

**THE PLANNING ACT 2008**

**M4 (JUNCTIONS 3 TO 12) (SMART MOTORWAY) DEVELOPMENT CONSENT  
ORDER APPLICATION**

**TR010019**

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**Response on Traffic Modelling & Mitigation  
Requirement**

**Appendix A - Minutes of Meeting with BCC**

**Deadline VIII - 29 February 2016**

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## M4 Junctions 3 to 12 Smart Motorway

### Meeting Minutes - Local Junction impacts in Buckinghamshire

**Buckinghamshire County Council Offices**  
**10:00 AM, Wednesday, 25 November 2015**

**Document Reference: 514451-MUH-00-ZZ-MI-TR-400151**

#### Attendees

**Buckinghamshire County Council (BCC):** Christine Urry (CU), Sally Sharp (SS)

**Mouchel:** Brian Weavin (BW), Gokuldas Gopalakrishnan (GG), Stephanie Howard (SH)

#### Apologies:

#### Distribution

Attendees, Lynne Stinson, Chris Tooth and M4 Alliance Management team

Ref	Issue	Owner	Action By
<b>1.0</b>	<b>Background</b>		
	Following the DCO hearings last week, the Planning Inspectorate has requested that BCC and Highways England (Mouchel) meet to discuss the junction modelling impact assessments requested by BCC.		
<b>1.1</b>	Subsequent to the DCO hearing, BCC sent a list of 17 junctions which they requested detailed assessment of all junction movements at these locations to be undertaken during four time period for three years 2017, 2020 (during construction of the M4 smart motorway) and 2022 (the scheme opening year). Seven of the proposed junctions for assessment are on the A4, two on the A355, six are located on the A412 and one on the A4007.		
<b>2.0</b>	<b>Meeting</b>		
	CU confirmed that BCC are not questioning the robustness of the M4 strategic model, and that those model outputs are trusted. BCC however had concerns regarding any further traffic loadings on the A4, A355 and A412 as these routes currently suffer congestion.		
<b>2.1</b>	SH tabled a plan illustrating the 17 junction locations and a schedule of the forecast traffic flow changes at each junction		

	for the four assessment periods for 2017, 2020 and 2022. The schedule evidenced that, with the exception of the 2022 pm peak at two adjacent locations, the forecast traffic increases during any period in 2017 and 2022 were less than 17 vehicles and that many junctions experienced reductions in the traffic using the junction.		
<b>2.2</b>	GG proposed that in view of the low traffic flow changes consideration should only be given to assessments of junctions based on the 2020 scenario. CU agreed that, in view of the low traffic flow changes in the other years, analysis of the 2020 scenario during the second phase of construction was appropriate.		
<b>2.3</b>	BW proposed that any junction assessment should be undertaken on the am peak changes, rather than each period, as this gave the worst case scenario for any mitigation, minimised expenditure and was consistent with the ES approach. CU agreed that this was appropriate and acceptable to BCC.		
<b>2.4</b>	CU also advised that the construction traffic itself is a separate issue and one which cannot be quantified until such time as a Construction Traffic Management Plan (CTMP) has been completed.		
<b>3.0</b>	<b>Available Traffic Data</b>		
	CU confirmed that 12 hour MCC data is available at the following locations and will be sent through to HE: <ul style="list-style-type: none"> <li>- A4/Marsh Lane/Station Road (20<sup>th</sup> May 2014)</li> <li>- A412/Church Lane (15<sup>th</sup> Sept. 2015)</li> <li>- A412/George Green Road (17<sup>th</sup> Sept. 2015)</li> </ul>	BCC	CU
<b>3.1</b>	The Transport Assessment (TA) for the Bath Road (Mill Lane) consented residential development contains traffic flow data from March 2014 for three other junctions (A4/Mill Lane, A4/Berryhill, A4 Bridge Road/A4094 Ray Mead Road).		
<b>3.2</b>	CU advised that traffic data available from the Bishop Centre TA is considered to be too old for use as it was collected in 2011 or earlier.		
<b>3.3</b>	CU confirmed that there are no new developments along the A355 corridor, therefore no traffic data is available via other TAs.		

