Position Statement from National Highways

Title:	National Highways Update – Deadline 5
Reference:	TR050007
Applicant:	Tritax Symmetry
Proposal:	Application by Tritax Symmetry (Hinckley) Limited for an Order Granting Development Consent for the Hinckley National Rail Freight Interchange
Author:	National Highways (20040073)
Date:	09 February 2024

National Highways ("we") has been appointed by the Secretary of State for Transport as 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.

Following ISH6 on 24 January, National Highways have had two meetings with the Applicant team. The first of these was held on Monday 29 January, solely between the Applicant team and National Highways. During this meeting, an overview of the matters outstanding was provided. The second of these meetings was held on Friday 2 February between the Applicant team and all three highway authorities. During this meeting, matters relating to furnessing, modelling and mitigation were discussed. Key elements of these discussions as well as progress on our positions are summarised in Table D5.1 below.

Additionally, at ISH6 the Examining Authority (ExA) requested further information regarding the current roadworks at M69J1. We can confirm that these are relating to maintenance works essential maintenance works to A5/M69 Burbage Island and associated slip roads and approaches. No alterations to the junction layout are proposed and as part of the works, we will:

- renew traffic signal equipment
- renew the safety barrier on the roundabout and beneath the M69 overbridges
- remove vegetation to reduce sign obstruction and to allow future maintenance access
- resurface the carriageway including associated road markings and road studs in various locations

This work is due to start on 22 January 2024 and is scheduled for completion by the end of April 2024. We'll work overnight between the hours of 8pm and 6am, Monday to Friday.

The work will be carried out in sections as outlined below:

- full slip road closures to M69 Junction
- partial road closure on the gyratory roundabout – A5 and B4109 Rugby Road
- lane closure/ring management on the slip roads and the gyratory roundabout

During these closures fully signed diversion routes will be in place, which have been agreed with the local authority. No HGV's will be granted access during restricted times. HGV's will need to follow the diversion in place. All carriageways will be open as usual outside of our working hours.

Table D5.1: Summary of outstanding matters and progress

	Matter Outstanding	***Updated Position***	***Status & Next Steps***
Active & Sustainable Transport Strategy			
	National Highways has significant concerns that the proposals for active and sustainable travel have not been fully considered, and what is provided is exceptionally limited. We have therefore concluded it doesn't meet the requirements of the Circular and there is no clear vision or transport strategy for the development proposals. Our concern is that trips to and from the site by employees will be car dominated, having significant impacts upon the operation of the SRN.	National Highways has been working with the applicants on the development of an active & sustainable transport strategy. Further discussion was held during the meeting on 2 Feb 2024. The Applicant has provided clarification of their proposed strategy which includes introduction of majority of measures from Day 1. National Highways have queried the frequency of review (currently every two years) in the early years of the development where there is likely to be a greater rate of change and opportunity to influence travel patterns.	Ongoing
Furnessing Methodology			
	Whilst the general approach to applying the Furness process is acceptable, two areas of concern were identified: Where an observed (2018/19) turning movement is zero, or close to zero, the Furness process will not reflect a reassignment of traffic into the corridor where this is indicated as an effect of the scheme by the forecasting scenario outputs from the PRTM v2.2 traffic forecast model. There is a risk of underestimating the demand for a turning movement at an assessed junction.	A detailed update regarding the review of the Furness process has been provided through the National Highways response to ExQ2.11.1.	Ongoing

	Where a large observed (2018/19) turning movement has had negative growth applied, due to reassignment effects in the PRTM v2.2 forecast outputs, then this could result in the suppression of a flow demand. This might be important to the junction's operational assessment if the suppressed flow demand is (say) a right turn. These two concerns may be addressed by undertaking a sense check using the PRTM reassignment impacts and turn movements; paying particular attention to the magnitude of flows that turn right at an assessed junction. Alternatively, the operational assessments of the junctions could include sensitivity testing of the derived turning proportions.		
	3. For those junctions along the Development's spine road, the report contains no description of how design reference flows were derived from PRTMv2.2 forecast outputs (which model loads all development trips at a single zone) combined with a 'first principals' method of distributing trips generated by the development. It is noted that the design of the spine road is not a specific concern for the SRN, such as the M69, A5, M1 corridors.	National Highways has raised this matter with BWB, on behalf of the applicant during the workshop which took place on the 13th November 2023. Matters relating to traffic flows on the spine road are also covered in the furness review which require further information to be clarified.	Ongoing
	4. There is no traffic forecasting set for the scenario 'With development generated trips' demand assigned to a 'Without HNFI infrastructure network'. This forecasting set	It is understood that all mitigation will be required up front to support the development and the rerouting of traffic across the SRN and LRN. Therefore, no such scenario would be required.	Matter resolved 09.11.2023

would identify if all the link and junction improvements are necessary. This forecasting set would also assist in determining construction phase timing and sequencing of improvements.		
Strategic modelling methodology and outputs		
National Highways are not able to fully consider the suitability of the strategic modelling undertaken at present. The justification being that not all parameters which have been used within the PRTM modelling methodology have been agreed with us including the furnessing methodology. This has prevented us being able to fully review and consider the outputs which have been provided to ourselves until our concerns regarding the methodology have been addressed. Furthermore, we have not been able to undertake a full review of all the transport supporting information as a Transport Addendum is awaited which will provide further modelling methodology and outputs based on modelling through Rugby Rural Area Wide Model (RRAM) which is managed and maintained by Warwickshire County Council. This information is crucial for us to fully understand the impacts the development proposals will have on the SRN.	National Highways confirms that the PRTM and RRAM model are the correct tools to be utilised to understand and identify the impact that the development proposals will have upon the operation of the Strategic Road Network. National Highways has been directed to the BWB Sharepoint site to review the furnessing data in light of discussions at the workshop which took place on the 13th November 2023. We understand that these have been submitted; however given the volume information available we had requested for the precise locations of within SharePoint to be provided. This requires clarification.	Ongoing
PRTM Review		
AECOM on behalf of National Highways undertook a review of PRTM v2.2 Hinckley National Rail Freight Interchange Application: Forecasting Modelling version 3 dated the 3rd May 2022 and supporting	National Highways has been directed to the BWB Sharepoint site to review the furnessing data and additional PRTM information in light of discussions at the workshop which took place on the 13th	Ongoing

