

Simon Davis

From: Cleaver, Elizabeth <Elizabeth.Cleaver@nationalhighways.co.uk>
Sent: 27 June 2022 18:01
To: [REDACTED]
Cc: Simon Davis; Planning SE; Bowie, David
Subject: National Highways response: Y/3/22/OUT, Land West of Bilsham Road, Yapton
Attachments: A27 YAPTON LANE ITB11324-GA-014 Rev C.pdf

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For attention of:	Mr Thomas Moloney
Site:	Land West of Bilsham Road, Yapton
Proposal:	Hybrid Application comprising of: Outline planning application for further phases of up to 110 No dwellings and associated infrastructure (with all matters reserved) and Full application for Phase 1 for 30 No residential dwellings, new access from Bilsham Road, public open space, landscaping, sustainable urban drainage and associated works. This application is a Departure from the Development Plan and is in CIL Zone and is CIL Liable as new dwellings.
Your Reference:	Y/3/22/OUT
National Highways' Ref:	HAMIS 93768; Tracker #17048; (JSJV SB379)

Dear Mr Moloney,

Thank you for your email of 6 June 2022 regarding the proposed development referenced above. We have reviewed your technical note 'A361-TN007 Rev A' following our earlier correspondence with you and Arun District Council regarding the detail of the Transport Assessment and subsequent technical note 'A361-TN005'. We have reviewed the further information supplied in the Technical Note against the actions raised within our NHPR dated 23 May 2022 and set out below where information remains outstanding in order for us to fully assess the impacts on the strategic road network (SRN).

Personal Injury Collision Analysis

We note that Table 2.1 of your technical note provides *brief* wording from the collision report at Table 2.1. However, the additional information remains insufficiently detailed to enable conclusions to be drawn. This is reflected in the action point below.

ACTION: Full details of the accidents identified from the Personal Injury Collision data need to be provided, to include causation factors, time of day, weather, lighting conditions, vehicle types, movements undertaken which led to the accidents and the resulting outcomes (for

example, rear-end shunt, side-strike) as well as injuries to those involved. This is required in order for the impacts of the proposed development traffic on safety areas of concern to be appraised.

Traffic Impact Assessment – A27/Yapton Lane Junction

The opening year is the date at which the development first becomes available for occupation, unless agreed otherwise, but assuming full occupancy at that date. Hence in this case, 2024 is the development opening year. In accordance with policy, the year 2024 scenarios are those that will inform the need or otherwise for further junction mitigation at this location.

Comments on the outcomes of these modelling exercises are made below.

Updated Models

We understand that the traffic models do not include or represent the committed mitigation scheme referenced in our previous response. Therefore this mitigation scheme layout needs to be tested as discussed below.

A generally accepted figure for the road space required to accommodate a single PCU is 5.5 metres. The available stacking space in the A27 eastbound right hand turn lane is approximately 90 metres. This represents the approximate length of the turn lane where the full carriageway width is available. This equates to approximately 16 PCUs.

Your 2024 assessment indicates that the proposed development increases the queue by 2 vehicles (from 10 vehicles to 12 vehicles). The queue lengths which are presented in the table have been taken from the highest “end queue” value observed across the modelled period. In a majority of cases, this closely corresponds to the “mean queue” value for the Queue Variation data which is included with the detailed modelling outputs (but not referenced directly in the technical note).

The queue variation data provides queue length calculations for a series of statistical points within the expected overall variability of queue lengths on a given arm. As an example, for the 2024 PM Peak “base + committed” model, the stated queue length is 10 vehicles, which corresponds to the highest 15-minute end queue (17.30 to 17.45) and the mean queue value for this same time period in the Queue variation table. However, the more detailed information shows that, whilst the 50th percentile queue length is 1.38, the 90th percentile queue length is predicted as 29 vehicles, with the 95th percentile queue length calculated as 49 vehicles. As set out above, we have calculated the available length of the corresponding right-turn lane to have a capacity of 16 vehicles; therefore, whilst the mean queue would typically fall within this value, the 90th and 95th percentile queue values exceed this by a substantial margin. This indicates that at least 10% of the time a queue forms in this location, it would be expected to extend back to a point where the adjacent running lane of the A27 is obstructed.

The equivalent figures from the 2024 PM Peak “base + committed + development” model are 12 vehicles (end queue / mean queue for the period 17.30 to 17.45), 33 vehicles for the 90th percentile queue length, and 53 vehicles for 95% queue length. This demonstrates that the proposed development would lead to longer queues in this scenario, which would potentially mean that queues exceeding the available storage would occur more frequently.

We therefore request that further analysis of the queue data from the models is accompanied by a Poisson calculation (or similar alternative) to provide an estimate of how much more frequently queues would extend beyond the storage capacity of the turning lane. This should be done for all time periods within the models where the 90th percentile queue length exceeds the calculated storage for the eastbound right-turn lane (16 vehicles).

ACTION: A detailed analysis of the queue variation data produced as part of the submitted modelling exercises must be undertaken, to include a Poisson (or equivalent) calculation in relation to the expected variation of queue lengths. We will then be able to determine whether the junction requires further mitigation.

Mitigation Scheme

As per previous correspondence, there is a committed mitigation scheme for the A27/Yapton Lane junction, as shown on drawing number ITB11324-GA-014 Revision C (attached). Once the junction modelling has been updated considering the above actions, the results will inform our decision on whether any further mitigation is required as per our previous stance.

A further modelling exercise needs to be undertaken for the 2024 and 2031 scenarios with the model layout adjusted to reflect the committed improvement scheme. This should include the statistical analysis of queue length data as described above.

ACTION: The future year model scenarios should be re-tested with an updated layout to reflect the committed improvement scheme (shown on drawing ITB11324-GA-014 Revision C). The tests should include analysis of the detailed queue data in a similar manner to that described for the current models.

Conclusion

As detailed above, there are a number of issues which require further consideration and additional information to be submitted for our review. We look forward to continuing engagement with you on this proposal. To send us further information, or if you have any queries, please contact us at planningse@nationalhighways.co.uk.

Kind regards

Elizabeth Cleaver, Assistant Spatial Planning Manager

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