



National Highways Planning Response (NHPR 22-12) Formal Recommendation to an Application for Planning Permission

From: Regional Director, South West Operations Division, National Highways
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To: Wiltshire Council
FAO Olivia Tresise

CC: transportplanning@dft.gov.uk
spatialplanning@nationalhighways.co.uk

Council's Reference: PL/2023/09142

Location: Land at Junction 16 (M4), Swindon

Proposal: Outline application (with Access to be determined) for development of a new Motorway Rest Area (MRA) to provide up to 241 car parking spaces; up to 63 Heavy Goods Vehicle (HGV) parking spaces; coach and caravan parking; amenity building; fuel filling station; new roundabout access from B4005; and associated landscaping, infrastructure and ancillary works

National Highways Ref: NH/23/03529

Referring to the consultation of the planning application referenced above, in the vicinity of the M4 that forms part of the Strategic Road Network, notice is hereby given that National Highways' formal recommendation is that we:

- ~~a) offer no objection (see reasons at Annex A);~~
- ~~b) recommend that conditions should be attached to any planning permission that may be granted (see Annex A – National Highways recommended Planning Conditions & reasons);~~
- c) recommend that planning permission not be granted for a specified period (see reasons at Annex A);**
- ~~d) recommend that the application be refused (see reasons at Annex A)~~

Highways Act 1980 Section 175B is not relevant to this application.¹

¹ Where relevant, further information will be provided within Annex A.

This represents National Highways' formal recommendation and is copied to the Department for Transport as per the terms of our Licence.

Should the Local Planning Authority not propose to determine the application in accordance with this recommendation they are required to consult the Secretary of State for Transport, as set out in the [Town and Country Planning \(Development Affecting Trunk Roads\) Direction 2018](#), via transportplanning@dft.gov.uk and may not determine the application until the consultation process is complete.

The Local Planning Authority must also copy any consultation under the 2018 Direction to Planningsw@nationalhighways.co.uk.

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Annex A **National Highway's assessment of the proposed development**

National Highways has been appointed by the Secretary of State for Transport as a 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 we work 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.

We have undertaken a review of the relevant documents supporting the planning application to ensure compliance with the current policies of the Secretary of State as set out in DfT Circular 01/2022 "The Strategic Road Network and the Delivery of Sustainable Development" and the National Planning Policy Framework (NPPF). This response represents our formal recommendations with regards to planning application reference PL/2023/09142.

Reasons

The proposals

The application is seeking consent for a new Motorway Rest Area (MRA) comprising up to 241 car parking spaces, up to 63 Heavy Goods Vehicle (HGV) parking spaces, coach and caravan parking, a facilities building, a filling station for all fuel types and associated landscaping and infrastructure works. The development is to be served by a new roundabout access from the B4005 which provides a direct connection to M4 Junction 16 (J16). The site is bounded by the J16 west-bound off-slip immediately to the north of the site.

National Highways primary consideration is for the ongoing safe and efficient operation of the M4 and J16, and it is in this context that our comments are made. In general terms, subject to being otherwise acceptable in terms of safety, congestion and asset impacts, National Highways policy is to be supportive of proposals that increase and improve the facilities available for both HGVs and EV charging.

DfT Circular 01/2022 sets out the minimum standards and requirements for Motorway Rest Areas, particularly with regards to the provision of signing from the SRN. The applicant has sought to provide facilities that comply with these requirements. However, it should be noted that signing from M4 will be subject to a separate application process directly to National Highways as the strategic highway authority.

Car parking requirements

Minimum parking requirements for an MRA are defined in DfT Circular 01/2022. The requirements are based on daily traffic flows passing the site. The applicant has reviewed WebTRIS data for the M4 mainline for the 12-month period of 2022. The review identified August as the busiest month, with a total 2-way average Annual Daily Traffic of 89,003 vehicles on the mainline (78,555 light vehicles and 10,448 HGVs). To future-proof car parking provision, the applicant has sought to account for growth in traffic over a 10-year period to 2033. The applicant's analysis indicates that the proposed level of parking provision is in line with or in excess of the minimum requirements contained within DfT Circular 01/2022.