	additional data and plots provided in September 2022. This review was completed on the 29th September 2022, and the technical note is provided in Appendix C National Highways has requested a further review be undertaken by AECOM of the supporting PRTM modelling reports. This review has highlighted that no further assessments or refinement have been undertaken by BWB. Based on this the following matters need to be addressed.	November 2023. We understand that these have been submitted; however given the volume information available we had requested for the precise locations of within SharePoint to be provided. This requires clarification.	
	1. Whilst the modelled trip distributions appear logical, some of the routeing patterns to and from the development do not use highest standard routes to the destination. If traffic can be persuaded to use the most appropriate roads, this would result in an increase in traffic on some parts of the SRN.	National Highways has been directed to the BWB Sharepoint site to review the furnessing data and additional PRTM information in light of discussions at the workshop which took place on the 13th November 2023. We understand that these have been submitted; however given the volume information available we had requested for the precise locations of within SharePoint to be provided. This requires clarification.	Ongoing
	2. On some roads, particularly the M69 to the north of Hinckley NRFI going up to M1 Junction 21, the increase in traffic flow on the road is less than the assigned traffic from the development. This is a demonstration that development traffic is causing existing traffic to divert away from the preferred route. The roads being used are of a lower standard.	National Highways has been directed to the BWB Sharepoint site to review the furnessing data and additional PRTM information in light of discussions at the workshop which took place on the 13th November 2023. We understand that these have been submitted; however given the volume information available we had requested for the precise locations of within SharePoint to be provided. This requires clarification.	Ongoing

	3. Assuming that all traffic uses the most appropriate roads may mean that more mitigation would be required to avoid adding to congestion at the most congested junctions.	National Highways has been directed to the BWB Sharepoint site to review the furnessing data and additional PRTM information in light of discussions at the workshop which took place on the 13th November 2023. We understand that these have been submitted; however given the volume information available we had requested for the precise locations of within SharePoint to be provided. This requires clarification.	Ongoing
Rugby RAM Modelling			
	Based on our consideration of the RRAM modelling outputs provided, National Highways is unable to agree to the modelling at this moment in time until the following matters are resolved.	National Highways have engaged with the applicants consultants, BWB and Warwickshire County Council. We have also undertaken a further review and this matter is now resolved.	Matter resolved 09.11.2023
	1. The claimed reduction of 22 seconds 'mean delay' benefit obtained from across the RRAM network is substantially less than the range of accuracy that can be obtained from an application of the RRAM traffic model. There is a low level of assurance in stating this conclusion.	National Highways have engaged with the applicants consultants, BWB and Warwickshire County Council. We have also undertaken a further review and this matter is now resolved.	Matter resolved 09.11.2023
	2. Journey time Route "R1" along the M69 did not validate against observed journey times in the base Year. Without knowing the narrative behind why the RRAM is simulating vehicles as travelling too slowly along the M69, it is difficult to attribute a level of confidence to the tabulated results.	National Highways have engaged with the applicants consultants, BWB and Warwickshire County Council. We have also undertaken a further review and this matter is now resolved.	Matter resolved 09.11.2023

	3. Similarly, the difference in journey times along the A5 strategic route ("R7") could be due to a number of modelling parameters and might not be attributable to using an alternative forecasting scenario alone.	National Highways have engaged with the applicants consultants, BWB and Warwickshire County Council. We have also undertaken a further review and this matter is now resolved.	Matter resolved 09.11.2023
	4. The locations where journey times increase are described in bullet points at paragraph 3.5. However, the wording in brackets is confusing. The journey times presented in Table 1 are total journey times for the full route lengths.	National Highways have engaged with the applicants consultants, BWB and Warwickshire County Council. We have also undertaken a further review and this matter is now resolved.	Matter resolved 09.11.2023
	5. Care needs to be taken when examining journey times along route segments. The average journey speeds were not validated in the Base Year for links with short lengths.	National Highways have engaged with the applicants consultants, BWB and Warwickshire County Council. We have also undertaken a further review and this matter is now resolved.	Matter resolved 09.11.2023
	6. RRAM was built by Vectos using S-Paramics microsimulation software. BWB is using VISSIM microsimulation software. The claimed betterment appears to have been achieved by changing software packages.	National Highways have engaged with the applicants consultants, BWB and Warwickshire County Council. We have also undertaken a further review and this matter is now resolved.	Matter resolved 09.11.2023
	7. Paragraph 3.8 and Table 2 present journey time changes for the PM one-hour peak. The same comments apply as for paragraph 3.4 and Table 1 above.	National Highways have engaged with the applicants consultants, BWB and Warwickshire County Council. We have also undertaken a further review and this matter is now resolved.	Matter resolved 09.11.2023
Development impact upon the SRN			
	J4 – A5 The Longshoot Junction: The assessment of the A5 Longshoot junction is not correct. This is because operationally the A5 Longshoot Junction and A5 Dodwells Junction work	At the workshop on the 13th November 2023, it was agreed that the A5 the Longshoot and Dodwells Junctions will be assessed in accordance with the modelling protocol provided	Ongoing

	as one. Therefore, they must be assessed together. In addition, all three Highway Authorities have agreed a modelling protocol for this junction, which we expect applicants to accord with. A copy of this protocol was provided in the National Highways Deadline 3 Position Statement In addition, the following information is required to enable us to complete our assessment of the submitted LINSIG model. – Signal Controller not provided so the modelled setup cannot be compared to the on-street setup. – CAD drawings have not been provided so the measurements in the model cannot be checked. – The demand spreadsheets have not been provided so the demands in the model cannot be checked. – The Saturation Flow has been calculated using LinSig's built in RR67 calculation, however, turn radii have not been entered.	in Appendix E of National Highways Deadline 3 Position Statement. The modelling protocol requires the joint use of the LCC PRTM and the NH VISSIM to assess this impact. National Highways have supplied the Applicant team with the most up to date VISSIM model, which includes all agreed assumptions associated with the Padge Hall Farm development. In light of this, the LinSig model will not be accepted. At ISH6 National Highways highlighted operational issues at the Longshoot Junction (along with the Dodwells Junction). Traffic surveys, including video surveys, were undertaken in November 2023. A summary of the findings which demonstrate the above operation can be found in Annexes A-D of this submission. Details on the Furnessing issues are provided in our response to ExQ2.11.1	
	J13 - M69 Junction 1	The traffic flow information which will be utilised is still not agreed until National Highways is satisfied with the furnessing methodology. A detailed	Ongoing

