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To: [M25 Junction 28](#)
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Subject: M25 Junction 28 improvements - Transport for London Deadline 5 submission
Date: 13 April 2021 14:53:55
Attachments: [M25 J28 TfL Deadline 5 submission.pdf](#)

Dear Sir/Madam,

Please find attached Transport for London's submission for Deadline 5 of the M25 Junction 28 improvements DCO examination.

If you require any further information then please get in touch.

Kind regards,

Matthew

Matthew Rheinberg | Major Projects Manager

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TRANSPORT FOR LONDON

M25 JUNCTION 28 IMPROVEMENTS – DEADLINE 5 SUBMISSION

13 APRIL 2021

I. Introduction

- I.1 This document provides TfL's responses to the Further Written Questions (WQ2) and requests for information made by the Examining Authority for the M25 Junction 28 improvements scheme. Responses have been provided to all questions directed to TfL and any other questions relevant to TfL's interests.
- I.2 The response to most questions is provided in Section 2. For two questions where longer responses are required, concerning the Ground Investigation Report and Outline Traffic Management Plan, TfL's responses are provided in Sections 3 and 4 respectively. This submission concludes with further comments on Deadline 4 submissions in Section 5.

2. Response to ExA's Further Written Questions (WQ2)

Reference	Subject and Interested Parties	Question	TfL's response
CA	Compulsory Acquisition		
CA 2.2	<p><i>Plot 1/6, and Plots 1/3 and 1/1(a) to (d)</i></p> <p>Transport for London</p>	<p>At the CAH1, TfL cited concerns with the need for Plot 1/6 to be CA for the freehold. The Applicant responded, confirmed in its written summary of oral submissions put at a Hearing [REP4-014] and in its response to Action Point 9 [REP4-018] that Plot 1/6 was necessary <i>"to secure access to an existing drainage channel and outfall associated with the A12 but which will also serve the new loop road, for ongoing maintenance"</i>. The Applicant goes on to state that <i>"TfL has since provided...further comments which are under consideration"</i>.</p> <p>i) Update the ExA as to whether objections to Plot 1/6's CA remain.</p> <p>ii) Respond to the Applicant's response to Action Point 9 in respect to Plots 1/1(a) to (d) and Plot 1/3.</p>	<p>i) As set out in paragraphs 2.2.10 and 2.2.11 of TfL's Deadline 4 submission [REP4-038], the Applicant has now provided further information about why permanent rights over Plot 1/6 are required. TfL is now satisfied with the approach being taken by the Applicant for this plot.</p> <p>ii) TfL has reviewed the Applicant's response to Action Point 9 from the Compulsory Acquisition Hearing [REP4-018], the changes to Schedules 6 and 8 of the draft DCO [REP4-007], and the changes to the Book of Reference and Land Plans [REP4-019].</p> <p>TfL has no remaining issues with the compulsory acquisition proposals for, and any amendments to the boundaries of, Plots 1/lb, 1/lc and 1/ld.</p> <p>For Plot 1/1a, TfL remains of the view that the acquisition of permanent rights as proposed in the draft DCO is unnecessary, as the New Roads and Street Works Act 1991 (NRSWA) could be used to obtain the necessary permissions instead. The Applicant acknowledged this in its response to TfL's Deadline 3b submission [REP4-011 table row REP3B-008-1] but stated that it "does not wish to rely on other legislation but instead to bring all the necessary powers within the scope of the DCO where it may do so". TfL does not consider the acquisition of permanent rights to be necessary given the established alternative of the NRSWA that is available to the Applicant.</p> <p>For Plot 1/3, the acquisition of permanent rights is only appropriate if TfL is responsible for the ownership and maintenance of the new A12</p>