Whilst the Circular does not contain minimum requirements for EV charging facilities, the development proposes the provision of 50 electric vehicle charging spaces from the commencement of development. There is the potential to increase this provision in the future, including EV charging spaces for HGVs, subject to demand and grid capacity.

Assessment of traffic impact

The application is supported by a Transport Assessment (TA) prepared by Eddisons. Pre application scoping discussions were held with both National Highways and the local highway authority, Wiltshire Council.

The TA includes analysis of Personal Injury Collision data for a five-year period (2017-2021) covering M4 J16 and slip roads, along with the B4005. The analysis identifies that eleven collisions occurred at the M4 J16 roundabout within the five-year period. Ten of the collisions were classed as slight in severity and one was classed as serious. It is noted that the period of analysis includes construction of the new junction layout, which was completed in 2018. The reported collisions principally involve lane discipline issues or driver error at the signals. The applicant concludes that the data does not highlight any particular safety issue at the junction. National Highways is giving further internal consideration to the collision data presented, in particular with regards any conclusions from later stages of the road safety audit process following completion of the improvement scheme.

National Highways hold a Vissim microsimulation model of M4 J16 and the adjoining local highway network. The base model was developed using survey data collected in November 2021. A Reference Case model was also then developed using WebTRIS data for the J16 slip roads, reflecting a general increase in traffic demand to March 2023. The Reference Case model was shared with the applicant and has been applied as part of the TA to assess traffic impacts on M4 J16.

The applicant has identified the following committed and proposed developments in the vicinity of the site:

- Partially developed garden centre, craft centre, and family leisure attraction at Hay Lane, Wroughton (Wiltshire Council application reference 19/02146).
- Consented development of 104 residential dwellings on land at Swindon Road, Wroughton (Swindon Borough Council application reference S/OUT/20/0556).
- Proposed development of 410 residential dwellings on land to the south of the A3102 and east of Royal Wootton Bassett (Wiltshire Council application reference PL/2023/02129).
- Consented development of 4,500 dwellings, employment, commercial, retail and education facilities at the Wichelstowe Development Area (Swindon Council application reference S/13/1524).

The applicant has concluded that with the exception of the Wichelstowe development, the remaining development will have no material impact on M4 J16 and does not need to be explicitly accounted for in traffic forecasting work. Whilst this is accepted in respect of consented development in the Wroughton area, we disagree that the proposed residential development at Royal Wootton Bassett should be discounted. National Highways will therefore require a cumulative assessment that specifically

includes traffic associated with that application as well as the Wichelstowe development. National Highways are currently in discussion regarding the traffic generation of the Royal Wootton Bassett application, and it is likely that agreed values can be shared with the applicant in the near future.

National Highways has raised questions regarding the Wichelstowe assumptions with both the applicant and Swindon Borough Council. The development has delivered a new vehicular access route underneath the M4 that meets with the B4005 to the east of the application site. Given the future impact of Wichelstowe traffic on both M4 J16 and the B4005, it is necessary to ensure that assumed traffic levels are accurate.

National Highways are aware that Wiltshire Council is currently consulting on its pre-submission draft Local Plan. The draft Local Plan includes proposed allocations for around 1,000 dwellings and employment in Royal Wootton Bassett. In responding to the draft Local Plan, National Highways has requested that further consideration be given to the potential impacts of cumulative development at M4 J16.

Trip Generation and Distribution

Trip generation for the proposed MRA has been based on available data for nearby Motorway Service Areas (MSAs) at Membury and Leigh Delamere. The approach adopts average arrival and departure trip rates across the two service areas, for the identified M4 J16 peak hours of 7:30-8.30am and 4.30-5.30pm. The adopted peak hour trip rates are presented in Table 1 below.

