

MID SUSSEX TRANSPORT STUDY

DISTRICT PLAN REVIEW

SCENARIO 4 NON-TECHNICAL SUMMARY (DRAFT)

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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). The work stages are:

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

Current Position and Next Steps

1.1.2 This report is part of an iterative process to test the impact of development and the potential mitigations to reduce those impacts. The next steps will be to propose sustainable mitigations and highway mitigations. However, this report does include results of scenarios which have been informed by submissions made by the significant site promoters and 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 scenario's significant site developments.

Highway Model

1.1.3 The Mid Sussex Strategic Highway Model (MSSHM) was produced in accordance with standard good practice as set out in the Department for Transport's (DfT) transport analysis guidance (TAG). The model's base year is 2019.

Transport Study

1.1.4 The impacts on the highway network of the agreed development scenarios were assessed based on the National Planning Policy Framework (NPPF) using criteria agreed by MSDC and West Sussex County Council (WSCC). Where junctions or roads sections are assessed to be adversely impacted by the developments, the potential impact of sustainable transport mitigation will be assessed after which potential highway mitigation schemes will be tested. These mitigations will aim to remove all 'severe' impacts.

1.1.5 A safety review will also be undertaken to provide a junction and road-section based assessment of accident clusters.

1.1.6 Parallel work will include environmental impact to comply with National Planning Practice Guidance on transport evidence bases in plan making and air quality modelling and ecological interpretation for Habitats Regulations Assessment to test the impact of traffic on the Ashdown Forest Special Area of Conservation.

1.2 Scenarios Tested

2039 Reference Case

1.2.1 The 2039 Reference Case represents a benchmark against which the development scenarios are tested. 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 2031 Sites DPD Scenario including proposed mitigation as referenced below.

Committed Infrastructure in 2039 Reference Case

1.2.2 The reference case schemes from the previous Sites DPD modelling were carried forward to the 2039 Reference Case. 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

1.2.3 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
- New access road from A272/A23 northbound roundabout for Marylands Nursery

2039 Scenario 4 and Scenario 4B

1.2.4 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 District Plan Review and select a preferred option. The scenarios build on the Reference Case and assess proposed Local Plan development and supporting infrastructure in 2039. Scenario 4B differs from Scenario 4 in that it additionally includes the development site at Ansty. **Table 1** summarises the total housing units considered.

Table 1. Total Housing units Considered in Mid-Sussex in Scenario 4

SCENARIO	TOTAL UNITS CONSIDERED	DIFFERENCE FROM REF
Reference Case	13,884	
Scenario 4	20,435	6,551
Scenario 4 including windfall	21,923	8,039
Scenario 4B	22,035	8,151
Scenario 4B including windfall	23,523	9,639

1.2.5 **Figure 1** shows the location of the Scenario 4 and 4B development sites labelled by SHLAAID (Strategic Housing Land Availability Assessment ID).

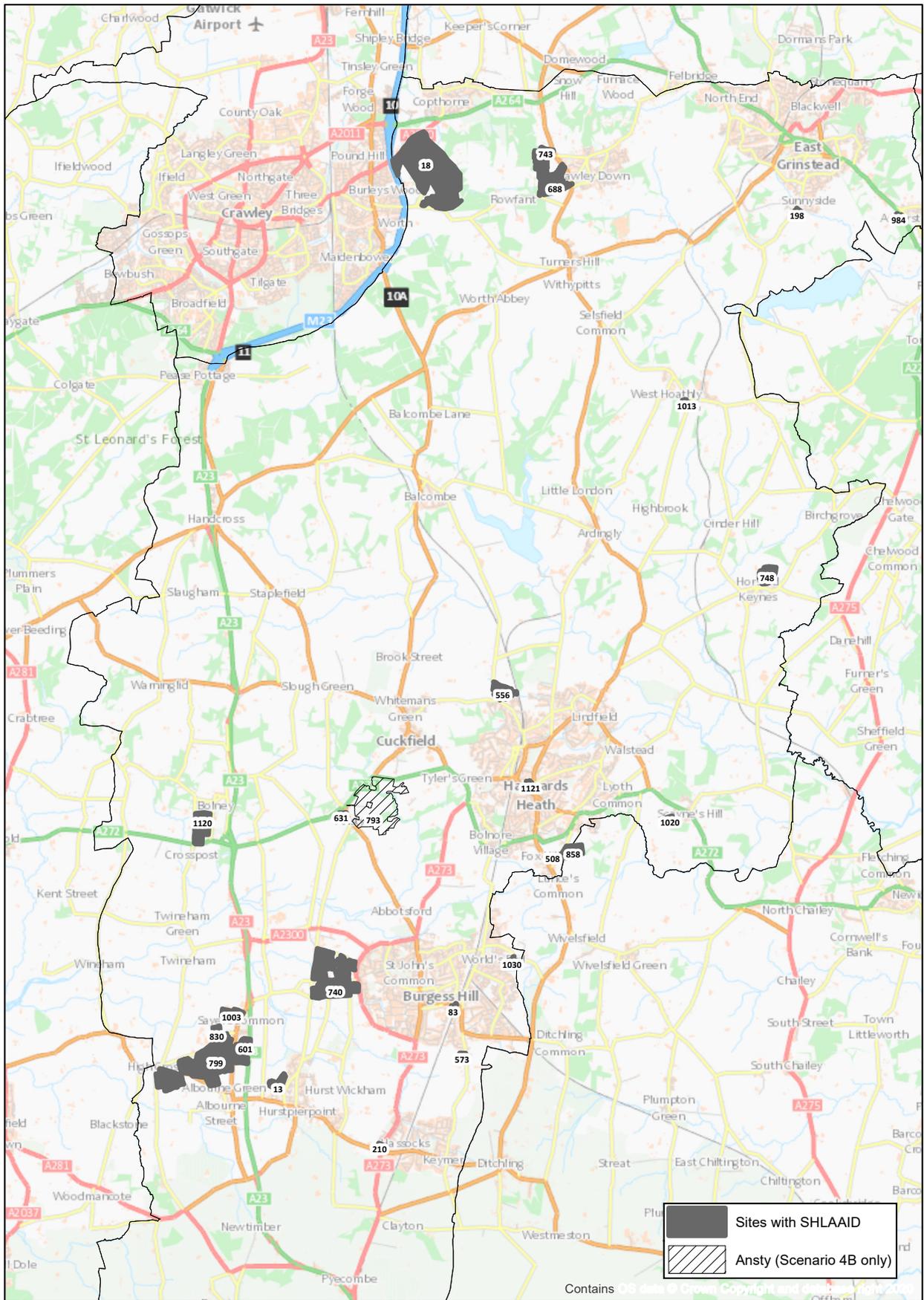
2039 Scenarios 4 and 4B with Car Trip Rate Reduction (Scenarios 4m1 and 4Bm1)

