Developments Affecting Trunk Roads and Special Roads
Highways England Response & Formal Recommendation to an Application for Planning Permission

From: Andrew Page- Dove (Divisional Director), Network Delivery and Development South-West Region Highways England.

To: Charmian Burkey, Wiltshire Council

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Council's Reference: 14/12118/OUT

Referring to the notification of a planning application dated 23 December 2014 referenced above, in connection with M4 Junction 17 - Mixed Use Urban Extension Comprising Residential (Class C3), Local Centre (Classes A1-A5) and (Classes D1 and D2), Primary School, Public Open Space Including Riverside Park and Allotments, Landscaping, 4 Vehicular Accesses, Site Roads and Associated Infrastructure, Rowden Park Patterdown Road Chippenham Wiltshire, notice is hereby given that Highways England's formal recommendation is that we:

a) offer no objection;

b) recommend that conditions should be attached to any planning permission that may be granted (see Annex A—Highways England recommended Planning Conditions);

c) recommend that planning permission not be granted for a specified period (see Annex A—further assessment required);

d) recommend that the application be refused (see Annex A—Reasons for recommending Refusal).
This represents Highways England formal recommendation and is copied to the Department for Transport as per the terms of our Licence.

Should you disagree with this recommendation you must consult the Secretary of State for Transport, as per the Town and Country Planning (Development Affecting Trunk Roads) Direction 2015, via transportplanning@dti.gsi.gov.uk.

Signed by

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Condition(s) to be attached to any grant of planning permission:

Reason(s) for the direction given at b), c) or d) overleaf and the period of time for a direction at e) when directing that the application is not granted for a specified period:

Wiltshire Council shall not grant planning permission for the development proposals (LPA reference: 14/12118/OUT) for a period of 3 months.

To provide sufficient time for the applicant to address Highways England concerns regarding traffic impact on the Strategic Road Network (SRN), which includes M4 Junction 17.

HIGHWAYS ENGLAND ("we") has been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the Strategic Road Network (SRN). The SRN is a critical national asset and as such works to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

This response represents our formal recommendations with regard to M4 Junction 17 and has been prepared by Rachel Sandy of the Network Delivery and Development Growth and Improvement Team and Asset Manager for the SRN in Wiltshire.

Statement of Reasons
The development proposals include up to 1,000 residential dwellings, a primary school and local community facilities (local shops).

Peter Brett Associates (PBA) has prepared a Transport Assessment, Framework Travel Plan and a series of technical notes to support the planning application transport submission, and to aid discussions with Highways England with regard to traffic impacts on the Strategic Road Network. In relation to this development site, the SRN focus is M4 Junction 17.

Highways England has been involved in planning application and pre-application discussions. In our advice, Highways England has made it clear that the development proposals should accord with National Planning Policy Framework (2012) and DfT Circular 02/2013 'Planning and the Strategic Road Network', with particular attention drawn to the modelling requirements set out within the Circular.

This TR110 provides an overview of the full audit undertaken to date and the conclusion currently reached.

PBA have identified trip generation from trip rates supplied by Wiltshire Council in the analysis provided for the ‘Transport Strategy for Chippenham’. Having considered the trip rates presented, Highways England is content with their use. Vehicle mode split assumptions have been taken from 2011 census data, and this approach is also considered to be acceptable.
The Transport Assessment (TA) states that the proposals will generate a total of 545 two-way trips during a morning peak hour (0800-0900) and 625 two-way trips during an evening peak hour (1700-1800), with 159 (morning peak) and 182 (evening peak) identified to travel through M4 J17.

Trip distribution is extrapolated from 2011 ‘Travel to Work’ census outputs and shows 30% of traffic travelling to/from the SRN.

The impact of development traffic on the operation of the SRN has been presented through the use the Highways England S-Paramics model, which covers both M4 Junction 16 and 17. PBA have applied background traffic growth and included their development traffic into the S-Paramics model under licence.

Summary results have been presented for a 2016 ‘opening year’ traffic scenario, ‘with’ and ‘without’ proposed development traffic, and again for a 2026 future year. Technical Note - TN015 provided by PBA, presents the modelling results that include journey time changes and a comparison of average and maximum queues.