Table 1 – Adopted Vehicular Trip Rates

Time Period	Arrivals		Departures	
	Cars	HGVs	Cars	HGVs
AM Peak (7.30-8.30am)	0.769	0.844	0.769	0.844
PM Peak (4.30-5.30pm)	1.011	1.166	1.011	1.166

Whilst the approach is considered reasonable, we request evidence of the supporting WebTRIS analysis for review, to include an understanding of any seasonal variation in use, and variation in arrival and departure rates across the wider day.

Trip generation has been assessed for 248 light vehicle spaces (accounting for proposed 241 car parking spaces and 7 caravan spaces), along with 68 HGV spaces (accounting for 62 HGV spaces and 6 spaces for coaches). The resultant trip generation figures adopted by Eddisons are summarised in Table 2 below, with the proposed development forecast to attract 502 two-way vehicles trips in the AM peak hour and 660 two-way trips in the PM peak hour.

Table 2 – Eddisons Adopted Trip Generation

Time Period	Arrivals		Departures	
	Cars	HGVs	Cars	HGVs
AM Peak (7.30-8.30am)	191	60	191	60
PM Peak (4.30-5.30pm)	251	79	251	79

The vast majority of vehicular trips generated by the proposed development would access and egress the site via the M4. The directional split of traffic travelling through J16 has been based on the prevailing flow of traffic on the M4 mainline. Following

discussion with both National Highways and Wiltshire Council, a small allowance (7%) has also been made for local vehicular trips to/from Royal Wootton Bassett, Wroughton and Swindon.

Traffic Modelling

The applicant has used the National Highways Vissim model of M4 J16 to assess development impacts on the junction. The proposed site access junction has been modelled separately in Arcady. It is unclear if unequal lane usage has been accounted for on the eastbound approach to the site access junction. Given the proximity to M4 J16, this is of interest to National Highways and should be evidenced by Eddisons.

The TA considers a development opening year of 2027, with a further forecast year assessment undertaken for 2033. Growth rates have been derived from TEMPro v8.0. No adjustments appear to have been made to account for National Transport Model (NTM) forecasts in line with section 9.1 of TAG Unit M4 (Forecasting and Uncertainty). This advises that, for the purposes of a traffic impact assessment, and where a formal (strategic) transport model is not available, use of TEMPro factors alone is not appropriate, as they do not take into account the impacts of fuel cost, values of time, and changes in trip length.

Previous versions of TEMPro had an in-built function to calculate the NTM adjusted growth rate. This is not currently available in the latest version of Tempro (version 8). The guidance instead advises use of TEMPro version 7.2 for this analysis, although it is possible to undertake spreadsheet adjustments using the published National Road Traffic Projections 2022.

National Highways has requested access to the modified Vissim model files used as part of the TA. This information was supplied to National Highways on 17th November, and the modelling work is currently being reviewed. Whilst the TA concludes that the development is forecast to have a minimal impact on conditions at M4 J16, we are not yet able to agree this conclusion.

Assessments of existing merge and diverge layouts at M4 J16 have also been undertaken by Eddisons based on TD22/06 of the Design Manual for Roads and Bridges (DMRB). It is noted that TD22/06 has since been superseded by CD122 (Geometric design of grade separated junctions). The current slip road layouts provide standard taper merges and diverges. The applicant's assessment concludes that the development will not trigger a required change in merge or diverge layout. However, it is noted that assumed forecast year traffic levels do suggest a need to upgrade the eastbound diverge, eastbound merge, and westbound diverge. The implications of the analysis will need to be reviewed following agreement of assessment traffic flows.

It is noted that the proposed site access has been modelled using Arcady software. The applicant should be aware that, subject to completion of our review of the Vissim model files in respect of the J16 impacts, National Highways may request further modelling of the proposed access roundabout in micro simulation software to ensure the interaction between the two junctions is fully understood.