1.2.6 This report includes scenarios which have been informed by submissions made by the significant site promoters and 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 scenario’s significant site developments. Further scenarios will be prepared to test the impact of proposed sustainable mitigation, and the resulting mode shift from car, to support the proposed allocations.

1.2.7 The following trip rate reductions are assumed for the Crabbet Park, West of Burgess Hill, Sayers Common and Ansty significant sites:

- 15% reduction on residential unit car trip rates to account for home working, internalisation and mode share assumptions
- 80% reduction on primary school car trip rates to account for internalisation of trips

Figure 1. Scenario Map with SHLAAID



2. SCENARIO 4 CAPACITY IMPACTS

2.1 Introduction

2.1.1 This chapter reports the capacity impact results of **Scenario 4** compared to the Reference Case. The following items are reported:

- Impacts on the M23 and A23 Strategic Road Network
- Identification of Junctions with Capacity Impacts (using NPPF based criteria)
- Cross Boundary Impacts

2.2 Impacts on the M23 and A23 Strategic Road Network

2.2.1 The highest percentage increases in the AM peak are northbound on the A23 between the A272 and the B2110, where the increase is up to approximately **13%** and southbound between the B2115 and the A273, where the increase is up to approximately **11%**.

2.2.2 The highest percentage increases in the PM peak are northbound on the A23 between the A27 and the B2117, where the increase is up to approximately **17%** and southbound between the B2114 and the B2118/Mill Lane where the increase is up to approximately **13%**.

2.2.3 There are some locations where the maximum vehicles per hour (as defined by the Design Manual for Roads and Bridges CD122 Geometric design of grade separated junctions) is exceeded. It should be noted that many of these are also exceeded in the Reference Case.

2.3 Identification of Junctions with Capacity Impacts

2.3.1 The impact of development was assessed based on the National Planning Policy Framework (NPPF) using criteria agreed by MSDC and WSCC.

2.3.2 **Table 2** shows how many junctions are forecast to be impacted significantly or severely in **Scenario 4** when compared to the Reference Case.

Table 2. Scenario 4: ‘Severe’ and ‘Significant’ Junction Impacts

SCENARIO	‘SEVERE’ IMPACTS	‘SIGNIFICANT’ IMPACTS
Scenario 4 vs Reference Case	14	38

2.3.3 In **Scenario 4** there are ‘severe’ impacts at **14** junctions and ‘significant’ impacts at **38** junctions. The junctions with ‘severe’ impacts are:

- N1 Copthorne A264 / A2220 Copthorne
- N7 Crawley Down B2028 Turners Hill Road / Wallage Lane
- N8 Turners Hill B2110 / B2028 Turners Hill
- N16 Crawley B2036 Balcombe Rd / B2037 Antlands Ln (CRAWLEY)
- C7 Ansty A272 / B2036
- C10 Bolney A23 / A272 Bolney Road
- C10aBolney London Road / A272 Cowfold Road
- C12 Haywards Heath A273 / Isaac’s Lane / Traustein Way
- S2 Burgess Hill A23 / A2300 Eastern Roundabout (planned scheme)
- S3 Burgess Hill A2300 / Cuckfield Road (planned scheme)

- S6 Burgess Hill Junction Road / B2113, Burgess Hill
- S8 Hassocks A273 / B2116 Hassocks (Stonepound)
- S21 Burgess Hill B2112 / Green Road (LEWES DISTRICT)
- S22 Burgess Hill Valebridge Road / Junction Road / Leylands Road

2.3.4 **Figure 2** is a map showing the locations of the significant and severely impacted junctions.