	The following information is required to enable us to complete our assessment of the submitted VISSIM model. – Signal Controller not provided so the modelled setup cannot be compared to the on-street setup. – CAD drawings have not been provided so the measurements in the model cannot be checked. – The demand spreadsheets have not been provided so the demands in the model cannot be checked. – No model has been provided so cannot be checked.	update regarding the review of the Furness process has been provided through the National Highways response to ExQ2.11.1. In addition, notwithstanding the requirement to agree traffic flows, National Highways have undertaken a review of the highways network coding in the VISSIM supplied by the Applicant team. A number of corrections are required, which are detailed in the Technical Note in Annex E.	
	J14 - A5 Dodwells Junction The assessment of the A5 Dodwells junction is not correct. This is because operationally the A5 Longshoot Junction and A5 Dodwells Junction work as one. Therefore, they must be assessed together. In addition, all three Highway Authorities have agreed a modelling protocol for this junction, which we expect applicants to accord with. A copy of this protocol is provided in Appendix E of the National Highways Deadline 3 Position Statement.	At the workshop on the 13th November 2023, it was agreed that the A5 the Longshoot and Dodwells Junctions will be assessed in accordance with the modelling protocol provided in Appendix E of National Highways Deadline 3 Position Statement. The traffic flow information which will be utilised is still not agreed until National Highways is satisfied with the furnessing methodology. A detailed update regarding the review of the Furness process has been provided through the National Highways response to ExQ2.11.1.	Ongoing

	In addition, the following information is required to enable us to complete our assessment of the submitted LINSIG model. – Signal Controller not provided so the modelled setup cannot be compared to the on-street setup. – CAD drawings have not been provided so the measurements in the model cannot be checked. – The demand spreadsheets have not been provided so the demands in the model cannot be checked. – The Saturation Flow has been calculated using LinSig's built in RR67 calculation, however, some turn radii have not been entered. For example, Lane 10/1. – Some of the Saturation Flows are also quite high (in excess of 2000 PCU/Hr). These may be too high to accurately model behaviour on a roundabout.	The modelling protocol requires the joint use of the LCC PRTM and the NH VISSIM to assess this impact. National Highways have supplied the Applicant team with the most up to date VISSIM model, which includes all agreed assumptions associated with the Padge Hall Farm development. In light of this, the LinSig model will not be accepted. At ISH6 National Highways highlighted operational issues at the Dodwells Junction (along with the Longshoot Junction). Traffic surveys, including video surveys, were undertaken in November 2023. A summary of the findings which demonstrate the above operation can be found in Annexes A-D of this submission.	

	Junction 26 – A5 / A426 Gibbet Hill (Existing Layout) It has not been possible to verify the roundabout geometry values input into the Existing Layout model without a scaled plan of the junction. This should be provided. Please also supply any traffic flow spreadsheets developed to demonstrate how the traffic flows used in the submitted models have been determined.	A detailed update regarding the review of the Furness process has been provided through the National Highways response to ExQ2.11.1. During the meeting on 2 February, National Highways reiterated our position regarding the assessment requirements in VISSIM as expressed during ISH6. Following the meeting National Highways has confirmed the correct VISSIM model to be utilised.	Ongoing
	J26 - A5 Gibbet Hill (Proposed Layout) The following information is required to enable us to complete our assessment of the submitted LINSIG model. – CAD drawings have not been provided so the measurements in the models cannot be checked. – The demand spreadsheets have not been provided so the demands in the model cannot be checked. – The Saturation Flows have been entered manually rather than using LinSig's RR67 calculation. The calculations that resulted in these Saturation Flows have not been provided so cannot be checked.	At ISH6 it was clarified that National Highways proposals at the Gibbet Hill roundabout are still in development stages. The process advised by LCC, to which WCC and NH have previously agreed on other developments, is for a mitigation scheme to be proposed by the Applicant team to be used as the basis for a contribution in lieu. During the meeting on 2 February, National Highways reiterated our position regarding the assessment requirements in VISSIM as expressed during ISH6. Following the meeting National Highways has confirmed the correct VISSIM model to be utilised. Also at the same meeting, a process was detailed to the Applicant team which would require agreement of the traffic flows (through the ongoing PRTM and furness reviews), the VISSIM model and the proposed mitigation scheme in lieu. It is National Highways understanding that the Applicant team will also provide a breakdown	Ongoing

	– Custom lane lengths have not been entered. This isn't necessary incorrect, however, it would depend on the junction's measurement which have not been provided.	of the cost estimate used to derive the proposed contribution value.	
	Junction 27 – A5 / A4303 / B4027 Coal Pit Lane Roundabout Although the proposed layout drawing has been provided within the Transport Assessment, it has not been possible to fully verify the roundabout geometry values input into the Existing and Proposed models due to the extent of the junction shown on the plan. Please can further information be provided to demonstrate how the roundabout geometry has been calculated. National Highways requests the provision of any traffic flow spreadsheets developed to demonstrate how the traffic flows used in the submitted models have been determined.	A further workshop meeting between the applicant's consultants, BWB, and National Highways will be taking place on the 16th November 2023. The traffic flow information which will be utilised is still not agreed until National Highways is satisfied with the furnessing methodology. A detailed update regarding the review of the Furness process has been provided through the National Highways response to ExQ2.11.1.	Ongoing
	Junction 30 – A5 / Higham Lane Roundabout Chapter 8 of the Transport Assessment does not summarise the capacity results of this junction. Please clarify its absence from the report and update as necessary. It has not been possible to verify the roundabout geometry values input into the Existing Layout model	The traffic flow information which will be utilised is still not agreed until National Highways is satisfied with the furnessing methodology. A detailed update regarding the review of the Furness process has been provided through the National Highways response to ExQ2.11.1.	Resolved Dec 23

	without a scaled plan of the junction. This should be provided. National Highways requests the provision of any traffic flow spreadsheets developed to demonstrate how the traffic flows used in the submitted models have been determined.		
	M69 Junction 1 and M69 Junction 2 Traffic modelling work was previously submitted for review, with comments provided by National Highways within the formal S42 Consultation Response dated 8 April 2022. This response stated that although VISSIM base model validation for M69 Junction 1 and M69 Junction 2 had been agreed, models assessing the with development scenarios were not provided for review. Although we note that the TA summarises results of these assessment scenarios, will require the accompanying model files to be submitted before impacts at these junctions can be agreed.	The traffic flow information which will be utilised is still not agreed until National Highways is satisfied with the furnessing methodology. A detailed update regarding the review of the Furness process has been provided through the National Highways response to ExQ2.11.1. In addition, notwithstanding the requirement to agree traffic flows, National Highways have undertaken a review of the highways network coding in the VISSIM supplied by the Applicant team. A number of corrections are required, which are detailed in the Technical Note in Annex E.	Ongoing
	M1 Junction 21 From review of the PRTM forecast flows at the junction, TA Table 8-6 shows that the most significant impacts shall be in the PM peak, with an overall increase of 114 vehicles across the junction as a result of the development. 107 of these vehicles however are on the A5460 local road link, with	The traffic flow information which will be utilised is still not agreed until National Highways is satisfied with the furnessing methodology. A detailed update regarding the review of the Furness process has been provided through the National Highways response to ExQ2.11.1.	Ongoing

