M25 junction 28 improvement scheme

TR010029

9.35 Applicant's comments on Local Impact Report submitted by Essex County Council

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Development Consent Order 202[x]

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Author:	M25 junction 28 scheme, Project Team, Highways England

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Chapter Pages

1. Structure of document

1.1.1 This document sets out Highways England's comments on the Local Impact Report (LIR) submitted by Essex County Council on 29 January 2021 as a late submission to Deadline 1.

1.1.2 It is noted that the LIR contains background information which Highways England does not consider it necessary to respond to and as such, only those comments which are considered necessary to respond to have been included in Section 2. Where a comment from the LIR has not been included in Table 2-1, it can be considered that Highways England notes the point raised by Essex County Council.

2. Highways England's Response to Local Impact Report

Table 2-1 Highways England's response to Local Impact Report

Paragraph	Issue	Highways England's Response
Transport Models		
2.5.1	*The performance of the M25NEv2 base year models as described above is detailed in the M25 NE Local Model Validation Report (2018). However, the updated Traffic Data Collection Report has not been provided. Not with standing this, the TA demonstrates that the necessary steps have been undertaken to show that the M25NEv2 meets TAG guidance and is suitable to analyse the traffic impacts of the Scheme.*	The Transport Assessment Report (APP-098) contains a summary of the Traffic Data Collection Report, with all relevant information provided within it to enable all interested parties to adequately understand the development, calibration and validation of the baseline model. It is also noted that the local model validation reports provide the present the processed traffic data collected, in the format used throughout the model development, calibration and validation. Consequently, Highways England consider it unnecessary to provide Essex CC with the Traffic Data Collection Report.
2.7	Baseline data collection *The TA summarises the traffic data collected in November 2016, namely Automatic Traffic Counts at 24 sites over a three week period, Manual Classified Counts at 3 sites for two days (M25 Junction 28 circulatory carriageway, Brook Street/ Nags Head Lane junction and Brook Street/ Mascalls Lane junction), and TomTom journey time data for six routes undertaken during the same period. The location of the ATC, MCC, and Journey Time surveys are identified in Figures 3.6, 3.7, 3.8 and 3.9 of the TA.* *Site visits and video surveys were undertaken on 24/02/2016 between 07:00 and 12:00 to understand how M25 Junction 28, Brook Street/ Nags Head Lane and Spitals Lane/ Mascalls Lane junctions operate. The Brook Street / Nags Head Lane signalised junction is located east of the M25 Junction 28.* *Based on both the site visit and video surveys undertaken in 2014, it was noted that eastbound traffic queues on Brook Street block back from the Nags Head Lane junction on to the M25 Junction 28 roundabout in the AM peak. This queueing presents significant congestion and safety concerns to both circulatory traffic and traffic attempting to exit M25 Junction 28 onto Brook Street.* *Site observations showed that the key causes of queuing on this approach were the high demand and low discharge rate of the straight movement onto Brook Street east. The low discharge rate was due to the downstream merge on the Brook Street east exit. This was exacerbated by cars parked in front of a shop parade and a bus stop which was used frequently during the AM peak.* *Long queues were also observed forming at the Mascalls Lane/ Spitals Lane signalised junction, which is approximately 300 metres downstream of M25 Junction 28. These queues were the result of slow-moving eastbound traffic along Brook Street occasionally blocking the exit at the Brook Street/ Nags Head junction.* *A high demand on the right turn from Brook Street West into Mascalls Lane was also observed. The current phasing at the junction is not synchronised with the Brook*	See response to 2.5.1 above.