2.4 Cross Boundary Impacts

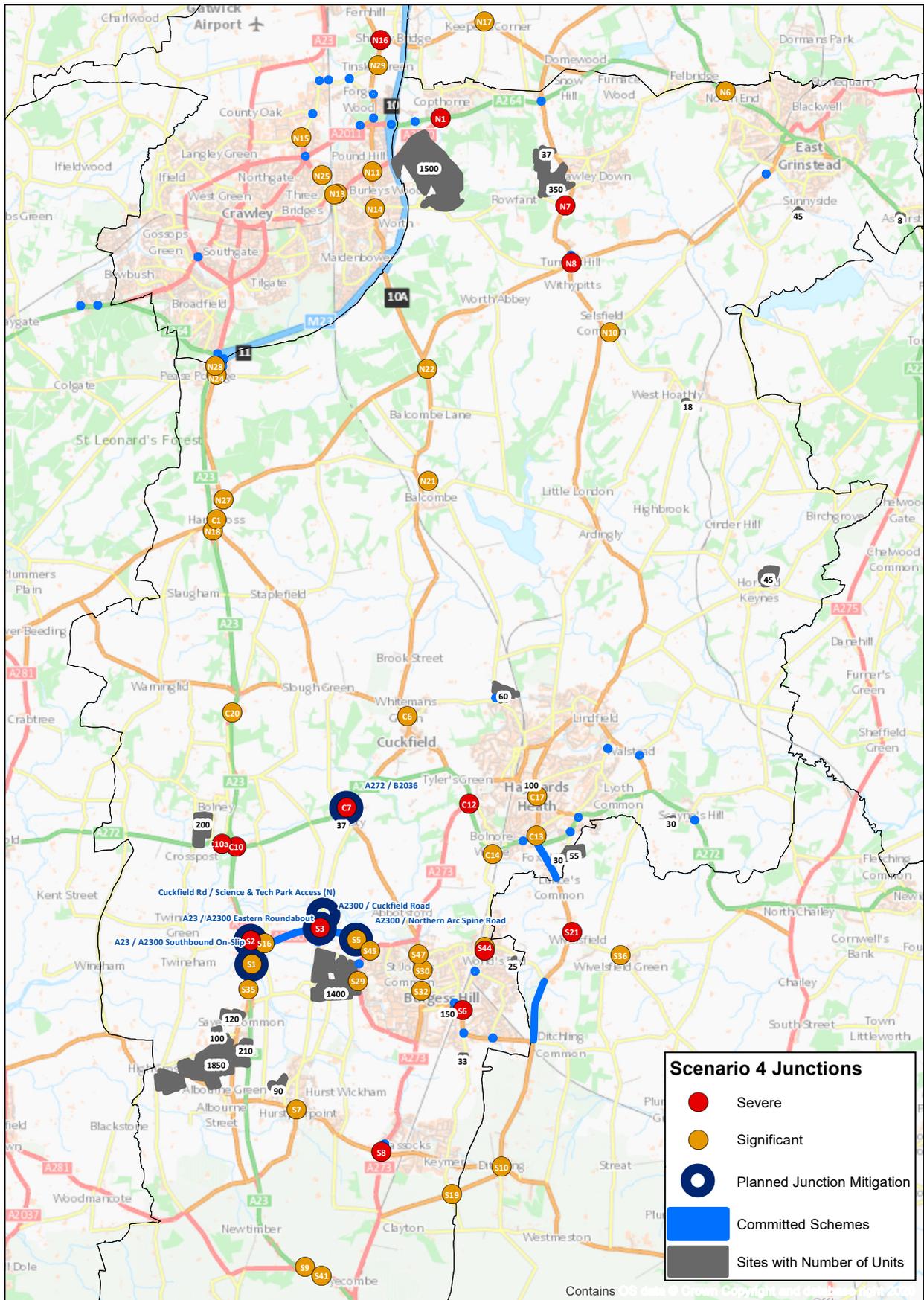
2.4.1 There are **two** junctions in neighbouring authorities which experience a ‘severe’ impact. These are N16 (Crawley Borough) and S21 (Lewes District).

2.4.2 **Table 3** shows the change in total distance travelled (in vehicle kilometres) for the **Ashdown Forest**. Compared to the Reference Case, Scenario 4 results in an increase in vehicle kilometres of **2.56%** in the **AM peak** and **1.66%** in the **PM peak**.

Table 3. Scenario 4: Vehicle Kilometres in Ashdown Forest

SCENARIO	AM PEAK	PM PEAK
Scenario 4 vs Reference Case	2.56%	1.66%

Figure 2. 'Significant' and 'severely' impacted junctions - Scenario 4 versus Reference Case



3. SCENARIO 4B CAPACITY IMPACTS

3.1 Introduction

3.1.1 This chapter reports the capacity impact results of **Scenario 4B** compared to the Reference Case. The following items are reported:

- Impacts on the M23 and A23 Strategic Road Network
- Identification of Junctions with Capacity Impacts (using NPPF based criteria)
- Cross Boundary Impacts

3.2 Impacts on the M23 and A23 Strategic Road Network

3.2.1 The highest percentage increases in the AM peak are northbound on the A23 between the A272 and the B2110, where the increase is up to approximately **18%** (13% in Scenario 4) and southbound between the B2115 and the A273, where the increase is up to approximately **13%** (11% in Scenario 4).

3.2.2 The highest percentage increases in the PM peak are northbound on the A23 between the A27 and the B2117, where the increase is up to approximately **20%** (17% in Scenario 4) and southbound between the B2114 and the B2118/Mill Lane where the increase is up to approximately **15%** (13% in Scenario 4).

3.2.3 There are some locations where the maximum vehicles per hour (as defined by the Design Manual for Roads and Bridges CD122 Geometric design of grade separated junctions) is exceeded. It should be noted that many of these are also exceeded in the Reference Case.

3.3 Identification of Junctions with Capacity Impacts

3.3.1 **Table 4** shows how many junctions are forecast to be impacted significantly or severely in **Scenario 4B** when compared to the Reference Case.

Table 4. Scenario 4B: 'Severe' and 'Significant' Junction Impacts

SCENARIO	'SEVERE' IMPACTS	'SIGNIFICANT' IMPACTS
Scenario 4 vs Reference Case	14	38
Scenario 4B vs Reference Case	20	41

3.3.2 In **Scenario 4B** there are 'severe' impacts at **20** junctions and 'significant' impacts at **41** junctions. Overall, there are 6 more 'severe' impact junctions than in Scenario 4 due to the additional site at Ansty. The junctions with 'severe' impacts are shown below with **bold** denoting the additional junctions compared to Scenario 4. The 3 junctions with a strikethrough have 'severe' impacts in Scenario 4 but not in Scenario 4B due traffic rerouting impacts resulting from the relief road provided as part of the Ansty site.