			eastbound off slip road. Should it be determined that the Applicant will own and maintain this new slip road then permanent acquisition of Plot 1/3 would be necessary instead. TfL's remaining issue with Plot 1/3 is associated with the small part of this plot towards the western end located at the entrance of the new private means of access (Work No. 19A) for maintenance of the scheme. TfL considers that this part of Plot 1/3 should be maintained by the Applicant, as is proposed for the remainder of the private means of access. This requires Plot 1/3 to be split with the Applicant seeking permanent acquisition of the part of Plot 1/3 at the entrance to the new private means of access.
DCO	Draft Development Consent Order (dDCO)		
DCO 2.3	<p><i>Schedule 2 – Requirement 18</i></p> <p>London Borough of Havering</p> <p>Brentwood Borough Council</p> <p>Essex County Council</p> <p>Transport for London</p>	Comment on the wording in the draft DCO submitted at Deadline 4 [REP4-002] in respect to consultation responses being advanced to the SoS before any Requirement is discharged.	TfL proposed in Appendix A of its Deadline 4 submission [REP4-038] that the consultation period should be no less than 28 days and that additional wording should be added to require the undertaker to have regard to the consultation responses received. These changes have been made to the wording of Requirement 18 of the draft DCO submitted at Deadline 4 and TfL is satisfied with this revised wording.
GS	Geology and Soils		
GS 2.1	<p><i>Ground Investigation Report</i></p> <p>London Borough of Havering</p> <p>Transport for London</p>	Comment on the adequacy of the Ground Investigation Report (GIR) submitted at Deadline 1 [REPI-023, REPI-024 and REPI-025] and the Applicant's response as set out at ISHI, confirmed in its oral submissions at Deadline 4 [REP4-016] that an outline Materials Management Plan does not need to be submitted into the Examination.	TfL's response to this question is set out in Section 3 of this document.

	Environment Agency		
TA	Traffic and Access		
TA 2.2	<p><i>Extended Intergreen Signalling at Brook Street Roundabout</i></p> <p>The Applicant Transport for London</p>	<p>In its response to ISHI Action Points 2 [REP4-021] received at Deadline 4, the Applicant confirmed that it has agreed, following a meeting on 8 March 2021, to address the matter of intergreen signalling at Brook Street as part of a separate legal agreement.</p> <p>i) Confirm that the legal agreement described will be completed before the close of the Examination.</p> <p>ii) Submit a draft version of the separate legal agreement to the Examination at Deadline 5, Tuesday 13 April 2021.</p>	<p>TfL and the Applicant held a further meeting on 1 April 2021 where the means of securing a reduction in delays on the A1023 approach to the Junction 28 roundabout, by extending the timing of the intergreen period for the traffic signals, was discussed. The Applicant has advised TfL that instead of securing this in a legal agreement, it does not object to including an additional requirement in respect of intergreen timing in the DCO. TfL considers this to be more appropriate given that Essex County Council, Brentwood Borough Council and the London Borough of Havering all have an interest in the management of delays on the A1023; it is not just a matter between the Applicant and TfL.</p> <p>TfL understands that the Applicant will submit proposed wording for a new requirement on this matter at Deadline 5.</p>
TA 2.3	<p><i>Proposed Access / Egress at Grove Farm</i></p> <p>The Applicant Transport for London London Borough of Havering</p>	<p>The representatives of Mr & Mrs Jones submitted revised proposals at Deadline 4 [REP4-036] for access / egress to and from their property.</p> <p>Provide comments on these proposals.</p>	<p>TfL has reviewed the proposed new location for the egress from Grove Farm onto the new A12 eastbound off slip road set out in the plan in document REP4-036. This results in the egress being located approximately 120 metres from the proposed stop line at the roundabout instead of the current distance of approximately 70 metres, an increase of 50 metres.</p> <p>TfL has not identified any immediate safety concerns with this proposal when compared with the layout currently proposed by the Applicant. It would be important to demonstrate that there is sufficient visibility to and from the new egress location for the required design speed. The alternative egress location may require a new or revised departure from standards.</p>

