

FOLKESTONE & HYTHE DISTRICT COUNCIL

Local Plan Traffic Analysis
Highways England Road Network

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1 Introduction

1.1 Background

At the request of Folkestone and Hythe District Council, Arcadis Consulting (UK) Ltd (Arcadis) is providing support to the District Council for their Core Strategy Review. The support being provided as described in this note relates to the Statement of Common Ground between Folkestone and Hythe District Council and Highways England and, specifically, the submission made to the examination by Highways England in a letter dated 3rd July 2020.

Arcadis held a meeting with Folkestone and Hythe District Council and Highways England on Monday the 14th of September to discuss the scope of work required to work towards a Statement of Common Ground between Folkestone and Hythe District Council and Highways England. Highways England expressed the view that they require further information to be able to support the local plan at the initial hearing in mid-November 2020, which is now postponed until December 2020.

A second meeting took place on Friday 25th of September, between Arcadis, Folkestone and Hythe District Council and Highways England. This meeting clarified the requirement for traffic investigations to support Highways England to determine of the impact of the Folkestone and Hythe Local Plan on its road network. Since then, further meetings have been held between all three parties on Thursday 1st, Wednesday 7th, Monday 12th and Friday 30th of October to discuss progress towards the agreement of the scope, data sources and assumptions required for the study.

1.2 Purpose

The purpose of the study is to enable Folkestone and Hythe District Council to agree on a Statement of Common Ground regarding requirements for highway schemes to mitigate impact related to the Folkestone and Hythe Local Plan on the Highways England road network, or the further work required to identify those requirements.

It is acknowledged that further supporting information will be provided after this study, including Design Manual for Roads and Bridges (DMRB) compliant horizontal alignments and scheme costing.

1.3 Report Structure

This document is composed of:

- Section 2, presenting a review of previous data;
- Section 3, detailing the process for the selection of the study area;
- Section 4, presenting the traffic demand preparation;
- Section 5, summarising the analysis for M20 Junction 11;
- Section 6, summarising the analysis for M20 Junction 11a;
- Section 7, summarising the analysis for M20 Junction 12;
- Section 8, summarising the analysis for M20 Junction 13;
- Section 9, summarising the analysis for A20 / Spitfire Way / Alkham Valley Road; and
- Section 10 presenting the overall conclusion.

2 Previous Data Review

2.1 Available Data

The data sources readily available as input to this study are available in Appendix A and consist of:

- AECOM, *Briefing Note: Shepway Transport Model Update – Review & Findings*, December 2017;
- AECOM, *Shepway Transport Model – Merge and Diverge Appraisal (with spreadsheet model)*, September 2018;
- AECOM, *Shepway Transport Model, Local Junction Modelling and outputs*; November 2017;
- Taylor Wimpey, *Cheriton High Street Junction, committed scheme drawing*, May 2018;
- Email correspondence from Highways England to Folkestone & Hythe District Council dated October 2018 to confirm that no mitigation would be required for the 2031 Do Something scenario for the Places and Policies Local Plan (additional modelling scenarios);
- Arcadis, *Otterpool Park – Transport Assessment*, February 2019 (with supporting information and traffic models);
- Folkestone & Hythe District Council and Highways England, *Statement of Common Ground*, January 2020;
- Highways England, *Folkestone and Hythe District Core Strategy Review Examination Submission to the Examination by Highways England*, July 2020; and
- Folkestone & Hythe District Council, *Core Strategy Review – Inspector’s Matters*, July 2020.

Further information can be found as required on the Folkestone and Hythe District Council Local Plan website (<https://folkestone-hythe.gov.uk/planning/planning-policy/local-map/examination-news-and-updates>).

2.2 Traffic Demand Consistency with the Previous Stage

Two previous traffic models were available at the inception of this study. These were:

- The AECOM Shepway transport model, and
- The VISUM cordon model prepared as part of the Otterpool Park transport assessment.

For consistency with the existing Statement of Common Ground between Folkestone & Hythe District Council and Highways England (2020), it was decided to update the key assumptions of the 2017 AECOM Shepway transport model, rather than using the information available in the Otterpool Park transport assessment.

The Otterpool Park transport assessment information was, however, used for the traffic assessment within Ashford, as it is outside the Shepway model.

Following a detailed review of the AECOM Shepway transport model, the following information was identified as requiring an update:

- The Local Plan development housing and employment projections;
- The TEMPro factors, to account for the latest version of the database;
- The M20 motorway growth factor, to be superseded by an independent factor, accounting for through traffic values;
- The merge/diverge calculation methods to account for the 2020 DMRB; and
- The introduction of the junction upgrades immediately South of M20 Junction 12 (U-turning movement removal in the interchange).

No updates were undertaken of the Shepway transport model traffic assignment on the road network or individual development description and trip generation ratios. The 2017 traffic volumes are also closely matching between various sources.

3 Study Area Selection

3.1 Identifying Highways England Road Network

Folkestone and Hythe District Council Location

As shown in Image 1, Folkestone and Hythe District Council is located on the coast of the English Channel and includes the port town of Folkestone and the coastal market town of Hythe. Both towns are located within the northern half of the district. To the West is the town of Ashford, and to the East is the port of Dover.

Image 1 – Folkestone and Hythe District Council Location

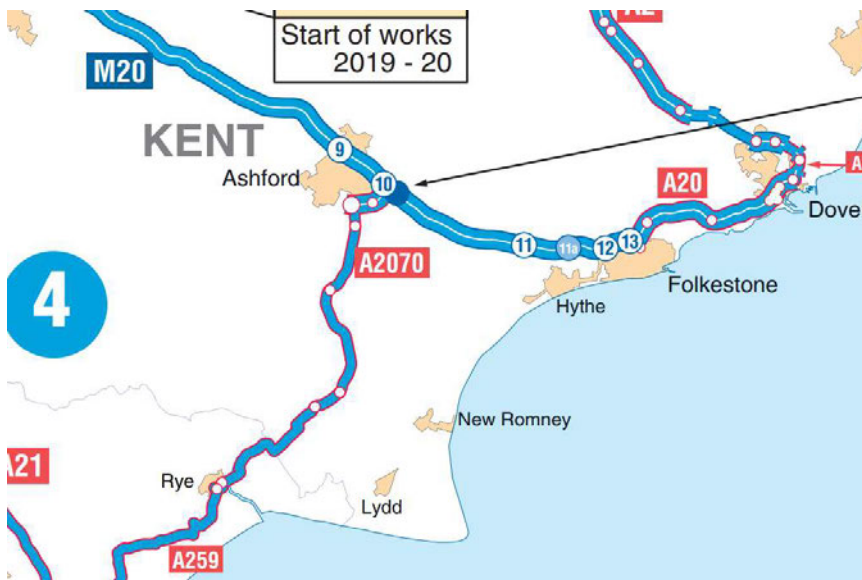


Highways England Road Network within the Area

Image 2 shows the Highways England road network in the area. It consists of:

- The M20, passing through Ashford, linking it to Folkestone;
- The A20, prolonging the M20 from Folkestone to Dover; and
- The A2070, linking Ashford to Rye.

Image 2 – Highways England Road Network



3.2 Channel Crossing

The M20 and A20 correspond to a key road transport corridor giving access to both:

- Dover port ferry terminal; and
- The Eurotunnel terminal.

Both facilities generate a significant volume of HGVs on the Highways England road network. Beyond the large volume of HGVs, traffic disruptions are anticipated concerning new customs rules expected to be implemented in late 2020.

3.3 Local Plan Description

2037 Local Plan in Numbers

Table 1 shows the Local Plan proposed development description for 2037 per housing and employment, based on the latest information available. This table also presents the projection used by AECOM in 2017. The comparison of the two datasets shows an increase in overall housing. Employment projections, on the other hand, remain stable.

Table 1 – 2037 Local Plan Housing and Employment Projections

From	To	2017 Data		2020 Data	
		Housing	Jobs	Housing	Jobs
2016	2016	49843	51458	51164	48200
2016	2017	50423	51760	52311	48530
2016	2018	51002	52062	52800	48860
2016	2019	51582	52363	53232	49190
2016	2020	52161	52665	53832	49520
2016	2021	52741	52967	54433	49850
2016	2022	53127	53125	55078	50180
2016	2023	53513	53283	55779	50510
2016	2024	53898	53441	56584	50840
2016	2025	54284	53599	57615	51170
2016	2026	54670	53757	58577	51500
2016	2027	55170	53889	59496	51830
2016	2028	55670	54021	60405	52160
2016	2029	56170	54153	61162	52490
2016	2030	56670	54285	61929	52820
2016	2031	57170	54417	62652	53150
2016	2032	57614	54583	63404	53480
2016	2033	58058	54749	64097	53810
2016	2034	58502	54914	64787	54140
2016	2035	58946	55080	65515	54470
2016	2036	59390	55246	66271	54800
2016	2037	59812	55412	66949	55130

Key Development Locations

Image 3 identifies the location of all the key developments considered explicitly in the AECOM Shepway transport model. With the updated Local Plan projections, these developments represent 72% of the growth in housing and 83% of the employment growth. They are located in the vicinity of existing urban areas of Folkestone and Hythe, North of the district.

Image 3 also shows, in dark blue, the junctions considered impacted by the Local Plan in the January 2020 statement of common ground between Folkestone and Hythe and Highways England. Visible in light blue are other junctions considered for inclusion within the study area of this updated assessment.

Table 2, on the next page, lists the names of the 13 developments explicitly included in the local plan.

Image 3 – Key 2037 Local Plan Developments



2031 Do Something Scenario - Places and Policies Local Plan (PPLP)

The 2031 Do Something scenario of the Places and Policies Local Plan includes developments 1 to 12 in Table 3. Highways England confirmed the absence of impact requiring mitigation of these developments (see Appendix A.5).

Site 13 is the only major development in the Local Plan not included in the PPLP.

2037 Growth Complement

The housing and employment growth in the Local Plan for 2037 not accounted for by the 13 developments is calculated using a TEMPro factor adjustment and applied to the base traffic volumes of the local road network.

The traffic growth from these developments is therefore distributed equally across the road network, except for the motorway mainline that has its own TEMPro growth factor taken directly from the TEMPro database.

Table 2 – Key Development Descriptions

Site Number	Scenario Inclusion	Site Name
1	2031 PPLP & 2037 Local Plan	Former Rotunda Amusement Park, Marine Parade, Folkestone, Kent
2	2031 PPLP & 2037 Local Plan	Shornccliffe Garrison, Folkestone
3	2031 PPLP & 2037 Local Plan	Street Record, Hurricane Way, Hawkinge, Kent, CT18 7SU
4	2031 PPLP & 2037 Local Plan	Philbeach House, Tanners Hill, Hythe, Kent CT21 5UQ
5	2031 PPLP & 2037 Local Plan	Land Adjoining Enterprise Way Enterprise Way Link Park Lympne Kent
6	2031 PPLP & 2037 Local Plan	Land Adjoining The Link Park Lympne Industrial Estate Lympne Kent
7	2031 PPLP & 2037 Local Plan	Land Read Rhodes House Main Road Sellindge Kent
8	2031 PPLP & 2037 Local Plan	Remainder of land at Aerodrome, Hawkinge
9	2031 PPLP & 2037 Local Plan	Nickolls Quarry Dymchurch Road Hythe Kent CT21 4NF
10	2031 PPLP & 2037 Local Plan	Land Adjacent The Surgery, Main Road, Sellindge, Kent
11	2031 PPLP & 2037 Local Plan	Land at Hurricane Way, Hawkinge, Kent CT18 7SU
12	2031 PPLP & 2037 Local Plan	Plot 1, Hurricane Way, Hawkinge, Kent CT18 7SU
13	2037 Local Plan	Otterpool Park

3.4 Ashford M20 Junctions

Key Interchanges

West of Folkestone and Hythe District Council is the town of Ashford. Three M20 interchanges are present:

- M20 Junction 9;
- M20 Junction 10; and
- M20 Junction 10a.

M20 Junction 10a improvement scheme is recent. According to Highways England scheme presentation leaflet, works started in January 2018 and were completed in the summer of 2020. Image 4 presents a scheme that includes:

- The construction of a new interchange junction (Junction 10a);
- The closure of East facing ramps at Junction 10.

The fact that Junction 10a has recently been constructed as well as the COVID19 situation does not permit the reliable collection of traffic counts to assess the split of traffic for West facing splits.

Image 4 – M20 Junction 10a Scheme



Total Traffic from Folkestone and Hythe Local Plan

Using the updated transport model, the assessment of the 2037 traffic volumes from the Local Plan travelling to and from district council towards the West (the number within parenthesis as volumes from Otterpool Park), using the M20 are:

- AM Peak: Westbound 929(450) veh, - Eastbound 550(252) veh;
- PM Peak: Westbound 671(316) veh, - Eastbound 950(468) veh

Merge / Diverge Assessment

A merge and diverge assessment using the latest DMRB guidelines has been undertaken using the most recent WebTRIS counts available. Traffic demand on the West facing ramps of Junction 10 and 10a have been split equally as road users now have two ramps to chose from.

The key findings from this assessment are:

- The mainline through traffic volumes are low;
- Junction 9 traffic volumes on the ramp already exceed the design limit with DMRB, but there are no signs of congestion, likely as a result of very low mainline traffic; and
- The traffic volume from the Folkestone and Hythe Local Plan is not expected to be sufficient to require an upgrade of the merge / diverge segments.

Due to the very low mainline traffic volume, any upgrade of the merge / diverge segment would likely correspond to a lane gain, lane drop solution, with the hatching of lane 1 within the interchange.

Interchange Roundabout Assessment

Table 3 shows the 2037 junction traffic analysis within the 2019 Otterpool Park transport assessment, in which the Do-Minimum scenario is equal to Local Plan growth without Otterpool Park and the Do-Something scenario is Local Plan growth including Otterpool Park. This assessment shows the limited impact of the Folkestone and Hythe Local Plan, and the fact that it would not trigger the need for mitigation measures.

Table 3 – Junction 10, 10A and 9 2037 Degree of Saturation

Junction ID / Name		Maximum Degree of Saturation / Ratio of Flow to Capacity					
		2018		2037			
		Baseline		Do-Minimum		Do-Something	
		AM	PM	AM	PM	AM	PM
J1	M20 J10	84.5%	83.2%	70.7%	78.4%	75.0%	77.6%
J42	M20 J10A			41.0%	45.0%	68.3%	75.0%
J23	M20 J9	75.3%	92%	83.9%	95.1%	83.9%	93.3%

Conclusion

In conclusion, it is not anticipated that the Folkestone and Hythe Local Plan would lead to required mitigation measures within the Highways England network in Ashford.

