

Strategic Planning, Sustainability & Transportation Committee

11 October 2016

Is the final decision on the recommendations in this report to be made at this meeting?

Yes

M20 Junction Assessments

Final Decision-Maker	Strategic Planning, Sustainability and Transportation Committee
Lead Head of Service	Rob Jarman, Head of Planning & Development
Lead Officer and Report Author	Paul Goodenough, Transport Planner, Spatial Policy
Classification	Public
Wards affected	All Wards

This report makes the following recommendations to this Committee:

1. The Committee is asked to note the report updating Members on the progress of modelling work being undertaken for M20 Junctions 5 to 8.

This report relates to the following corporate priorities:

- Keeping Maidstone Borough an attractive place for all
- Securing a successful economy for Maidstone Borough

Timetable

Meeting	Date
Strategic Planning, Sustainability and Transportation Committee	11 October 2016

M20 Junction Assessments

1. PURPOSE OF REPORT AND EXECUTIVE SUMMARY

- 1.1 This report updates the Committee on the progress of work undertaken by Mott MacDonald to model the impact of the submitted Maidstone Borough Local Plan on M20 junctions 5 to 8. This work was commissioned by the Borough Council due to Highways England's (HE) holding objection expressed in its Regulation 19 representation to the submitted Local Plan dated 18 March 2016. In their representation HE commented that:

We have a concern that the approach to the assessment of transport impacts may underestimate the full impacts of the Local Plan. We are interested in the full impact of the Local Plan on the SRN, however the approach that you are proposing will see the impacts of particular individual developments only. This may underestimate the impacts of the full Local Plan on the SRN, as smaller developments may individually show little or no impact whereas cumulatively they may have an incremental impact.

- 1.2 In the same representation HE also objected to the draft Integrated Transport Strategy. Their position was reiterated in the following comments:

HE remains supportive of the principles of this document which are consistent with the NPPF. The document seeks to promote sustainable modes of transport, achieving reliable vehicle journey times and supporting sustainable development. We do however need to see evidence that the approach to the transport strategy is sound. The approach should assess the impacts of the full element of the Local Plan that to date has not received planning consent.

- 1.3 A draft technical report (Local Plan Evidence Library document TRA 037) has been submitted to HE, providing evidence that the impact of non-consented Local Plan development (i.e. proposed development on allocated sites but without planning permission) on the strategic highway network can be satisfactorily mitigated. At the time of writing, feedback is awaited from HE on this report before considering whether there is the possibility of progressing towards an agreed Statement of Common Ground for the Local Plan Examination.

2. INTRODUCTION AND BACKGROUND

- 2.1 In its Regulation 19 representation to the submitted draft Maidstone Borough Local Plan dated 18 March 2016, Highways England (HE) expressed a holding objection. HE commented that:

We have a concern that the approach to the assessment of transport impacts may underestimate the full impacts of the Local Plan. We are interested in the full impact of the Local Plan on the SRN, however the

approach that you are proposing will see the impacts of particular individual developments only. This may underestimate the impacts of the full Local Plan on the SRN, as smaller developments may individually show little or no impact whereas cumulatively they may have an incremental impact.

- 2.2 In the same representation HE also objected to the draft Integrated Transport Strategy. Their position was reiterated in the following comments:

HE remains supportive of the principles of this document which are consistent with the NPPF. The document seeks to promote sustainable modes of transport, achieving reliable vehicle journey times and supporting sustainable development. We do however need to see evidence that the approach to the transport strategy is sound. The approach should assess the impacts of the full element of the Local Plan that to date has not received planning consent.