- N1 Cophorne A264 / A2220 Cophorne
- N7 Crawley Down B2028 Turners Hill Road / Wallage Lane
- N8 Turners Hill B2110 / B2028 Turners Hill
- N16 Crawley B2036 Balcombe Rd / B2037 Antlands Ln (CRAWLEY)
- **C6 Cuckfield B2036 / Ardingly Road, Whitemans Green**
- ~~○ C7 Ansty A272 / B2036~~
- C10 Bolney A23 / A272 Bolney Road
- ~~○ C10a Bolney London Road / A272 Cowfold Road~~

○ C12 Haywards Heath	A273 / Isaac's Lane / Traustein Way
○ C13 Haywards Heath	A272 Rocky Lane / B2112
○ C14 Haywards Heath	A272 / Rocky Lane
○ C15 Haywards Heath	B2272 / Bolnore Road
○ C16 Haywards Heath	A272 / B2272
○ S2 Burgess Hill	A23 / A2300 Eastern Roundabout
○ S3 Burgess Hill	A2300 / Cuckfield Road
○ S6 Burgess Hill	Junction Road / B2113, Burgess Hill
○ S7 Hurstpierpoint	B2117 / B2116 Hurstpierpoint
○ S8 Hassocks	A273 / B2116 Hassocks (Stonepound)
○ S21 Burgess Hill	B2112 / Green Road (LEWES DISTRICT)
○ S22 Burgess Hill	Valebridge Road / Junction Road / Leylands Road
○ S34 Burgess Hill	B2036 Cuckfield Road / A273 Isaacs Lane
○ S35 Sayers Common	A23 / B2118 Sayers Common
○ S45 Burgess Hill	A2300 / A273 Jane Murray Way

3.3.3 **Figure 3** is a map showing the locations of the significant and severely impacted junctions.

3.4 Cross Boundary Impacts

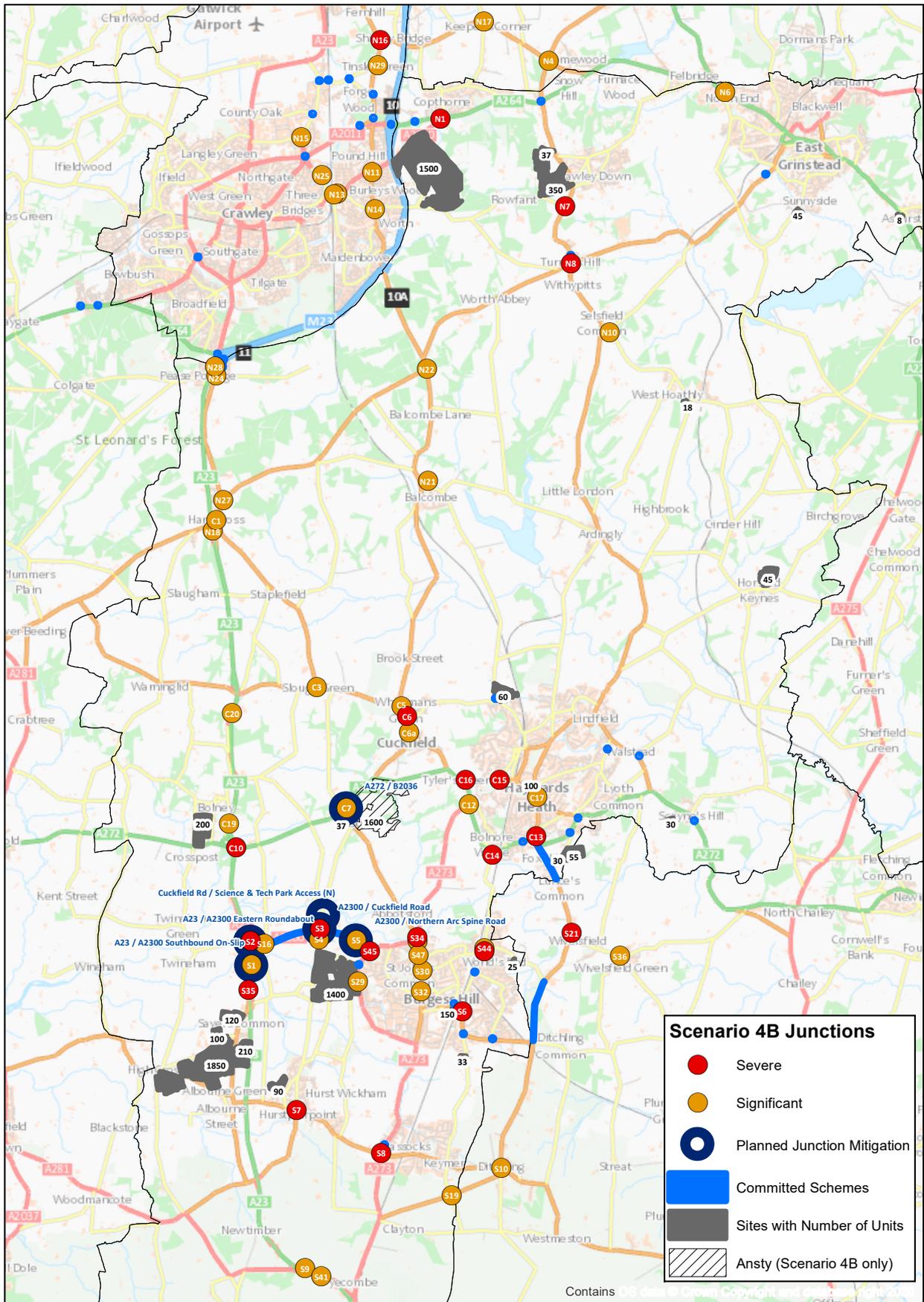
3.4.1 There are **two** junctions in neighbouring authorities which experience a 'severe' impact. These are N16 (Crawley Borough) and S21 (Lewes District).