Paragraph	Issue	Highways England's Response
	Street/ Nags Head Lane junction. As a result, the right turn at the Mascalls Lane/ Spitals Lane junction blocked the Brook Street ahead movement. These queuing issues affect the performance of the Nags Head Lane junction and subsequently impact the operation of the M25 Junction 28. *Without a Traffic Data Collection Report, this review cannot determine if the traffic data collection satisfies TAG guidance.*	
2.13	Road Safety Audit *The RSA identified two key issues that this report considers:* *1) Issue 2 identified the discontinuous nature of the proposed footway adjacent to A12 eastbound. The design team disagreed and stated the improvement scheme is providing like for like replacement. However, they did recognise that though improvements to pedestrian facilities were outside the scope, they are being investigated as a designated funds scheme.* *2) The horizontal alignment of the M25 exit to the link road encourages faster speeds and increases the risk of loss of control type collisions due to the unfamiliar layout. The design team disagreed stating the loop road geometry complies with TD22 (now CD122) guidance. However, they recognised that other RSA recommended measures could be undertaken to reduce speeds. These have been adopted in the Scheme design.* *The ECC recommends that the HE undertakes improvements to the cycle and pedestrian facilities on the approaches and within Junction 28.*	At present, pedestrians and cyclists are able to cross the Brook Street roundabout via a footway leading along the northern side of the A12 eastbound off-slip, cross to the inside of the Brook Street roundabout at the end of the slip and cross again at the A12 westbound on-slip. It is then possible to cross the M25 northbound off-slip, pass under the M25 and cross the M25 southbound on-slip to reach Brook Street. As noted within Tables 13.29 and 13.30 of the People and Communities assessment (APP-095) the Scheme involves minimal alterations to the existing NMU routes and would re-provide a widened pedestrian footway along the northern side of the A12 off-slip. The crossing point at the end of the A12 off-slip to the inside of the Brook Street roundabout would remain as shown on the Streets, rights of way and access plans (APP-007). As such the Scheme retains the provisions for pedestrians and cyclists. Highways England is currently in the process of applying for Road Investment Strategy 2 Designated Funds for the implementation (construction) of a proposed wider NMU route in the vicinity of M25 junction 28. Designated funds are separate to Highways England's core work of operating, maintaining and improving England's strategic road network. They provide ring-fenced funding to be invested in and to support initiatives that deliver lasting benefits for road users, the environment and communities across England. The NMU scheme comprises the conversion of 3.1km of existing walking route into a high-quality shared use cycling and walking route. The proposal comprises continental-standard cycling provision between A1023 / Kavanaghs Road junction and the M25 junction 28. The proposed improvements would continue west of junction 28 linking with the NCN route 136 in Harold Wood. The NMU proposal has been developed in consultation with Essex Country Council, London Borough of Havering, Brentwood Borough Council and Transport for London. This application for Designated Funds for the wider NMU proposal is separate to this DCO application, though the designs are compatible with each other.
Supplementary Report		
3.1	Brook Street *In Section 5 the Applicant presents the results of the low and high growth scenarios. In the low growth scenario, the changes between the DS and DM appear consistent with the core scenario but of lower magnitude. In the high growth scenario, the changes between the DS and DM appear consistent with the core scenario but of greater magnitude. A direct comparison with the core scenario is not possible as different statistics have been presented for the low growth and high growth scenarios.*	The benefit to cost ratios (BCRs) for low and high growth scenarios are 2.73 and 4.21 respectively, based on capturing only the elements of the benefits forecast through DfT's TUBA software.