3.4	No data is available for A412 other than that detailed in 3.0 above. All data collected for the Pinewood development TA is considered too old to be useable as it is from 2011 or earlier.		
3.5	CU confirmed that counts have not been taken of the other locations and so BCC have no data available for any of the other junctions at the present time.		
4.0	<b>Available Traffic Models</b>		
	BCC do not hold any local models of these local roads. BCC only hold a strategic model of the County which is unsuitable for use for isolated junction modelling.		
4.1	The Mill Lane development TA contains model outputs for some of the junctions along the A4. CU to speak with the transport consultant (Glanville) and request that the models are released for use on the M4 project. Failing that, the models could be recreated using the parameters within the model outputs. CU to send the final agreed model outputs to HE.	BCC	CU
4.2	The Pinewood development TA contains model outputs for the 'five points' roundabout on the A412, and for the double mini roundabouts at Iver on the A4007. CU to speak with the transport consultant (Vectos) and request that the models are released for use on the M4 project.	BCC	CU
5.0	<b>A4 Junction Reviews</b>		
	Each of the proposed junctions were the reviewed to establish the basis for the junction modelling and assessments.  CU stressed that the A4 corridor through Buckinghamshire is a very sensitive part of the BCC highway network, and needs to be considered carefully to ensure impacts are mitigated.		
5.1	<b>Junction 1 - A4 Bridge Road/A4094 Ray Mead Road</b>		
	Although the A4 Bridge Road/A4094 Ray Mead Road junction is within Maidenhead, not in BCC, any queuing or delay might impact on the BCC highway network due to the proximity of the border.		
	The increase in traffic as a result of the 2020 construction period at this junction is 90 vehicles in the AM peak and 29 vehicles in PM peak.		
	There is no traffic count data available for this junction. CU		

	confirmed that there is no way to obtain traffic data other than to do traffic counts. SH confirmed that there is no 'neutral month' until after the DCO Inquiry closes, therefore any counts completed would be non-compliant with DMRB/TAG and unacceptable to TAME.		
<b>5.2</b>	<b>Junction 2 – A4 /Mill Lane</b>		
	CU suggested (from memory) that the most recent junction assessment of the Mill Lane junction was on the borderline of operational acceptability.		
	The junction will be amended to become a 'left-in, left-out, arrangement when the Mill Lane development progresses, which is likely to be before the 2020 M4 SM construction period commences.		
	CU accepted that if the junction improvement contains sufficient spare capacity to accommodate the reassigned trips, then it may not be necessary to model this junction.		
<b>5.3</b>	<b>Junction 3 – A4/Mill Lane (proposed)</b>		
	This is a new junction to be implemented as part of the Mill Lane development. The developer is currently implementing the enabling works for the scheme and is in the process of completing the Section 278 Agreement.		
	It is anticipated that construction will be completed pre-2020. CU agreed that if it can be shown that there is spare capacity built into the design to accommodate the reassigned traffic it may not be necessary to model this junction.		
<b>5.4</b>	<b>Junction 4 – A4/Berryhill</b>		
	The Mill Lane development is obligated to provide improvements to the traffic signals at this junction through the implementation of MOVA. CU advised that the junction is currently 'falling apart' i.e. it is over capacity.		
	CU agreed to provide the current traffic signal timings and if possible an indication of the improved timings that MOVA will generate (via the BCC traffic signal team). CU strongly stressed that this junction should be modelled.	BCC	CU
<b>5.5</b>	<b>Junction 5 – A4/Marsh Lane/Station Road</b>		
	Traffic count data is available from May 2014. This is a very sensitive junction at which temporary traffic signals were implemented and subsequently made permanent due to the		

	increased capacity created.		
	The traffic lights are linked to the junction at the Bishop Centre (Junction 6) and should be modelled as such.		
<b>5.6</b>	<b>Junction 6 – A4/Bishop Centre</b>		
	No traffic count data is available, but traffic signal timings can be provided and if the traffic signals have cameras attached, the signal timings and video recordings can be captured to provide indicative traffic flows through this junction, and through junction 5.		
	CU to discuss with BCC traffic signals and if possible provide data for a day in mid-end of Jan 2016 as an indication of the junction flows.	BCC	CU
	CU confirmed that there is unlikely to be any effect of the ‘January Sales’ at this junction as the main retail occupier is Tesco, rather than large household goods retailers. Given the congested nature of the A4, CU considers that there will be a limited trip attraction to the Bishop Centre during the AM peak.		
<b>5.7</b>	<b>Junction 7 – A4/Hitcham Road/Hag Hill Lane</b>		
	No data is available for this junction, and as the junction is a priority arrangement there will be no way of obtaining data other than through traffic counts.		
	CU reiterated that an increase of just 38 vehicles during the 2020 construction period is of concern on this stretch of the A4.		
	It was agreed to model J6 and J8 first to assess to impact, if there is a potential issue then J7 may also need modelling.		
<b>5.8</b>	<b>Junction 8 – A4/Lake End Road</b>		
	Marsh Lane is to be closed for a period of 12 months during construction. The impact of this will be increased traffic through the A4/Lake End Road junction. CU agreed that there is no need to model the junction without the Marsh Lane closure, as a model including the closure will present a ‘worst-case’ assessment.		
	The reassignment of traffic as a result of the Marsh Lane closure can be assumed to be the traffic using Marsh Lane currently, from the May 2014 traffic data which is available.		

