WSCC HA to identify junctions forecast to experience 'severe' impacts in the future due to the strategic developments. This uses appropriately selected criteria to reflect WSCC interpretation of the NPPF. A 'severe' impact is defined as a junction with any approach arm experiencing both of the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **95%** or more in any peak, in any Scenario; and
- an increase in average delay of **30 seconds** or more to an average delay of **two minutes** or more in any peak hour, in any Scenario

6.4.4 A 'significant' impact is a junction with any approach arm experiencing the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **85%** or more in any peak hour, in any Scenario

6.4.5 The criteria for defining and categorising capacity impact into Significant/Severe on the WSCC highway network have been agreed with West Sussex County Council.

6.4.6 Table 9 details the significant and severe junction impacts of Scenario 6m5 with Mitigation.

Table 9. Scenario 6m5: 'Severe' and 'Significant' Junction Impacts

				2039 Scenario 6m5						
ID	Area	Junction	Ref v 2019	Scenario v Ref	'Severe' change in Ref v 2019 also?	Number of junction arms meeting 'Severe' criteria		Total over capacity demand where 'Severe'	Average change in delay where 'Severe' (secs)	
						AM	PM	AM+P	AM+P	
N6	East Grinstead	A22 / Imberhorne Lane		SIG.		0	0	0	0	
N8	Turners Hill	B2110 / B2028 Turners Hill	SEVERE	SEVERE	YES	1	0	85	64	
N10	West Hoathly	Selsfield Road / Vowels Lane		SIG.		0	0	0	0	
N11	Crawley	A2220 / B2036 (CRAWLEY)	SIG.	SIG.		0	0	0	0	
N13	Crawley	A2220 Haslett Avenue / St. Mary's Drive (CRAWLEY)		SIG.		0	0	0	0	
N13a	Crawley	A2220 Haslett Avenue / Station Hill (CRAWLEY)	SIG.	SIG.		0	0	0	0	
N15	Crawley	Gatwick Road / Manor Royal (CRAWLEY)	SIG.	SIG.		0	0	0	0	
N18	Handcross	A23 / B2110 Northbound On-Slip		SIG.		0	0	0	0	
N25	Crawley	Hazlewick Avenue / Bycroft Way (CRAWLEY)	SIG.	SIG.		0	0	0	0	
N28	Crawley	M23 / Junction 11 Southbound On-Slip	SIG.	SIG.		0	0	0	0	
N29	Crawley	B2036 / Radford Road	SIG.	SIG.		0	0	0	0	
C1	Handcross	B2114 Junction, Handcross		SIG.		0	0	0	0	
C5	Haywards Heath	B2114 / B2036 Whitemans Green	SEVERE	SIG.		0	0	0	0	
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	SEVERE	SIG.		0	0	0	0	
C7	Ansty	A272 / B2036	SIG.	SEVERE		0	1	90	60	
C10	Bolney	A23 / A272 Bolney Road	SIG.	SIG.		0	0	0	0	
C10a	Bolney	London Road / A272 Cowfold Road	SIG.	SIG.		0	0	0	0	
C15	Haywards Heath	B2272 / Bolnore Road	SEVERE	SIG.		0	0	0	0	
S1	Burgess Hill	A23 / A2300 Southbound On-Slip	SIG.	SIG.		0	0	0	0	
S3	Burgess Hill	A2300 / Cuckfield Road	SIG.	SIG.		0	0	0	0	
S5	Burgess Hill	A2300 / Northern Arc Spine Road	SIG.	SIG.		0	0	0	0	
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint		SIG.		0	0	0	0	
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	SEVERE	SEVERE	YES	2	0	104	90	
S9	Pyecombe	A23 / A281 Southbound On-Slip	SIG.	SIG.		0	0	0	0	
S22	Burgess Hill	Valebridge Road / Junction Road / Leylands Road	SIG.	SIG.		0	0	0	0	
S23	Burgess Hill	A273 / B2036 / Marchants Way	SIG.	SIG.		0	0	0	0	
S32	Burgess Hill	B2036 / Lower Church Road / Royal George Rd.	SIG.	SIG.		0	0	0	0	
S34	Burgess Hill	B2036 Cuckfield Road / A273 Isaacs Lane	SIG.	SIG.		0	0	0	0	
S35	Sayers Common	A23 / B2118 Sayers Common	SIG.	SIG.		0	0	0	0	
S38	Burgess Hill	A23 / A2300 Western Roundabout	SIG.	SIG.		0	0	0	0	
S39	Burgess Hill	A23 / A2300 Northbound On-Slip	SIG.	SIG.		0	0	0	0	
S45	Burgess Hill	A2300 / A273 Jane Murray Way	SIG.	SIG.		0	0	0	0	
Number of Junction with SEVERE Impacts			12	3	2	3	1	279	210	
Number of Junction with SIGNIFICANT impacts			44	29						

6.4.7 **Scenario 6m5** has **29** junctions that are considered significantly impacted and **3** that are severely impacted.