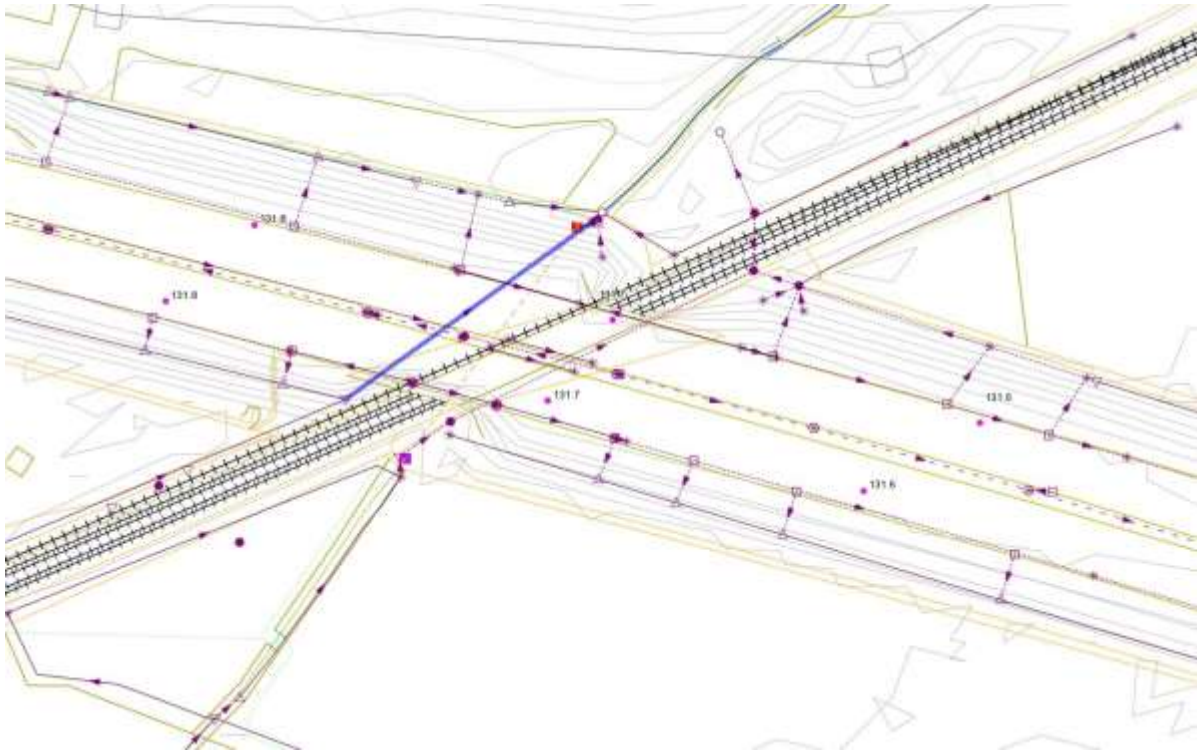
Assessment of operational impacts

Due to the proximity of the development to the M4 westbound off-slip and J16 circulatory carriageway, the development has the potential to impact on highway safety and operational highways assets. We therefore need to be satisfied that the requirements of DfT Circular 01/2022 will be met.

Drainage

Whilst we are generally satisfied that the development doesn't directly affect National Highways M4 surface water drainage, the proposal to install a new roundabout along on the B4005 will impact the existing surface water drainage between the M4 J16 Spittleborough Roundabout and Hay Lane, to which National Highways currently has a lease title. This is indicated within the Conceptual SW Drainage Strategy drawing 107846-PEF-ZZ-XX-DR-CD-0504.

The applicant should therefore be made aware that changes to the B4005 surface water drainage may have an impact on the National Highways downstream M4 1200Ø Culvert at MP131.7+50m as indicated from our asset records below.