	CU considered that it may be necessary to implement mitigation such as temporary traffic lights at this junction during the 2020 construction period.		
	CU has requested that the BCC Traffic Management team review the potential mitigation solutions for the A4 corridor. No timescale can be provided for that review.	BCC	CU
	CU agreed that given the lack of traffic data available, we may need to agree a methodology to be implemented later at this (and other) junctions. That methodology is likely to be comparing traffic surveys within a DMRB compliant neutral month prior to completing any modelling assessments.	HE/BCC	DW/CU
<b>6.0</b>	<b>A355 Junction Reviews</b>		
<b>6.1</b>	<b>Junction 9 – A355/Park Road/Farnham Close</b>		
	There is an increase of 34 vehicles at this junction in the early AM peak (0700-0800). CU confirmed that the early AM peak is of concern given the elongated peak period that occurs within Buckinghamshire.		
	No data is available for this junction, however CU will review to determine whether any ‘old’ data is available that can be used. ATC data may be available, although that would not provide turning movement details.	BCC	CU
<b>6.2</b>	<b>Junction 10 – A355/One Pin Lane</b>		
	CU confirmed that this junction was converted to traffic signals within the past two years approximately. This junction is less of a concern to BCC, however there appears to be an oddity in the traffic flows where there is an increase in trips in the middle of the A355 link around this location.		
	GG suggested this might be a result of developments / traffic zone connectors in the area. CU confirmed that if this is the case, and can be demonstrated, then the junction will not need to be modelled.	HE	GG
<b>7.0</b>	<b>Junctions of Concern to BCC – A412 Corridor</b>		
<b>7.1</b>	<b>A412/Church Lane</b>		
	Traffic survey data for 2015 is available. Traffic signal timing data can be provided by CU. CU to confirm whether the traffic	BCC	CU

	signals are linked to the A412/George Green Road junction (junction12). If so, the junctions should be modelled together.		
	CU has requested feedback from the BCC traffic signals team regarding the operation of this corridor however CU is unable to provide a timescale for that review.	BCC	CU
<b>7.2</b>	<b>Junction 12 – A423/George Green Road</b>		
	As discussed in 7.1.		
<b>7.3</b>	<b>Junction 13 – A412/Coronation Avenue</b>		
	BCC’s concern is that an increased A412 flow will provide less ‘gaps’ for local traffic to join the A412 at this priority junction. The increase in traffic on the A412 is at most one vehicles per minute per lane on this dual carriageway section.		
	CU has no indication as to the operation of this junction as there are no developments in the area than have completed modelling in this location. No traffic data is available.		
	CU advised that the Iver area is on the verge of being part of the AQMA, although there are no traffic flows available as part of the work to support that assumption.		
<b>7.4</b>	<b>Junction 14 – A412/Wexham Park Lane</b>		
	This is another priority junction on the A412, BCC’s concern is that an increased A412 flow will provide less ‘gaps’ for local traffic to join the A412.		
	The increase in traffic on the A412 is at most one vehicles per minute per lane on this dual carriageway section.		
	BCC has no evidence to demonstrate that the junction is over capacity or causes an issue at peak times. No traffic data is available.		
<b>7.5</b>	<b>Junction 15 – A412/Black Park Road</b>		
	Anecdotally, BCC suggest that this priority junction operates over capacity and causes queuing on Black Park Road.		
	No traffic data is available for this junction.		
<b>7.6</b>	<b>Junction 16 – A412/Pinewood/Church Road</b>		
	The ‘five points’ junction is of concern to BCC as it is currently		