3.5 Selected Study Area

For this study, the road network of interest was defined as:

- Highways England road network (SRN) directly impacted by the increase in traffic from Folkestone and Hythe District Council Local Plan, to the extent that it would trigger the need for network upgrades; and
- The local junctions at risk of blocking back into the SRN as a result of traffic increase generated by the Local Plan.

The proposed study area is presented in Image 5. It corresponds, West to East, to interchanges:

- M20 Junction 11;
- M20 Junction 11a;
- M20 Junction 12;
- M20 Junction 13; and
- A20, A20 / Spitfire Way / Alkham Valley Road.

Image 5 – Proposed Study Area



4 Traffic Demand

4.1 2017 Baseline

The 2017 baseline data used in the AECOM Shepway Transport Model and the Arcadis Otterpool transport assessment were compared. The data is available in Appendix C.1 and is presented in Table 4. The key findings are:

- Except for Junction 12 in the AECOM model, all data sources are from 2016/2017 and consistent;
- AECOM applied a seasonality factor to the October traffic. The peak traffic is in August, likely related to the Dover port activities;
- AECOM traffic volumes are always higher than the non-factored counts.

The AECOM traffic volumes being a worst-case scenario, the original baseline traffic in the AECOM Shepway Transport Model has been retained. The increase in baseline traffic for M20 Junction 11 and the A20 junction, however, is significant.

Table 4 – 2017 Data Review

Junction	Date of survey		AM (8-9)			PM (17-18)		
	Arcadis model	AECOM model	Arcadis model	AECOM model	Difference	Arcadis model	AECOM model	Difference
M20 J11	13 October 2016	13 October 2016	2,361	2,672	+13%	2,356	2,690	+14%
M20 J11a	13 October 2016	13 October 2016	508	539	+6%	548	582	+6%
M20 J12	29 June 2017	22 October 2013*	2,931	3,074	+5%	3,045	3,070	+1%
M20 J13 Southern rdb	29 June 2017	13 October 2016	3,306	3,768	+14%	3,301	3,659	+11%
A20 Spitfire rdb	13 October 2016	13 October 2016	2,452	2,721	+11%	2,803	3,115	+11%
A20 Alkham rdb	13 October 2016	13 October 2016	1,903	2,112	+11%	1,523	1,693	+11%

Factored up to 2016 baseline

4.2 2037 Traffic Demand Model

The travel demand models are contained in Appendix C.2.

Local Plan Horizon

The local plan horizon is 2037 and this is the core assessment year.

Local Plan Scenario Description

Within the Shepway Transport Model, the core scenarios selected are:

- 2037 DS, corresponding to the Local Plan projection, also labelled Core Strategy Review (CSR 6,500); and
- 2037 DM, corresponding to the Places and Policies Local Plan (PPLP).

The description of individual development has evolved, but by consistency with the previous stage, developments descriptions have been retained as per the AECOM model version.

Local Plan Housing and Employment Projections

The housing and employment project are:

- As per the Local Plan in the 2037 DS;
- Discounted by Otterpool Park development in the 2037 DM.

The reason for the application of the discount is to ensure the transport model does not re-allocate the Otterpool Park traffic via the TEMPPro Factor.

Motorway Growth Rate

For the motorway mainline traffic, an independent TEMPPro factor has been included in the model. This change enables the assessment to reflect the increase of through traffic, which was not included in the original model developed in 2017 by AECOM.

Junction 12 U-Turning Traffic Removal

The Taylor Wimpey Cheriton High Street Junction, committed scheme drawing, clearly shows the ability to perform the right turning movement from the side road. Thus, the traffic from the South using Junction 12 to U-turn in the AECOM model has been removed.

TEMPPro 7b

All TEMPPro rates in the model have been superseded using the latest available version of the rates. The version is indicated as 7b.

5 M20 Junction 11

5.1 Assessment Overview

General Description

M20 Junction 11 is a major motorway interchange with the following characteristics:

- The M20 at this location is composed of 3 lanes in each direction (no lane drop/lane gain);
- To the West of the interchange, an overbridge is located that will constrain future road widening at this location;
- Ramps are wide, but are marked as one lane;
- The at-grade junction is a two-lane, non-signalised, roundabout, widened to three lanes at some locations;
- The at-grade junction has 5 arms (including 2 motorway arms). To the South, a further left-in left-out junction gives access to a depot; and
- Another roundabout further South enable U-turning movements.

Initial Mitigation Requirements Identification

The traffic analysis mitigation requirements at M20 Junction 11 based on the 2037 DS CSR 6,500 has been summarised in Image 6 on the next page. The key requirements are:

- Merge and diverge type upgrade at three locations;
- The widening to two lanes of three ramps;
- The upgrade of the main roundabout.

5.2 Merge / Diverge Assessment

The merge and diverge assessment are presented in Table 5 and 6. The key findings are:

- The motorway mainline never requires more than two lanes; and
- Three ramps require widening to two lanes.

Image 6 – M20 Junction 11 High-Level Mitigation Requirements

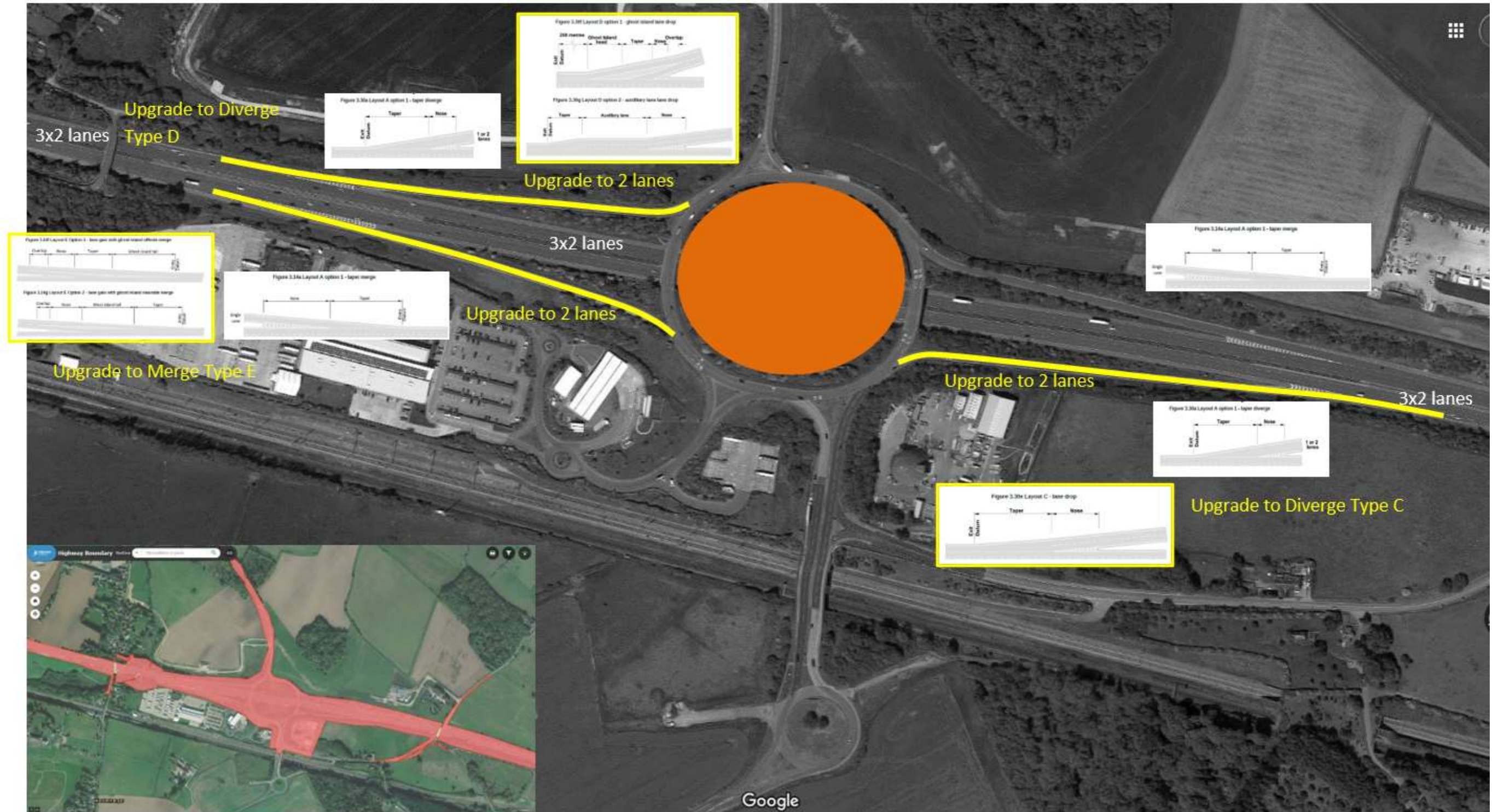
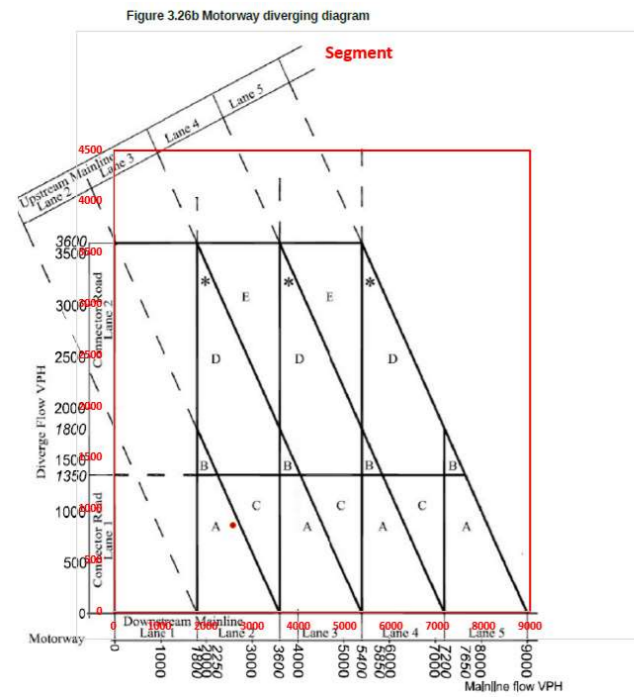
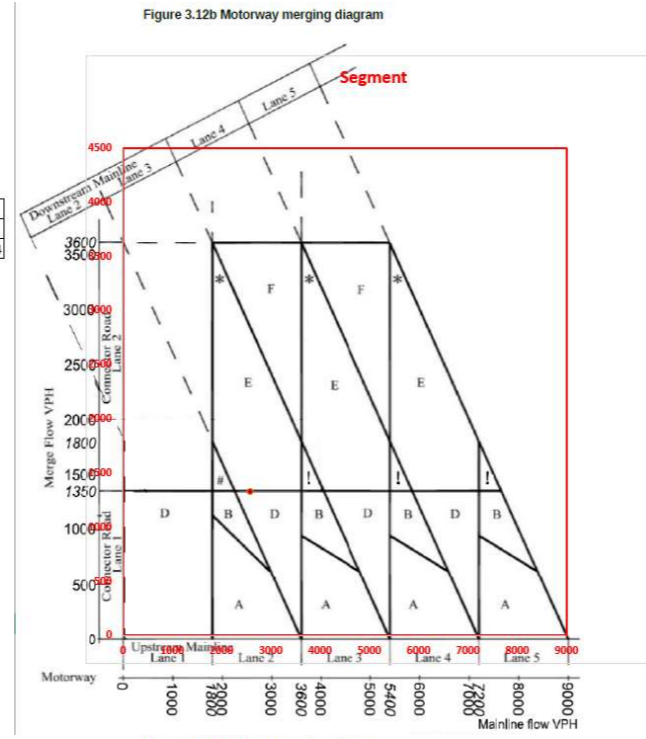


