

To : Maidstone Joint Transportation Board
By : Tim Read – KCC Head of Transportation
Date : 4th November 2015
Subject : Results of the VISUM Transport Modelling
Classification: For Information and Discussion

Summary : This report summarises the results of the additional DS4 modelling scenario that has been undertaken to inform the Maidstone Local Plan.

1. Introduction

1.1 The VISUM modelling work undertaken by Amey in support of the emerging Local Plan has tested a series of scenarios relating to the transport interventions that could be implemented alongside future housing and employment development. Each of the scenarios has been predicated on an individual set of assumptions regarding the package of transport interventions.

1.2 The modelling enables the relative effectiveness of each scenario to be compared and contrasted by providing a measure of their influence on future travel demand and highway network performance.

1.3 The purpose of this report is to ensure that Members are informed of the model findings associated with the ‘2031 Do Something 4’ scenario and how these compare against the other previously modelled scenarios.

2. Background

2.1 At the previous meeting of this board on 22nd July 2015, Members were presented the results of the VISUM modelling work for the following scenarios:

- 2031 Do Minimum (DM) – a minimalist approach to transport whereby only the Bridge gyratory scheme is implemented;
- 2031 Do Something 1 (DS1) – a package of highway capacity improvements and provision of the Leeds-Langley Bypass (as identified at the JTB workshop in December 2014);
- 2031 Do Something 2 (DS2) – an expanded package of highway capacity improvements and range of sustainable travel initiatives including Linton Park & Ride, increased bus frequencies (to every 7 mins), a 50% uplift in town centre parking charges and 8.5% increase in walking/cycling.

- 2031 Do Something 3 (DS3) – the package of highway capacity improvements in DS2 plus the Leeds-Langley Bypass, increased bus frequencies (to every 10 mins) and a 50% uplift in town centre parking charges.

2.2 Following a discussion on the relative merits of the various scenarios, Members made the following resolution:

“That this Board recommends to Kent County Council’s Cabinet Member for Highways, Transportation and Waste and to Maidstone Borough Council’s Strategic Planning, Sustainability and Transportation Committee that a combination of DS2 and DS3 form the basis of the Integrated Transport Strategy for Maidstone to underpin the Local Plan. This is with the exception of the following and subject to costing to ascertain affordability and the evaluation of feasibility, sustainability and deliverability:

- *Additional North/South Park and Ride removed from DS2;*
- *All references to percentage targets removed from DS2;*
- *That it is specified that with reference to parking costs, it refers to long-term car parks; and*
- *That frequent bus services are encouraged with appropriate junction improvements but at no detriment to existing traffic capacity.”*

2.3 At the meeting of this Board on 14th October 2015 Members were presented the work undertaken on the feasibility and affordability of the highway schemes proposed for inclusion in the Integrated Transport Strategy (ITS).

2.4 A proposal was also made that the previous Board resolution should be taken forward in the form of a further modelling test, to be referred to as the ‘2031 Do Something 4’ (DS4) scenario. This was considered necessary in view of the increased housing numbers in the Local Plan and the need to demonstrate the impact of the emerging ITS to this Board.

2.5 A series of assumptions were proposed that would be applied in the DS4 modelling. These were:

- the quantum of development to be assessed is 18,560 new homes;
- the distribution strategy for development should follow that currently proposed by the Borough Council;
- scenarios with and without the principle of a Leeds-Langley Link Road to be included;
- typical 10 minute bus frequency;
- discounting of walk/cycle trips to be based on a distance threshold of 5km within the town centre;
- 50% increase in long-stay parking charges; and
- removal of park and ride sites at Linton and M20 J7.

2.6 The Board resolved that the modelling work should proceed and be reported back at a specially arranged Board meeting on 28th October 2015. This meeting was subsequently rearranged to 4th November 2015.

3. Modelling Results

3.1 In view of the limited timeframe within which to undertake the modelling work, Amey were instructed to focus on the AM peak period. This has ensured that the busiest period has been tested and has enabled network conditions with (scenario DS4a) and without (scenario DS4b) a Leeds-Langley Link Road to be identified.

3.2 A summary of the DS4 results, set against the results of the previously modelled scenarios, is presented in Appendix A.

3.3 It can be seen that the package of transport interventions associated with DS4 achieves a set of results that fall between those of the DS1 and DS3 scenarios.

3.4 Comparison of the DS4a and DS4b scenarios highlights how a Leeds-Langley Link Road has a more pronounced effect on travel time than travel distance.

3.5 The differential impacts associated with the various scenarios should be viewed in the context of comments made previously regarding certainty of delivery and robustness.

4. Summary

4.1 The modelling work has been completed to test the effects of the DS4 scenario on travel demand and highway network performance.

4.2 The results provide a basis for determining a way forward on the transport interventions required to support the Local Plan.

Contact Officers:

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Appendix A: Maidstone Transport Model - Option Testing Summary

Model Scenario	Transport Intervention Assumptions	Model Results: Network Performance	
		Travel Distance (Veh km)	Travel Time (Veh hours)
		AM	AM
2014 Base	None	122,000	8,300
2031 Do Minimum	Original housing and employment allocations (17,381 homes) Maidstone Gyratory scheme only	144,500 (+18%)	11,400 (+38%)
2031 Do Something 1	Original housing and employment allocations (17,381 homes) Package of transport improvements: <ul style="list-style-type: none"> • Highway capacity improvements • Leeds - Langley Link Road 	146,700 (+20%)	10,800 (+30%)
2031 Do Something 2	Original housing and employment allocations (17,381 homes) Package of transport improvements: <ul style="list-style-type: none"> • Highway capacity improvements • Public transport improvements (7 min bus frequency) • Linton P&R • Increased walking and cycling (by 8.5%) • Increased parking costs (by 50%) 	126,900 (+4%)	8,500 (+3%)
2031 Do Something 3	Revised housing and employment allocations (16,247 homes) Package of transport improvements: <ul style="list-style-type: none"> • Highway capacity improvements • Leeds-Langley Link Road • Public transport improvements (10 min bus frequency) • Increased parking costs (by 50%) 	135,500 (+11%)	8,800 (+7%)
2031 Do Something 4a	Revised housing and employment allocations (18,560 homes) Package of transport improvements: <ul style="list-style-type: none"> • Highway capacity improvements • Leeds – Langley Link Road • Public transport improvements (10 min bus frequency) • Discounting of walk/cycle trips up to 5km • Increase in long-stay parking charges (by 50%) • Removal of P&R at Linton and M20 J7 	140,100 (+15%)	9,300 (+13%)

2031 Do Something 4b	Revised housing and employment allocations (18,560 homes) Package of transport improvements: <ul style="list-style-type: none"> • Highway capacity improvements • Public transport improvements (10 min bus frequency) • Discounting of walk/cycle trips up to 5km • Increase in long-stay parking charges (by 50%) • Removal of P&R at Linton and M20 J7 	141,600 (+16%)	9,900 (+20%)
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