- 2.3 These matters were clarified in a meeting attended by the Borough Council, HE, Kent County Council (KCC), Amey and Mott MacDonald on 12 April 2016. It was confirmed by KCC that the Maidstone VISUM model covers the county road network in detail but not the M20 motorway itself. It was also confirmed that the data underlying the VISUM model is of varying ages, some of it 15 years old. HE therefore recommended that an alternative approach to modelling the impact of Local Plan development on the strategic highway network be pursued without VISUM, with localised junction modelling undertaken at M20 Junctions 5 to 8 to assess likely future conditions and to demonstrate that the impacts of non-consented Local Plan development can be satisfactorily mitigated. HE also requested that merge and diverge assessments were undertaken for the slip roads and main carriageway. These will provide information on the suitability of slip roads and the main carriageway where traffic joins and leaves a motorway to accommodate future traffic flows with Local Plan development.
- 2.4 Mott MacDonald was commissioned by the Borough Council to undertake this work. A meeting attended by the Borough Council, HE, KCC, Amey (KCC's consultants which hold the Maidstone VISUM model) and Mott MacDonald was held on 18 May 2016 which discussed two potential modelling approaches:
- Use of the Maidstone VISUM model data for the localised junction modelling; or
 - A "first principles" approach, manually assigning the traffic associated with Local Plan development (split into consented and non-consented) to each of the four junctions and adding background traffic growth from TEMPro to identify future traffic flow scenarios.
- 2.5 Amey compared junction flows from the 2014 base VISUM model with recent observed traffic count data. This revealed an insufficiently good match between modelled and observed data and all parties agreed that HE would be unlikely to accept the use of future traffic flows forecast by VISUM for the detailed junction assessments. However, it is agreed with KCC that the Maidstone VISUM model is an appropriate traffic modelling and

assessment tool to test the overall impact of the Local Plan on the local (i.e. non-strategic) highway network.

2.6 Hence the “first principles” approach was pursued. This took into account development numbers from Tonbridge & Malling (namely the sites to be included in their Regulation 18 Local Plan consultation) and Swale as well as Maidstone.

2.7 At each junction, the following scenarios were tested for the AM and PM peak hours:

- 2016 Existing Situation
- 2031 Future Situation including TEMPro background traffic growth only
- 2031 With Consented Development (Scenario 1)
- 2031 With Consented and Non-Consented (ALL) Development (Scenario 2)

2.8 Initially, the existing junction layouts were tested against the above scenarios using the ARCADY transport modelling software. The modelling results demonstrated that all of the motorway junctions were at or approaching theoretical junction capacity in 2031 with their existing layouts. Mitigation measures were therefore tested for all four junctions, using the LinSig transport modelling software where junction signalisation has been considered. The mitigation measures comprise:

- J5 – road markings on the circulatory carriageway and signalisation of the M20 West, M20 East and Coldharbour Lane south arms.
- J6 Cobtree Roundabout – changes to road markings/lane allocations and signalisation of the A229 South arm.
- J6 Running Horse Roundabout – changes to road markings/lane allocations on the M20 West off-slip and A229 North arm.
- J7 – changes to road markings/lane allocations and signalisation of the A249 South, A249 Detling Hill and M20 West arms.
- J8 – road markings and signalisation of the A20 Link Road South arm.

2.9 The model outputs provide evidence to indicate that the above measures sufficiently mitigate any impacts that non-consented developments contained in the Local Plan may have on the four motorway junctions, as sought by HE. Within the scope of the localised junction modelling work, HE did not seek measures to further mitigate the impact of Local Plan development which has already been consented.

2.10 Merge and diverge assessments were also undertaken as requested by HE. These determined the suitability of slip roads and the main carriageway where traffic joins and leaves a motorway to accommodate future traffic flows with Local Plan development. The results of the merge and diverge assessments indicate that, although in most circumstances a different layout would be required in future years, this would be required because of background traffic growth and already consented Local Plan development, and not because of the non-consented Local Plan development tested in Scenario 2. The one exception is the Junction 8 westbound merge where a different layout would be required in the AM peak with the addition of non-consented development traffic. This is, however, marginal and flows will

need to be monitored in the future to ascertain whether a change in layout would be required.