	minimal change in demands on the M1 or M69 approaches in either peak period. A merge-diverge assessment has been carried out, which based on these flows demonstrates that the development impacts shall not trigger the requirement for upgrade to the junction's merges or diverges.	National Highways continues to note a considerable concern about the impact at this junction and the lack of mitigation being identified by the applicants at present. At ISH6 it was clarified that the required level of assessment at the M1J21 is a VISSIM model. This is due to the interactions between the circulatory carriageway and the merge/diverge sections on both motorways needing to be accounted for to understand the operation of this junction. During the meeting on 2 February, it was clarified that a VISSIM model is not currently available from National Highways. However, LCC offered advice to the Applicant team regarding their model in Paramics, which National Highways would consider as a suitable alternative provided that the junction in its entirety (circulatory and merge/diverge) are contained for assessment.	
Development Mitigation Strategy for the SRN			
	The Applicant and their consultants have not discussed the mitigation strategy with National Highways at this present time. It should also be noted that some locations have mitigation identified whilst others, the documents note, mitigation is required but a scheme has not been identified. At present we are unable to agree the development mitigations strategy. This is because we have been awaiting the completion and sign off of the strategic modelling with the Applicant's consultants and other	National Highways has actively engaged with applicants to identify the range of mitigation being identified to resolve the development impact. There is agreement that this consists of a variety of tools including sustainable and active travel interventions as well as physical mitigation schemes where required. Inclusion of these will be required through the requirements.	Ongoing

	stakeholders to understand the traffic flows at the junction in the base and future year assessments. This data is key to setting the design parameters and design standards and understanding whether any departures from standard are required in accordance with DMRB.		
Deliverability of the Railhead and capacity on the Nuneaton & Leicester Railway Line			
	National Highways is concerned whether the railhead on the Nuneaton & Leicester Railway Line is deliverable as we have not seen the assessments nor agreement from Network Rail. We also have concerns that the acceptance of the scheme would limit future capacity on the line to the detriment of passenger services which are crucial as a viable alternative to car based strategic trips between Birmingham, Nuneaton, Hinckley and Leicester.		Resolved 31.01.2024
M69 Junction 2 – Slips			
	National Highways has no objection to the principle of the slip roads and their implementation however there are still the following aspects which need to be confirmed, some of which are also linked to environmental matters as well:	The suitability of proposals will be assessed once the traffic flows (through the PRTM and furness process) and subsequent capacity modelling are agreed.	Ongoing
	Agreement of the strategic modelling to agree and identify traffic flow to enable the agreement of the design parameters and required standards or where departures are required in accordance with DMRB	The suitability of proposals will be assessed once the traffic flows (through the PRTM and furness process) and subsequent capacity modelling are agreed	Ongoing
	Departure from Standard submitted for approval in principle in regard to the removal of the hard shoulder	Approval in Principle has been given by SES at National Highways for this departure.	Matter resolved 09.11.2023

	through M69 J2 to create all lane running for the inclusion and provision of the new slips.		
	Understanding of the suitability of the bridge structures to accommodate the additional traffic and the introduction of the slips, access arrangements and improvements to the circulatory.	A further workshop meeting between the applicant's consultants, BWB, and National Highways will be taking place on the 16th November 2023.	Resolved Dec 23
	Agreement of the WCHAR and RSA Stage 1 Briefs and CVs when National Highways is satisfied with the design of the slips and access arrangements for M69 Junction 2	Agreement of traffic flows and operation (through PRTM, furness and VISSIM) are required to progress this to WCHAR and RSA1.	Ongoing
	Landscaping: National Highways notes that the introduction of the northbound on-slip and southbound off-slip will impact the landscape in the vicinity of M69 Junction 2. This is mainly due to the removal of substantial and well-established vegetation on the embankments adjacent to the M69. Landscaping has an important role of limiting the impact on the landscape of the visibility of the SRN whilst also having a role in mitigating noise impact of the network.	A further workshop meeting between the applicant's consultants, BWB, and National Highways will be taking place on the 16th November 2023.	Resolved Dec 23
	Lighting / Lighting Impact: the landscape impact assessments need to consider the potential visual impact that the lighting of M69 Junction 2 will have on the landscape. Whilst the existing circulatory of the junction is lit, the need to accord with the requirements of standards set out in DRMB, may require the new proposed slips, and existing slips to be lit and for this to extend onto the M69 mainline in the interests of highway safety. It should be noted that the existing M69 mainline and existing slips are not lit.	Discussions have taken place between the applicants' consultants and the asset management for lighting and an agreement in principle has been reached regarding to the requirement and extents of lighting.	Resolved Dec 23

	Biodiversity: Based on our assessment we would also note that the proposed works at M69 Junction 2, also need to be considered through relevant biodiversity assessments. National Highways also requires details of biodiversity off-setting for the loss of habitats which potentially exist on the verges of the M69 at junction 2.	A further workshop meeting between the applicant's consultants, BWB, and National Highways will be taking place on the 16th November 2023.	Resolved Dec 23
	Drainage: National Highways needs to fully consider the full drainage strategy for the development proposals and how it relates to the SRN. However we are unable to fully consider the drainage implications of the proposals related to the SRN until further clarity is provided in the feasibility and development of the highway schemes notable for M69 Junction 2.	A further workshop meeting between the applicant's consultants, BWB, and National Highways will be taking place on the 16th November 2023.	Resolved Dec 23
HGV Routing Strategy & Enforcement			
	National Highways requires further clarity on the proposed HGV routing strategy and notably around its enforcement. At present National Highways cannot agree to this as who is responsible for the strategy and enforcement is not clear. We also require additional information for the potential location of any associated infrastructure and who would be responsible for its maintenance.	National Highways has been working with the applicant's consultants, BWB, to identify the HGV Routing Strategy and suitable routes. National Highways also accepts that none of the infrastructure will be on its network.	Resolved Dec 23
Construction Management Plan			
	National Highways requires further clarity on the construction management plan due to how it will function with the implementation of the development proposals and the associated infrastructure.	National Highways has been working with the applicant's consultants, BWB, to identify the HGV Routing Strategy and suitable routes.	Resolved Dec 23

	In addition, the routing of construction traffic also needs to be fully considered during the phasing of the development and implementation of the associated infrastructure. As works to M69 Junction 2 may warrant for this junction to be closed for significant periods to traffic movements whilst works should the development be approved are implemented.	We are also awaiting the publication of the GANNT Chart which has been requested for Deadline 3.	
Emergency Response Plan			
	It was noted that during the examination by the ExA about providing details and modelling on what would happen should the M69 be closed.	National Highways and the applicants have discussed the matter. An emergency plan with routes identified is being prepared by the applicants. National Highways has submitted a note which sets out our current operational plans for the M69.	Resolved Dec 23

ANNEX A:

Traffic Survey

Annex A - A5 the Longshoot and Dodwells Video Analysis AM Peak

Typical Traffic on a Wednesday at 08:00 AM – Google Maps

- There is no eastbound congestion east of the Dodwells Circulatory.

