

Advice Note 04



Spatial Planning Framework Commission

Job number:	K341		
Job title:	Former Tollgate Hotel Gravesend		
LPA name:	Gravesham Borough Council	LPA Ref:	PRE20240151
To:	Nigel De Wit	cc:	
Topic:	Review of Appendices relating to Pre-Application Transport Assessment		
	Prepared:	Checked/Approved	
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Date:	05/07/2024	11/07/2024	

Throughout this response any **ACTION POINTS** for the applicant are shown as **bold underlined**.

Introduction

- 1 National Highways has been consulted by Gravesham Borough Council on a Pre-Application (LPA Reference: PRE20240151) in relation to proposals at the Former Tollgate Hotel, Watling Street, Gravesend, Kent.
- 2 The development proposals include:
 - Demolition of all existing buildings on the Site, in favour of an EV Hub albeit with an initial petrol offer
 - Provision of 24 Electric Vehicle Charging points
 - Erection of a single storey building that is likely to be used as a forecourt shop and café area similar to a petrol filling station with wraparound canopy
 - Erection of six petrol/diesel fuel pump islands in a domino six layout, with a canopy above and fuel storage tanks below, all to the rear of the amenity building
 - Provision of two air/water bays
 - Provision of customer parking to the front on the retail building
 - Construction of vehicle access and circulation areas, with access to the site via the existing albeit improved crossover
 - Provision of supporting infrastructure such as a sub-station and plant room and Perimeter landscaped areas, including new trees, to provide a soft interface between the development proposal and its wider context
- 3 We note that as the proposals stand, based on DfT Circular 01/2022, the facility would not be eligible for signing from the SRN.
- 4 The Pre-Application is supported by a Pre-Application Draft Transport Assessment (DTA) dated 29 May 2024, prepared by Markides Associates on behalf of BP Pulse.
- 5 National Highways provided an interim response to the DTA to the LPA on 10 July 2021. This included a JSJV Advice Note (AN03) and additional advice on boundary issues.

- 6 This Advice Note (AN04) follows on from the interim response, providing comments on the DTA appendices and related matters.

Review of Pre-Application Transport Assessment Appendices

- 7 This review will focus on the DTA appendices that are of relevance to the SRN, with reference to the interim response as per AN03.

| Previous Comments

- 8 As noted in AN03, the following matters are now agreed:

- Trip rates and Trip Generation
- Trip Distribution and Assignment
- Background TEMPRO growth
- Assessment Scenarios
- Collision Analysis

| Baseline Traffic Flows

Manual Classified Count Data (Appendix I)

- 9 Manual Classified Counts (MCC) have now been provided within Appendix I of the DTA as agreed during the 2023 pre-application discussion, with corresponding Network Flow Diagrams also being included that cover the following junctions:

- A227 Wrotham Road / Coldharbour Road / Wrotham Road roundabout;
- A227 Wrotham Road / A2 eastbound slip road roundabout; and
- A227 Wrotham Road / A2 westbound slip road roundabout.

- 10 Following a review of the submitted MCC data, these were conducted on 2 March 2023, which, in accordance with the guidance of TAG unit M1.2, has been undertaken on a neutral day (Thursday) within a neutral month (March). We therefore consider the submitted information acceptable with regard to MCC data.

2023, 2025 and 2028 'Baseline Flows' (Appendix K)

- 11 Traffic data collected as part of the MCC information has been presented in a series of turning flow diagrams that cover the 2023, 2025 and 2028 assessment years – this is provided within Appendix K of the submitted DTA.

| Committed Development

Committed Development Flows (Appendix L)

- 12 A list of four committed developments was submitted for confirmation with National Highways in February 2023:
- EDC/22/0168 – Ebbsfleet Central East;
 - 20221064 – Northfleet Harbourside;
 - 20210270 – Albion Waterside; and
 - Lower Thames Crossing.

- 13 These initial committed developments were accepted in principle by National Highways subject to written evidence from the LPA being provided confirming the committed development requirements.
- 14 Subsequently, a fifth committed development development was added as part of the latest DTA:
- 20141214 – Land at Coldharbour Road, Northfleet, Gravesend
- 15 **However, Appendix L of the DTA does not contain any correspondence from the LPA confirming the list of committed developments to be considered and this is still required.**

Traffic Flow Diagrams – Junction Capacity Assessments (Appendix M)

- 16 Until the committed developments have been confirmed, we are unable to comment on the acceptability of the traffic flow diagrams contained within Appendix M.