	over capacity, although CU confirmed there are no recent models to demonstrate this.		
	The Pinewood development (Phase 1) is under construction. The improvement to the 'five points' roundabout is required in Phase 1, therefore should be implemented shortly and before the 2020 construction period. CU to confirm the trigger points contained within the Pinewood s106 Agreement.	BCC	CU
	CU agreed that there could be sufficient capacity within the improved junction to take account of the 2020 construction reassigned traffic, as the Pinewood development will not be fully occupied until at least 2033.		
	The Pinewood TA junction assessment and traffic flows should be reviewed prior to determining whether the junction should be modelled.		
<b>8.0</b>	<b><u>A4007 Corridor Junction Review</u></b>		
<b>8.1</b>	<b>Junction 17 – A4007/Bangors Road North/Bangors Road South</b>		
	The double mini roundabout is of concern as a great deal of traffic uses Iver as a cut-through to avoid the M25. The junction should be modelled as a double mini roundabout.		
	No traffic data is available, and CU confirmed the Pinewood TA traffic data is too old to be used.		
<b>8.2</b>	<b>Safety Assessment</b>		
	There is a lot of parking and frontage activity along the A4007 which presents a safety concern, and additional traffic may exacerbate this.		
	CU requested that a safety review of the 30mph section along A4007 west of the double mini roundabout should be undertaken.		
	CU to send through collision / traffic data for the links of concern so that the requirement could be considered.	BCC	CU
<b>9.0</b>	<b>Junction Modelling Methodology</b>		
	The meeting reviewed the lack of available data and the potential opportunities for traffic survey data to be collected.		

	There are no neutral months, as required by DMRB, available between now and March 2016 in which to obtain this data. BW enquired whether there were any local authority data collection standards which could apply and it was established that DMRB was the appropriate standard for this data collection.		
	CU suggested an alternative methodology would be to complete all of the junction models based on completely new data when collected (post March 2016) to enable a holistic corridor approach to the assessment and mitigation provided.		
	Consequently CU proposed that, it will be necessary to agree via the SoCG or the DCO document that modelling and mitigation should be provided for the junctions of concern in a neutral month following the closure of the DCO.		
	CU and BW to discuss the appropriate mechanism for this with respective lawyers.	HE/BCC	CU/BW
	CU suggested that Highways England should be aware that there is a risk to this methodology as a currently unknown mitigation package will need to be provided. CU suggested the mitigation could include VMS signs.		
	CU advised that while models where traffic count data exists could be completed now, BCC require that the junction solutions are considered collectively to make sure the right solutions are identified to any problem areas that may arise.		
	Consequently the mitigation package would only be agreed following completion of all of the junction modelling.		
	CU confirmed that BCC will only be looking to mitigate where there is a detrimental impact of the 2020 construction reassigned traffic.		
	The meeting concluded that any modelling completed prior to the close of the DCO examination would be un-calibrated and un-validated due to the lack of available data and time scales. The modelling could therefore only provide indicative partial results and therefore not fit for BCC's purpose.		
<b>10.0</b>	<b>AOB</b>		
<b>10.1</b>	<b>CTMP / CEMP</b>		

	CU requested that a working group is set up in January to allow the framework to be bolstered to include what work will be undertaken, how it will be completed and what mitigation concerns will need to be dealt with.		
	BW advised that this would be arranged by the contractor and undertook to discuss establishing the arrangements with HE and the contractor.	HE	BW
<b>10.2</b>	<b>Existing draft DCO wording</b>		
	CU expressed the view that the existing draft DCO requires the contractor to undertake the work substantially in agreement with the draft CEMP and CTMP as submitted at the application stage, rather than the finished CEMP and CTMP. BW advised his understanding was that it was the final form of the CEMP and CTMP which would be the requirement within the DCO and agreed to ask DLA Piper to provide details.	HE	BW
<b>10.3</b>	<b>HS2 Impact</b>		
	BCC has calculated traffic in Iver and along Pinewood Road taking account of HEX and HS2. The HS2 and HEX traffic is of concern as it impacts on A412 and A4007 and to the east through Iver.  CU will forward the traffic flows, timeline of the process, and supporting information to HE for information.	BCC	CU
	CU is also concerned with the impact of HS2/HEX on M25 junctions 16 and 17. There will be new slip roads on the M25 for HS2 as agreed in the HS2 Hybrid Bill. CU questioned whether the new slips are in the M4 model. GG confirmed the new slips are not part of the current forecast network.		
	CU suggested HE should undertake a sensitivity test either using the HS2 or M4 model.		
	BW to check with M25 DBFO for any existing model with the slips.	HE	GG/BW
<b>11.0</b>	<b>Submission to DCO</b>		
	CU requested a copy of the submission from Highways England to the DCO regarding the matters discussed at this meeting.	HE	BW
	<b>Meeting end</b>		