Point D Westbound

- Eastbound queue along the A5 originates from the traffic signal at the Dodwells Circulatory extending back to the Longshoot.
- Although the approach to the roundabout does not seem overly congested, the three lane section is short, allowing the queue from the traffic lights to reach the one lane section, creating the queue shown in the next slide.

Point A Eastbound

Point B Eastbound

- The queue originating at the Dodwells Circulatory extends back through the one lane section of the A5 towards the Longshoot.

- The eastbound queue originating at the Dodwells Circulatory affects the Longshoot as seen at Point C in the eastbound direction
- This also affects the ability of traffic to get through the Longshoot, resulting in underutilised green time.

Point C Eastbound

- Only 6 vehicles cross the stopline during green time whereas 18-20 vehicles cross the stop line under free flow conditions. The reduced flow at the traffic lights is caused by the downstream queue, originating from the Dodwells Circulatory. This occurs frequently during the AM peak.
- For example, the HGV marked with the blue arrow is 7th in the queue and does not cross the junction after 43 seconds of green time and has to wait for a second cycle (approximately 100 seconds).

Point D Eastbound

- Eastbound queue extend beyond the A5 Watling Street/Access to Gardens of Blessings Cemetery junction
- The analysis of the MCTC and ATC data suggests that the queue does not clear during the peak hour, as there are at least 65 vehicles queuing between points D and C after the peak.

- The eastbound queue also affects the A47 northbound at the junction, resulting in vehicles blocking the A5 and creating further delays and safety risks.
- Although this does not happen every cycle, it is observed quite often, as shown in the next slides.

- The eastbound queue also affects the A47 northbound at the junction, resulting in vehicles blocking the A5 and creating further delays and safety risks

- The westbound queue originates from the traffic lights at the Longshoot and extends along the A5

Point A Westbound

- The queue extends along the single lane section of the A5 between the Longshoot and Dodwells Circulatory

Point B Westbound

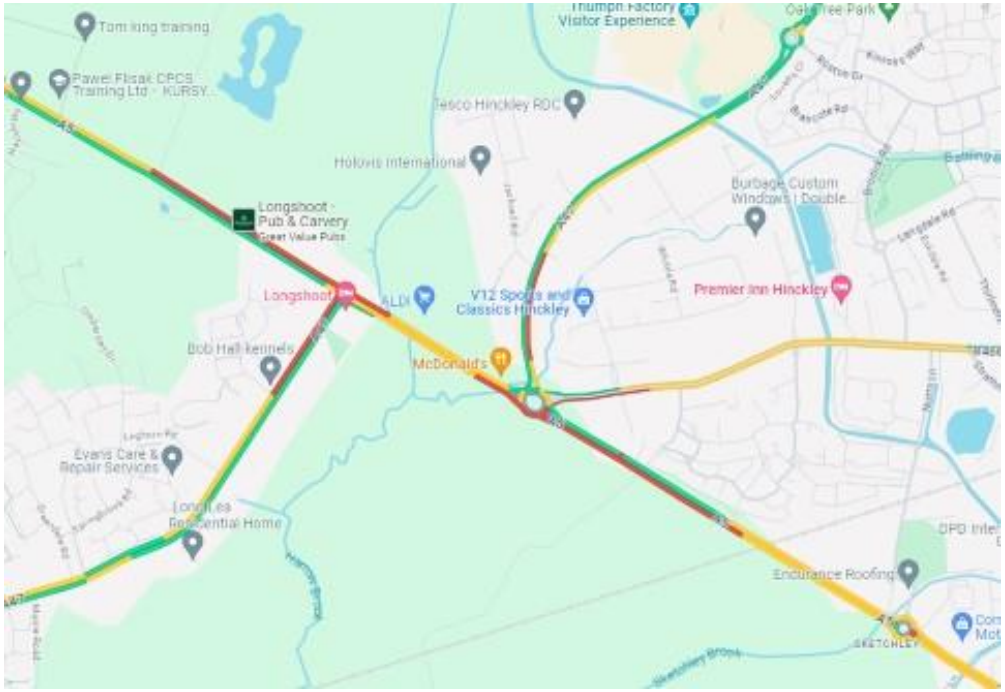
Point C Westbound

- The queue generated by the capacity constraints at the Longshoot extends up through the Dodwells Circulatory affecting the operation of the other arms.
- Westbound vehicles tend to block the roundabout as seen in the screenshot. This queue is caused by the lane reduction on the westbound exit and the queues from the Longshoot occasionally reaching back to the Dodwells Circulatory.

- Queues extend further back on the A5 where the camera is positioned at Point D
- The signals at the Dodwells Circulatory also contribute to the increase in queues
- The westbound queue does not reach the next roundabout

Point D Westbound

Annex B - A5 the Longshoot and Dodwells Video Analysis PM Peak



Typical Traffic on a Wednesday at 05:00 PM – Google Maps

- There is no eastbound congestion east of the Dodwells Circulatory.

Point D Westbound

- Eastbound queue along the A5 originates from the Dodwells Circulatory extending back to the Longshoot
- Although the approach to the roundabout does not seem overly congested, the three lanes section is short, allowing the queue from the traffic lights to reach the one lane section, creating the queue shown in the next slide.

Point A Eastbound

Point B Eastbound

- The queue originating at the Dodwells Circulatory extends back through the one lane section of the A5. However, it should be noted that the eastbound queue moves faster than in the AM peak.

- The eastbound queue originating at the Dodwells Circulatory, affects the Longshoot as seen at Point C in the eastbound direction
- This also affects the ability of vehicles to get through the Longshoot, resulting in underutilised green time.

Point C Eastbound

- Only 6 vehicles cross the stopline during green time whereas 18-20 vehicles cross the stop line under free flow conditions. The reduced flow at the traffic lights is caused by the downstream queue, originated at the roundabout. A reduced throughput at the junction can be observed quite often during the AM peak.
- For example, the car marked with the blue arrow is 7th in the queue and does not cross the junction after 37 seconds of green time and has to wait for a second cycle (approximately 80 seconds).