3.4.2 **Table 5** shows the change in total distance travelled (in vehicle kilometres) for the **Ashdown Forest**. Compared to the Reference Case, Scenario 4B results in an increase in vehicle kilometres of **3.14%** in the **AM peak** and **1.81%** in the **PM peak**.

Table 5. Scenario 4B: Vehicle Kilometres in Ashdown Forest

SCENARIO	AM PEAK	PM PEAK
Scenario 4 vs Reference Case	2.56%	1.66%
Scenario 4B vs Reference Case	3.14%	1.81%

Figure 3. 'Significant' and 'severely' impacted junctions - Scenario 4B versus Reference Case



4. SCENARIO 4 WITH CAR TRIP RATE REDUCTION (4M1) CAPACITY IMPACTS

4.1 Introduction

4.1.1 This chapter describes the results of **Scenario 4m1** which, informed by submissions made by the significant 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 Scenario’s significant site developments (see paragraph 1.2.7).

4.1.2 The following items are reported:

- Impacts on the M23 and A23 Strategic Road Network
- Identification of Junctions with Capacity Impacts (using NPPF based criteria)
- Cross Boundary Impacts

4.2 Impacts on the M23 and A23 Strategic Road Network

4.2.1 The highest percentage increases in the AM peak are northbound on the A23 between the A272 and the B2110, where the increase is up to approximately **10%** (13% in Scenario 4) and southbound between the B2115 and the A273, where the increase is up to approximately **10%** (11% in Scenario 4).

4.2.2 The highest percentage increases in the PM peak are northbound on the A23 between the A27 and the B2117, where the increase is up to approximately **15%** (17% in Scenario 4) and southbound between the B2114 and the B2118/Mill Lane where the increase is up to approximately **11%** (13% in Scenario 4).

4.2.3 There are some locations where the maximum vehicles per hour (as defined by the Design Manual for Roads and Bridges CD122 Geometric design of grade separated junctions) is exceeded. It should be noted that many of these are also exceeded in the Reference Case.

4.3 Identification of Junctions with Capacity Impacts

4.3.1 **Table 6** shows how many junctions are forecast to be impacted significantly or severely in **Scenario 4m1** when compared to the Reference Case.

Table 6. Scenario 4m1: ‘Severe’ and ‘Significant’ Junction Impacts

SCENARIO	‘SEVERE’ IMPACTS	‘SIGNIFICANT’ IMPACTS
Scenario 4 vs Reference Case	14	38
Scenario 4m1 vs Reference Case	10	39

4.3.2 In **Scenario 4m1** there are ‘severe’ impacts at **10** junctions and ‘significant’ impacts at **39** junctions. There are 4 fewer ‘severe’ impact junctions than in Scenario 4. The Scenario 4 junctions are listed again below with a strikethrough for those that are not ‘severe’ in Scenario 4m1:

- ~~N1 Copthorne~~ — ~~A264 / A2220 Copthorne~~
- ~~N7 Crawley Down~~ — ~~B2028 Turners Hill Road / Wallage Lane~~
- N8 Turners Hill — B2110 / B2028 Turners Hill

	N16 Crawley	B2036 Balcombe Rd / B2037 Antlands Ln (CRAWLEY)
○	C7 Ansty	A272 / B2036
○	C10 Bolney	A23 / A272 Bolney Road
	C10a Bolney	London Road / A272 Cowfold Road
○	C12 Haywards Heath	A273 / Isaac's Lane / Traustein Way
○	S2 Burgess Hill	A23 / A2300 Eastern Roundabout (planned scheme)
○	S3 Burgess Hill	A2300 / Cuckfield Road (planned scheme)
○	S6 Burgess Hill	Junction Road / B2113, Burgess Hill
○	S8 Hassocks	A273 / B2116 Hassocks (Stonepound)
○	S21 Burgess Hill	B2112 / Green Road (LEWES DISTRICT)
○	S22 Burgess Hill	Valebridge Road / Junction Road / Leylands Road

4.3.3 **Figure 4** is a map showing the locations of the significant and severely impacted junctions.

