

From: Mike Knowles [<mailto:knowlesM@rpsgroup.com>]
Sent: 29 December 2015 10:09
To: M4 Junction 3-12 Smart Motorway
Cc: 'n.d.frankland@reading.ac.uk' (n.d.frankland@reading.ac.uk); Simon Dimmick; Nick Paterson-Neild
Subject: M4 Junctions 3 to 12 Smart Motorway Deadline 5 Submission

Dear Sir

For the attention of Richard Price

Your reference TRO10019

Our reference 10031723

Further to the Deadline 4 submission made on behalf of the University of Reading further consideration has been given to the additional information (for which the University is grateful) which has been made available by Highways England, both in its Deadline 3 response to the Deadline 2 submission of the University of Reading and in its response dated 25 November 2015 to the email from RPS to Highways England dated 24 November 2015. (A copy of the Highways England response of 25 November 2015 is attached with the RPS email of 24 November 2015 being included in the response).

The University continues to support the M4 Junctions 3 to 12 Smart Motorway Scheme and agrees with the strategic aims of the Scheme which are set out in paragraph 2.1.3 of Volume 4.1 of the Statement of Reasons. The Deadline 3 response of Highways England has demonstrated how the aims will be met. (Paragraphs 9.1 and 9.2 of the Deadline 3 response).

The University notes that Highways England has also confirmed in its Deadline 3 response that consideration has been given to the impacts of the Scheme on the wider road network, including the A327 route. In particular the driver stress analyses have been referred to in paragraphs 10.1 to 10.6 of the response. Highways England is satisfied that the Scheme will have no impact on the assessed level of driver stress on the A327. Driver stress is seen as a measure of traffic conditions on the route. Highways England has also confirmed that the analyses undertaken have taken account of general traffic growth and also developments in the area which were considered to be "reasonably foreseeable".

Highways England has also confirmed that the Scheme will not result in any material change in the performance of Junction 11 of the M4 Motorway and therefore no additional junction assessments were undertaken. (Paragraphs 11.1 and 11.2 of the Deadline 3 response).

Yours faithfully

Mike Knowles

Senior Transport Consultant RPS Group

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RPS Planning and Development Limited, company number: 02947164 (England). Registered office: 20 Western Avenue Milton Park Abingdon Oxfordshire OX14 4SH.

RPS Group Plc web link: <http://www.rpsgroup.com>

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M4 junctions 3 to 12 smart motorway: Response to email from Mike Knowles on behalf of University of Reading, 24.11.15

“As you will be aware RPS is acting for the University of Reading in relation to the Scheme. We submitted Written Representations at Deadline 2 and received the response of Highways England on Deadline 3. I was then involved in the discussions at the Issue Specific Hearing on the environment on 17 November. Our interest relates to the traffic forecasting and the likely impacts on the wider road network particularly the A327 corridor and Junctions 10 and 11 of the M4.

During the Hearing the Panel requested further clarification on a number of traffic matters by Deadline 4, which is later this week. These included:

- 1 A better understanding of Appendix 16.2 of the ES. For example why has the South of M4 SDL been scoped out when the boundary of the SDL abuts the Scheme? Also what floorspace has been assumed for the University of Reading Thames Valley Science Park? The details of the Science Park are set out in paragraph 5 of our Written Representation.”*

Highways England Response

In response to a request from ExA at the Issue specific hearing on the 17th November 2015, further details of the various development proposals ‘included’ or ‘not included’ within the M4 smart motorway traffic model are to be submitted to PINS. In the meantime, it is confirmed that the following proposed developments were included in the modelled core scenario based on Wokingham Borough Council’s Core Strategy, policy CP17 – Housing Delivery:

- Arborfield Garrison – 3400 units
- South of M4 SDL – 2500 units
- North Wokingham – 1500 units
- South Wokingham – 2500 units

In respect of the Reading Thames Valley Science Park, the consented first phase of 18,850 sq m has been included in the modelled core scenario. It is acknowledged that further development is envisaged within the Core Strategy under core policy CP16 – Science Park. However, it was noted that paragraph 4.75 states:

“Further development will take place in the remainder of the plan period subject to there being identified need and demand together with resolution of any transport, landscape and design considerations to maintain the exceptionally high quality environment initially developed. It is likely that some 55,000m² of floorspace will have been completed by 2026.”

On the basis that the need and demand had yet to be demonstrated, the further floorspace was adjudged as ‘reasonably foreseeable’, being consistent with its status of being included in a development plan and therefore, in line with Table A2 of TAG Unit M4 – Forecasting and Uncertainty, excluded from the core scenario.