Point D Eastbound

- The queues do not extend back beyond the A5 Watling Street/Access to Garden of Blessings Cemetery which is the primary difference between the AM and PM peaks

- The eastbound queue also affects the A47 northbound at the Longshoot, resulting in vehicles blocking the A5 and creating further delays and risks.
- Although this does not happen every cycle, it can be observed quite often, as shown in the next slides.

- The eastbound queue also affects the A47 northbound at the junction, resulting in vehicles blocking the A5 and creating further delays and safety risks

- The eastbound queue also affects the A47 northbound at the junction, resulting in vehicles blocking the A5 and creating further delays and safety risks

- The westbound queue originates from the traffic lights at the Longshoot and extends along the A5

Point A Westbound

- The queue extends along the single lane section of the A5 between the Longshoot the Dodwells Circulatory. However, the video footage suggest that the interaction between the junctions has a smaller impact than the lane reduction after the roundabout.

Point B Westbound

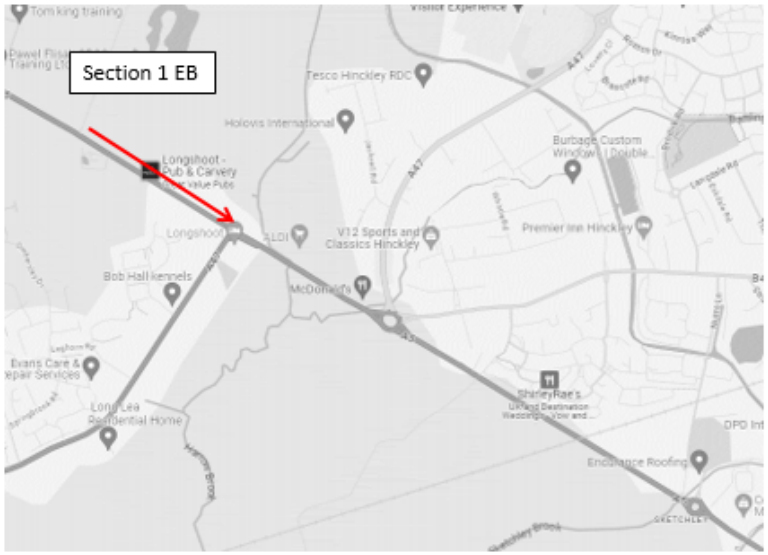
Point C Westbound

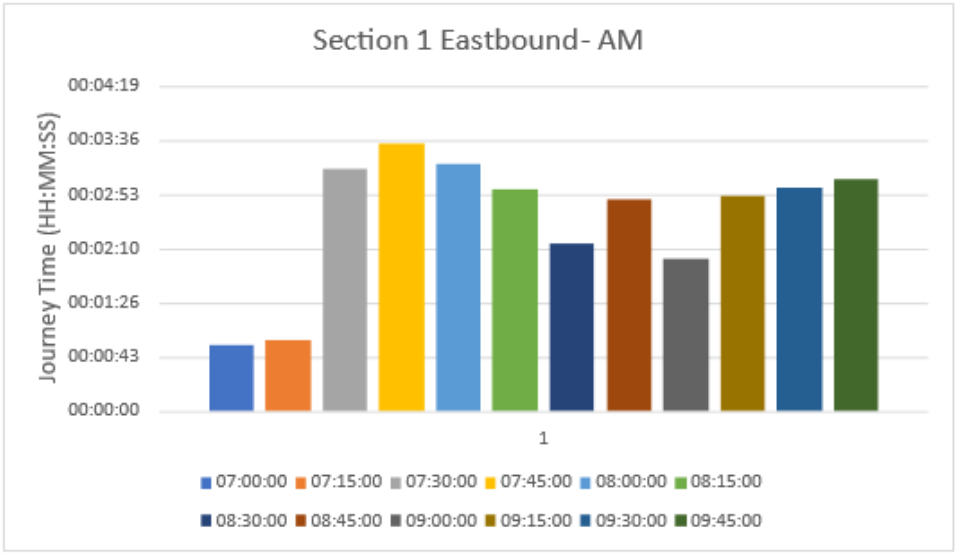
- The queue generated by the capacity constraints at the Longshoot extends up through the Dodwells Circulatory affecting the operation of the other arms.
- Westbound vehicles tend to block the roundabout as seen in the screenshot. This queue is caused by the lane reduction on the westbound exit and the queues from Longshoot occasionally reaching back to the roundabout.

- Queues extend further back on the A5 where the camera is positioned at Point D
- The signals at the Dodwells Circulatory also contribute to the increase in queues
- The westbound queue does not reach the next roundabout