Table 5 – M20 Junction 11 – 2037 AM Merge/Diverge Assessment



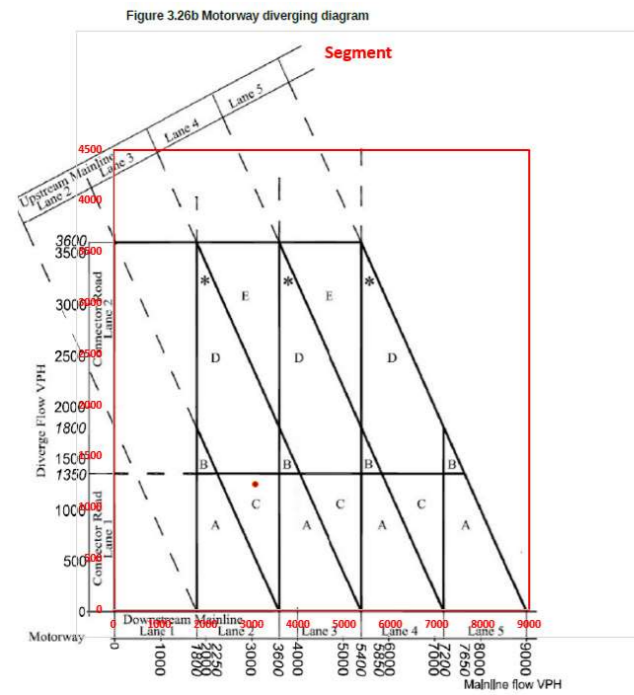
M20 J11 EB Off-Slip__AM

Mainline flow Veh/hr	Diverge flow Veh/hr
2580	844



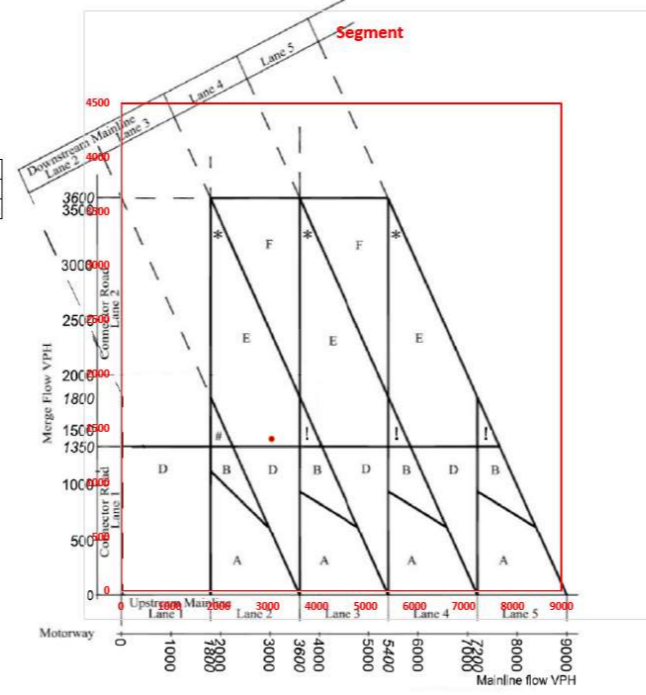
M20 J11 EB On-Slip__AM

Mainline flow Veh/hr	Merge flow Veh/hr
2580	1335



M20 J11 WB Off-Slip__AM

Mainline flow Veh/hr	Diverge flow Veh/hr
3073	1232



M20 J11 WB On-Slip__AM

Mainline flow Veh/hr	Merge flow Veh/hr
3073	1405

Table 6 – M20 Junction 11 – 2037 PM Merge/Diverge Assessment

Figure 3.26b Motorway diverging diagram

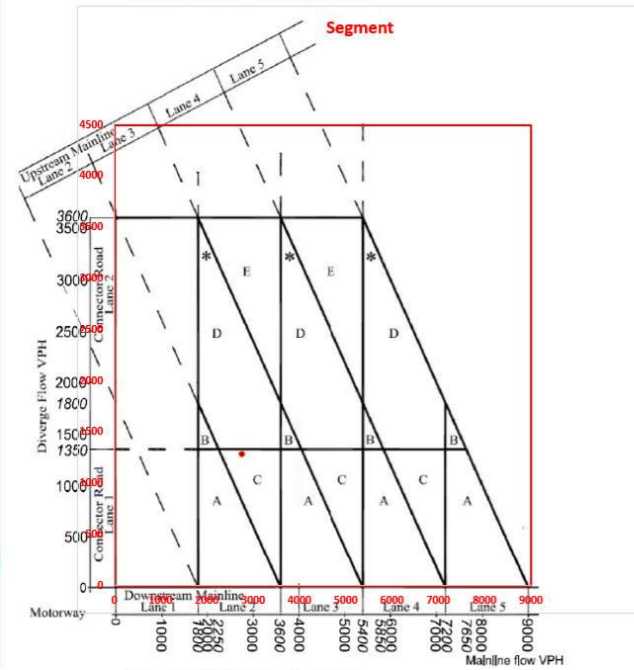
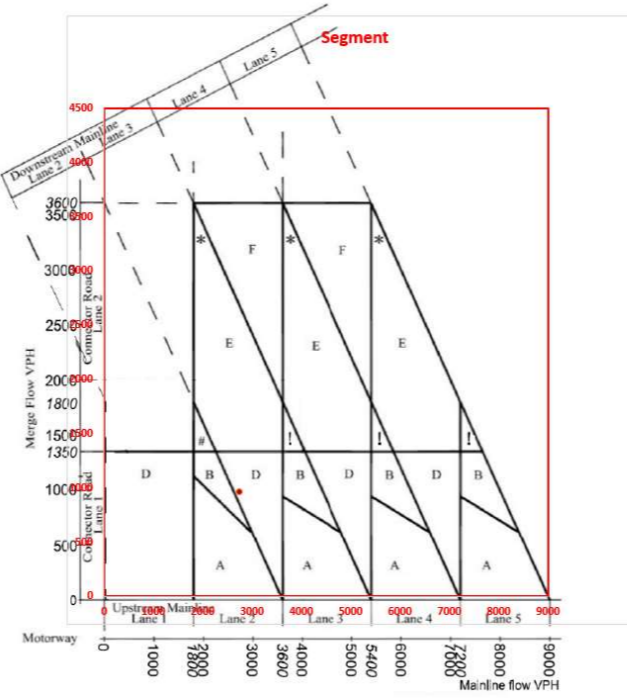


Figure 3.12b Motorway merging diagram

M20 J11 WB Off-Slip __PM

Mainline flow Veh/hr	Diverge flow Veh/hr
2747	1291

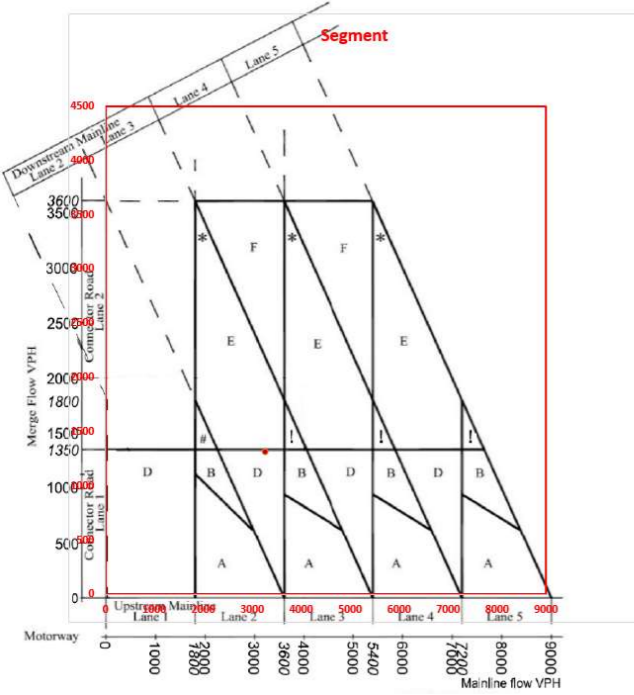
Figure 3.12b Motorway merging diagram



M20 J11 WB On-Slip __PM

Mainline flow Veh/hr	Merge flow Veh/hr
2747	962

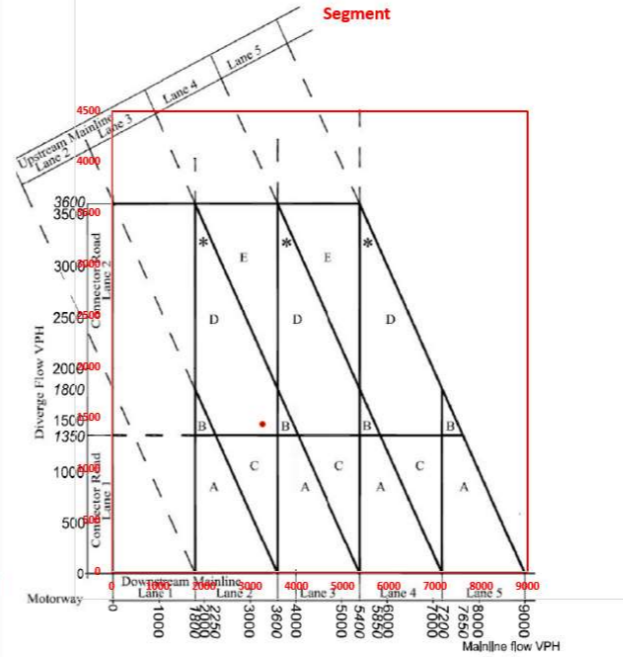
Figure 3.12b Motorway merging diagram



M20 J11 EB On-Slip __PM

Mainline flow Veh/hr	Merge flow Veh/hr
3263	1305

Figure 3.26b Motorway diverging diagram



M20 J11 EB Off-Slip __PM

Mainline flow Veh/hr	Diverge flow Veh/hr
3263	1441

5.3 Traffic Demand Impact

Overall Changes in Traffic Volumes (in Veh.)

For M20 Junction 11, the comparison of total traffic at an at-grade junction in 2037 between the DM scenario (DS PPLP) and the DS scenario (DS CSR 6,500) is as follows:

- AM Peak – DM (3708) / DS (5327), or an increase of 1619 (30%)
- PM Peak – DM (3807) / DS (5573), or an increase of 1766 (32%)

Based on the figures described above, the increase in traffic at the junction is very important between the 2037 DM and DS scenarios. Such a traffic increase is expected and is related mostly to Otterpool Park development.

5.4 Existing Layout at Grade Traffic Assessment

Table 7 presents the traffic analysis of the existing junction layout in both 2037 DM and DS scenarios.

The key findings are:

- In the DM PM peak scenario, one approach reaches capacity, but the impact is minor, with no risk of blocking back queue onto the M20;
- In the DS AM and PM peak scenarios, most approaches have reached oversaturation, indicating the need for a widening of the junction layout.

Table 7 – M20 Junction 11 – 2037 Existing Layout Assessment

Arm	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
DM 2037								
M20 OffSlip Westbound	1.9	6.7	0.66	A	2.5	11.7	0.72	B
A20 Ashford Road	2.3	5.11	0.7	A	1.9	4.47	0.66	A
Services	0.4	8.29	0.31	A	0.3	6.31	0.25	A
M20 OffSlip Eastbound	1.3	6.82	0.56	A	16.3	55.15	0.97	F
B2068	0.8	5.76	0.45	A	4	27.89	0.82	D
DS 2037								
M20 OffSlip Westbound	29	74.95	1.01	F	63.5	202.61	1.07	F
A20 Ashford Road	267	383.77	1.21	F	22	34.23	0.97	D
Services	32.8	1004.84	1.35	F	3.6	74.68	0.83	F
M20 OffSlip Eastbound	74.8	331.4	1.17	F	599.7	2036.32	2.22	F
B2068	6.5	50.38	0.89	F	24.8	167.51	1.05	F

Image 7 – M20 Junction 11 – 2037 Queue Length Comparison



5.5 Proposed Mitigations

Proposed Mitigation Constraints

The proposed concept development was focussed on respecting the following constraints:

- Ensuring free-flowing and safe traffic conditions;
- Avoiding any impact on existing structures as much as possible, for cost reasons; and
- Maintaining the same level of accessibility as in the present situation.

When developing proposed mitigations, the introduction at the junction to the South of a signalised South to East right turning movement was necessary to avoid the need to widen the bridge structures across the M20.

Table 8 presents the traffic analysis of the proposed junction layout for 2037 DS scenario. The key findings are:

- The two junctions at the interchange can be upgraded to free-flowing traffic conditions, without impacting the key structures; and
- Further significant increase in right-turning traffic at the junction to the South, giving access to the depot would potentially require further upgrading.

Table 8 – M20 Junction 11 – 2037 Proposed Layout Assessment

2037 DS with Mitigation M20 Junction 11 Roundabout							
Approach	Lane	AM			PM		
		Queue (PCU)	Delay	DoS	Queue (PCU)	Delay	DoS
M20 OffSlip Westbound	1	7.5	19.1	71.8%	16.7	41.6	71.8%
	2 & 3	7.6	18.7	65.50%	17.9	42.4	65.50%
A20 Ashford Road	1	14.8	12.2	79.9%	12.6	11.4	79.9%
	2 & 3	6.8	7.4	73.40%	9.3	10	73.40%
Services	1	2.6	12	34.6%	1.8	5.9	34.6%
M20 OffSlip Eastbound	1 & 2	6.8	28.8	75.2%	18.7	34.2	75.2%
		6.6	29.3	71.30%	20.7	38.9	71.30%
B2068	1	1.5	7.4	58.3%	9.4	28.0	58.3%
	2	1.9	13.9	47.0%	2.4	29.3	47.0%
2037 DS with Mitigation M20 Junction 11 T-Junction							
Approach	Lane	AM			PM		
		Queue (PCU)	Delay	DoS	Queue (PCU)	Delay	DoS
A20 Ashford Road Southbound	1 & 2	10.5	9.6	71.9%	21.9	12.6	87.7%
	3	11.2	9.9	70.20%	25.3	13.7	87.70%
A20 Ashford Road Northbound Right Turn	1	5.7	31.7	81.3%	6.9	45.2	79.5%

5.6 Timeline Analysis

To provide information regarding the phasing of junction mitigation, a timeline analysis at M20 Junction 11 has been broken down into three key stages. The timeline is expressed in percentage development of Otterpool Park development. Reference to the development programme is required to associate dates against the various infrastructure upgrades requirements. The key stages are:

- **Stage 1 – No Upgrades**
 - The M20 Eastbound Off-slip will reach saturation in 2037, even without the Otterpool Park development. Any additional increase in traffic will require mitigations at the junction.

- **Stage 2 – Main Roundabout Upgrade**
 - Upgrade of the interchange roundabout will be gradually required after 45% of Otterpool Park Development. The widening of the ramp approaches is the first element of junction upgrade required, meaning the complete roundabout upgrade would be recommended to take place in one construction stage.

- **Stage 3 – South Junction Upgrade (A20 Ashford Road Junction)**
 - The South junction upgrade will only be required once approximately 92% of Otterpool Park has been delivered. It is important to underline the initial seasonal factoring of the baseline traffic in our traffic demand. It is likely the junction upgrade will not be required if adequate travel demand controls are put in place, or if the turning proportion does not develop as anticipated in the model.

5.7 Conclusion

In conclusion, M20 Junction 11 is significantly impacted by the Local Plan. A proposed mitigation has been developed and requires further highway design investigation.

It is recommended the junction upgrade is not considered as one development stage, as the South junction might not be required as part of DS CSR 6,500.

It is recommended that any mitigation scheme is subject to a monitor and manage approach to implementation. Traffic volumes should be monitored throughout the Local Plan period to inform when or if the mitigation is required.