			TfL is not able to comment on the proposal in terms of construction feasibility or environmental impacts and we would expect the Applicant to consider these alongside a full assessment of road safety implications.
TA 2.4	<i>Outline Traffic Management Plan</i> The Applicant Interested Parties	An outline TMP was submitted by the Applicant at Deadline 4 [REP4-013]. The ExA notes that the outline TMP does not appear to address the impact of temporary closures to the A12 eastbound off slip to junction 28 and any associated diversions during construction work. <u>For the Applicant:</u> i) Confirm that temporary closures are no longer considered necessary for this section of road. If this is not the case indicate where the diversion caused by such a closure is described in the outline TMP. <u>For Interested Parties:</u> ii) Comment on the outline TMP.	TfL's response to this question is set out in Section 4 of this document.
TA 2.5	<i>Outline Traffic Management Plan</i> The Applicant Interested Parties	The ExA notes the Petersfield Avenue vehicle swept path analysis submitted in Appendix E of the outline TMP [REP4-013] and observes that this analysis appears to show that articulated vehicles carrying out the proposed u-turn will mount the kerb before (or while) crossing the eastbound carriageway. <u>For the Applicant:</u> i) Confirm whether the ExA's interpretation of the swept path analysis is correct. <u>For Interested Parties:</u> ii) Comment on the appropriateness of the proposed u-turn manoeuvre based on the swept path analysis.	TfL notes that paragraph 2.3.5 of the outline TMP states that the existing junction between the A12 and Petersfield Avenue cannot accommodate articulated heavy goods vehicles (HGVs) turning from the westbound to eastbound A12 to access the construction compound. TfL has reviewed the swept path analysis in Appendix E of the outline TMP and agrees with this conclusion. The implication of this is that HGVs will need to turn from the westbound to eastbound A12 at Gallows Corner instead.
TA 2.6	<i>Outline Traffic Management Plan</i>	In its response to Action Point 2 [REP4-026] of ISH2 [EV-010], the Applicant declined to delete Part 3, Article 18(2)(c) which authorises the use as a parking place on any road. The	TfL has not identified any reference to parking for construction workers in the outline TMP. TfL notes that the construction parking strategy needs to

	The Applicant Interested Parties	Applicant confirms that Woodstock Avenue would not be used for operative or construction parking. Confirm whether the outline TMP [REP4-013] contains within it a construction parking strategy for operatives and / or identifies which of the surrounding road network would be used under this Article in the draft DCO [REP4-002].	consider any safety or operational impacts on the AI2. In addition to considering implications for local residents, if workers are required to walk alongside or cross the AI2, the strategy must demonstrate how this could safely be achieved.
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3. Response to Written Question GS 2.1 – Ground Investigation Report

Comment on the adequacy of the Ground Investigation Report (GIR) submitted at Deadline 1 [REPI-023, REPI-024 and REPI-025] and the Applicant's response as set out at ISHI, confirmed in its oral submissions at Deadline 4 [REP4-016] that an outline Materials Management Plan does not need to be submitted into the Examination.

- 3.1 TfL has reviewed the Ground Investigation Report and considers it to be comprehensive and contains the information on ground conditions that TfL needs to see. The report highlights risks around the stability of the ground in the area which are set out below and emphasises the importance of TfL being involved in the design process if it becomes responsible for the new A12 eastbound off slip road.
- 3.2 The report confirms the presence of superficial materials near the surface consisting of soft cohesive soils with high plasticity and high potential for swell/shrinkage with saturated groundwater levels. The construction of embankments and other load bearing structures on this type of material poses a significant risk regarding future settlement and maintenance concerns over a long period of time. While these risks have been highlighted in the report, TfL does not have information about how these risks have been mitigated through the design option being taken forward. TfL is therefore seeking more information from the Applicant about how the design option selection process took on board the recommendations of the Ground Investigation Report so that it can be assured that the option chosen will not suffer from increased maintenance requirements in the long term.
- 3.3 Other key areas highlighted by the report where TfL requires further information from the Applicant are:
- the above-mentioned excavated cohesive material is to be re-used for the construction of new earthworks and embankments, which will result in these structures having settlement and swell/shrink characteristics that could impact on maintenance requirements; TfL needs to understand what whole life cost assessment has been carried out and the design measures to mitigate ground movement adopted to reduce the burden of additional resulting maintenance;
 - the use of reinforced earth embankments, reinforced earth walls and abutments will impact on the durability and design life of the scheme; more information on the fill materials is required;
 - the 7.5-metre high embankment for the new A12 eastbound off slip road will be filled with expanded polystyrene; TfL needs to understand the design life of this product and records of its performance where used elsewhere in the UK as TfL has no experience of maintaining assets composed of such material; and
 - a contiguous anchored pile wall is to be used but it is not clear what type of anchors are to be used, and the future inspection and testing of ground anchors will present a high maintenance cost during the whole design life of the structure.
- 3.4 Given the concerns over the risk of settlement impacting on the structures and carriageway, TfL is seeking information from the Applicant on the forecast upper and lower bounds of likely settlement on the carriageway, to understand whether this is acceptable from a maintenance perspective.
- 3.5 There are also various exceedances of certain constituents observed in the assessment of soil reported. TfL will need to review the engineering solutions that are developed during the detailed design phase to mitigate the risk of pollutants reaching the water courses, to

ensure there is no risk of drainage infrastructure that TfL is asked to take on having a role in pollutant linkages.

