

**To :** Maidstone Joint Transportation Board  
**By :** Tim Read – KCC Head of Transportation  
**Date :** 22<sup>nd</sup> July 2015  
**Subject :** Results of the VISUM Transport Modelling  
**Classification:** For Information and Discussion

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**Summary :** A proposal that the DS3 modelling scenario is taken forward for the purposes of the Maidstone Local Plan.

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## **1. Introduction**

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

1.2 The transport interventions included within each option are:

- 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.

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

1.4 The purpose of this report is to ensure that Members are informed of the model findings associated with the DS3 option and how these compare against the other modelled options.

## **2. Background**

2.1 The DS3 option has been tested to gain an understanding of whether model results comparable to those of DS2 could be achieved through a less ambitious set of assumptions relating to mode choice behaviour.

2.2 This approach acknowledges the imperative of a robust evidence base that provides a high degree of certainty in how new transport infrastructure and associated changes in travel patterns can be delivered.

2.3 The DS3 option includes targeted highway capacity improvements and measures that will encourage sustainable travel choices. It differs from DS2 by the inclusion of a bypass around Leeds and Langley and in how it alters aspirations surrounding walking, cycling and public transport in view of the high level of uncertainty over whether successful application can be achieved within the local context of Maidstone.

2.4 DS3 does not allow for a new park and ride service at Linton, given the lack of available evidence to prove its viability. It also adopts more conservative assumptions regarding bus frequencies on radial routes. The 7 minute frequency aspiration included in DS2 is high and more likely to be seen in a city such as London than a provincial town such as Maidstone. There are uncertainties over such frequencies could be sustained by future levels of patronage and whether the service operator would be able to secure the required vehicle fleet.

2.5 A 10 minute frequency on radial routes has been included in DS3 as it represents a more realistic reflection of the future service levels that are likely to be viable.

2.6 The assumed 8.5% increase in walking and cycling has been excluded from DS3 as this overestimates the level of behavioural change likely to arise as a result of investment in new infrastructure. Whilst demonstration towns such as Worcester, Darlington and Peterborough have experienced sizable increases in walking and cycling as a result of special government funding, they differ from Maidstone in having much lower levels of car ownership and more extensive dedicated networks. Although some change in travel habits could be achieved in Maidstone, it is unlikely it would be of the magnitude assumed in DS2.

2.7 The DS3 option has been tested alongside the other model options.

### 3. Results

3.1 The modelling results for the AM peak are summarised below:

	<b>2014</b>	<b>2031 DM</b>	<b>2031 DS1</b>	<b>2031 DS2</b>	<b>2031 DS3</b>
Person Trips	50,300	58,600	58,600	56,600	57,800
		+17%	+17%	+12%	+15%
Vehicle Trips	35,500	41,500	41,600	37,700	38,600
		+17%	+17%	+6%	+9%
Travel Distance (vehicle km)	122,000	144,500	146,700	126,900	135,500
		+18%	+20%	+4%	+11%
Travel Time (vehicle hours)	8,300	11,400	10,800	8,500	8,800
		+38%	+30%	+3%	+7%

3.2 The package of transport interventions associated with DS3 achieves a reduced impact on the highway network when compared against the DM and DS1 options.

3.3 The more conservative assumptions regarding travel behaviour in DS3 mean that it has a marginally less beneficial impact upon travel time than DS2, but is of a similar order.

3.3 The differential impacts should be viewed in the context of the comments made above regarding certainty of delivery and robustness.

### 4. Recommendations

4.1 Members are recommended to take forward the DS3 option, as this provides a package of highway and sustainable travel improvements that can be regarded as realistic and deliverable within the local context of Maidstone.

4.2 The DS3 option will therefore provide the most appropriate basis on which to accommodate the future traffic growth associated with planned new housing and employment development.

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