Image 8 – M20 Junction 11 Initial Mitigation

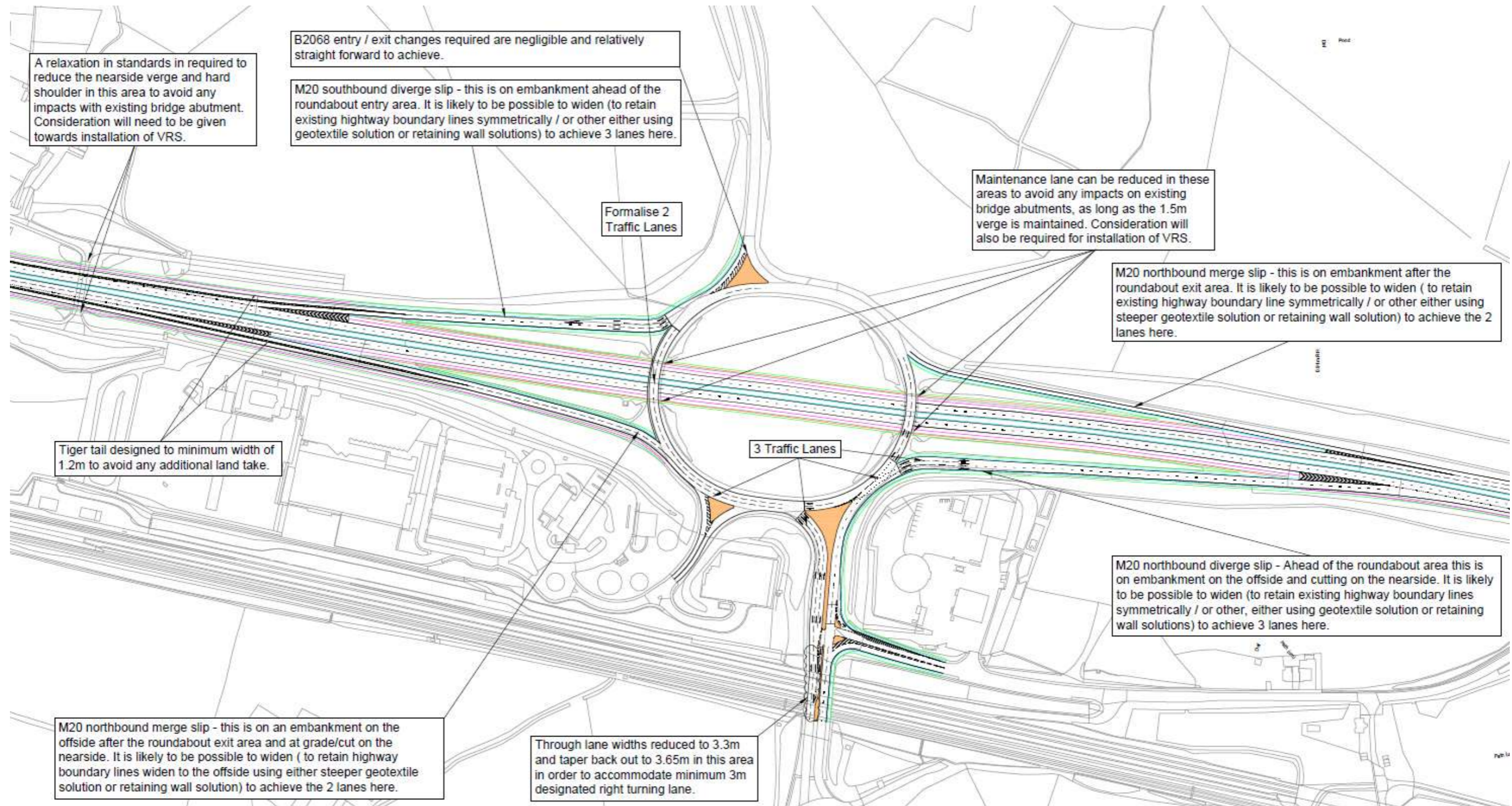


Image 9 – M20 Junction 11 Initial Mitigation 2037 Queue Length



6 M20 Junction 11a

6.1 Assessment Overview

General Description

M20 Junction 11a corresponds to the access and egress to the Eurotunnel terminal. The interchange is composed of:

- West facing ramps only;
- No nearby at-grade junctions on the local network; and
- The tunnel control gate when entering the facility.

It is our understanding that the entrance control gate has only been designed to process vehicles for custom controls in an EU environment. It is possible that more extensive custom control will result in the control gate creating blocking back queues on the M20.

Mitigation Requirements Identification

There are no mitigation requirements identified at Junction 11a, related to the impact of the Folkestone and Hythe Local Plan.

The merge and diverge calculations, however, highlight the fact that the traffic volume to and from the Eurotunnel terminal is low. A three-lane cross-section East of the interchange should be maintained in the 2037 scenario.

6.2 Merge / Diverge Assessment

The merge and diverge analysis of M20 Junction 11a is presented in Table 9 on the next page.

6.3 Conclusion

In conclusion, M20 Junction 11a does not require mitigation from Folkestone and Hythe Local Plan DS CSR 6,500 scenario.

Table 9 – M20 Junction 11a – 2037 AM & PM Merge/Diverge Assessment

Figure 3.26b Motorway diverging diagram

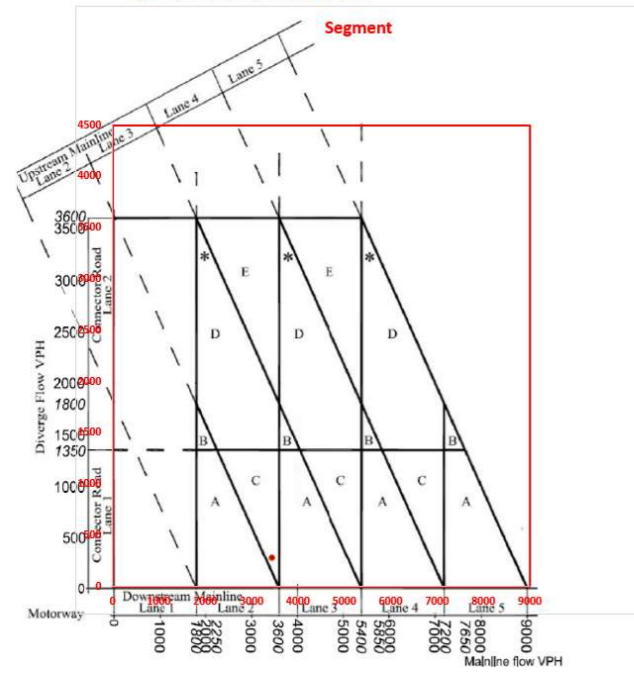
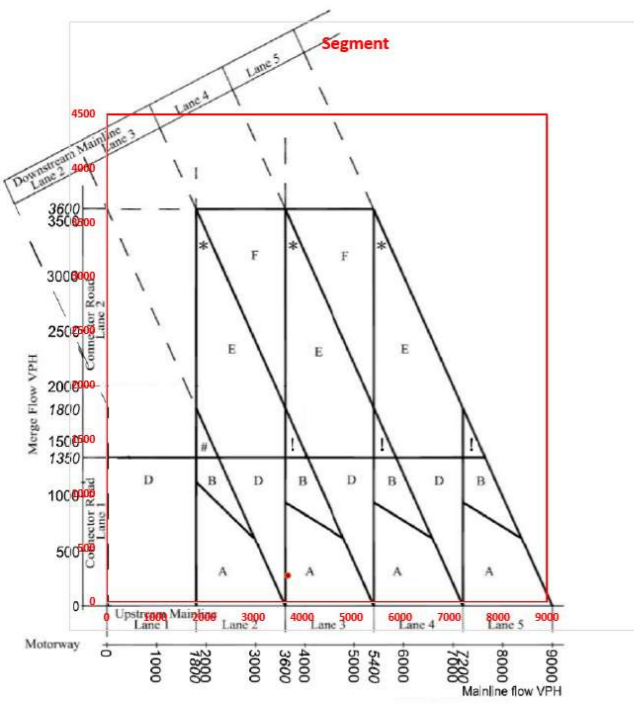


Figure 3.12b Motorway merging diagram



M20 J11A EB Off-Slip__AM

Mainline flow	Diverge flow
Veh/hr	Veh/hr
3445	283

Figure 3.26b Motorway diverging diagram

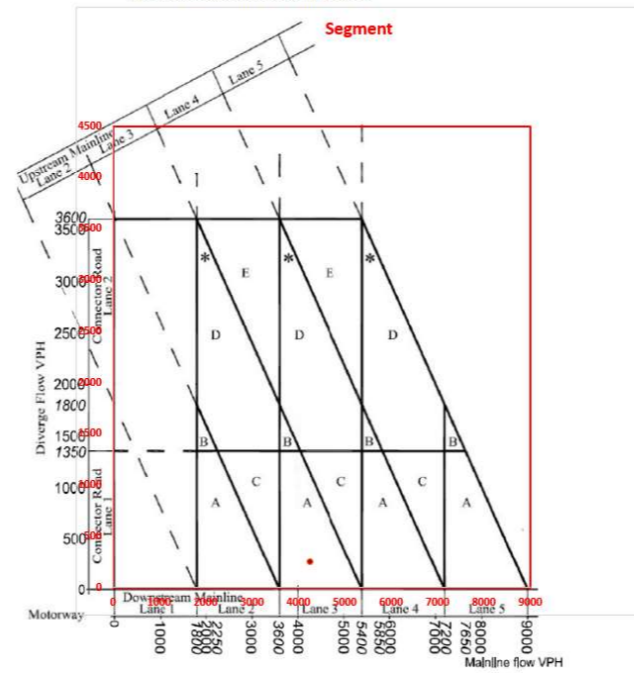
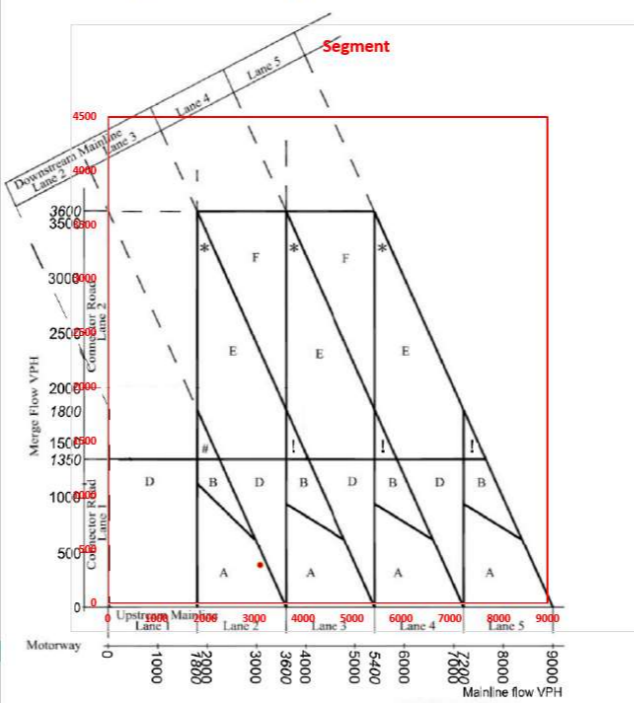


Figure 3.12b Motorway merging diagram



M20 J11A WB On-Slip__AM

Mainline flow	Merge flow
Veh/hr	Veh/hr
3711	246

M20 J11A EB Off-Slip__PM

Mainline flow	Diverge flow
Veh/hr	Veh/hr
4248	258

M20 J11A WB On-Slip__PM

Mainline flow	Merge flow
Veh/hr	Veh/hr
3125	352

7 M20 Junction 12

7.1 Assessment Overview

General Description

M20 Junction 12 is a major motorway interchange with the following characteristics:

- West of Junction 12 the M20 is composed of 3 lanes in each direction, a lane drop/lane gain arrangement results in the motorway being two lanes in each direction to the east of the junction;
- The at-grade junction is a two-lane, non-signalised, roundabout;
- The junction immediately to the South of the roundabout interchange is being upgraded to include a right-turning movement from the Cheriton High Street (the West side road); and
- Highways England road network only extends to the motorway ramps.

Mitigation Requirements Identification

There are no mitigation requirements identified at Junction 12, traffic volumes are not changing significantly between the DM and the DS scenario. Traffic conditions remain free-flowing, except for the M20 westbound off-ramp approach at the roundabout that has reached capacity.

7.2 Merge / Diverge Assessment

The merge and diverge assessment is presented in Table 10 and 11. The key finding is:

- The motorway mainline East of Junction 12 should be 3 lanes and not 2 as in the existing situation.

Image 10 – M20 Junction 12 High-Level Mitigation Requirements

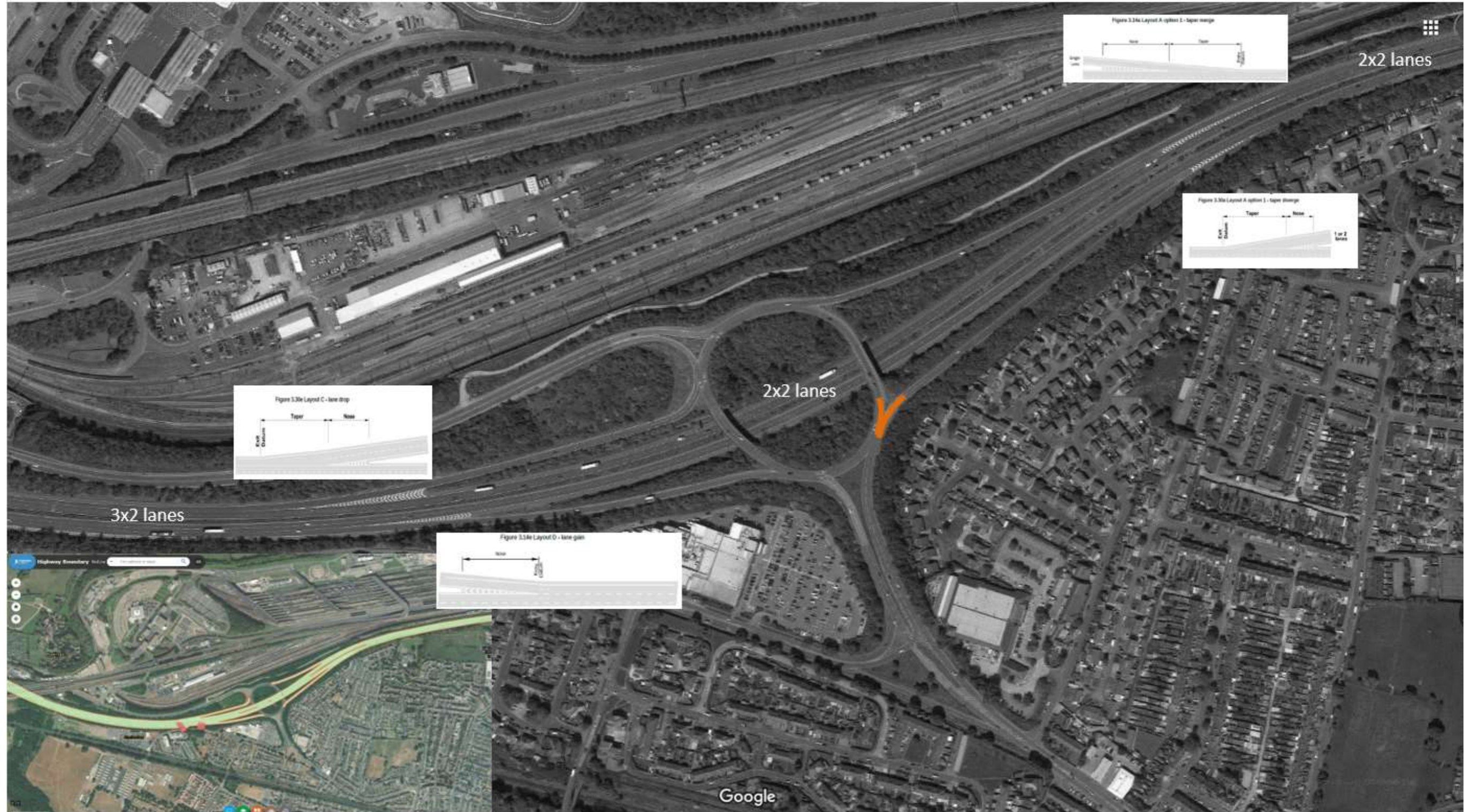
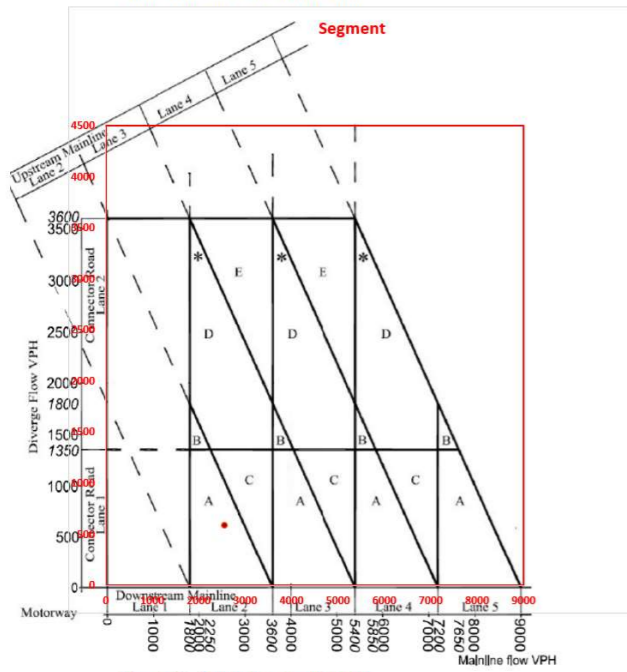