This will therefore need to be evidenced and addressed as part of the detailed drainage design for the development and associated access proposals. However, we consider that this matter could be addressed by a suitable pre-commencement planning condition although we are willing to consider any further information the applicant wishes to submit prior to determination.

Boundary treatments, landscaping and screening

The topography and existing vegetation around the development site provides for open views across the site from the M4 carriageway, the westbound off-slip and

junction circulatory lanes. The submitted Illustrative Masterplan shows limited landscape mitigation along the northern boundary of the development. The direction of travel of HGVs through the HGV parking area will therefore have the potential to create a distraction to M4 traffic from headlights and other top marker lights typically found on HGVs. We consider that the limited planting which is currently proposed would provide insufficient screening and will need to be addressed.

The Planning Statement in paragraph 3.17 also advises that “The fuel filling station shop is to benefit from a green roof as well as 14 solar panels on the canopy roofing.” We will therefore require a Glint and Glare Survey to be submitted for our review. Any mitigation identified as necessary must be incorporated into the proposals to ensure no adverse impact to users of the M4 and associated slip roads.

It should be emphasised that National Highways soft estate must not be relied upon to contribute any mitigation to the development as the management of our estate may from time to time affect any real or perceived benefits. As such the developer must ensure that all required and desired mitigation is provided within the development or by a site boundary feature proposed as part of the development. We would encourage the use of native and naturalised species planting to provide or support visual screening mitigation, with an evergreen component to sustain this all year round. Any fences, screening and other structures must be erected outside of the highway boundary in accordance paragraph 57 of DfT Circular 01/2022 “The Strategic Road Network and the Delivery of Sustainable Development” and far enough within the developer’s land to enable maintenance to take place without encroachment onto highway land.

It will therefore be necessary for the applicant to submit a detailed Boundary Treatment and Landscape Plan to be submitted for our review and acceptance insofar as any potential impacts on the SRN. This will need to be accompanied by an associated Planting Schedule and maintenance strategy.

The developer should be advised that the following species must not be planted within 10m of National Highways estate:

1. Blackthorn (*Prunus spinosa*)
2. Goat willow (*Salix caprea*)
3. Crack willow (*Salix fragilis*)
4. Dogwood (*Cornus sanguinea*)
5. Italian alder (*Alnus cordata*)
6. Bird cherry (*Prunus avium*)
7. Quaking Aspen (*Populus tremula*)
8. Wild Privet (*Ligustrum vulgare*).

In addition, the following trees must not be planted in a position where at maturity they would be within falling distance of the carriageway or any significant National Highways asset:

9. Silver Birch (*Betula pendula*, *Betula pubescens*)
10. Austrian Pine (*Pinus nigra*)
11. Poplar (*Populus* sp)
12. English Oak (*Quercus robur*, *Quercus petraea*)

Furthermore, the planting of ash (*Fraxinus excelsior*) and larch (*Larix* sp) is ill advised due to the current diseases they spread and succumb to.

However, we consider that these matters could be addressed by a suitable pre-commencement planning condition, although we are willing to consider any further information the applicant wishes to submit prior to determination.

In terms of National Highways existing soft estate, it is noted that there is no construction proposed in the north-east field where there are some trees within National Highways estate that are close to the red line boundary of the application site. In the field where construction is taking place, 'Tree Protection Fencing' is to be provided which should protect any trees that may be within our estate. However, the applicant should note that National Highways will not permit the removal of any trees or vegetation from our estate to facilitate the visibility of advertising.

Dft Circular 01/2022 Policy and Access

DfT Circular 01/2022 sets out our requirements with regards to access in respect of roadside facilities. In particular, paragraph 91 states that *"there must be no route through a roadside facility or its access link between the local road network and the SRN. In addition, any subsidiary accesses must be restricted to staff, deliveries, parties carrying out duties for and on behalf of the Secretary of State, the company, the emergency services, and breakdown recovery and assistance."* Paragraph 92 further states that "access to other developments through a roadside facility or from its connection to the SRN is not permitted. Furthermore, where a new connection is agreed for a proposed roadside facility, the company will expect any subsequent change in the permitted land use to be in accordance with paragraph 22 of this circular." Paragraph 22 set out the expectation that planning authorities should restrict any change in the permitted land use of the associated development unless otherwise agreed by the strategic highway authority and that further through access to other developments should similarly be restricted.