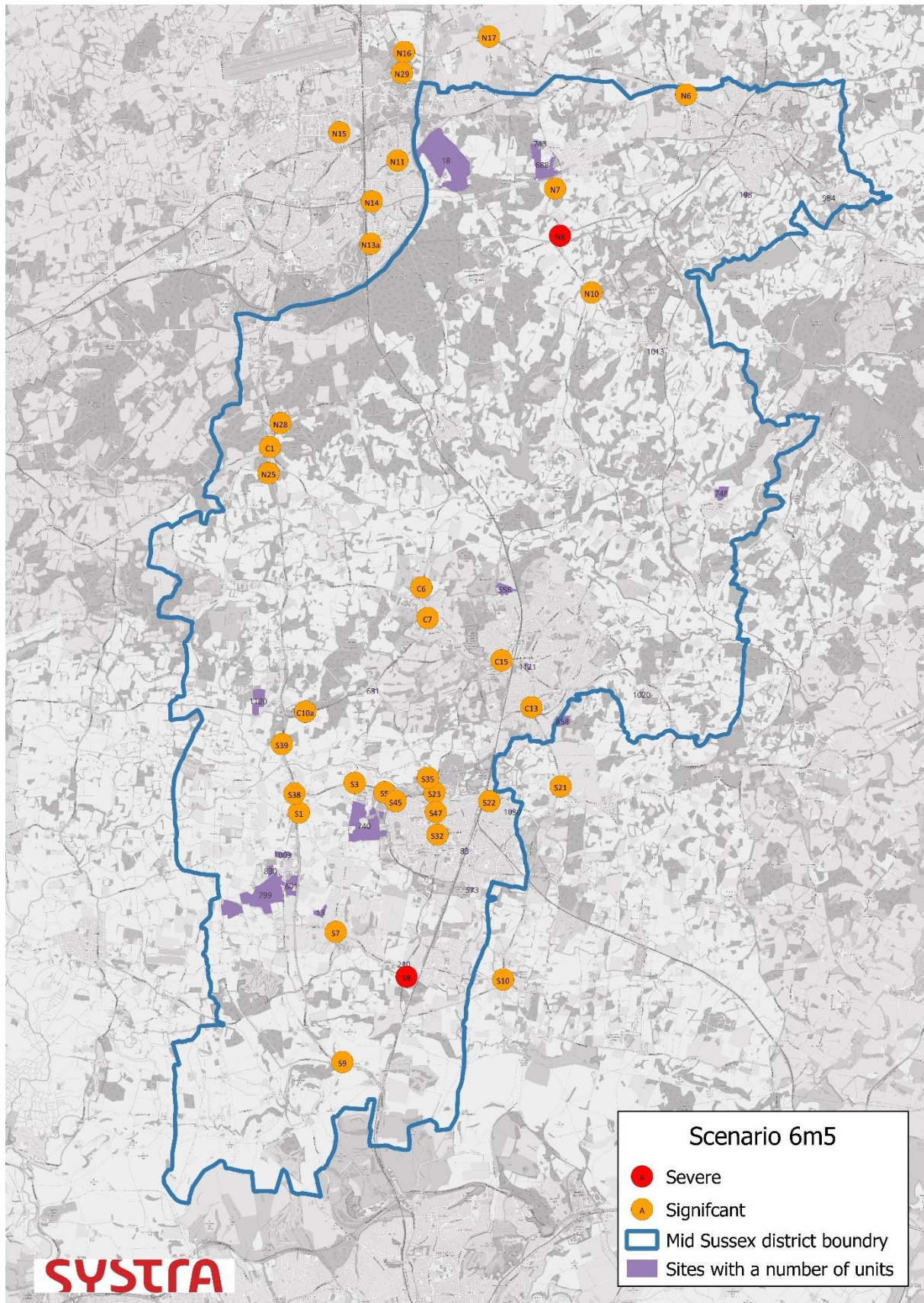
6.4.8 Severe Junctions:

- N8: B2110 / B2028 Turners Hill
- C7: A272 / B2036 Ansty
- S8: A273 / B2116 Hassocks (Stonepound)

6.4.9 Figure 6 shows the locations of the significant and severely impacted junctions in Scenario 6m5

6.4.10 Appendix B1 shows summary results for all Scenarios (6, 6m2, 6m5) and Appendix C shows detailed results by approach arm.