Table 10 – M20 Junction 12 – 2037 AM Merge/Diverge Assessment

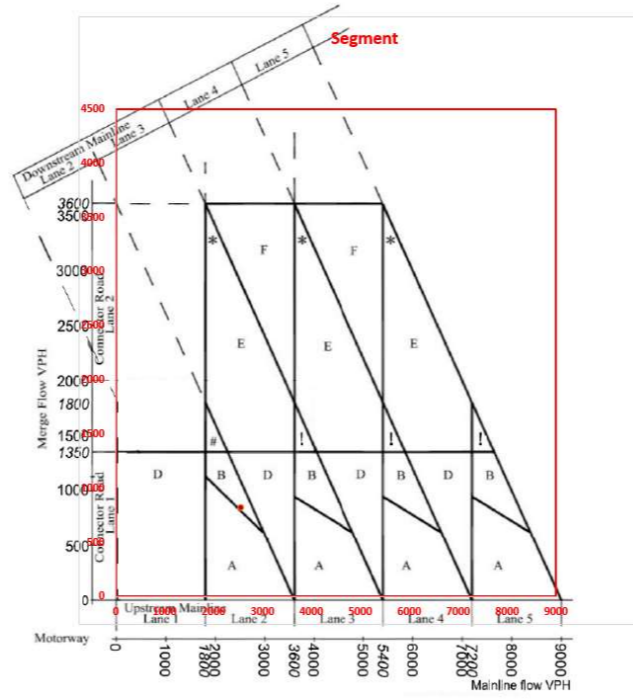
Figure 3.26b Motorway diverging diagram



M20 J12 EB Off-Slip__AM

Mainline flow	Diverge flow
Veh/hr	Veh/hr
2562	587

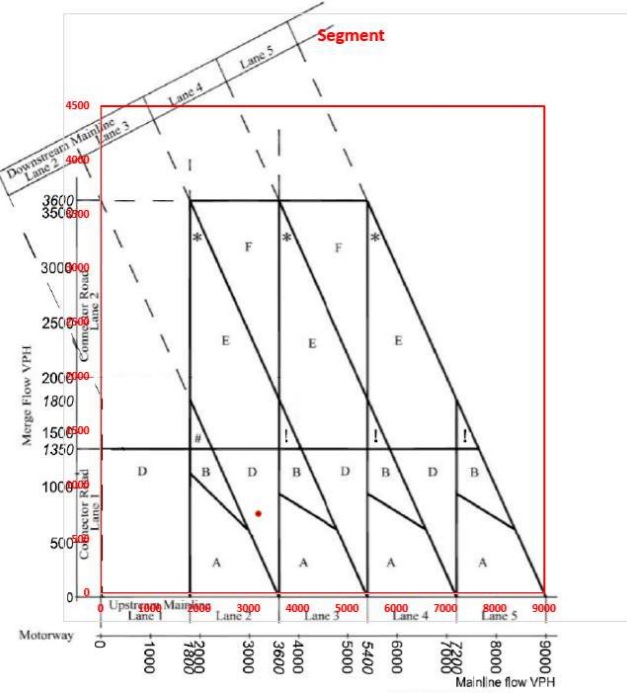
Figure 3.12b Motorway merging diagram



M20 J12 EB On-Slip__AM

Mainline flow	Merge flow
Veh/hr	Veh/hr
2562	812

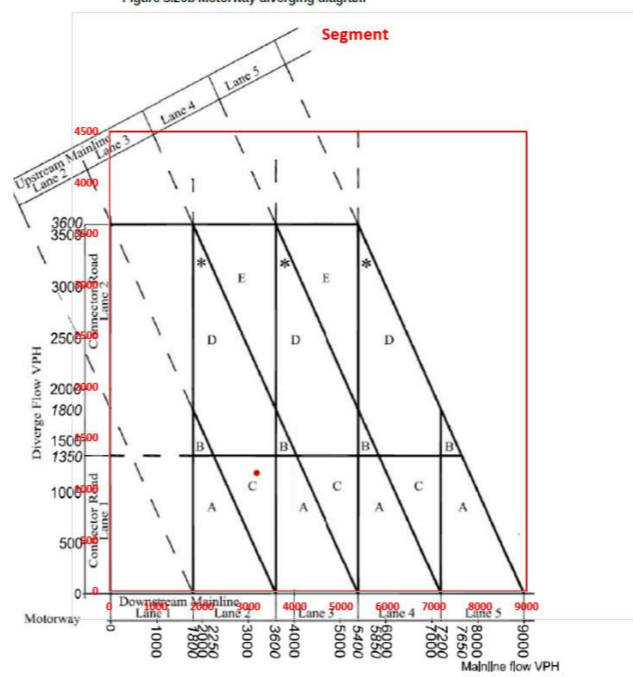
Figure 3.12b Motorway merging diagram



M20 J12 WB On-Slip__AM

Mainline flow	Merge flow
Veh/hr	Veh/hr
3194	741

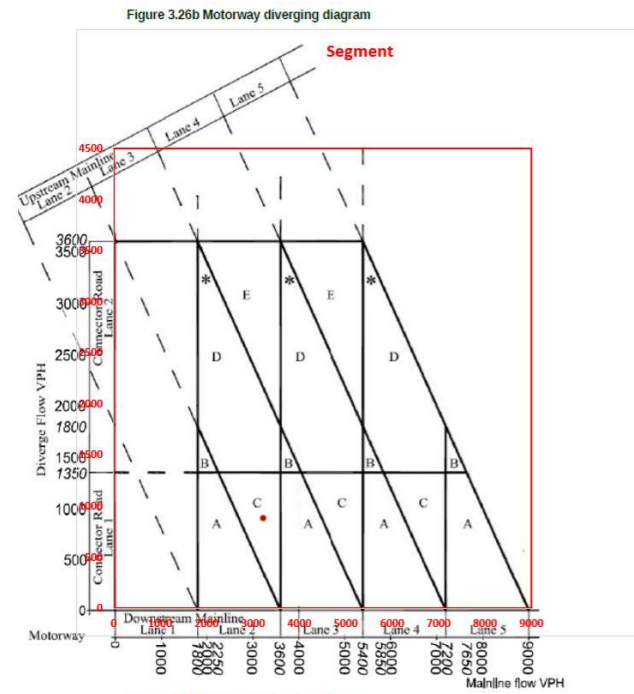
Figure 3.26b Motorway diverging diagram



M20 J12 WB Off-Slip__AM

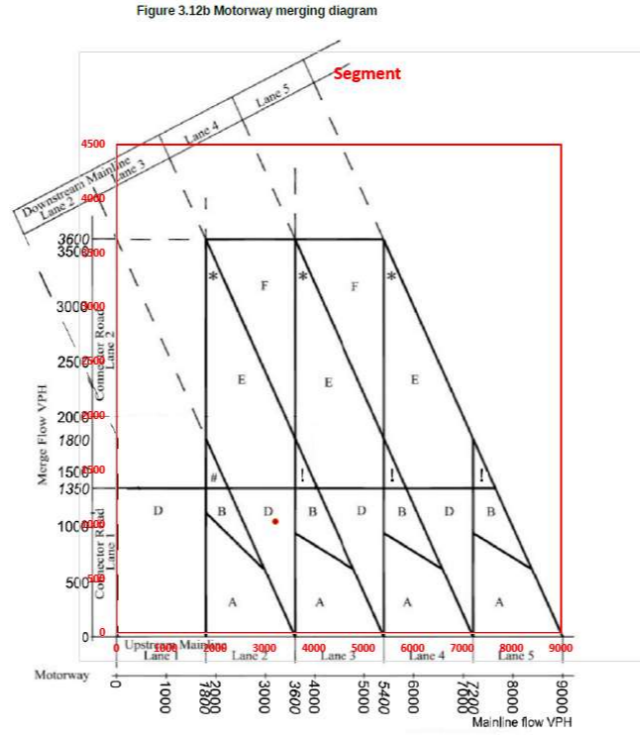
Mainline flow	Diverge flow
Veh/hr	Veh/hr
3194	1153

Table 11 – M20 Junction 12 – 2037 PM Merge/Diverge Assessment



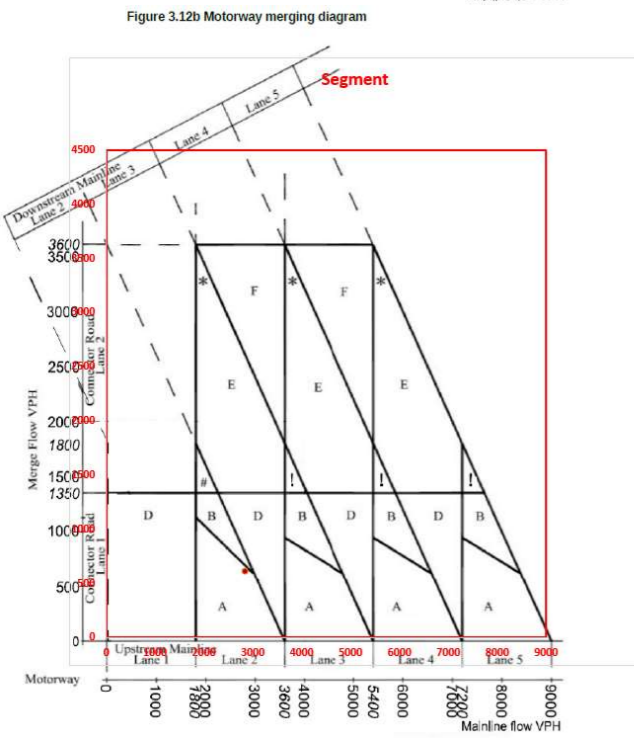
M20 J12 EB Off-Slip__PM

Mainline flow Veh/hr	Diverge flow Veh/hr
3228	882



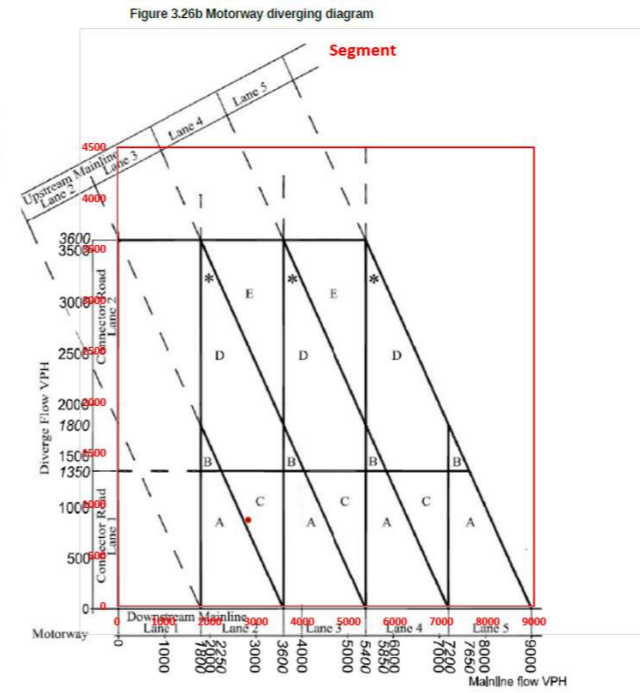
M20 J12 EB On-Slip__PM

Mainline flow Veh/hr	Merge flow Veh/hr
3228	1031



M20 J12 WB On-Slip__PM

Mainline flow Veh/hr	Merge flow Veh/hr
2838	607



M20 J12 WB Off-Slip__PM

Mainline flow Veh/hr	Diverge flow Veh/hr
2838	850

7.3 Traffic Demand Impact

Overall Changes in Traffic Volumes

The M20 Junction 20 comparison of total traffic at an at-grade junction in 2037 between the DM scenario (DS PPLP) and the DS scenario (DS CSR 6,500) is as follows (traffic flows in vehicles):

- AM Peak – DM (3869) / DS (3825), or a decrease of -44 (-1%)
- PM Peak – DM (3898) / DS (3858), or a decrease of -40 (-1%)

The overall change in traffic is negligible.

7.4 Existing Layout at Grade Traffic Assessment

Table 12 presents the traffic analysis of the existing junction layout in both 2037 DM and DS scenarios.

The key findings are:

- Traffic conditions remain similar between the two scenarios; and
- The junction is free-flowing, except for the M20 westbound approach that has reached capacity.

