

SWALE JOINT TRANSPORTATION BOARD 12th MARCH 2012

Subject: **M2 Junction 5**

Director/Head of Service: Director - Kent County Council, Regeneration Projects

Decision Issues: **This matter is reliant on the Secretary of State for Transport (through the Highways Agency) with some matters within the authority of Kent County Council**

Decision: Non-key

Ward/Division: **Borden / Swale West**
North Downs / Maidstone Rural East

Summary: *This report provides a summary of studies carried out to date on the traffic problems at M2 Junction 5 (Stockbury).*

To Recommend: **This report is for Members' information.**

Classification: THIS REPORT IS OPEN TO THE PUBLIC

Introduction

1. At the December meeting of this Board, the Association of Local Councils representative requested a report on M2 Junction 5. Several studies have been carried out over the last few years, none of which have reached conclusions that can be taken forward. It is apparent that in reporting progress to Members for decisions, there is no positive action that can be recommended at the present time, but the overall strategy for how to resolve the problems at M2 Junction 5 has not been properly debated.
2. This report briefly summarises the studies undertaken and sets out the issues for Members to debate. The existing problems at the Junction are significant and there is little prospect of developing a complete solution in the short term. Engineering solutions are possible to resolve the problems but due to the engineering constraints (topography, junction geometry, environmental issues, etc.) the costs for any meaningful solution are quite major. It is worth stating what the basic problems of the Junction are so that all parties are aware of the full magnitude of the issues.
3. To assist Members deliberations a presentation showing the various possible improvement plans and some of the issues / constraints involved in trying to overcome the problems will be provided at the meeting.

Congestion

4. The junction currently suffers from congestion principally in the morning peak period, with lesser problems also apparent in the evening peak period. Congestion patterns are tidally skewed, related to journey to/from work travel patterns. The key congestion occurs on the A249 southbound where long queues (approximately 2 to 3 miles in length) form every morning. This queue does move reasonably quickly and dissipates after a relatively short time, only usually manifesting itself during the peak periods. Exceptional circumstances (such as motorway closures, the Kent Show and other unforeseen events) can cause the

congestion to be extended beyond the peak periods into other “normal” times of the day.

Crash Record

5. The crash record for the Junction is very poor. For the 2009 study (which was the most detailed investigation undertaken) there were 57 personal injury crashes in a three year period. This level of crashes is very significant and represents one of the worst crash records on the highway network for a single junction. The statistics have to be treated with some caution because they include some crashes occurring in the queues forming at the junction, so are actually recorded remotely from the junction, whereas some remote crashes are due to other factors (such as bend geometry remote from the locality). Despite the detail considerations that need to be assessed, it is clear that the junction performs very badly in terms of safety.

History of Studies

6. The junction has been studied several times by a number of different consultants for different client groups. The following chronology sets out the basic reporting that has taken place since 2007. Any studies prior to this date are likely to be too old to be of value in today's traffic conditions, so have not been researched for this report. The options studied are shown (where they have been drawn up) in the accompanying presentation for Members to consider.
7. **InterRoute** In August 2007, InterRoute, the Highways Agency's maintenance contractor, studied the queuing forming on the A249 southbound arm in response to on-site observations and customer complaints. The possible solution developed was a free-flow slip road from the A249 southbound to the M2 London-bound. This would have required the closure of the “old” Maidstone Road and would have resulted in the free flow slip road being well below current design standards. The risk of over-turning HGVs was a significant issue with this design and the diversion of southbound traffic would have been counter-productive.
8. **Faber Maunsell** – In July 2008, Faber Maunsell as the Highways Agency's then term engineering consultant considered larger solutions for the junction and conceived two possible options at the Junction. One was a north-south flyover at the roundabout, carrying A249 traffic separately from the Junction, whilst the second was the provision of four separate free-flow slip roads from the motorway onto the A249, removing the current counter-intuitive geometry of the existing slip roads. This would require substantial land, earthworks and structures, plus new junctions to be located on the local road network.
9. **Jacobs** – In April 2009, Jacobs produced the most detailed report on possible options looking initially at short term reconfigurations of the existing junction to develop both more capacity and better safety features. Five different junction configurations were studied, of which four were drawn up in outline. None of the options were without problems and none of them provided anything other than a short term interim intervention, as further works would be required to cope with future traffic flows.
10. **Jacobs** – In July 2009, as an additional item of work, Jacobs were asked to review the potential for an alternative junction (5a) which could be associated with the Kent Science Park. The principle behind this intervention was to provide a Sittingbourne Southern Relief Road and effectively bypass the A249 and M2 Junction 5 completely. Such an improvement would be extremely expensive to provide and would provide only a partial solution to the traffic problems at Stockbury.
11. **Parsons Brinckerhoff** – In October 2010, Parsons Brinckerhoff, as the Highways Agency's current design consultant reviewed the modelling work carried out by Jacobs for the preceding studies and considered further seven possible options, referring back to the InterRoute and Faber Maunsell studies. The study was specifically focused on the short-term options for reducing the A249 southbound queue as the most severe congestion

problem at the Junction. No further design work was undertaken, but this commission was more a comparison between the various combinations and permutations of options to ascertain which would be best considered for any future work.