4.4 Cross Boundary Impacts

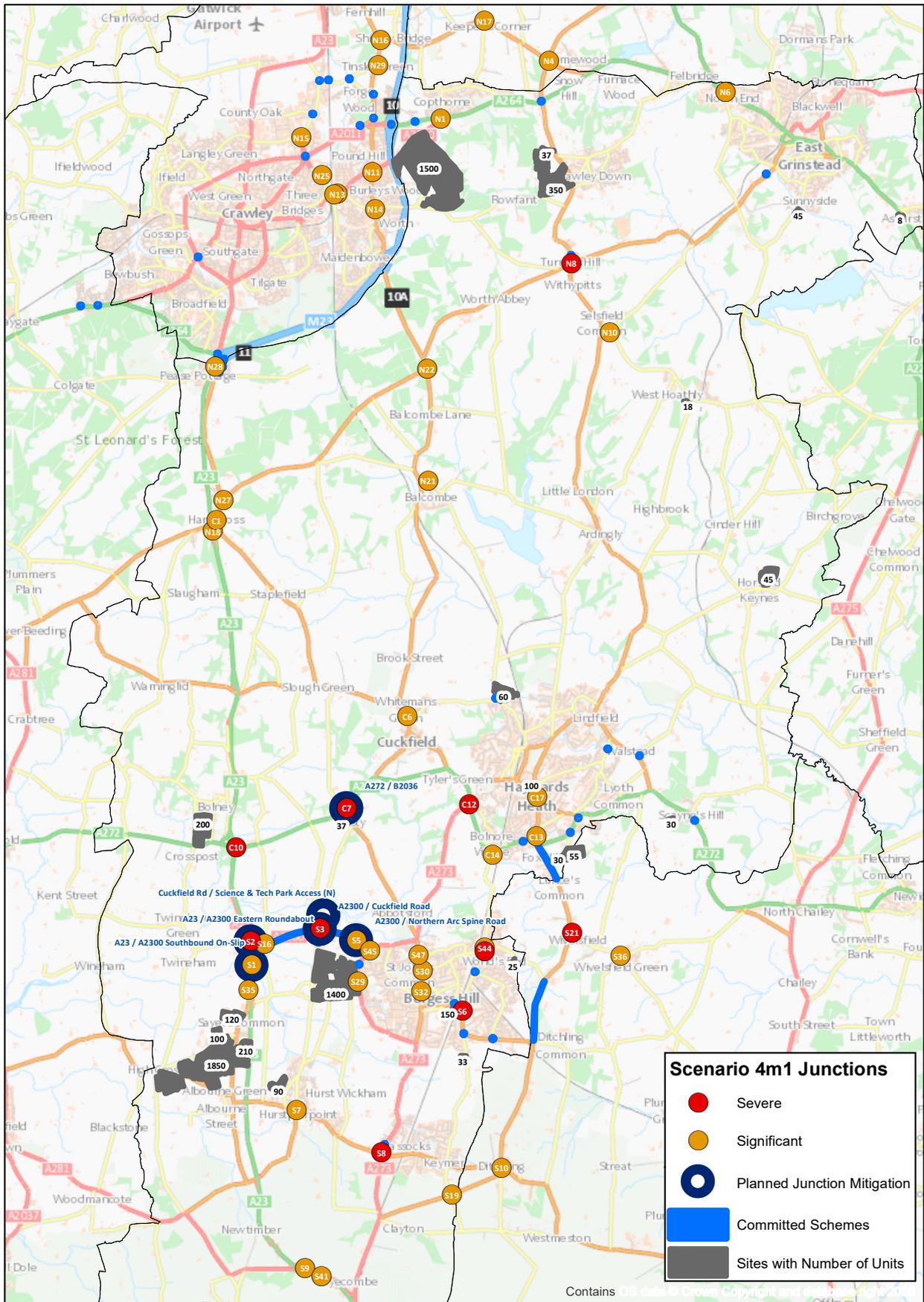
4.4.1 One junction in a neighbouring authority (S21 - Lewes District) experiences a 'severe' impact.

4.4.2 **Table 7** shows the change in total distance travelled (in vehicle kilometres) for the **Ashdown Forest**. Compared to the Reference Case, Scenario 4B results in an increase in vehicle kilometres of **2.18%** in the **AM peak** and **1.51%** in the **PM peak**.

Table 7. Scenario 4m1: Vehicle Kilometres in Ashdown Forest

SCENARIO	AM PEAK	PM PEAK
Scenario 4 vs Reference Case	2.56%	1.66%
Scenario 4m1 vs Reference Case	2.18%	1.51%

Figure 4. 'Significant' and 'severely' impacted junctions - Scenario 4m1 versus Reference Case



5. SCENARIO 4B WITH CAR TRIP RATE REDUCTIONS (4BM1) CAPACITY IMPACTS

5.1 Introduction

5.1.1 This chapter describes the results of **Scenario 4Bm1** which, informed by submissions made by the significant 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 Scenario’s significant site developments (see paragraph 1.2.7).

5.1.2 The following items are reported:

- Impacts on the M23 and A23 Strategic Road Network
- Identification of Junctions with Capacity Impacts (using NPPF based criteria)
- Cross Boundary Impacts

5.2 Impacts on the M23 and A23 Strategic Road Network

5.2.1 The highest percentage increases in the AM peak are northbound on the A23 between the A272 and the B2110, where the increase is up to approximately **14%** (18% in Scenario 4B) and southbound between the B2115 and the A273, where the increase is up to approximately **11%** (13% in Scenario 4B).

5.2.2 The highest percentage increases in the PM peak are northbound on the A23 between the A27 and the B2117, where the increase is up to approximately **17%** (20% in Scenario 4B) and southbound between the B2114 and the B2118/Mill Lane where the increase is up to approximately **14%** (15% in Scenario 4B).

5.2.3 There are some locations where the maximum vehicles per hour (as defined by the Design Manual for Roads and Bridges CD122 Geometric design of grade separated junctions) is exceeded. It should be noted that many of these are also exceeded in the Reference Case.

5.3 Identification of Junctions with Capacity Impacts

5.3.1 **Table 8** shows how many junctions are forecast to be impacted significantly or severely in **Scenario 4Bm1** when compared to the Reference Case.