- 3.6 With regards to an Outline Materials Management Plan, this will be important to TfL as it will provide evidence of which materials will be used in construction of the embankments and structures, and which will be discarded. For example, it is likely that bands of 'soft' clays will be encountered during the excavation which would not be suitable for the construction of embankments and structures. While TfL recognises that a full Materials Management Plan cannot be produced until the detailed design is completed, TfL considers that submission of an outline plan to the Examination would be beneficial to provide assurance on the principles of re-use of excavated materials given concerns over their suitability for use in the embankments and structures.

4. Response to Written Question TA 2.4 – Outline Traffic Management Plan

An outline TMP was submitted by the Applicant at Deadline 4 [REP4-013]. The ExA notes that the outline TMP does not appear to address the impact of temporary closures to the A12 eastbound off slip to junction 28 and any associated diversions during construction work.

For the Applicant:

i) Confirm that temporary closures are no longer considered necessary for this section of road. If this is not the case indicate where the diversion caused by such a closure is described in the outline TMP.

For Interested Parties:

ii) Comment on the outline TMP.

Introduction

- 4.1 TfL welcomes the submission of the Outline Traffic Management Plan (TMP) [REP4-013] to the Examination as it provides valuable additional information about the construction impacts of the scheme.

Impact of the works on traffic flows and journey times

- 4.2 TfL has reviewed the proposals for traffic management in the context of Section 6 of the Transport Assessment Supplementary Information Report (TASIR) [PDB-003] which considered the traffic impacts during construction. TfL recognises that the TMP is an outline document and the details of traffic impacts will become clearer as the design is developed. However, TfL notes that disruption on the A12 set out in Table 2-4 of the outline TMP is more significant than suggested by paragraph 6.1.4 of the TASIR, with lane 1 of the eastbound A12 carriageway closed for approximately 1.8 km during off peak periods for a total of 141 days over a seven-month period for statutory undertakers diversions. This in particular draws into question the validity of the off-peak modelling presented in the TASIR, which only considered a lane closure on the A12 eastbound off slip road and Junction 28 roundabout.
- 4.3 Modelled data for the 2022 Do Minimum scenario provided to TfL by the Applicant shows that off peak flows on the eastbound A12 approaching M25 Junction 28 are between 65 and 81 per cent of the flows during the peak periods, i.e. traffic levels during the off peak period are only reduced by up to 35 per cent. However, a daytime lane closure will reduce road capacity by approximately 50 per cent. TfL is therefore concerned that the daytime lane closures of the eastbound A12 for diversions of utilities for 141 days may be more disruptive than the scenarios presented in the TASIR. TfL requests that the Applicant assesses the

impact of this A12 carriageway lane closure to identify the scale of impact of the disruption and submits this to the Examination.

- 4.4 TfL also notes that no full closures of the A12 eastbound off slip road are listed in Tables 2-3 to 2-5 of the outline TMP despite the Applicant previously advising that at least some night closures would be necessary. If no full closures of this slip road are required, then some of the concerns that TfL and other Interested Parties have previously raised would be removed; for example, there would be no need for diversion of TfL buses that use this slip road. TfL requests that the Applicant clarifies the position about whether any closures of this slip road are necessary.
- 4.5 TfL is also concerned about the statement in paragraph 2.3.14 of the outline TMP which suggests that narrow lane running on the eastbound A12 could cause increased hazards to pedestrians on the adjacent footway, with the implication that nearside lane closures of the eastbound A12 may be necessary instead. Given that Table 2-4 shows that narrow lanes are proposed for a total of 185 days (in addition to the 141 days of off peak lane closures described in paragraph 4.2 above), this has the potential for significant disruption to the A12 if the narrow lane solution was found to not be safely operable. TfL considers the safety of pedestrians to be paramount but is also greatly concerned about the substantial disruption that an additional 185 days of the nearside lane being closed (not just in off peak periods) would cause. If a prolonged closure or diversion of the Non-Motorised User route is to be proposed as an alternative, the implications of this also need to be understood. TfL considers that additional clarity on this matter is required and submitted to the Examination so that it can be assured about the impact of the scheme on traffic flows on the A12 and pedestrian safety.
- 4.6 TfL agrees with the Applicant's conclusion that the junction between the A12 and Petersfield Avenue is not suitable for turning large construction vehicles, as set out in TfL's response to Written Question TA 2.5 above.