Paragraph	Issue	Highways England's Response
	Nevertheless, the results are in line with expectations, although it would be useful for the applicant to confirm the BCRs for the low and high growth scenarios. In addition, we would like to understand why the delay on Brook Street is greater in the low growth DM scenario than in the high growth DM scenario in the 2037 PM peak hour in both the DM and DS scenarios? We would assume all approaches would have greater delays in the high growth scenario compared to the low growth scenario. These questions are included in the comments log.	<table><tr><th></th><th>TUBA only</th><th>All Benefits (Level 1)*</th><th>All Benefits (Level 2)**</th></tr><tr><td>Core Growth</td><td>4.10</td><td>4.02</td><td>4.21</td></tr><tr><td>Low Growth</td><td>2.73</td><td>N/A</td><td>N/A</td></tr><tr><td>High Growth</td><td>4.21</td><td>N/A</td><td>N/A</td></tr></table> * *includes accident savings, disruption during construction, greenhouse gas emissions, local air quality and noise* ** *includes reliability and wider impacts* The additional elements which have been modelled to develop the full Level 1 and Level 2 Core BCRs are unlikely to significantly change with the alternative growth scenarios and so it has not been considered proportionate to reassess these. Delays on Brook Street are lower in the high growth scenario compared to the low growth scenario because the queue in the eastbound direction on Brook Street from Nags Head Lane signal junction blocks the junction 28 circulatory more often in the high growth scenario compared to the low growth scenario. As a result of this queue, it creates more gaps in the platoons of traffic on the roundabout, enabling traffic from Brook Street (westbound) to more easily join the roundabout in the high growth scenario compared to the low growth scenario. In contrast, due to less queuing in the eastbound direction on Brook Street in the low growth scenario, the Brook Street westbound traffic experiences higher delay joining the roundabout due to fewer gaps in the traffic flow on the roundabout compared to the high growth scenario. However, it should be noted that the overall junction delays are still lower in the 2037 PM peak low growth scenario compared to the 2037 PM peak high growth scenario for the respective Do minimum and Do something models.
3.4	Construction Traffic *Neither the TA nor the TASR fully address the limitations of the new construction site on the A12 eastbound in terms of construction vehicles accessing the site from all directions. The construction traffic approaching from the A12 east and M25 north will need to use the A12/ Petersfield Avenue junction to undertake a "U-turn" to turn east towards the works access. This could cause issues during the peak hours.*	As stated in Section 6 of the Transport Assessment Supplementary Information Report (PDB-003), the construction of the Scheme is forecast to generate approximately 95 vehicle arrivals and 95 departures per day. The westbound daily traffic flow on the A12 to the west of junction 28 is forecast to be approximately 28,600 vehicles per day in 2022. Therefore, the additional traffic generated by construction of the Scheme would represent less than a 0.5% increase in daily traffic flow on the A12 which is insufficient to have a material adverse impact on the operational performance of the A12.
3.4	Construction Workforce *The TA indicates that the peak construction workforce is estimated to be 85 persons during the original Phases 4 to 8. There is no update in the TASR to reflect the revised phases. The expected mode share for the peak workforce is 20 by car, 20 by*	The estimated size of the construction workforce remains unchanged from that stated in Section 8 of the Transport Assessment Report (APP-098), i.e. typically up to around 85 workers on site per day.