Table 8. Scenario 4Bm1: ‘Severe’ and ‘Significant’ Junction Impacts

SCENARIO	‘SEVERE’ IMPACTS	‘SIGNIFICANT’ IMPACTS
Scenario 4B vs Reference Case	20	41
Scenario 4Bm1 vs Reference Case	12	41

5.3.2 In **Scenario 4Bm1** there are ‘severe’ impacts at **12** junctions and ‘significant’ impacts at **41** junctions. There are 8 fewer ‘severe’ impact junctions than in Scenario 4B. The Scenario 4B junctions are listed again below with a strikethrough for those that are not ‘severe’ in Scenario 4Bm1:

- ~~N1 Copthorne~~ ~~A264 / A2220 Copthorne~~
- ~~N7 Crawley Down~~ ~~B2028 Turners Hill Road / Wallage Lane~~
- N8 Turners Hill B2110 / B2028 Turners Hill
- ~~N16 Crawley~~ ~~B2036 Balcombe Rd / B2037 Antlands Ln (CRAWLEY)~~

- C6 Cuckfield B2036 / Ardingly Road, Whitemans Green
- C10 Bolney A23 / A272 Bolney Road
- C13 Haywards Heath A272 Rocky Lane / B2112
- ~~○ C14 Haywards Heath A272 / Rocky Lane~~
- C15 Haywards Heath B2272 / Bolnore Road
- C16 Haywards Heath A272 / B2272
- S2 Burgess Hill A23 / A2300 Eastern Roundabout (planned scheme)
- S3 Burgess Hill A2300 / Cuckfield Road (planned scheme)
- S6 Burgess Hill Junction Road / B2113, Burgess Hill
- ~~○ S7 Hurstpierpoint B2117 / B2116 Hurstpierpoint~~
- S8 Hassocks A273 / B2116 Hassocks (Stonepound)
- S21 Burgess Hill B2112 / Green Road (LEWES DISTRICT)
- S22 Burgess Hill Valebridge Road / Junction Road / Leylands Road
- ~~○ S34 Burgess Hill B2036 Cuckfield Road / A273 Isaacs Lane~~
- ~~○ S35 Sayers Common A23 / B2118 Sayers Common~~
- ~~○ S45 Burgess Hill A2300 / A273 Jane Murray Way~~

5.3.3 **Figure 5** is a map showing the locations of the significant and severely impacted junctions.

5.4 Cross Boundary Impacts

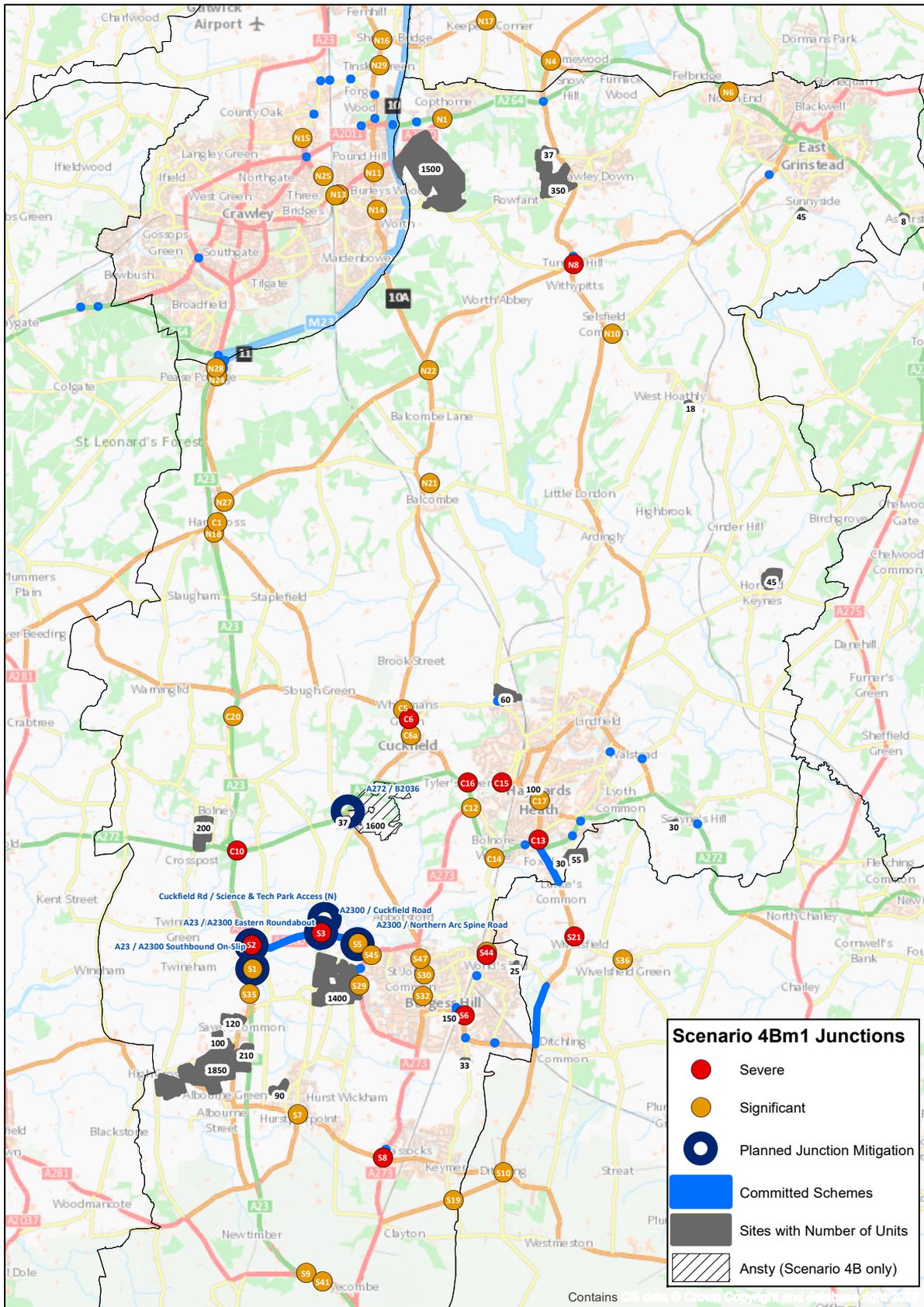
5.4.1 One junction in a neighbouring authority (S21 - Lewes District) experiences a 'severe' impact.