Figure 6. 'Significant' and 'severely' impacted junctions - Scenario 6m5 versus Reference Case



6.5 Scenario 6m5 differences to previous Scenario 5m5 modelling

6.5.1 Firstly to note the difference between Scenario 5 and Scenario 6. Scenario 5 considered Temprow NTEM8 High, Scenario 6 considers Temprow NTEM8 Core. Additional trip rate adjustments in Scenario 6m2 are considered for smaller local plan development sites, with an increase in home working from 5% (in scenario 5m2) to 20%, bringing this assumption in line with the larger Local Plan sites which are proposed at 20% in both Scenario 5 and Scenario 6.

- DM1 Scenario 5m0 & 6m0 – with local plan, without mode-shift
- DM2 Scenario 5.2 & 6m2 – with local plan, with mode-shift applied
- DS1 Scenario 5m5 & 6m5 – with local plan, with mode shift, with highway intervention (Hickstead Junction and Copthorne Roundabout (5m5 includes Dukes Head mitigation also)).

Headline changes between scenario 5 and scenario 6 identified junctions

6.5.2 There are some acknowledged differences between Scenario 5 vs 6.

6.5.3 Scenario 5m2 vs 6m2: 5m2 previously identified severe junctions which are also flagged in scenario 6m2. (Ansty, Stonepound, & Turners Hill junctions). There is no change between junctions considered severe.

6.5.4 Scenario 5m5 vs 6m5: 5m5 previously identified severe junctions which are also flagged in scenario 5m2, however an additional junction flagged as severe is the northbound A23 on-slip at Sayer Common. Scenario 6m5 includes the 3 flagged junction in scenario 6m2 (and 5m2), however it differs from Scenario 5m5 where the northbound A23 on-slip at Sayer Common is no longer flagged severe.

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Appendix A1 – Reference Case Commitments

Mid Sussex District Council: Commitment Schedule as at 1st April 2023, large sites (5+ units) over Plan Period