SRN Junction Capacity Assessments

A227 Wrotham Road/ A2 Eastbound Slip Road/Site Access Roundabout – ARCADY Reports (Appendix N and O)

Proposed Development Trip Impact

- 17 Based on information provided, the proposed development vehicle trip impact on the A227 Wrotham Road/ A2 Eastbound Slip Road/Site Access Roundabout is expected to be 217 two-way trips in the AM Peak hour (08:00-09:00) and 234 two-way trips in the PM Peak hour (17:00-18:00).

Junction Capacity Assessment Model

- 18 Appendix N contains 2023 base model outputs with non-adjusted slope and intercept. Appendix O contains model outputs for all modelled assessment years with manual adjustments to the slope and intercept for the A227 North Arm, as part of the calibration/validation process.

Model Geometry

- 19 Following a review of the model structure, we can confirm that the geometries, arm arrangements and labelling of each arm match the current layout of the A227 Wrotham Road/ A2 Eastbound Slip Road/Site Access Roundabout.

Modelled Flow Inputs

- 20 Use of the 'One Hour' traffic profile for the 2023 base flows correlates to the submitted traffic survey data in Appendix I of the DTA.

2023 Base Model Calibration/Validation

- 21 We have compared the 2023 base model modelled maximum queues (Appendix O) with the observed maximum queues (Appendix I) and note that there are some differences, specifically on the A227 North and the A2 eastbound off-slip.
- 22 **The calibration/validation of the 2023 base model of this junction is required to be improved so that it more accurately represents typical operating conditions at this junction during the morning and evening peak hours.**
- 23 Furthermore, until the 2023 base models are agreed, we will not review any future year models as the results of these are subject to change.

A227 Wrotham Road/ A2 Westbound Slip Road Roundabout – ARCADY Reports (Appendix P and Q)

Proposed Development Trip Impact

- 24 Based on information provided, the proposed development vehicle trip impact on the A227 Wrotham Road/ A2 Westbound Slip Road Roundabout is expected to be 98 two-way trips in the AM Peak hour (08:00-09:00) and 83 two-way trips in the PM Peak hour (17:00-18:00).

Junction Capacity Assessment Model

- 25 The DTA includes Junctions 9 ARCADY modelling of the A227 Wrotham Road/ A2 Westbound Slip Road Roundabout. We note that Appendix P contains ARCADY model outputs without lane simulation whilst Appendix Q contains ARCADY model outputs for the with lane simulation model.

Model Geometry

- 26 Following a review of the model structure, we can confirm that the geometries, arm arrangements and labelling of each arm match the current layout of the A227 Wrotham Road/ A2 Westbound Slip Road Roundabout.

Modelled Flow Inputs

- 27 Use of the 'One Hour' traffic profile for the 2023 base flows correlates to the submitted traffic survey data in Appendix I of the DTA.

2023 Base Model Calibration/Validation

- 28 We have compared the modelled maximum queues with the observed maximum queues for both the with and without lane simulation 2023 base models.
- 29 For the non-lane simulation model, we note that there are some significant differences, specifically on the A2 westbound off-slip and the A227 South.
- 30 For the lane simulation model, again we note some significant differences specifically on the A2 Westbound off slip and the A227 South.
- 31 **The calibration/validation of the 2023 base models of this junction are required to be improved so that it accurately represents typical operating conditions at this junction during the morning and evening peak hours.**
- 32 Furthermore, until the 2023 base models are agreed, we will not review any future year models as the results of these are subject to change.

A227 Wrotham Road/ A2 Eastbound Slip Road/Site Access Roundabout – Mitigation ARCADY Report (Appendix T)

- 33 Until we have agreed base and future year models of the existing junction layout, we are unable to make any substantive comments on the 'Mitigation ARCADY' model results.

A227 Wrotham Road/ A2 Westbound Slip Road Roundabout – Mitigation ARCADY Report (Appendix U)

- 34 Until we have agreed base and future year models of the existing junction layout, we are unable to make any substantive comments on the 'Mitigation ARCADY' model results.
- 35 Furthermore, we note that the 'Mitigation ARCADY' models utilise the lane simulation function within ARCADY.
- 36 **To enable a fair comparison to be made, if lane simulation is to be utilised for the 'with mitigation scheme' scenario, it should be based on a calibrated/validated 2023 base year lane simulation model of the existing layout.**

| Merge/Diverge Assessment (Appendix R)

- 37 JSJV has reviewed the merge/diverge assessment diagrams contained within Appendix R of the DTA, with reference to the corresponding section in the main DTA report.
- 38 It is important to note that we have undertaken a high - level review of these assessments, as the committed development traffic flows which are included in some of the assessed scenarios are yet to be confirmed.