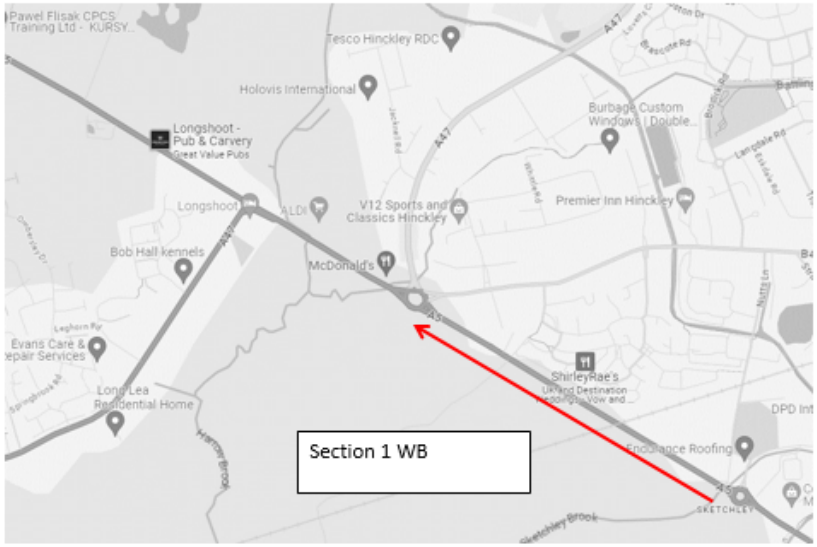
Point D Westbound

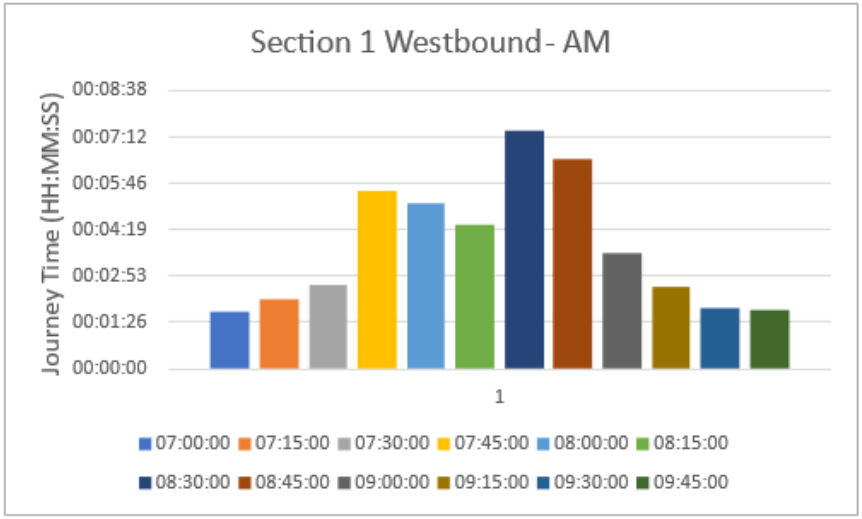
Annex C - A5 the Longshoot and Dodwells Journey Time Analysis AM Peak





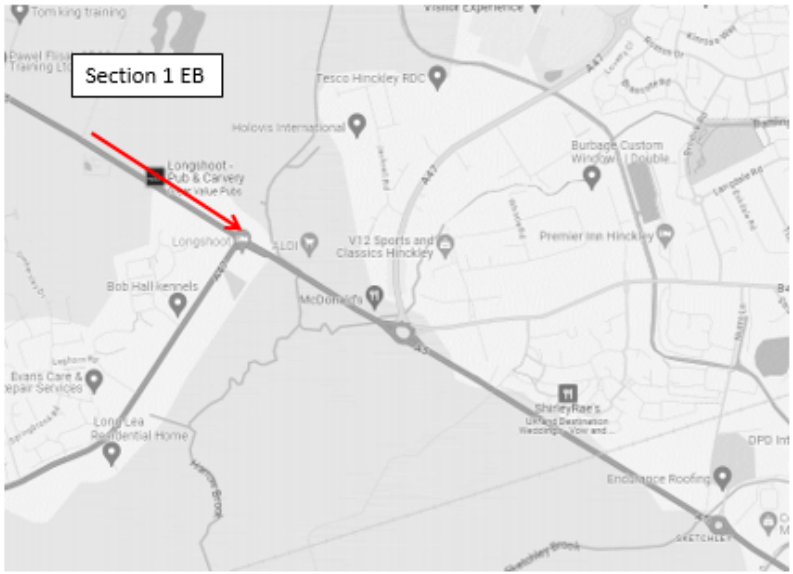
- The journey times analysed in the graph above have been collected by the ANPR cameras, and represent the average journey time across Section 1 every 15 minutes.
- Section 1 EB is approximately 450 m long.
- In the eastbound direction along the A5, queues start to develop around 07:30 as seen in the screenshots from the video footage.
- The journey time data shows a sudden spike in journey times around 7:30 (it should be noted that these journey times have been averaged every 15 minutes).
- The journey time data analysis shows that the journey times along this sections increase from 43 seconds before the peak hour to over 3 minutes during the peak hour, demonstrating that the junction generates **over two minutes of delay** between 7:30 and 10:00
- This is equivalent to an **average speed of 6 mph** along the 450 metres section.