Town / Parish (NP Area)	Ward	Site Address (sites of 6+ units)	Overall Total (Gross)	Overall Losses (Gross)	Overall Cmplts (Net)	Total Remaining (Net)	PP Ref #	Expiry Date	SHLAA ID#
Albourne		Former Hazelden Nursery London Road Albourne (Care/not communal)	84	0	0	84	DM/22/2485	01/03/2024	58
Ansty & Staplefield		Bridge Hall, Cuckfield Road, Burgess Hill	35	0	0	35	DM/21/1524	commenced	570
Ansty & Staplefield		Woodfield House, Isaacs Lane Burgess Hill	30	1	0	29	SA allocation		840
Ansty & Staplefield		Ansty Cross Garage Ansty	12	0	0	12	SA allocation		844
Ardingly		Land west of Selsfield Road Ardingly	35	0	0	35	DM/22/1575	Pending s106	832
Ashurst Wood		Wealden House, Lewes Road, Ashurst Wood	54	0	0	54	DM/19/1025	11/11/2023	470
Ashurst Wood		LIC, Wealden House, Lewes Road, Ashurst Wood	25	0	0	25	NP allocation		757
Ashurst Wood		Mount Pleasant Nursery Canons Lane Ashurst Wood	6	1	0	5	DM/18/3242	REM submitted	208
Ashurst Wood		Land south of Hammerdown Road Ashurst Wood	12	0	0	12	SA allocation		138
Balcombe		Land adjacent Balcombe House Haywards Heath Road Balcombe	17	0	0	17	DM/21/4235	04/08/2025	150
Balcombe		Land opposite Newlands, London Road, Balcombe	14	0	0	14	NP allocation		188
Boley	Boley	G&W Motors London Road Boley	10	0	0	10	NP allocation		82
Boley		Land opposite Queens Head (near cricket club), Boley	30	0	8	22	DM/17/4392	commenced	953
Boley		Boley House, Cowfold Road, Boley	5	0	0	5	NP allocation		711
Burgess Hill		Northern Arc, Burgess Hill	2731	0	0	2731	DM/18/5114	04/10/2022	493
Burgess Hill		Northern Arc, Burgess Hill (Care/not communal)	60	0	0	60	DM/18/5114	04/10/2022	1125
Burgess Hill		Northern Arc, Burgess Hill (Belfry, P1.5 and P1.6)	249	0	0	249	DM/21/3870	24/05/2025	493
Burgess Hill		Land west of Frieles Lane Burgess Hill (countryside/Vistry)	460	0	50	410	DM/19/3845	commenced	969
Burgess Hill	Chantonbury Ward	Station yard/car park Burgess Hill	150	0	0	0	NP allocation*		83
Burgess Hill	Franklands Ward	The Oaks Centre Junction Road Burgess Hill	12	0	0	12	LP Allocated		84
Burgess Hill	Leylands Ward	North of Faulkners Way Burgess Hill	20	0	0	20	NP allocation		88
Burgess Hill	Leylands Ward	Aberville Park Fairbridge Way Burgess Hill	307	0	7	300	DM/19/1895	Commenced	45
Burgess Hill		Keymer Tile Works Nye Road Burgess Hill phase 2	170	0	161	9	DM/16/2718	Commenced	91
Burgess Hill	St Andrews Ward	Land East of Kingsway Burgess Hill, Phase 1	78	0	76	2	14/03208/REM	Commenced	233
Burgess Hill	St Andrews Ward	Land East of Kingsway Burgess Hill, Phase 4	237	0	0	237	DM/20/0886	Pending s106	233
Burgess Hill		Open air market Burgess Hill	25	0	0	25	LP Allocated		92
Burgess Hill	Town Ward	Land at Victoria Road (north), Burgess Hill	51	0	0	51	NP allocation		544
Burgess Hill		Burgess Hill Town Centre, Civic Way, Burgess Hill	172	0	0	172	DM/19/3331	02/07/2025	528
Burgess Hill		The Brow, Burgess Hill	100	0	0	100	NP allocation		756
Burgess Hill		1 Cyprus Road Burgess Hill	10	0	0	10	DM/20/2740	Commenced	447
Burgess Hill		Prospect House 1 -11 Junction Road Burgess Hill (Part GF - part overlap)	2	0	0	2	DM/19/4670	Commenced	117
Burgess Hill		Prospect House 1 -11 Junction Road Burgess Hill (GF)	3	0	0	3	DM/20/2157	Commenced	117
Burgess Hill		Prospect House 1 -11 Junction Road Burgess Hill (2nd floor extension)	3	0	0	3	DM/21/0338	Commenced	117
Burgess Hill		Flat 5 and Flat 12 subdivision Prospect House 1 -11 Junction Road Burgess Hill	4	2	0	2	DM/21/3487	Commenced	117
Burgess Hill		Victoria House 66 Victoria Road Burgess Hill	7	0	0	7	DM/21/1991	07/04/2025	544
Burgess Hill		America House 273 London Road Burgess Hill	6	0	0	6	DM/21/0688	Commenced	1089
Burgess Hill		66 Church Walk Burgess Hill	8	0	0	8	DM/21/3503	10/05/2025	1108
Burgess Hill		60 - 64 Church Walk Burgess Hill	15	0	0	15	DM/19/4077	20/09/2024	1109
Burgess Hill		Rear Of 62 - 64 Folders Lane Burgess Hill	18	1	0	17	DM/22/0732	16/11/2025	1143
Burgess Hill		Land At Wintons And Wintons Fishery Folders Lane Burgess Hill	4	0	0	4	DM/21/5311	14/11/2025	8
Burgess Hill		66 Folders Lane, Burgess Hill	40	0	0	40	SA allocation		827
Burgess Hill		Land south of Folders lane and East Keymer Road Burgess Hill	300	0	0	300	SA allocation		976
Burgess Hill		Land south of Selby Close Burgess Hill	12	0	0	12	SA allocation		904
Burgess Hill		St Wilfrids School Burgess Hill	200	0	0	200	SA allocation		345
Burgess Hill		Little Abbotford Island Lane Burgess Hill	9	0	0	9	DM/19/3234	19/07/2025	1144