5.4.2 **Table 9** shows the change in total distance travelled (in vehicle kilometres) for the **Ashdown Forest**. Compared to the Reference Case, Scenario 4B results in an increase in vehicle kilometres of **2.74%** in the **AM peak** and **1.50%** in the **PM peak**.

Table 9. Scenario 4Bm1: Vehicle Kilometres in Ashdown Forest

SCENARIO	AM PEAK	PM PEAK
Scenario 4B vs Reference Case	3.14%	1.81%
Scenario 4Bm1 vs Reference Case	2.74%	1.50%

Figure 5. 'Significant' and 'severely' impacted junctions - Scenario 4Bm1 versus Reference Case



6. SUMMARY AND NEXT STEPS

6.1 Work Undertaken

6.1.1 Mid Sussex District Council (MSDC) commissioned SYSTRA to build a strategic highway model to underpin the Mid Sussex Transport Study (MSTS). The work stages are:

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

Highway Model

6.1.2 The Mid Sussex Strategic Highway Model (MSSHM) was produced in accordance with standard good practice as set out in the Department for Transport's (DfT) transport analysis guidance (TAG). The model's base year is 2019.

Transport Study

6.1.3 The impacts on the highway network of the agreed Development Scenarios were assessed based on the National Planning Policy Framework (NPPF) using criteria agreed by MSDC and West Sussex County Council (WSCC). Where junctions or roads sections are assessed to be adversely impacted by the developments, the potential impact of sustainable transport mitigation will be assessed after which potential highway mitigation schemes will be tested. These mitigations will aim to remove all 'severe' impacts.

6.1.4 Parallel work will include environmental impact to comply with National Planning Practice Guidance on transport evidence bases in plan making and air quality modelling and ecological interpretation for Habitats Regulations Assessment to test the impact of traffic on the Ashdown Forest Special Area of Conservation.

6.2 Scenarios Tested

2039 Reference Case

6.2.1 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.

2039 Scenario 4 and Scenario 4B

6.2.2 The scenarios build on the Reference Case and assess proposed Local Plan development and supporting infrastructure in 2039. Scenario 4B differs from Scenario 4 in that it additionally includes the development site at Ansty.

2039 Scenarios 4 and 4B with Car Trip Rate Reduction (Scenarios 4m1 and 4Bm1)

6.2.3 This report includes scenarios which have been informed by submissions made by the significant site promoters and 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 scenario's significant site developments. Further scenarios will be prepared to test the impact of proposed sustainable mitigation, and the resulting mode shift from car, to support the proposed allocations.

6.2.4 The following trip rate reductions are assumed for the Crabbet Park, West of Burgess Hill, Sayers Common and Ansty significant sites:

- 15% reduction on residential unit car trip rates to account for home working, internalisation and mode share assumptions
- 80% reduction on primary school car trip rates to account for internalisation of trips

Junctions

6.2.5 The number of junctions experiencing 'severe' and significant impacts is as follows:

- **Scenario 4** has **14** junctions with 'severe' impacts and **38** 'significantly' impacted.
- **Scenario 4B** has **20** junctions with 'severe' impacts and **41** 'significantly' impacted.
- **Scenario 4m1** has **10** junctions with 'severe' impacts and **39** 'significantly' impacted.
- **Scenario 4Bm1** has **12** junctions with 'severe' impacts and **41** 'significantly' impacted.

Cross Boundary Impacts

6.2.6 N16 (B2036 Balcombe Rd / B2037 Antlands Ln) in Crawley Borough and N21 (B2112 / Green Road) in Lewes District show 'severe' impacts in Scenarios 4 and 4B while in Scenarios 4m1 and 4Bm1 only S21 shows a 'severe' impact.

6.2.7 In the **Ashdown Forest** the changes in total distance travelled (in vehicle kilometres) are:

- In **Scenario 4** the increase is **2.56%** in the AM peak and **1.66%** in the PM peak.
- In **Scenario 4B** the increase is **3.14%** in the AM peak and **1.81%** in the PM peak.
- In **Scenario 4m1** the increase is **2.18%** in the AM peak and **1.51%** in the PM peak.
- In **Scenario 4Bm1** the increase is **2.74%** in the AM peak and **1.50%** in the PM peak.

6.3 Next Steps

6.3.1 Where junctions or road sections are assessed to be adversely impacted by the developments, the potential impact of sustainable transport mitigation (on mode shift from car) will be assessed before highway mitigation schemes are devised and tested. These mitigations will aim to remove all 'severe' impacts.

6.3.2 To assess the potential impact of **sustainable mitigation** targets for the number of trips shifting mode from car to sustainable modes will be considered. The mode shift targets will reflect site size, location and proximity to employment, PT and cycle/walk routes.

6.3.3 MSDC have provided information submitted by the significant site promoters, which will be used to further assess sustainable travel and links to services/employment and to inform a more developed sustainable mitigation scenario.

6.3.4 Following completion of the sustainable mitigations analysis, **highway mitigations** may be considered for locations where 'severe' impacts remain in the with-sustainable-mitigation scenario(s), especially for main inter-urban routes. Capacity may not be increased for secondary routes where this could encourage short cutting.

6.3.5 A **safety review** will also be 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.

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