- 2.11 The impact of the South East Maidstone Strategic Link (SEMSL) has been considered using modelled flow changes obtained from Amey for the Maidstone VISUM model. With SEMSL in place, Junctions 5, 6 and 7 showed a difference in traffic flows in Scenario 2 of less than 1% during both the AM and PM peak periods, whereas Junction 8 showed an increase of 7.4% in the AM peak and 10.4% in the PM peak. Hence only Junction 8 was subject to detailed capacity assessment for the "with SEMSL" scenario. Without SEMSL, the junction operates within desirable capacity in both the AM and PM peak periods, following mitigation. With SEMSL, the A20 Link Road South arm slightly exceeds desirable capacity in the AM peak.
- 2.12 In conclusion, the junction improvement measures identified in the Mott MacDonald study mitigate any impacts of non-consented development at M20 Junctions 5 to 8.
- 2.13 The full technical report was submitted to HE in early September; detailed feedback is currently awaited on the report although correspondence between Mott MacDonald and HE's technical advisors regarding the detailed methodology has been ongoing over the summer as the work has progressed. The approach taken has been confirmed by HE's technical advisors as reasonable.
- 2.14 The next steps will be to review any queries raised by HE, provide any necessary clarification, and work towards an agreed Statement of Common Ground for the Local Plan Examination at the earliest opportunity, with the objective of lifting HE's objection to the Local Plan and in turn the ITS. Evidence from the M20 modelling work was presented to the Examination Inspector at Session 3A (Transport Modelling Seminar) on 6 October 2016.

3. AVAILABLE OPTIONS

- 3.1 The Committee is asked to note this report updating Members on the progress of modelling work being undertaken for M20 Junctions 5 to 8.

4. PREFERRED OPTION AND REASONS FOR RECOMMENDATIONS

- 4.1 As set out in 3.1 above, the Committee is asked to note this report.

4. NEXT STEPS: COMMUNICATION AND IMPLEMENTATION OF THE DECISION

- 4.2 Officers will continue to engage with HE in seeking their feedback on the evidence provided, with consultants providing further technical clarification if required, in order to proceed towards an agreed Statement of Common

Ground for the Local Plan Examination at the earliest opportunity. The Committee will be kept updated as part of this process.

5. CROSS-CUTTING ISSUES AND IMPLICATIONS

Issue	Implications	Sign-off
Impact on Corporate Priorities	The package of mitigation measures for M20 Junctions 5 to 8 will support Local Plan growth over the period to 2031. By mitigating the impact of planned development on the strategic highway network this will benefit car users, business users (including freight operators) and public transport users alike, contributing to economic growth and improved road safety.	Rob Jarman: Head of Planning & Development
Risk Management	There is a risk that HE will not accept the evidence provided as demonstrating that the impacts of non-consented Local Plan development can be mitigated to a level where congestion is lower than if the development was not built and the mitigation was not implemented. HE's objection to the Local Plan would therefore be maintained.	Rob Jarman: Head of Planning & Development
Financial	No specific financial implications arise from the consideration of this report.	Head of Finance and Resources & Finance Team
Staffing	No specific financial implications arise from the consideration of this report.	Rob Jarman: Head of Planning & Development
Legal	The Borough Council is required to consider its evidence base which supports the progress of the Local Plan.	Kate Jardine Team Leader (Planning), Mid Kent Legal Services
Equality Impact Needs Assessment	The highway improvements necessary to mitigate the impacts of non-consented Local	Anna Collier Policy & Information

	Plan development have been identified in the modelling report. As an element of an overall package of transport improvements for Maidstone Borough the improvements will not have negative equality impacts, and indeed may benefit those without access to a car that use bus services traversing the four junctions.	Manager
Environmental/Sustainable Development	Highway capacity improvements may generate additional traffic. However, if their implementation is aligned with the phasing of development, and forms part of a balanced package of transport improvements, negative impacts on congestion and carbon emissions will be minimised.	Rob Jarman: Head of Planning & Development
Community Safety	No specific implications arise from the consideration of this report.	Rob Jarman: Head of Planning & Development
Human Rights Act	No specific implications arise from the consideration of this report.	Rob Jarman: Head of Planning & Development
Procurement	Consultants are used to prepare specialist or technical evidence to support the Local Plan and are appointed in accordance with the Council's procurement procedures.	Rob Jarman: Head of Planning & Development & Head of Finance and Resources
Asset Management	No specific implications arise from the consideration of this report.	Rob Jarman: Head of Planning & Development

6. REPORT APPENDICES

The draft technical report is not appended due to its length. However, it can be accessed at the Local Plan Evidence Library (document TRA 037).