Burgess Hill		Land south of Southway Burgess Hill	30	0	0	30	SA allocation		594
Cuckfield		Land at Hanyie Lane east of Ardingly Road Cuckfield	55	0	0	55	SA allocation		479
Cuckfield	Cuckfield	The Manor House, 14 Manor Drive, Cuckfield	15	0	0	5	NP allocation		177
Cuckfield	Cuckfield	Courtmeadow School, Hanyie Lane, Cuckfield	13	0	0	13	DM/21/3785	15/06/2025	480
Cuckfield		Horsgate House, Hanyie Lane, Cuckfield	5	0	0	0	NP allocation		649
East Grinstead	North Ward	Stonequary Woods East Grinstead	30	0	0	30	LP Allocated		96
East Grinstead		5 - 8A Whitehall Parade London Road East Grinstead	7	0	0	7	DM/21/4105	17/10/2025	1145
East Grinstead	West Ward	Junction of Windmill Lane/London Road East Grinstead	40	5	0	0	Allocated		102
East Grinstead		Imberhome School, Windmill Lane, East Grinstead	200	0	0	200	NP allocation		81
East Grinstead		67 - 69 Railway Approach, East Grinstead	7	0	0	0	NP allocation		441
East Grinstead		Imberhome Lane Car Park, Imberhome Lane, East Grinstead	18	0	0	18	NP allocation		510
East Grinstead		Delivery Office, 76 London Road, East Grinstead	12	0	0	12	NP allocation		559
East Grinstead		Phoenix House, 53 -59 Lingfield Road, East Grinstead	9	0	0	9	DM/20/3640	commenced	369
East Grinstead		Queensmere House, 49 Queensmere Road, East Grinstead	14	0	0	14	DM/17/2725	commenced	909
East Grinstead		Hill Place Farm, Turners Hill Road, East Grinstead	200	98	0	102	DM/19/1067	commenced	562
East Grinstead		Sussex House London Road East Grinstead	8	0	0	8	13/04040/FUL	Commenced	409
East Grinstead		Tower Car Sales Tower Close East Grinstead	9	0	0	9	DM/21/3534	07/03/2022	759
East Grinstead		11a Crawley Down Road Faldridge	32	1	0	31	DM/19/3022	Commenced	21
East Grinstead		Vacant plot 70 - 72 London Road East Grinstead	6	0	0	6	DM/19/0303	13/10/2023	1084
East Grinstead		Brookhurst Furze Lane East Grinstead	7	0	3	4	DM/19/5211	29/09/2023	595
East Grinstead		Oakhurst Maypole Road East Grinstead	10	0	0	10	DM/20/0015	Commenced	980
East Grinstead		Block B East Grinstead House Wood Street East Grinstead West Sussex RH19 1UJ	60	0	0	60	DM/20/1369	04/06/2023	872
East Grinstead		Block F And G East Grinstead House Wood Street East Grinstead West Sussex	67	0	0	67	DM/20/1370	03/06/2023	872
East Grinstead		Block E Fifth Floor East Grinstead House Wood Street	15	0	0	15	DM/21/0386	17/03/2024	872
East Grinstead		Pikfield Engineering factory Durkins road EG	8	0	0	8	DM/20/1516	19/05/2024	1110
East Grinstead		Former East Grinstead Police Station East Grinstead	22	0	0	22	SA Allocation		847
East Grinstead		Land south Crawley Down Road Faldridge	200	2	0	198	DM/20/0840	commenced	096
East Grinstead		Land south and west of Imberhome Upper School East Grinstead	550	0	0	550	SA Allocation		770
East Grinstead		Blackwell Farm Road East Grinstead	10	0	0	10	DM/20/1333	04/03/2025	513
Hassocks	Hassocks Stonepound	Station Goods Yard Hassocks	54	0	0	54	SCHAD Allocated		106
Hassocks		Land adjacent to Station Goods Yard Hassocks	16	0	0	16	SCHAD Allocated		36
Hassocks		Hassocks Golf Club, London Road, Hassocks	165	0	155	10	DM/18/2616	Commenced	690
Hassocks		Land north of Clayton Mills, Hassocks	500	0	4	496	DM/21/2841	Commenced	753
Hassocks		land to rear of Friars Oak London Road Hassocks	130	0	0	130	DM/21/2628	Commenced	221
Hassocks		14 Hassocks Road Hassocks	9	0	0	9	DM/22/2188	Commenced	1111
Haywards Heath	Ansty and Staplefield	Rookery Farm Rocky Lane Haywards Heath (phase 1)	234	0	215	19	DM/17/1910	commenced	84498
Haywards Heath		Rookery Farm Rocky Lane Haywards Heath (phase 2)	109	0	0	109	DM/19/5207	Commenced	94497
Haywards Heath	Franklands Ward	North of 99 Reed Pond Walk Franklands Village Haywards Heath	24	0	0	24	DM/22/1371	22/12/2025	531
Haywards Heath		Hurst Farm, Hurstwood Lane, Haywards Heath	350	0	0	350	NP allocation		246
Haywards Heath		Canu Hall, Bolnere Road, Haywards Heath	12	0	0	0	NP allocation		507
Haywards Heath		Land rear of Devon Villas (The Courtyard), Western Road, Haywards Heath	9	0	0	9	DM/19/0840	commenced	597
Haywards Heath		NCP Car Park, Harlands Road, Haywards Heath	40	0	0	40	DM/17/2384	14/02/2023	744
Haywards Heath		The Priory, Syresham Gardens, Haywards Heath	9	0	0	9	DM/18/2237	Commenced	732
Haywards Heath		The Priory, Syresham Gardens, Haywards Heath	2	0	0	2	DM/18/2251	Commenced	732
Haywards Heath		Chester House Harland Road Haywards Heath	76	0	0	76	DM/21/0187	04/03/2023	1092