It is noted from the submitted plans that the proposed roundabout junction removes an existing field access which will be replaced by an arm from the roundabout separate to the arm providing access to the development. This additional arm will serve the field to the south-east of the development only. This field is outside of the application red line boundary. It is acknowledged that an alternative access to the adjacent land will need to be provided by the development and on the understanding that this additional spur provides access to the agricultural field only, the requirements of the Circular would be met.

The proposed application site layout also proposes an informal route between the HGV parking area and the plot of land to the north-east which is within the application redline and intended to provide biodiversity enhancements. We consider this connection would also be compliant with the Circular on the understanding that the land the connection serves remains part of the development. It is likely that National Highways would look to recommend a planning condition to ensure that the field remains for biodiversity purposes ancillary to the MRA only and for no other use. No onward connection to any other land would be permitted.

The proposed access roundabout from the B4005 would be located approximately 450 metres south-east of the M4 J16 circulatory. It is stated that a stage 1/2 Road Safety Audit for the proposed junction will be commissioned once the principle of the site access has been agreed with Wiltshire Council. It is stated that this could be subject

to a planning condition. Given the proximity to M4 J16, National Highways would wish to be consulted on the RSA brief and review the suitability of audit team members.

Summary

In respect of the potential operational impacts of the development, National Highways has identified the following issues:

- Supplied Vissim modelling for M4 J16 is currently being reviewed, and comments will be provided direct to the applicant's highways consultants. Evidence of any allowance for unequal lane use at the proposed site access junction should also be provided.
- Traffic growth rates adopted by Eddisons should be reviewed to account for National Traffic Model forecasts in line with TAG Unit M4.
- Committed development flows for the Wichelstowe site are under review with Swindon Borough Council. Allowance should also be made for the current application for housing to the east of Royal Wootton Bassett.
- It is requested that calculations of trip rate estimates, and evidence of hourly and seasonal variation in trip rates is provided for review.
- The suitability of existing merge and diverge layouts should be reviewed following agreement of assessment year traffic flows using CD122 of the DMRB.
- National Highways would wish to be consulted on the brief and audit team for a Road Safety Audit for the proposed access junction from the B4005.
- Matters arising from drainage, landscaping/screening and glint and glare assessments could be addressed by planning condition, although we are willing to consider any further information the applicant submits prior to determination.
- Restrictions in relation to the MRA land use and access in respect of DfT Circular policy compliance would be subject to a recommendation of planning conditions.

Recommendation

National Highways recommends that Wiltshire Council not grant permission in respect of application reference PL/2023/09142 for a period of 6 months from the date of this recommendation.

This is to allow the applicant time to submit further information to enable National Highways to determine whether the proposals will create an unacceptable or severe impact on the SRN in line with the requirements of DfT Circular 01/2022 and the NPPF.

Standing advice to the local planning authority

The Climate Change Committee's 2022 Report to Parliament notes that for the UK to achieve net zero carbon status by 2050, action is needed to support a modal shift away from car travel. The NPPF supports this position, with paragraphs 73 and 105 prescribing that significant development should offer a genuine choice of transport modes, while paragraphs 104 and 110 advise that appropriate opportunities to promote walking, cycling and public transport should be taken up.

Moreover, the *build clever* and *build efficiently* criteria as set out in clause 6.1.4 of PAS2080 promote the use of low carbon materials and products, innovative design solutions and construction methods to minimise resource consumption.

These considerations should be weighed alongside any relevant Local Plan policies to ensure that planning decisions are in line with the necessary transition to net zero carbon.