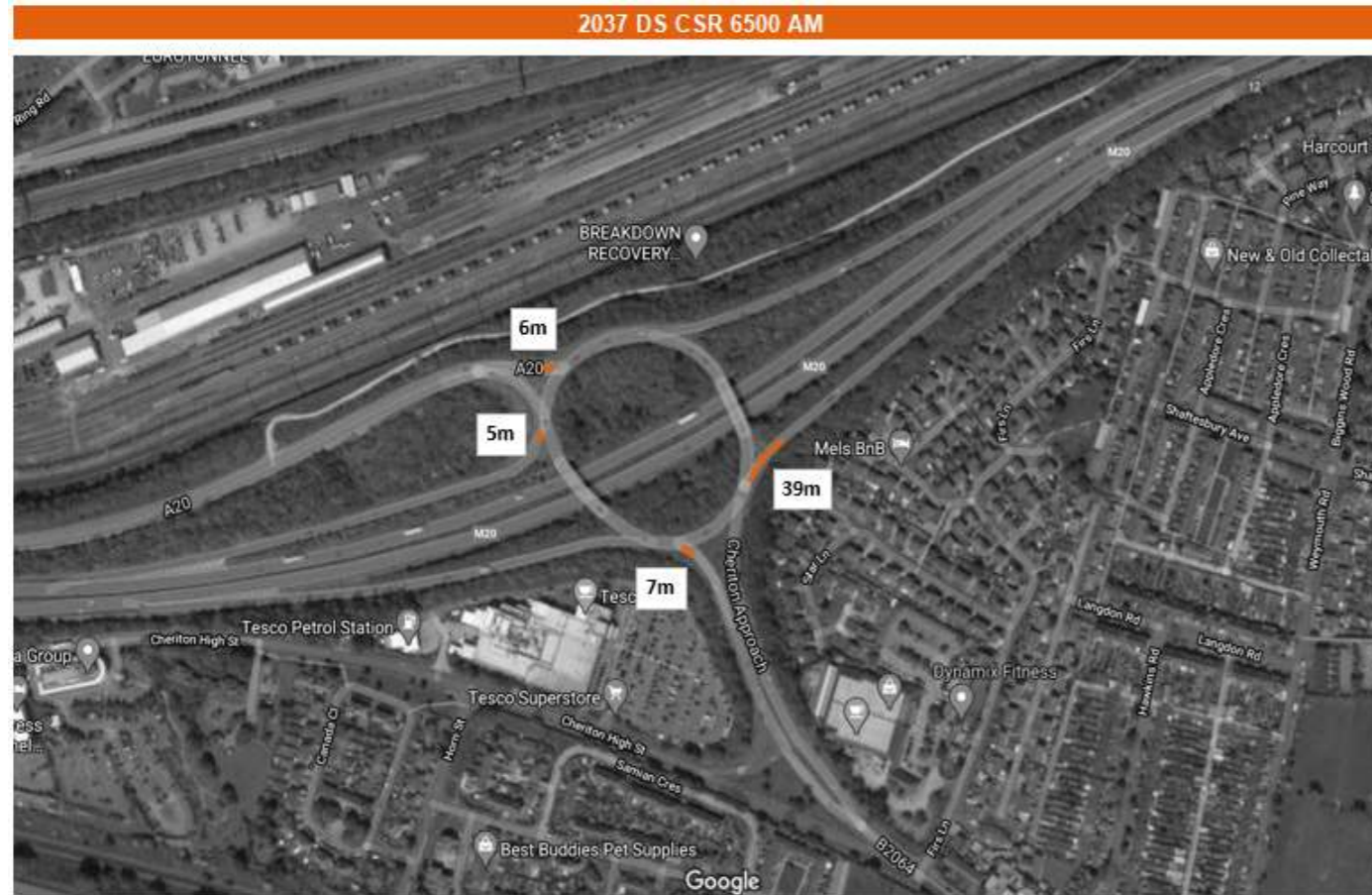
Table 12 – M20 Junction 12 – 2037 Existing Layout Assessment

Arm	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
DM 2037								
M20 Westbound	7.7	22.15	0.9	C	4.7	18.06	0.83	C
B2064 Cheriton	1.3	3.14	0.56	A	1.2	2.9	0.54	A
M20 Eastbound	0.9	5.11	0.46	A	3.3	12.57	0.77	B
A20 Ashford Road	1.1	4.55	0.53	A	3	12.56	0.76	B
DS 2037								
M20 Westbound	6.7	20.07	0.88	C	3.9	15.59	0.8	C
B2064 Cheriton	1.2	3.05	0.55	A	1.2	2.88	0.54	A
M20 Eastbound	0.9	5.12	0.48	A	3	11.28	0.75	B
A20 Ashford Road	1.1	4.54	0.52	A	2.6	11.02	0.73	B

7.5 Conclusion

In conclusion, M20 Junction 12 does not require mitigation from Folkestone and Hythe Local Plan DS CSR 6,500 scenario.

Image 11 – M20 Junction 12 – 2037 Queue Length Comparison



8 M20 Junction 13

8.1 Assessment Overview

General Description

M20 Junction 13 is a major motorway interchange with the following characteristics:

- The M20 at this location is composed of 2 lanes in each direction;
- The at-grade junction is a dumbbell with two non-signalised roundabouts;
- The South roundabout includes several free-flow bypasses as part of the existing road layout; and
- Highways England road network includes the full interchange.

Mitigation Requirements Identification

To accommodate 2037 traffic requirement at M20 Junction 13 would include:

- The widening of the M20 to 3 lanes in each direction, West of M20 Junction 13;
- The widening of West facing ramps to 2 lanes, with an upgrade of the corresponding merge / diverge segments; and
- The upgrade of the South roundabout in the dumbbell interchange.

The above upgrades, however, are not required because of the Local Plan CSR 6,500 development, but because of background growth. Although the CSR 6,500 growth increases traffic demand at the roundabout to the South the actual traffic increase is marginal, but as this junction is already saturated, traffic congestion worsens disproportionately.

A traffic increase of 1% to 2% can be mitigated using minor operational improvements. It would typically require geometric improvements.

8.2 Merge / Diverge Assessment

The merge and diverge assessment is presented in Tables 13 and 14. The key finding is:

- The PM peak is the busiest peak;
- The DMRB maximum motorway design value is 1,800 vehicles per lane, but the capacity could, in some circumstances allow up to 2,000 vehicles per lanes depending on the percentage of HGVs. The traffic forecast on the M20 presents values higher than 2,000 vehicles per lane, suggesting an overestimation of the traffic forecast. The widening of the M20 to 3 lanes in each direction, West of M20 Junction 13 is the outcome suggested by the DMRB calculation as well as the road capacity; and
- The widening of West facing ramps to 2 lanes, with an upgrade of the corresponding merge / diverge segments.



Table 13 – M20 Junction 13 – 2037 AM Merge/Diverge Assessment

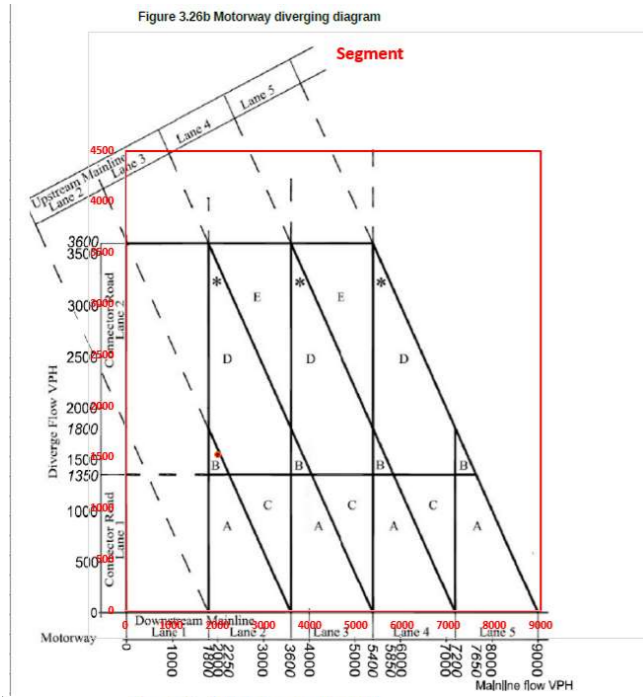
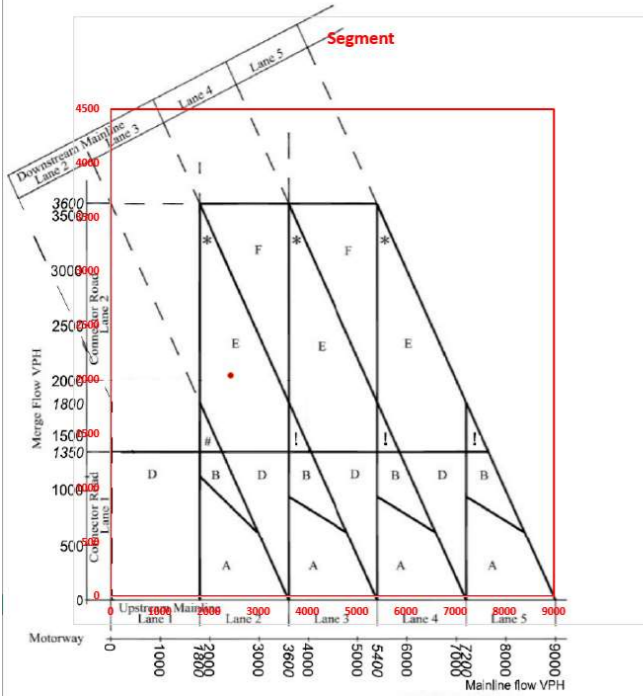
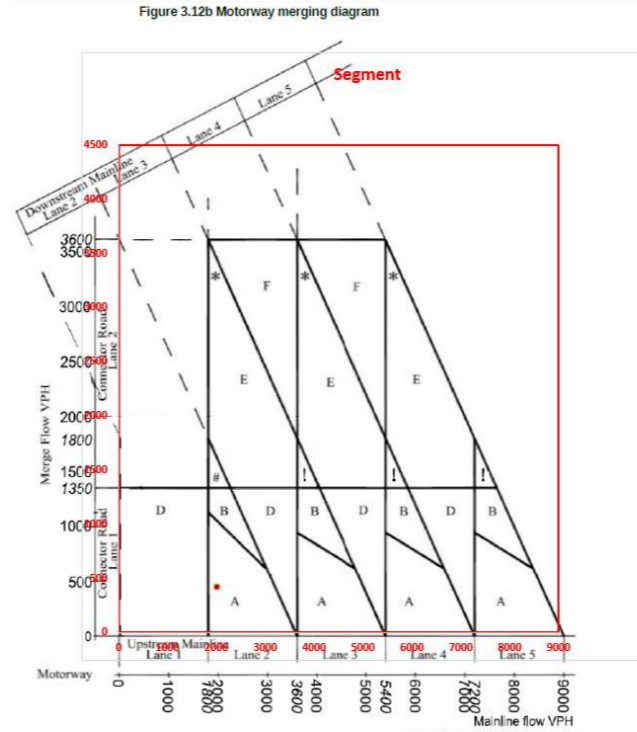


Figure 3.12b Motorway merging diagram



M20 J13 EB Off-Slip__AM

Mainline flow Veh/hr	Diverge flow Veh/hr
2015	1525

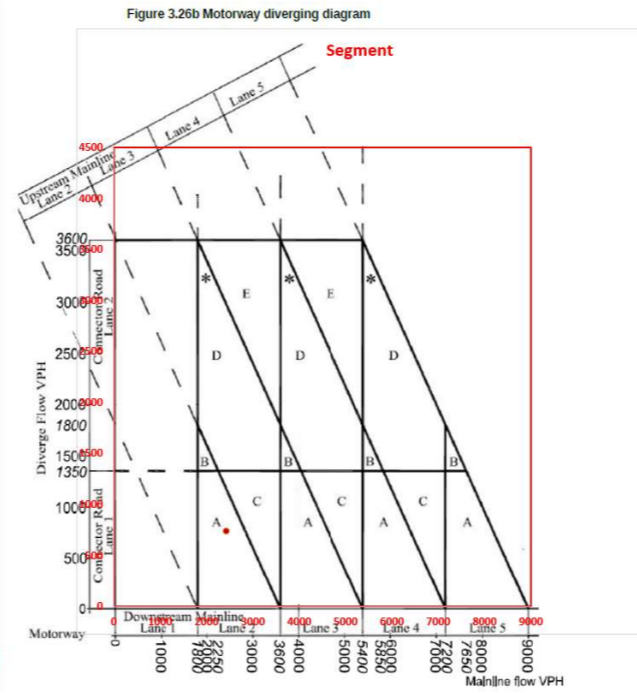


M20 J13 EB On-Slip__AM

Mainline flow Veh/hr	Merge flow Veh/hr
2015	413

M20 J13 WB On-Slip__AM

Mainline flow Veh/hr	Merge flow Veh/hr
2432	2045



M20 J13 WB Off-Slip__AM

Mainline flow Veh/hr	Diverge flow Veh/hr
2432	739

Table 14 – M20 Junction 13 – 2037 PM Merge/Diverge Assessment

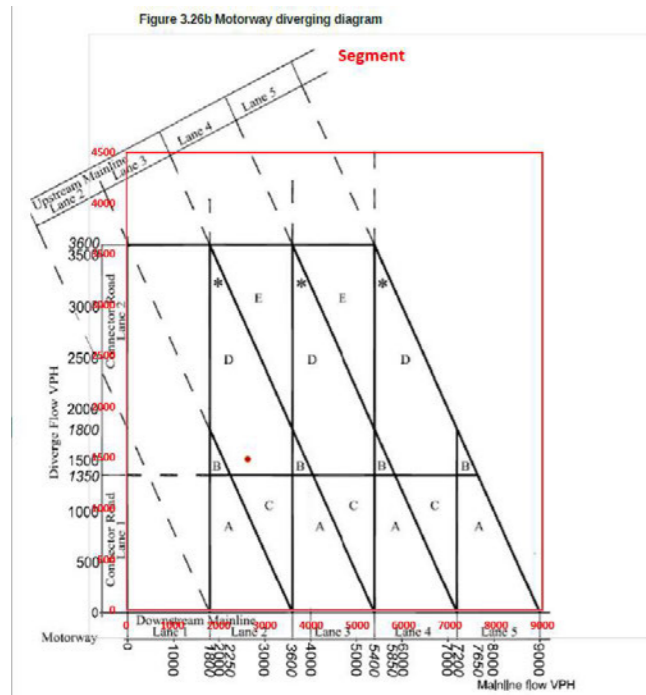
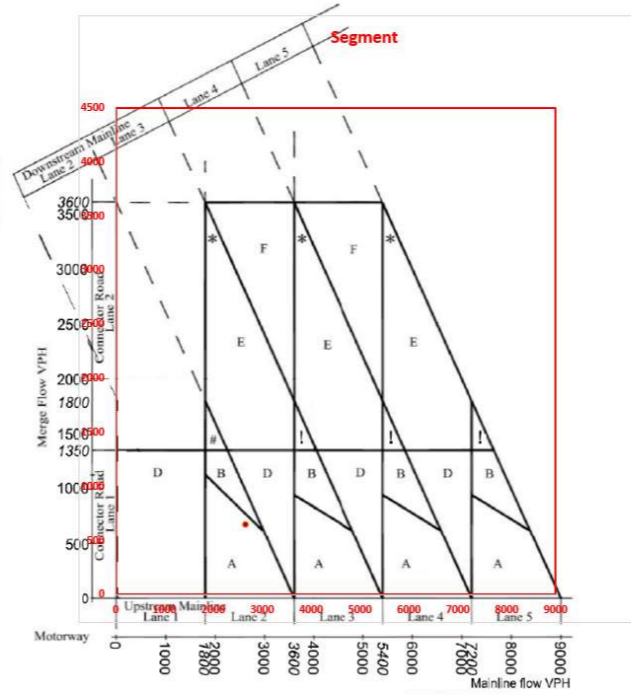