Haywards Heath		Maxwellton House 41 - 43 Bolto Road Haywards Heath West Sussex	54	0	0	54	DM/20/3516	20/12/2024	1090
Haywards Heath		Red Cross Hall 29 Paddockhall Road Haywards Heath West Sussex RH16 1TH	8	0	0	8	DM/18/4841	Commenced	618
Haywards Heath		25 Bolto Road Haywards Heath	7	1	0	6	DM/20/2998	Commenced	1102
Haywards Heath		Workshop and Garges North Road Haywards Heath	6	0	0	6	DM/20/1470	13/01/2025	1112
Haywards Heath		Linden House Southdowns Park Haywards Heath	14	0	0	14	DM/18/0421	02/06/2024	1113
Haywards Heath		2 - 6 The Broadway Haywards Heath	19	0	0	19	DM/20/1388	commenced	1114
Haywards Heath		Lloyds Bank 31-33 Perymount Road Haywards Heath (PDOFF - roof extension)	30	0	0	30	DM/22/0245	11/03/2025	1115
Haywards Heath		Lloyds Bank 31-33 Perymount Road Haywards Heath (PDOFF)	38	0	0	38	DM/21/2679	13/09/2024	1115
Haywards Heath		1 and 2 Heath Square Bolto Road Haywards Heath	15	0	0	15	DM/21/2676	13/12/2024	1116
Haywards Heath		14 - 16 Sussex Road Haywards Heath	8	0	0	8	DM/20/1881	17/12/2024	1118
Haywards Heath		Land at Rogers Farm Haywards Heath	20	0	0	20	DM/22/0733	21/10/2025	783
Haywards Heath		Downlands Park, Isaacs Lane, Haywards Heath (Care/not communal)	81	0	0	81	DM/20/4159	05/05/2025	750
Horsted Keynes		Land south of The Old Police House Horsted Keynes	25	0	0	25	SA Allocation		897
Horsted Keynes		Land south of St Stephens Church Horsted Keynes	30	0	0	30	SA Allocation		184
Hurstpierpoint and Sayers Common		Kingsland Lanes Reeds Lane Sayers Common Hassocks Phase1	93	0	85	8	DM/20/3927	Commenced	220
Hurstpierpoint and Sayers Common		Kingsland Lanes Reeds Lane Sayers Common Hassocks Phase 2	40	0	31	9	DM/20/3927	Commenced	220
Hurstpierpoint and Sayers Common		Land to north of Lyndon Reeds Lane Sayers Common	36	0	0	36	DM/22/0640	15/12/2022	829
Hurstpierpoint and Sayers Common		Land to north of Lyndon Reeds Lane Sayers Common (custom plots)	2	0	0	2	DM/22/0640	15/12/2022	829
Linfield Rural		Land east of High Beech Lane Linfield	43	0	40	3	DM/19/2454	Commenced	151
Linfield Rural		Land east of High Beech Lane Linfield (custom plots)	2	0	0	2	DM/17/2271		151
Linfield Rural		Land east of High Beech Lane Linfield (custom plot A) (37 Town Wood Close)	1	0	0	1	DM/22/3504	11/01/2026	151
Linfield Rural		Buxhalls Ardingly Road Linfield	35	19	0	16	DM/20/0979	commenced	586
Linfield Rural		Land south of Scamps Hill Linfield	200	0	0	200	DM/20/2763	Commenced	483
Linfield Rural		Springfield Farm Lewes Road Scaynes Hill	6	0	3	0	14/03160/PDOFF	Commenced	761
Linfield Rural		Land to the rear of Firlands, Church Road Scaynes Hill	20	0	0	20	SA Allocation		897
Slaugham		Slaugham Manor, Slaugham Place, Slaugham	25	0	18	7	DM/16/2531	Commenced	765
Slaugham		Land east of Brighton Road, Phase 1	156	0	148	7	DM/19/2534	commenced	666
Slaugham		Land east of Brighton Road, Pease Pottage phase 3	186	0	177	9	DM/19/3549	Commenced	666
Slaugham		Land east of Brighton Road, Pease Pottage phase 4	136	0	29	107	DM/19/4636	commenced	666
Slaugham		Land east of Brighton Road, Pease Pottage phase 5	141	0	58	83	DM/19/4637	commenced	666
Slaugham		Land at St Martins Close (East) Handcross	30	0	0	30	NP allocation		1010
Slaugham		Land at St Martins Close (West) Handcross	35	0	0	35	SA Allocation		127
Turners Hill		Old Vicarage Field, Church Road, Turners Hill	44	0	0	44	NP allocation		492+533
Turners Hill		Withypitts Farm Selsfield Road Turners Hill	20	0	0	20	SA Allocation		854
Twineham		Twineham Grange Farm, Bob Lane, Twineham	6	0	0	6	DM/17/1374	01/05/2021	924
West Hoathly	Sharpthorne	Land north of Top Road, Sharpthorne	24	0	0	24	NP allocation		148
West Hoathly	Sharpthorne	Land adjacent to Cookhams, south of Top Road, Sharpthorne	16	0	0	16	NP allocation		477
West Hoathly	Sharpthorne	Station Goods Yard, Station Yard, Sharpthorne	5	0	0	5	11/04102/FUL	Commenced	147
Worth		Land north of Burleigh Lane Crawley Down	50	0	0	50	SA Allocation		519
Worth		Regency Hotel Old Hollow, Cophthorne	10	0	0	10	DM/19/4549	28/01/2024	1103
Worth		Land parcel west of Turners Hill Road Crawley Down	44	0	29	15	DM/19/2442	23/01/2023	271
Worth		Land west of Cophthorne, Phase 3 and 4, Cophthorne Way (TW)	197	0	38	159	DM/21/0644	Commenced	38
Worth		Land west of Cophthorne, Phase 1, Cophthorne Way (St Mod)	303	0	219	84	DM/18/4321	Commenced	38
Worth	Crawley Down & Turners Hill	Palmer's Autocentre Turners Hill Road Crawley Down	8	0	0	8	DM/17/1660	Commenced	488