Local Plan / development Implications

12. Study work for the Local Plan and LDF has revealed that M2 Junction 5 has the potential to act as a brake on development in Swale. The Highways Agency have already issued two Article 14 directions on planning applications related to development impacts on the A249 Trunk Road. These were the Town Centre Tesco proposal and the Waterbrook housing development at The Meads.
13. The Town Centre application for Tesco has shown that transport problems are more likely at A249/A2 Key Street and that additional traffic at M2 Junction 5 is not likely to be an issue. Negotiations are under way with the Highways Agency to overcome the identified problems at Key Street and will be incorporated into the planning process for their S106 and S278 Legal Agreements.
14. The Waterbrook site is a relatively modest housing proposal (300 units) and the developer has been asked to provide mitigation for the additional traffic impact caused by the development. It is highly likely that the mitigation will comprise one of the options studied by Parsons Brinckerhoff noted above. It is open to question how much additional development beyond these initial 300 units can be contained within the proposed improvement. Study work is currently under way by the developer's consultants and until the results of this work are available, no firm conclusions can be drawn.
15. It should be noted that not all development proposed in the Borough would necessarily be "caught" by the M2 Junction 5 problem. The Highways Agency use a threshold approach which means that if a development generates less than 30 vehicle trips in a peak hour at the junction then they are less likely to issue an Article 14 Direction. Much depends on the proximity of the development to Stockbury and the nature of the development itself. For example, the Wind Turbine Manufacturing Facility at Sheerness is a major development that is sufficiently far removed from Stockbury, and generates trips on the network that do not add to the existing queuing problems on the A249. As such, considerations at M2 Junction 5 should not affect this application.

Financial Implications

16. The costs of the improvements identified range from £3.8 million to £7.6 million. The additional schemes studied that have not been designed are likely to have a much wider range of costs – from around £1.5 million for the short term widening associated with the Waterbrook site to in excess of £100 million for the alternative junction 5a and Southern Relief Road.
17. None of the schemes that have been studied in detail show particularly good benefits, because the limited capacity they provide is quickly filled up with suppressed traffic elsewhere on the local road network. Additionally, the complexity and disruption to traffic during the construction phase of the improvements effectively cancels out any benefit from the improved layout. This is because the improvements are effectively short-term, interim style schemes and a much longer term strategic scheme is required to realise significant benefits.
18. There is no budget identified for the longer term scheme options and any such study work has not taken place. The programme to prioritise schemes in Kent is now being devolved to the South East Local Economic Partnership (Kent, Essex, East Sussex) and it is intended that the programme would cover both local schemes and Highways agency proposals. It will therefore be necessary to take forward any schemes at M2 Junction 5 in that context, unless they can be fully funded by development (which is unlikely given the high costs involved).

Environmental Implications

19. In addition to the design and transport assessment issues at the junction, there are considerable environmental constraints at Stockbury. The junction falls in the Kent Downs Area of Outstanding Natural Beauty, is in an Environment Agency Flood Risk zone and has many local constraints (flora and fauna) as well as being in close proximity to Ancient Woodland. The topography of the Stockbury Valley is particularly challenging and anything other than minor amendments to the existing road layout are likely to trigger the requirement for full environmental studies. This could be a lengthy process, with the initial desk top based study work showing a number of environmental issues that require addressing.

Responsibilities / Cross Boundary Issues

20. It should not be forgotten that the M2 Junction 5 roundabout holds an interest for a number of different agencies. The Roundabout junction itself is a Trunk Road, under the responsibility of the Highways Agency. The A249 south to Maidstone and the "old" Maidstone Road through Danaway and Chestnut Street are Kent County Council Roads. The A249 north towards Sheppey is a DBFO Concession held by Sheppey Route Ltd on behalf of the Highways Agency. The junction itself lies in Maidstone Borough, such that any works south of the M2 motorway effectively require their consent as Local Planning Authority. Swale Borough Council is the local Planning Authority for the area north of the M2 motorway, which may be relevant for those solutions that involve works to the north. Informally all parties have indicated their willingness to work positively together and not to hinder the development of any solutions. However, this resolve has yet to be tested in any strength as no options have yet been identified that have required any decisions to be taken.

Conclusions

21. The study work undertaken shows a number of possible options for short term alleviation of the problems at M2 Junction 5. None of them stand out as being particularly better than any others and all of them have problems with delivery from a logistical / traffic management and environmental point of view. No funding has been identified and the process for taking schemes forward is now embedded in the SELEP, which has not determined its priorities. The responsibility for solving the problems runs across a number of different agencies, with the key driver being at Swale Borough Council related to development pressures within the Borough.
22. This report is for Members' information and discussion.

Contact Officer:

George Chandler
07841 315582

Regeneration Projects Manager