Figure 3.12b Motorway merging diagram

M20 J13 EB Off-Slip__PM

Mainline flow Veh/hr	Diverge flow Veh/hr
2643	1484



M20 J13 EB On-Slip__PM

Mainline flow Veh/hr	Merge flow Veh/hr
2643	637

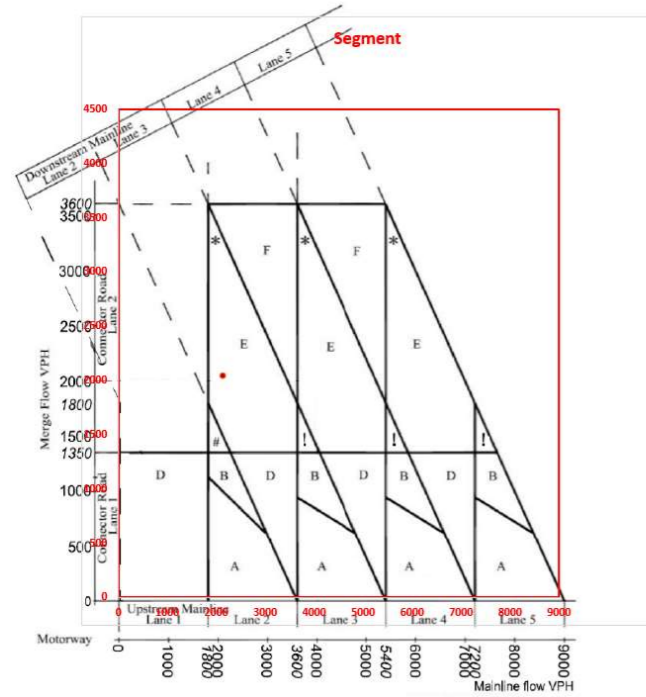
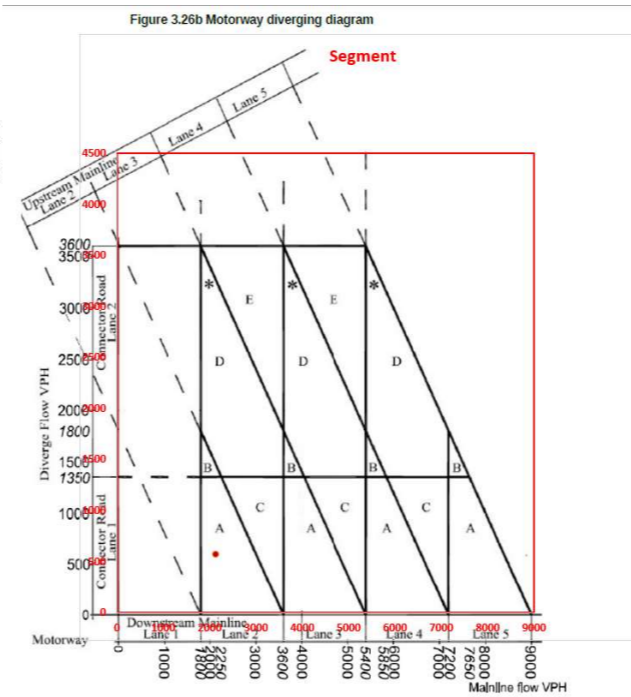


Figure 3.26b Motorway diverging diagram

M20 J13 WB On-Slip__PM

Mainline flow Veh/hr	Merge flow Veh/hr
2141	2037



M20 J13 WB Off-Slip__PM

Mainline flow Veh/hr	Diverge flow Veh/hr
2141	567

8.3 Traffic Demand Impact

Overall Changes in Traffic Volumes

M20 Junction 13 South roundabout comparison of total traffic at an at-grade junction in 2037 between the DM scenario (DS PPLP) and the DS scenario (DS CSR 6,500) is as follows (traffic flows in vehicles):

- AM Peak – DM (5504) / DS (5581), or an increase of 77 (1%)
- PM Peak – DM (5531) / DS (5636), or an increase of 105 (2%)

The above analysis demonstrates that a very small level of traffic volume from the DS CSR 6,500 is being routed via Junction 13 interchange.

8.4 Existing Layout at Grade Traffic Assessment

Table 15 shows the traffic delay at the non-signalised South roundabout. Three out of four approaches are saturated in both the AM and PM peak. Such a degree of saturation is not surprising considering the very high volume of traffic at the junction.

A physical junction improvement will be required at the junction to accommodate 2037 traffic demand. Moreover, traffic delays are very imbalanced. A signalised option at the junction should be considered to help to balance delays at the junction, but it is not a substitute to physical junction improvements.

Table 15 – M20 Junction 13 Castle Hill Interchange South – 2037 Existing Layout Assessment

Arm	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
DM 2037								
M20 Westbound Entry Only	1.9	8.42	0.66	A	1	5.52	0.5	A
Churchill Avenue	101.2	202.1	1.14	F	13.2	33	0.95	D
Cherry Garden Avenue	515.5	1266.95	1.5	F	724.2	1641.66	1.69	F
A20 Castle Hill Bridge	17.5	42.97	0.97	E	14.8	36.47	0.95	E
DS 2037								
M20 Westbound Entry Only	1.9	8.45	0.66	A	0.9	5.51	0.49	A
Churchill Avenue	127.1	276.29	1.18	F	24.4	56.96	0.99	F
Cherry Garden Avenue	584.5	1566.36	1.55	F	862.6	2000.96	1.81	F
A20 Castle Hill Bridge	51.5	101.83	1.04	F	25.1	56.39	0.99	F

8.5 Conclusion

Significant highway improvements will be required at M20 Junction 13. These improvements, however, should be attributed to background traffic growth and not to the DS CSR 6500 scenario. The Local Plan additional 1% to 2% traffic increase can be mitigated using minor operational improvements.

Moreover, clarification about the potential widening of the M20 should be provided to the team preparing the local junction upgrade. Traffic could block back from the M20 into the local road network and queuing space should be provided to prevent a network gridlock.

Image 13 – M20 Junction 13 – 2037 Queue Length Comparison



9 A20 / Spitfire Way / Alkham Valley Road

General Description

A20 / Spitfire Way / Alkham Valley Road junction is a major motorway interchange with the following characteristics:

- The M20 at this location is composed of 2 lanes in each direction;
- A number of physical constraints severely restrict geometric alterations at this interchange, including:
 - The presence of a tunnel West of the interchange, impacting the ability to extend merge / diverge segments;
 - The presence of a substation, requiring access to the South of the carriageway;
 - The presence of bridge structures;
 - The topography of the site, with significant elevations on the ramps; and
 - The overbridge width can only accommodate one lane in each direction.
- Highways England road network includes most of the interchange, except for Canterbury Road/Alkham Valley.

Mitigation Requirements Identification

To accommodate 2037 traffic requirement at A20 / Spitfire Way / Alkham Valley Road junction would include:

- A set of geometric upgrades at the junctions, in particular for the A-Road ramp approaches; and
- Probably an improved signage and road safety scheme to limit the risk of blocking back queues and incidents on the A20, that would potentially result from lane change manoeuvres on the A20 mainline.

Further upgrades could be considered, however, the presence of only two lanes on the A20, local site constraints as well as the balanced traffic volume on the corridor might suggest them to be not necessary, despite DMRB standard requirements.

Moreover, the DS CSR 6,500 would only account for up to 6% to 7% traffic increase at local junctions. Such traffic increase could typically be mitigated using limited geometric improvements and operational measures.

9.1 Merge / Diverge Assessment

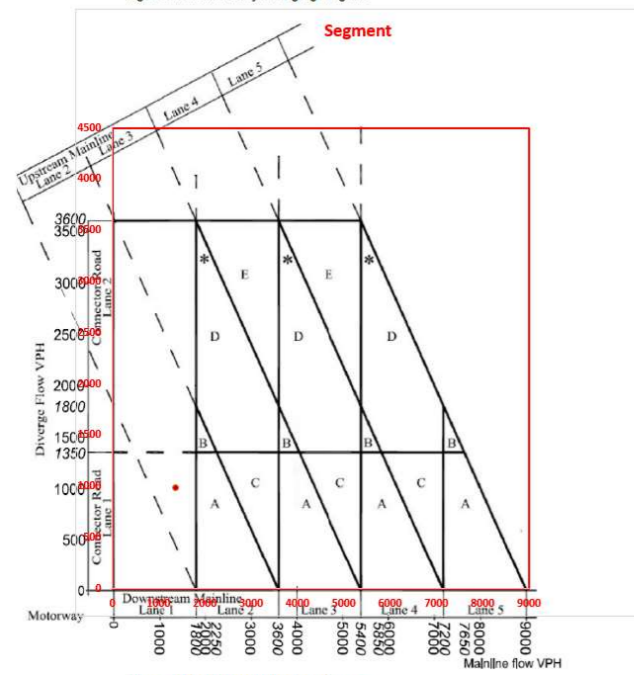
The merge and diverge assessment is presented in Tables 16 and 17. The key finding is:

- The dominant traffic seems tidal, from the local area towards the West in the morning, and back in the afternoon;
- The traffic staying on the motorway mainline never requires more than one lane, and overall, the traffic density on the A20 at this location is low;
- There are no lane restrictions for HGVs in the tunnel;
- The projected traffic volume on the ramps can be high and would require two lanes, however, a single lane would have sufficient capacity, and a two-lane ramp on a 2 lane mainline would require extended merge diverge segments.



Table 16 – A20 / Spitfire Way / Alkham Valley Road– 2037 AM Merge/Diverge Assessment

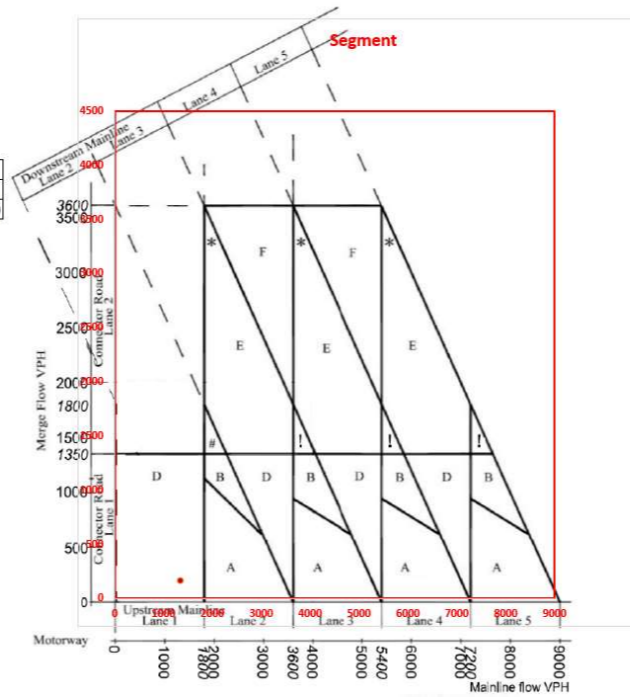
Figure 3.26b Motorway diverging diagram



A20 Spitfire EB Off-Slip __AM

Mainline flow Veh/hr	Diverge flow Veh/hr
1356	990

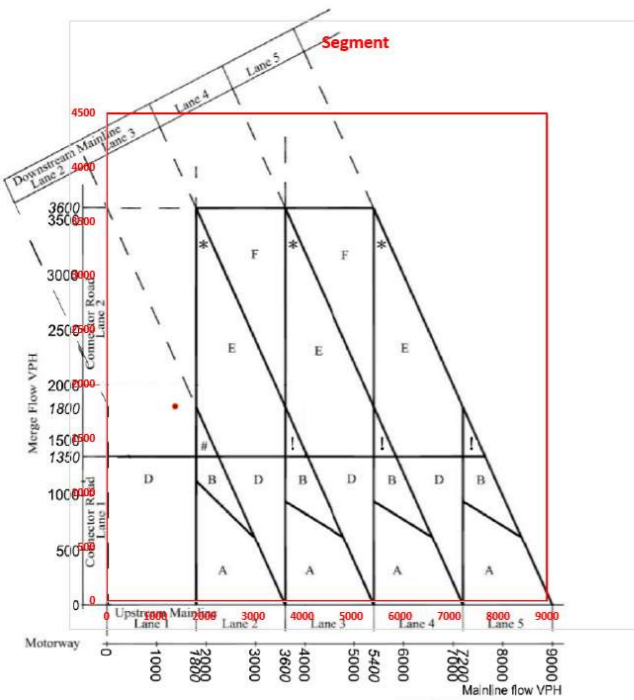
Figure 3.12b Motorway merging diagram



A20 Spitfire EB On-Slip __AM

Mainline flow Veh/hr	Merge flow Veh/hr
1356	154

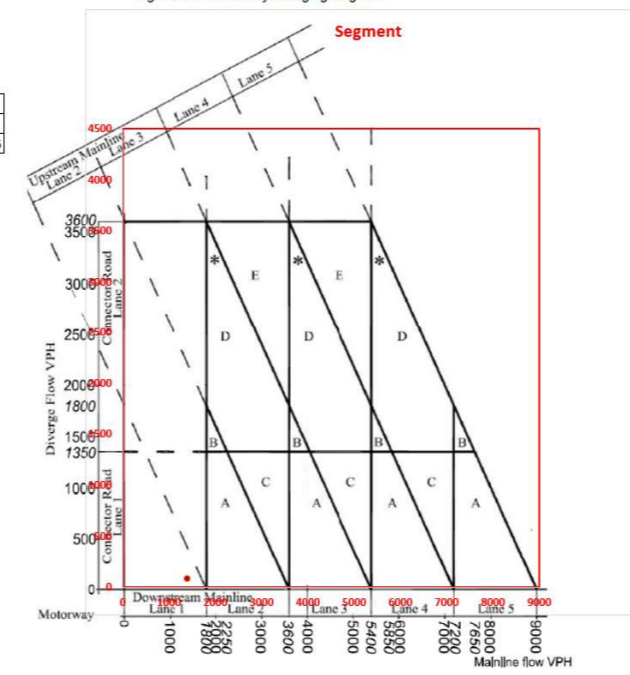
Figure 3.12b Motorway merging diagram



A20 Alkham WB On-Slip __AM

Mainline flow Veh/hr	Merge flow Veh/hr
1392	1785

Figure 3.26b Motorway diverging diagram



A20 Alkham WB Off-Slip __AM

Mainline flow Veh/hr	Diverge flow Veh/hr
1392	81

Table 17 – A20 / Spitfire Way / Alkham Valley Road– 2037 PM Merge/Diverge Assessment