Communal Accommodation

Overall Accommodation		Overall Total (Gross)	Overall Losses (Gross)	Overall Cmplts (Net)	Total Remaining (Net)					
Type						Ratio applied	Site Total completions with ratio applied	Permission Ref	SHELAA	Expiry
Burgess Hill	Care Accommodation	Land To The South Of Kings Way Burgess Hill	68	0	0	2	34	DM/21/3385	1042	05/09/2025
Haywards Heath	Care Accommodation	Oakwood Amberley Close Haywards Heath	31	4	0	27	16	DM/20/1503	1127	12/03/2024
Haywards Heath	Care Accommodation	23 - 25 Bolnore Road Haywards Heath	67	0	0	67	2	DM/20/3510	970	14/12/2024
			24	0	0	24	2			
Slougham	Care Accommodation	Land East Of Brighton Road Pease Pottage	67	0	0	24	2	DM/17/2534	1129	01/03/2025
East Grinstead	Care Accommodation	Acorn Lodge Turners Hill Road Nursing Home	7	0	0	7	2	DM/21/4377	1130	
Worthing	Care Accommodation	Rosam Turner Hill Road Crawley Down	17	0	0	17	9	DM/21/0028	1131	18/02/24
Worthing	Care Accommodation	Land Adjacent To Rowan East Of Turners Hill Road Crawley Down	64	0	0	64	2	DM/20/3081	269	12/04/2025

Hurstpierpoint	Care Accommodation	Land To West Of Goldcrest Drive Sayers Meadow Sayers Common	66	0	0	66	2	33	DM/22/2012	1126			24/01/2026
Care Accommodation Total			344					172					
Hurstpierpoint	Education	Hurstpierpoint College, College Lane & boardinf rooms and 2 flats							DM/23/3789	1132			
Hurstpierpoint	Education	St Johns House Hurstpierpoint College	2				2.5	1	DM/21/4020	1132			12/06/2025
Education Accommodation Total			2					1					

	Overall Total (Gross)	Overall Losses (Gross)	Overall Cmpltns (Net)	Total Remaining (Net)
Total (from large sites)	11419	132	1555	9594
Total (from small sites)				173
Total from Communal Accommodation (ratio applied)				173
Total Commitments (all sites)				9945