No mode shift has been assumed in the traffic modelling undertaken, although PBA have suggested that a 7% model shift is achievable as a result of Travel Planning measures. In considering strategic trip movements, the Travel Plan only discusses the ‘possibility of options’ for improvements and enhancements to public transport, but is unable to offer a guarantee that bus operators would be prepared to divert their services through the development site. Based on the information provided to date, it is the view of Highways England that the applicant has not demonstrated that sufficient measures exist to warrant the 7% mode shift objective.

In considering the traffic impact of the proposals on the SRN during the sensitive weekday peak hour periods, slip road queues (maximum values) are identified to be a primary concern, as the risk of queuing beyond the extent of the slip road could have severe implications for network safety.

Highways England currently has concerns with the modelling results presented by PBA. The S-Paramics model has not been provided to Highways England for review, and therefore we are unable to determine if development traffic and background growth factors have been correctly added. This information is requested.

Highways England have identified ‘anomalies’ in the modelling results presented by PBA that require further interrogation. The 2016 opening year queues (baseline scenario) on the M4 westbound off-slip are reported as 6 PCU’s, yet the same 6 PCU queue is shown to occur on the slip road for the 2026 ‘full development traffic’ scenario. This is especially unusual, as the difference in traffic volumes between these two sets of results should include the proposed Rowden Park development.
traffic, combined with background traffic growth associated with nearly 4,090 homes within Chippenham alone by 2026.

Average queues of 6 and 2 PCUs are reported for the westbound and eastbound slip roads respectively for a 2016 ‘with’ development traffic scenario, yet maximum queues are reported as 18 PCUs. This is a significant difference in values and these results should be further interrogated following a review of the S-Paramics modelling undertaken.

Highways England has received reports from Police, Highways England Traffic Officers and managing agent (Skanska) of peak hour queueing on the off-slips at junction 17 which extends onto the mainline M4. The nature and frequency of this queuing is sporadic, albeit with a reported increase in occurrences, and the primary cause is not yet known. Whilst this is clearly an existing issue, it will not be acceptable for proposed development to exacerbate vehicle queuing and delay at this junction which would further prejudice the safe operation of the network.

Whilst the Highways England S-Paramics model has been approved and considered acceptable for modelling the impacts of proposed development at Chippenham at M4 Junction 17, it must be borne in mind that the modelling platform is a tool with which to consider impacts and has captured baseline data at a certain point in time. In this instance, the baseline data pre-dates the reports of the extensive yet apparently adhoc queuing at the junction. It should be noted that at this time, M4 junction 17 is not signal controlled and Highways England currently has limited ability to manage slip road queues.

The S-Paramics model only includes a ‘snap shot’ of traffic conditions for a typical weekday period, and it is clear that in this instance, further investigation is required to ensure the SRN is safeguarded against a sizable development impact. This is especially a concern when the ‘with’ development traffic modelling scenario results presented by PBA are questionable. As such, further consideration of the traffic model and the developments impact on M4 Junction 17 is required.

Highways England are currently in the process of jointly investigating with Wiltshire Council appropriate improvement options for M4 junction 17 to accommodate local planned growth to 2026. Whilst the preferred solution is yet to be agreed, it is apparent that an improved junction operating strategy utilising signal controls may provide some benefit and help accommodate the cumulative impact of planned local growth on the SRN. However, as noted above the solution is yet to be agreed and suitable sources of funding and delivery timescales are yet to be identified. Therefore, development proposals in the vicinity of M4 junction 17 must clearly demonstrate that any generated impact can be appropriately mitigated.
Following the Highways England audit of the transport submission documents accompanying the planning application and the additional modelling assessment provided, concerns remain regarding the modelling results presented and the potential risk of a significant increase in vehicle queues on the slip road which extend onto the mainline. Until such a time that concerns have been addressed, we recommend that the ‘holding position’ be extended for a period of 3 months.

I trust the above is clear. Please do not hesitate to contact me if you require any further information.