- 39 Notwithstanding the above, this review has been undertaken with reference to DMRB CD 122 Geometric design of grade separated junctions and our initial conclusions are summarised as follows:

Eastbound Merge:

- Current arrangement corresponds to a Type A. However, for the PM 2023 the assessment indicates that a Type D arrangement would be required thus, it can be concluded that the current situation is already substandard
- From 2025 'Do nothing' assessment, the Type A would be insufficient, and a Type D arrangement would be required
- The DTA states that the development would not have a material impact as the merge is already substandard

Eastbound Diverge:

- The existing situation corresponds to a Type A diverge arrangement, although the assessment for PM 2023 indicates that a Type C would be required at this location thus, it can be concluded that the current situation is substandard as per the Eastbound merge
- The 2025 scenarios also required a Type C but for the 2028 Do Nothing / 2028 Do Minimum / 2028 Do Minimum sensitivity even further improvements would be required in a form of Type D (lane gain) diverge arrangement
- The DTA states that the development would not have a material impact as the diverge is already substandard

Westbound Merge

- Current arrangement is Type B and the AM/PM 2023 assessment concludes that a Type B is required, therefore the current situation in this case meets standards
- From 2025 'Do nothing' assessment, a Type D merge arrangement would be required for all scenarios
- The DTA states that there would be no material impact resulting from the proposed development, as all the 'Do nothing' scenarios would also require a Type D arrangement

Westbound Diverge

- Current arrangement is Type A and the AM/PM 2023 assessments conclude that a Type A is required, therefore, the current situation meets standards
- From 2028 'Do nothing' assessment, the Type A diverge arrangement would be insufficient and a Type C would be required
- The DTA states that there would be no material impact resulting from the proposed development

- 40 Subject to the committed development flows being confirmed, JSJV would agree, in principle, with the general conclusion that the proposed development itself would not result in any changes to the merge/diverge types required.

- 41 However, clarification is required in relation to paragraphs 6.3.7 and 6.3.8 in Section 6 of the DTA, in relation to the four-lane approach.

- 42 **References are made to lowest flows recorded within this lane criteria but we have been unable to find the corresponding merge/diverge diagrams in Appendix R in order to verify the findings, as presented in Table 6-10 of the DTA. For completeness this should be provided.**

| Improved Site Access Dimensions (Appendix S)

- 43 Appendix S consists of drawing number 22052-MA-XX-SK-C-0001- P01, titled 'ARCADY Measurements'. The drawing illustrates the proposed site access modifications.

- 44 JSJV has reviewed the above referenced drawing showing the proposed site access modifications and note that the part of the site access road which connects to the A227 Wrotham

Road/ A2 Eastbound Slip Road/Site Access Roundabout gyratory falls outside of the development's red line boundary.

- 45 We understand that it forms part of Kent County Council's local highway network and as such, this is a matter for them to consider, as the LHA. **We recommend that the Applicant contact KCC Highways for comments in respect of the proposed site access modifications.**

| A227 Wrotham Road/ A2 Westbound Slip Road Roundabout Scheme

- 46 Drawing Number 22052-MA-XX-DR-C-0102 Rev P02 'Roundabout Sign and Road Marking Proposal' illustrates the mitigation proposals for this roundabout.
- 47 The proposals comprise the removal of the left turn arrow from the nearside lane of the A2 westbound off-slip, to allow both lanes to be used to travel north towards Gravesend. It is noted that no further lane marking changes are proposed and that the existing lane length is being retained.
- 48 We will be able to provide further comments on the proposed changes once the junction modelling has been agreed.
- 49 The DTA also states that advanced signage would also be provided the slip road to advise drivers that both lanes can be utilised.
- 50 **We note that details of the proposed advanced signage have not been provided as part of the current submission and the applicant is requested to provide this for review.**

Other Matters

| Advertisement Displays

- 51 It is identified in drawing 14170-22 revision D two pole signs labelled as 'subject to consent to advertise'. Both are to be placed nearby the boundary that abuts the SRN and therefore will be visible from the SRN.
- 52 However, no assessment has been made at this stage as there is an annotation on the drawing which states that 'Any advertisements are indicative and are subject to a separate advertisement application'.

| CEMP Requirements

- 53 At the appropriate stage of the planning process, we suggest that National Highways recommends a suitable planning condition in relation to the need for a Construction Environmental Management Plan (CEMP) to be prepared, agreed with National Highways and adhered to.

Conclusion

Further information required – ideally at the pre-application stage
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