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	train, 20 by bus and 25 by minibus/van. However, no mention is made of how the bus and train passengers will travel from the closest bus stops (A12 Petersfield Avenue in the west and Holiday Inn and Brook Road in the east) and closest train station (Harold Wood to the west). Furthermore, no mention is made of possible cycle and walking modes. *There is no information concerning the number of car parking spaces on site. It is likely that a higher proportion of workers will travel by car due to the location of the works.* *Though there is insufficient evidence to demonstrate a realistic worker travel and access strategy at this stage, no construction should commence until detailed a CTMP is prepared which must include a construction workforce travel plan.*	Requirement 10 of the draft DCO (REP2-017) requires the preparation and implementation of a traffic management plan that will have to be submitted to and approved by the Secretary of State following consultation with the relevant highway authority before the relevant part of the works can start. This will incorporate a construction workforce travel plan that will set out the measures that will be adopted by the Principal Contractor to encourage the construction workforce to commute by modes of transport other than sole occupancy private car, including public transport. Travel Plan measures likely to be considered include: a contractor operated shuttle bus service between Brentwood Station and the main works site; incentives for car sharing; incentives for using public transport; and restrictions on on-site workforce car parking, with spaces being allocated only for workers unable to use alternative modes of transport. It is therefore assumed that the workforce anticipated to commute by rail presented in Table 8-2 of the Transport Assessment Report (APP-098) would travel between Brentwood station and the main works site by shuttle bus operated by the Principal Contractor. The car park for the construction workers will be in the main construction site located north of the A12 and to the east of the access to Maylands Golf Club access and will contain 30 car parking spaces. No car parking will be provided at the satellite compound.
3.4	Construction traffic impacts *The temporary traffic management measures will have an impact on the journey times of traffic travelling through the construction works due to reduced speed limits, narrow lanes and lane closures. The TASR states that the most disruptive period will be associated with a combination of temporary traffic measures and is likely to last one or two months. However, no evidence is provided to demonstrate when and how long this period is likely to last. The most disruptive period has been modelled assuming the 2022 assessment year…* *…The key issue concerning construction traffic impacts is that the Applicant has not provided clear evidence to demonstrate the length of time over which these delays occur and whether other combinations of traffic management measures demonstrate comparable delays and rerouting.*	Section 6 of the Transport Assessment Supplementary Information Report (PDB-003) provides estimated durations of the most disruptive temporary traffic management arrangements as follows: • A12 Eastbound off slip – closure of nearside left turn lane for 85 days. • Roundabout nearside lane closure – tie in of A12 off slip for 30 days. • M25 Clockwise – off slip diverge closure for 45 days. • M25 Clockwise off slip – lane 2 closure for 35 days. Proposed temporary traffic management arrangements for the construction of the Scheme and their sequencing have been developed to an appropriate level of detail to enable traffic modelling and assessment of likely impacts during construction to be undertaken such that it is sufficiently robust for the DCO submission. Requirement 10 of the draft DCO (REP2-017) requires the preparation and implementation of a traffic management plan (TMP) that will have to be submitted to and approved by the Secretary of State following consultation with the relevant highway authority before the relevant part of the works can start. The TMP will include details of the temporary traffic management plans along with their scheduled duration and sequencing.
3.4	Road Safety during construction *The TA identified that the FWI in the vicinity of Junction 28 is high. The applicant must ensure that the CTMP includes the necessary measures for road safety including driver awareness, driver training, vehicles properly equipped with necessary safety equipment and the proper maintenance of all construction vehicles.*	Highways England can confirm that the construction TMP or CTMP, that will have to be submitted to and approved by the Secretary of State following consultation with the relevant highway authority before the relevant works can start under Requirement 10 of the draft DCO, will include all necessary road safety measures covering driver awareness, driver training, vehicles properly equipped with necessary safety equipment and the proper maintenance of all construction vehicles.

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3.4	Cumulative construction impacts with Lower Thames Crossing (LTC) *It is anticipated that the early construction phases of the LTC will overlap with the construction of Junction 28.* *It is agreed that the impact of the construction traffic generated by the LTC scheme will have minimal impact on the operation of Junction 28 during construction since the LTC traffic will travel over the M25 viaduct over Junction 28. However, the northbound LTC construction traffic may experience the delays described above.* *However, we disagree that the construction of Junction 28 is not anticipated to significantly contribute to any traffic being potentially displaced onto local roads by the construction of the LTC scheme. It is clear the temporary traffic management measures have the greatest impact of the general traffic travelling through the works. There is a risk that the temporary traffic management measures put in place by the LTC scheme on the M25 at the same time as the measures implemented by the Scheme could potentially have a significant impact on the journey times on anticlockwise M25 traffic and which could result in rerouting of traffic on ECC road network.*	Forecast impacts of the Scheme in combination with construction of LTC and proposed mitigation is presented in Section 6.3 of the Transport Assessment Supplementary Information Report (PDB-003). This explains that temporary traffic management arrangements and the estimated construction traffic that will be generated by LTC are presently under revision by that project team, following the withdrawal of its DCO application in November 2020. Consequently, the results of the impact assessment of these revisions are not yet available. Nonetheless, traffic modelling carried out by the junction 28 team of the temporary traffic management measures required to construct the junction 28 Scheme has demonstrated that they would not result in any significant diversion of traffic onto local roads. Construction of the junction 28 Scheme is not therefore anticipated to significantly contribute to any traffic being potentially displaced onto local roads by construction of the LTC scheme.

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