- 2 Further clarification of the traffic flows provided in Section 10 of the response of the Highways Agency. Very small increases are being shown on the A327 through Shinfield.*

Highways England Response:

A similar request for additional information has been made by officers of Wokingham Borough Council, in particular:

- Average delays and delay differences

- Volume over Capacity values and their differences between DM and DS scenarios
- Network statistics for the links falling within Wokingham borough
- Differences in journey times along a selection of routes in the borough
- The model outputs should be provided both for the 2022 (opening year) and 2037 (design year)."

Data was extracted from the traffic model for the key A-roads (A321, A327, A329 and A4) within the Borough and forwarded to the Council for review. These statistics covered the items requested by WBC with the exception of the network statistics for the links within the Borough, which it was not possible to extract from the complete model area.

Copies of the tabulations of link delay and volume/capacity supplied to WBC are provided below. These show that there are negligible differences between DM (Do-minimum / without Scheme) and DS (Do-something / with Scheme). The maximum increase in journey times - 55 seconds - on these routes occurs on the A329 between the A4 and A329(M) in the pm peak hour in 2037.

Differences in journey times along a selection of routes in the Borough (seconds)

Time Period	ROAD	Direction	From	To	DM22	DS22	DM37	DS37	D C 2
Early AM 07:00-08:00	A321	NB	Henley on Thames	Wellington College	1,786	1,783	1,864	1,859	
	A327	NB	Basingstoke Rd	B3348	1,072	1,066	1,184	1,171	
	A329	NB	A4	A329M	1,291	1,291	1,373	1,375	
	A4	EB	A3290	Know Hill	753	750	761	756	
	A321	SB	Henley on Thames	Wellington College	1,641	1,641	1,674	1,678	
	A327	SB	Basingstoke Rd	B3348	1,080	1,082	1,189	1,199	
	A329	SB	A4	A329M	1,374	1,384	1,491	1,510	
	A4	WB	A3290	Know Hill	674	668	681	676	
AM peak 08:00-09:00	A321	NB	Henley on Thames	Wellington College	1,784	1,804	1,907	1,915	
	A327	NB	Basingstoke Rd	B3348	1,313	1,315	1,467	1,471	
	A329	NB	A4	A329M	1,496	1,525	1,825	1,820	
	A4	EB	A3290	Know Hill	678	675	691	687	
	A321	SB	Henley on Thames	Wellington College	1,906	1,907	2,027	2,038	
	A327	SB	Basingstoke Rd	B3348	1,252	1,248	1,434	1,429	
	A329	SB	A4	A329M	1,327	1,323	1,507	1,546	
	A4	WB	A3290	Know Hill	748	745	760	758	
Inter peak 10:00-16:00	A321	NB	Henley on Thames	Wellington College	1,647	1,647	1,688	1,690	
	A327	NB	Basingstoke Rd	B3348	956	955	998	998	
	A329	NB	A4	A329M	1,288	1,291	1,381	1,383	
	A4	EB	A3290	Know Hill	668	666	687	683	
	A321	SB	Henley on Thames	Wellington College	1,676	1,674	1,721	1,718	
	A327	SB	Basingstoke Rd	B3348	1,025	1,026	1,069	1,066	
	A329	SB	A4	A329M	1,146	1,148	1,223	1,225	
	A4	WB	A3290	Know Hill	657	655	678	674	
PM peak 17:00-18:00	A321	NB	Henley on Thames	Wellington College	1,832	1,827	1,961	1,979	
	A327	NB	Basingstoke Rd	B3348	1,238	1,239	1,399	1,397	
	A329	NB	A4	A329M	2,082	2,103	2,312	2,367	
	A4	EB	A3290	Know Hill	758	747	794	793	
	A321	SB	Henley on Thames	Wellington College	1,767	1,763	1,843	1,842	
	A327	SB	Basingstoke Rd	B3348	1,633	1,629	1,776	1,793	
	A329	SB	A4	A329M	1,206	1,212	1,338	1,328	

“3 Further clarification of the impact of the Scheme at Junction 11. Is the 2% increase referred to in paragraph 11.2 consistent with the predicted increases on the motorway itself? Has any additional modelling of Junction 11 been carried out to assess how it would perform in the future years of 2022 and 2037?”

Highways England response:

The M3/M4 traffic model covers a wide area either side of the M4 motorway and therefore includes the surrounding local road network. The junctions between the motorway and local roads are modelled in detail. This means that the layout (number of lanes etc) and method of operation (roundabout, signal-controlled etc) are replicated within the model. Therefore, although there may be a significant difference between impacts expressed as percentages at the junctions and on the M4 mainline, the two figures are consistent as they are taken from the same traffic model run and outputs. No additional junction assessments have been undertaken at junction 11.