Appendix A2 – Employment Allocations

Employment Allocations - December 2019

SHLAAID	Address	Settlement	Area	Location	Revised Usage Split			Revised Area			
					B1 %	B2 %	B8 %	B1	B2	B8	
24	Land at Stairbridge Lane (South of Bolney Grange), Bolney	Bolney	5.5	BolneyGrange	33.33	33.33	33.33	1.83	1.83	1.83	
906	Undeveloped land (south) at Bolney Grange Business Park Stairbridge Lane Bolney	Bolney	0.6	BolneyGrange	33.33	33.33	33.33	0.20	0.20	0.20	
907	Undeveloped land (east) at Bolney Grange Business Park Stairbridge Lane Bolney	Bolney	0.2	BolneyGrange	33.33	33.33	33.33	0.07	0.07	0.07	
931	Extension (east) to Bolney Grange Business Park Stairbridge Lane Bolney	Bolney	0.7	BolneyGrange	33.33	33.33	33.33	0.23	0.23	0.23	
192	Pease Pottage Nurseries, Brighton Road, Pease Pottage	Pease Pottage	1	Other	33.33	33.33	33.33	0.33	0.33	0.33	
826	Burnside Centre, Victoria Road, Burgess Hill	Burgess Hill	0.96	Other	50	50	0	0.48	0.48	0.00	
864	Marylands Nursery, Cowfold Road, Bolney	Bolney	2.4	Other	0	0	100	0.00	0.00	2.40	
888	Cedars (Former Crawley Forest School) Brighton Road Pease Pottage	Slaugham	2.3	Other	33.33	33.33	33.33	0.77	0.77	0.77	
912	Site of Former KDG Victoria Road Burgess Hill	Burgess Hill	1.1	Other	50	50	0	0.55	0.55	0.00	
940	Land north of the A264 at Junction 10 of M23 (Employment Area)	Copthorne	2.7	Other	50	0	50	1.35	0.00	1.35	
USE (ha)								5.81	4.46	7.18	17.46

Appendix A3 – DPR Transport Scenario 5

SHLAAID	Site	Settlement	Yield	Additional Uses
13	Land west of Kemps	Hurstpierpoint	90	C3 Residential
18	Crabbet Park	Copthorne	1500	1000 sqm commercial (Class E(g), 2FE Primary School, 4FE Secondary School
83	Burgess Hill Station (additional yield)	Burgess Hill	150	C3 Residential
198	Land off West Hoathly Road	East Grinstead	45	C3 Residential
210	Land rear of 2 Hurst Road (Land opposite Stanford Avenue) Hassocks	Hassocks	25	C3 Residential
508	Land at Junction of Hurstwood Lane and Colwell Lane	Haywards Heath	30	C3 Residential
556	Land east of Borde Hill Lane	Haywards Heath	60	C3 Residential
573	Batchelors Farm, Keymer Road	Burgess Hill	33	C3 Residential
601	Land at Coombe Farm, London Road	Sayers Common	210	C3 Residential
631	Challoners, Cuckfield Road	Ansty	37	C3 Residential
688	Land to west of Turners Hill Road	Crawley Down	350	Community centre
740	West of Burgess Hill	Burgess Hill	1400	2FE Primary school, up to 500m2 community hub - inc shops(s)/café/workspace (WeWork type), up to 3 x 100m2 (300m2) commercial (uses TBC) up to 200m2 pavilion/ community space
743	Hurst Farm, Turners Hill Road	Crawley Down	37	C3 Residential
748	Land to west of Marwick Close, Bolney Road	Ansty	45	C3 Residential
799	South of Reeds Lane	Sayers Common	1850	2000-4000 retail sqm retail/ community, 5000-9000sqm commercial (Class E(g)) - 2FE Primary and 4 FE Secondary school
830	Land to the west of Kings Business Centre, Reeds Lane	Sayers Common	100	C3 Residential
858	Land at Hurstwood Lane	Haywards Heath	45	C3 Residential
984	The Paddocks, Lewes Road	Ashurst Wood	8	C3 Residential
1003	Land to South of LVS Hassocks, London Road	Sayers Common	200	C3 Residential
1013	Land at Hoathly Hill	West Hoathly	18	C3 Residential
1020	Ham Lane Farm House, Ham Lane	Scaynes Hill	30	C3 Residential
1026	Land at Chesapeake and Meadow View, Reeds Lane	Sayers Common	33	C3 Residential
1030	Land at Hillbrow, Janes Lane, Burgess Hill	Burgess Hill	25	C3 Residential
1120	Land at Foxhole Farm	Bolney	200	C3 residential - community centre
1121	Orchards Shopping Centre	Haywards Heath	100	C3 Residential

Windfall and Brownfield Allowance

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