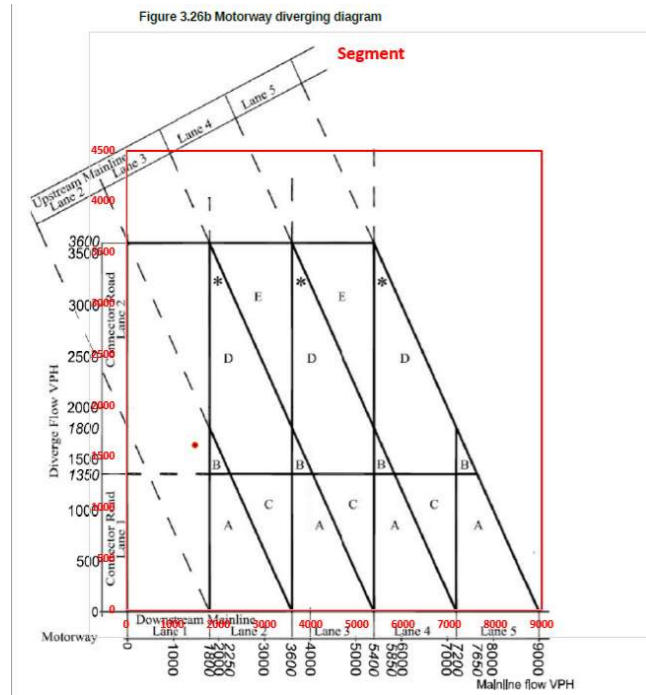


Figure 3.12b Motorway merging diagram

A20 Spitfire EB Off-Slip __ PM

Mainline flow	Diverge flow
Veh/hr	Veh/hr
1497	1619

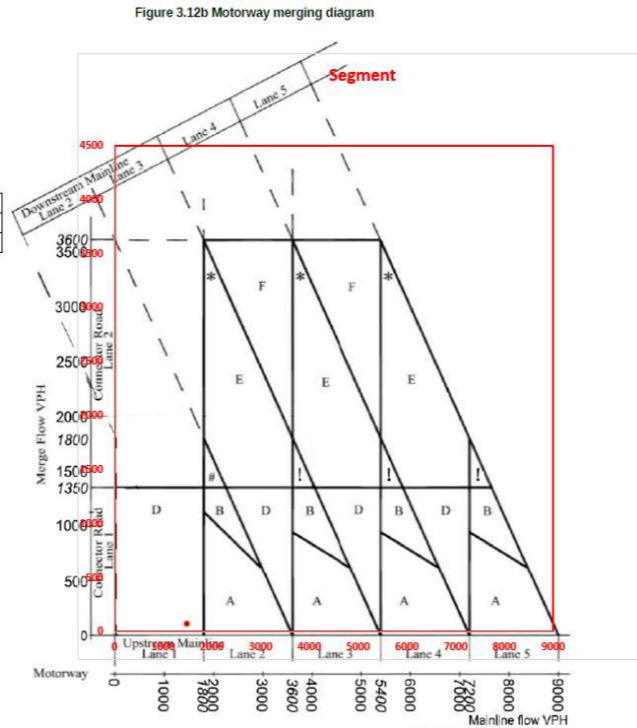
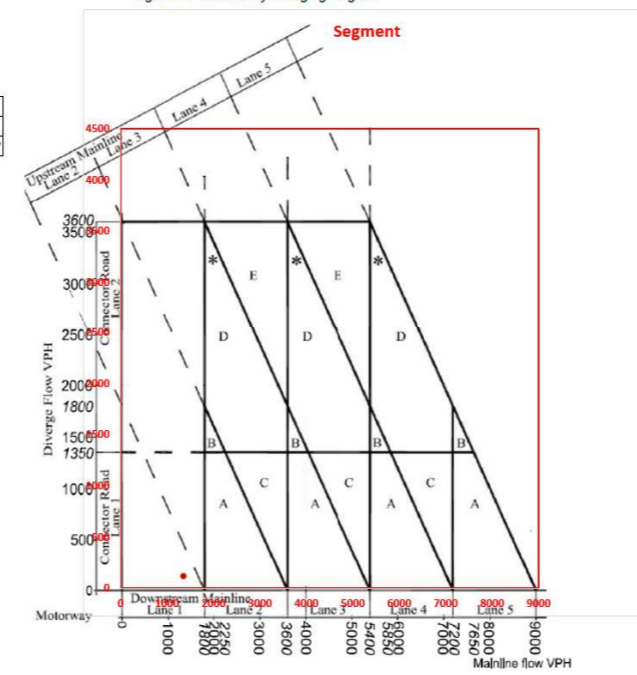


Figure 3.26b Motorway diverging diagram

A20 Alkham WB On-Slip __ PM

Mainline flow	Merge flow
Veh/hr	Veh/hr
1361	1177



A20 Spitfire EB On-Slip __ PM

Mainline flow	Merge flow
Veh/hr	Veh/hr
1497	67

A20 Alkham WB Off-Slip __ PM

Mainline flow	Diverge flow
Veh/hr	Veh/hr
1361	116

9.2 Traffic Demand Impact

The A20 / Spitfire Way / Alkham Valley Road interchange is composed of three junctions. As indicated below, the Spitfire Way junction to the North is more impacted than others. This is logical as most of the development is taking place North of the A20.

Overall Changes in Traffic Volumes (in Veh.) – Spitfire Way

The comparison of total traffic at an at-grade junction in 2037 between the DM scenario (DS PPLP) and the DS scenario (DS CSR 6,500) is as follows:

- AM Peak – DM (3363) / DS (3585), or an increase of 222 (6%)
- PM Peak – DM (3829) / DS (4069), or an increase of 240 (6%)

Overall Changes in Traffic Volumes (in Veh.) – Alkham Valley

The comparison of total traffic at an at-grade junction in 2037 between the DM scenario (DS PPLP) and the DS scenario (DS CSR 6,500) is as follows:

- AM Peak – DM (2491) / DS (2523), or an increase of 32 (1%)
- PM Peak – DM (2032) / DS (2184), or an increase of 152 (7%)

Overall Changes in Traffic Volumes (in Veh.) – Canterbury Road/Alkham Valley

The comparison of total traffic at an at-grade junction in 2037 between the DM scenario (DS PPLP) and the DS scenario (DS CSR 6,500) is as follows:

- AM Peak – DM (3231) / DS (3238), or an increase of 7 (0%)
- PM Peak – DM (3279) / DS (3385), or an increase of 106 (3%)

9.3 Existing Layout at Grade Traffic Assessment

Table 18 shows the traffic delay at the non-signalised North roundabout. The four approaches are unevenly saturated, however, typically two or more approaches have reached capacity at the junction at each peak hour.

Road geometric improvements will be required at the junction, which will have to be combined with a signalised (or part-signalised) solution to ensure the absence of blocking back queues on the A20.

Table 18 – Spitfire Way-White Horse Hill-A260 – 2037 Existing Layout Assessment

Arm	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
DM 2037								
White House Hill	2.1	14.93	0.68	B	0.7	6.29	0.4	A
A20 Slip Roads	20.1	82.1	1	F	289.4	742.35	1.45	F
Canterbury Rd	1.2	5.57	0.54	A	3.6	12.69	0.79	B
Spitfire Way	91.5	191.54	1.12	F	3.8	12.97	0.8	B
DS 2037								
White House Hill	2.1	15.16	0.68	C	0.9	8.04	0.47	A
A20 Slip Roads	116.8	447.95	1.25	F	503.7	1350.49	1.75	F
Canterbury Rd	1.2	5.74	0.54	A	2.8	10.01	0.74	B
Spitfire Way	119.7	277.65	1.15	F	9.3	28	0.92	D

Image 15 – Spitfire Way-White Horse Hill-A260 – 2037 Queue Length Comparison



Table 19 shows the traffic delay at the non-signalised South roundabout. The three approaches are unevenly saturated, with an overall degree of saturation suggesting the queueing could be re-balanced using traffic signals. Internal storage capacity might prove challenging.

Due to the arm configuration at the junction, free-flowing junction bypasses can also be envisaged.

Table 19 – Alkham Valley Rd-A20 Slip – 2037 Existing Layout Assessment

Arm	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
DM 2037								
A20 Offslip	0	1.95	0.05	A	0.1	2.26	0.08	A
AlkamValley Rd (East)	1.6	5.05	0.62	A	0.4	2.81	0.3	A
AlkamValley Rd (South)	152.7	390	1.23	F	37.8	83.81	1.02	F
DS 2037								
A20 Offslip	0	1.92	0.05	A	0.1	2.15	0.07	A
AlkamValley Rd (East)	1.4	4.75	0.59	A	0.4	2.76	0.29	A
AlkamValley Rd (South)	186	488.43	1.28	F	120.4	240.9	1.14	F

Image 16 – Alkham Valley Rd-A20 Slip – 2037 Queue Length Comparison



Table 20 shows a completely saturated three-arm junction on the A260. The development of a large signalised junction, or a large roundabout is required at this location. The carriageway width restriction on the bridge North of the junction represents a major constraint limiting opportunities for junction improvements.

Signalising the existing junction only will not be sufficient to accommodate future traffic demand.

Table 20 – Canterbury Rd-A260 Alkham Valley Rd – 2037 Existing Layout Assessment

Arm	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
DM 2037								
Stream B-C	215.7	2545.12	1E+10	F	163.8	2636.14	1E+10	F
Stream B-A	33.9	2622.47	1E+10	F	43.3	2718.02	1E+10	F
Stream C-B	49.6	1492.51	2	F	56.9	783.24	1.67	F
DS 2037								
Stream B-C	206.5	29190.2	1E+10	F	158.4	3416.15	1E+10	F
Stream B-A	32.2	33643.02	1E+10	F	41.7	3496.55	1E+10	F
Stream C-B	54	1965.07	2.33	F	78.8	2048.83	2.36	F

9.4 Conclusion

In conclusion, the merge / diverge arrangement would require upgrading using DMRB design standards, but from a congestion standpoint, it would not result in saturated traffic conditions. A safety assessment would, however, be required to ensure last-minute lane change manoeuvres are mitigated.

Regarding the three at-grade junctions of the A20 / Spitfire Way / Alkham Valley Road interchange the key elements are:

- Physical junction interventions will be required, combined with the signalisation of the junctions; and
- The Canterbury Road-A260 Alkham Valley Road junction is constrained by the bridge just North of it and might not be able to accommodate a sufficient junction upgrade.

In practice, several alternative routings exist in the immediate vicinity of the junction, and local road users are likely to bypass the overbridge.

The DS CSR 6,500 scenario, however, is having a very limited contribution to the above-described traffic conditions. Mitigating its own impact would be limited to the development of minor junction improvements and operational solutions.

Image 17 – Canterbury Rd-A260 Alkham Valley Rd – 2037 Queue Length Comparison



10 Overall Conclusion

In conclusion, the purpose of the study is to enable Folkestone and Hythe District Council to agree on a Statement of Common Ground regarding requirements for highway schemes to mitigate impact related to the Folkestone and Hythe Local Plan on the Highways England road network, or the further work required to identify those requirements.

The methodology in the AECOM Shepway Transport Model has been retained, and the model updated using the latest available information for the DS CSR 6,500 2037 scenario.

The study area has been confirmed to be limited to the Highways England road network within Folkestone and Hythe District Council following a review of traffic volumes and traffic conditions in the Ashford area.

Overall, the following junctions require physical upgrades by 2037:

- M20 Junction 11;
- M20 Junction 13; and
- A20 / Spitfire Way / Alkham Valley Road interchange.

M20 Junction 11 requires substantial junction upgrades, directly linked to background traffic growth and to the Otterpool Park development. The traffic impact from DS CSR 6,500 on the other two junctions, however, is limited. The traffic impact is mostly the result of these junction being already saturated in the future.

APPENDIX A

Available Input Data

1. AECOM, Briefing Note: Shepway Transport Model Update – Review & Findings, December 2017;
2. AECOM, Shepway Transport Model – Merge and Diverge Appraisal (with spreadsheet model), September 2018;
3. AECOM, Shepway Transport Model, Local Junction Modelling and outputs; November 2017;
4. Taylor Wimpey, Cheriton High Street Junction, committed scheme drawing, May 2018;
5. Email correspondence from Highways England to Folkestone & Hythe District Council dated October 2018 to confirm that no mitigation would be required for the 2031 Do Something scenario for the Places and Policies Local Plan (additional modelling scenarios);
6. Arcadis, Otterpool Park – Transport Assessment, February 2019 (with supporting information and traffic models);
7. Folkestone & Hythe District Council and Highways England, Statement of Common Ground, January 2020;
8. Highways England, Folkestone and Hythe District Core Strategy Review Examination Submission to the Examination by Highways England, July 2020; and
9. Folkestone & Hythe District Council, Core Strategy Review – Inspector’s Matters, July 2020.

APPENDIX B

Ashford Traffic Analysis

1. Junction 10a scheme description;
2. WebTRIS data; and
3. Ashford junctions DMRB merge diverge analysis.

APPENDIX C

Traffic Demand Model

1. Baseline demand analysis;
2. Traffic demand models.

APPENDIX D

Traffic Analysis

1. M20 Junction 11 traffic analysis;
2. M20 Junction 11a traffic analysis;
3. M20 Junction 12 traffic analysis;
4. M20 Junction 13 traffic analysis; and
5. A20 / Spitfire Way / Alkham Valley Road traffic analysis.

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