Co-ordination with other works

- 4.7 Table 2-2 of the plan includes key principles, with principle 01 referring to co-ordination with other roadworks and improvements, with further detail provided in paragraphs 2.3.21 to 2.3.24. TfL welcomes the acknowledgment of the need to co-ordinate with works for the Lower Thames Crossing, and to co-ordinate with other works being undertaken by Highways England, TfL and Essex County Council. In particular, TfL is aware of several separate programmes to resurface the M25 for durations of between 15 and 40 nights, during which traffic will be diverted onto the TfL road network (TLRN). Any such closures need to be co-ordinated between the contractors for these works, to ensure that disruption is manageable.

Diversion routes

- 4.8 TfL notes the substantial length of several of the diversion routes during any closures but agrees that in principle the routes are appropriate. Given that most routes use the TLRN, early co-ordination with TfL will be vital to ensure appropriate planning and co-ordination with any other works, and timely and effective communication to drivers and other affected stakeholders must be put in place.
- 4.9 TfL also notes that the customer requirements table (Table 2-1) specifies that appropriate diversion routes will be agreed with bus operators. TfL considers that should diversion to bus routes actually be necessary (see paragraph 4.4 above), this agreement is needed sufficiently in advance of the works affecting bus operations to ensure the diversion routes and customer communications can be planned appropriately. TfL also welcomes the

acknowledgment that a process and procedure is needed for emergency services to have access through the works; this will be particularly important if any closures of the A12 eastbound off slip road to general traffic are required.

Communications

- 4.10 TfL is listed as a partner in Table 2-1 and the intention for TfL to be invited to traffic management meetings is supported. The table also specifies that TfL will be provided with advance notice of closures and diversions; this will be essential for the successful management of the works and it is imperative that TfL has good communication with the scheme managers, to ensure appropriate planned responses are put in place.
- 4.11 TfL also welcomes the use of advance notices via Variable Message Signing (VMS) and various media outlets, as set out in principles 09 to 12 and 15 of Table 2-2 to ensure that drivers are notified and can plan alternative routes if necessary during disruptive periods of works, helping to mitigate any congestion impacts.

5. Comments on responses for Deadline 4

- 5.1 TfL also wishes to comment on the Applicant's response to Action Points from Issue Specific Hearing 2 [REP4-026]. TfL notes the Applicant's response to Action 9 regarding how improvements to the Non Motorised User (NMU) route could be secured in the DCO. TfL remains of the view that the pedestrian/cycle crossings around the Junction 28 roundabout are the greatest barrier to use of this route, leading to severance, so this part of the route should be improved as part of the M25 Junction 28 improvements scheme.
- 5.2 TfL would in principle support the Applicant's proposal to include additional works in the DCO to improve the route through Junction 28, including the enhancement to provide a shared footway/cycle track with toucan crossings where the route crosses the roundabout. However, it is not clear whether this would address the concern raised in paragraph 5.13 of TfL's Written Representation [REP2-036] that the Applicant must ensure that safe crossings of the slip roads must be provided where the NMU route crosses these. The Applicant must demonstrate that these crossings are safe as part of any proposal for upgrading the NMU route.
- 5.3 TfL also notes that the Applicant has approached TfL and other highway and planning authorities to enquire whether they could make a financial contribution and/or assist in the procurement and delivery of the separate scheme to upgrade the NMU route for which the Applicant is bidding for designated funds. TfL does not consider it appropriate that it should financially contribute towards improvements to the NMU route around the Junction 28 roundabout which are necessary to address the impact of the national road network on severance at this location.