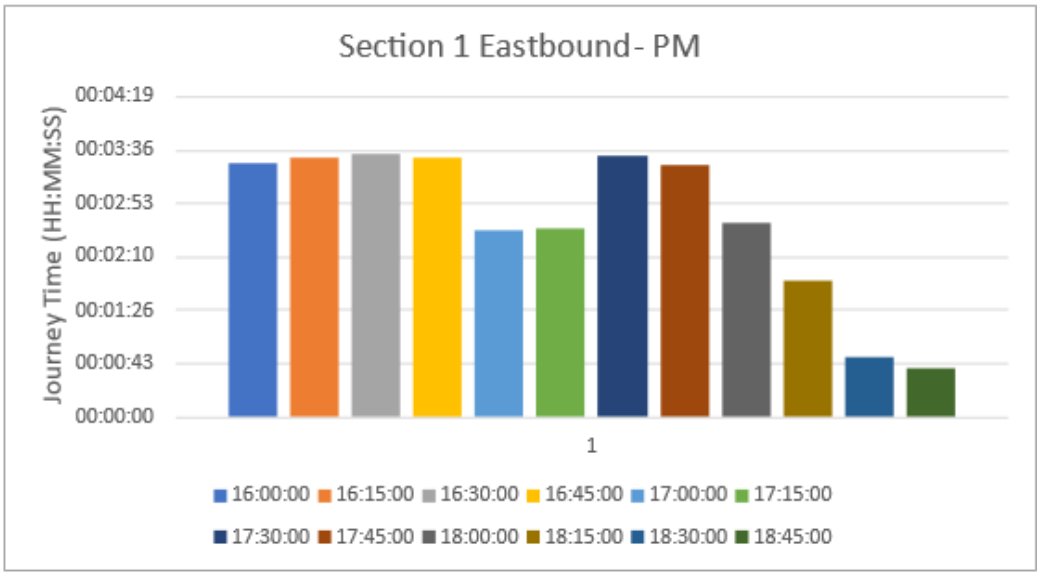




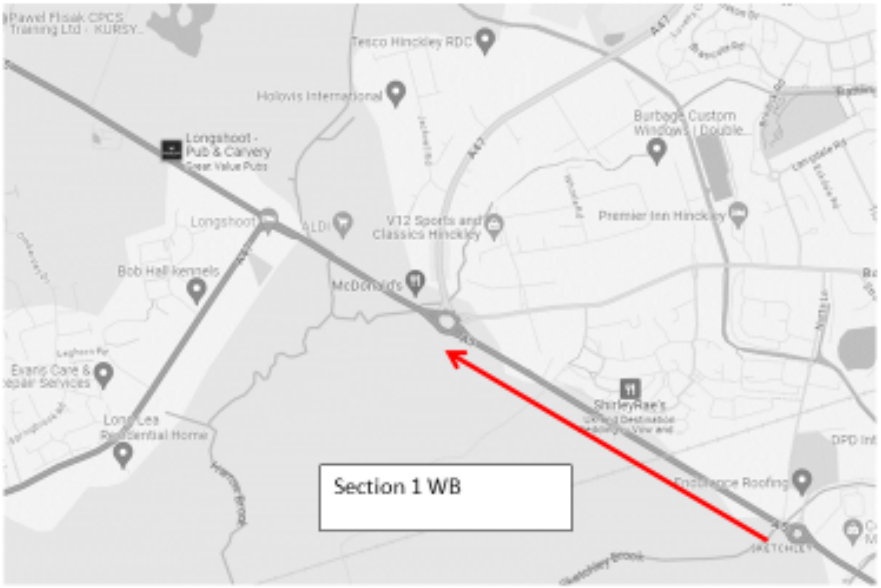
- The journey times analysed in the graph above have been collected by the ANPR cameras, and represent the average journey time across Section 1 every 15 minutes.
- Section 1 WB is approximately 1,100 m long.
- In the westbound direction along the A5, queues start to develop around 07:15 and dissipate after 09:15 as seen in the video screenshots
- This is also reflected in the journey times captured by ANPR with an increasing trend observed after 07:15 and a drop observed after 09:15
- During this time, the operation of Dodwells Circulatory generates **5 minutes of delay** along the A5, as the journey times increase from 1 minute and 30 seconds to over 5 minutes during most of the peak.
- This is equivalent to an **average speed between 7 and 8 mph** along the 1,100 metres section.
- The journey time reaches over 7 minutes during the worst part of the peak.

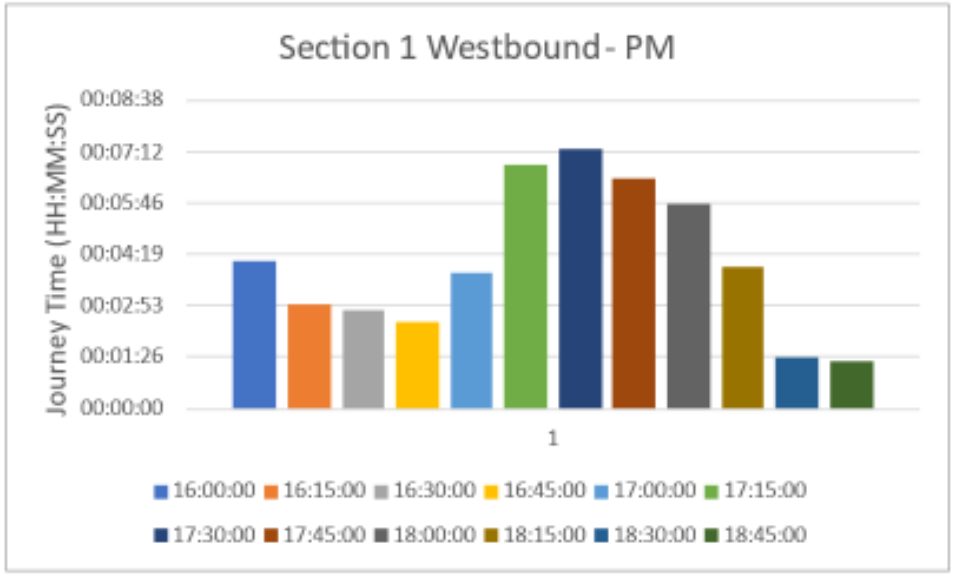
Annex D - A5 the Longshoot and Dodwells Journey Time Analysis PM Peak





- The journey times analysed in the graph above have been collected by the ANPR cameras, and represent the average journey time across Section 1 every 15 minutes.
- Section 1 EB is approximately 450 m long.
- In the eastbound direction along the A5, queues have already reached the junction at 16:00 as seen in the screenshots from the video footage.
- The journey time data shows a consistent journey time of over 3 minutes, from 16:00 PM.
- The journey time data analysis shows that the journey times along this sections start to reduce at 18:15, dropping to the free flow conditions (43 seconds) by 18:30.
- During this period, 16:00 to 18:15 the junction generates over **two minutes of delay**. Which is equivalent to an **average speed of under 5 mph** along the 450 m section.
- It should be noted that the eastbound queue and the delays observed in the PM peak are smaller than in the AM peak.





- The journey times analysed in the graph above have been collected by the ANPR cameras, and represent the average journey time across Section 1 every 15 minutes.
- Section 1 WB is approximately 1,100 m long.
- In the westbound direction along the A5, queues start to develop at 16:00 and dissipate after 18:30 as seen in the video screenshots
- This is also reflected in the journey times captured by ANPR with an increasing trend observed after 16:00 and a drop observed after 18:30
- During this time, the operation of Dodwells Circulatory generates **5 minutes of delay** along the A5, as the journey times increase from just under 1 minute and 30 seconds to almost 6 minutes during most of the peak.
- The journey time reach over 7 minutes during the worst part of the peak. This is equivalent to an **average speed of 6 mph** along the 1,100 metres section.
- It should be noted that the PM peak shows higher delays in the westbound direction than the AM.

Annex E - VISSIM modelling review (network layout and model extents) – Hinckley NRFI DCO Deadline 5

Project: Hinckley NRFI	**Author:** Javi Navaro Pardo, Principal Consultant
Subject: VISSIM modelling review (network layout and model extents) – Hinckley NRFI DCO Deadline 5	**Reviewed:**
Date: 9th February 2024	**Approved:** Daniel Law

1. Introduction

All parties agree that in order to avoid abortive work, the outstanding matters related to the Furnessing methodology should be addressed before progress is made with the standalone junction models. To expedite the overall process, we have reviewed VISSIM models for the following standalone junctions, however for the reason stated this review only considers the existing network layout and model extents:

- M69 Junction 1
- M69 Junction 2
- Longshoot to Dodwells

The scenarios, including additional schemes or mitigation, have not been reviewed as no proposed design has been provided – this was raised in the REP3-139 response. The operational parameters from the models have not been reviewed at this time (including but not limited to driving behaviours, give-way parameters, routing, traffic flows, signal operation, etc.) as it shall be most effective to complete this review once the following comments have been addressed:

2. M69 Junction 1

No immediate issues have been identified during the network review; however areas of clarification are required as detailed below.

- The link and connector structure within the junction includes multiple connectors, creating numerous routing options and potential issues during the convergence and dynamic assignment. These could be mitigated by coding the appropriate edge closures to ensure correct vehicle routing and lane allocation. The edge closures and lane allocation also depend on the flows and turning proportion, so they have not been reviewed at this stage.
- Multiple priority rules have been included to represent Keep Clear / Yellow box behaviours that are not painted on the road. These behaviours must be justified in the report and consistent with Base model.
- The desired speeds at the roundabout seem on the high side (39 to 75 mph). It is assumed that the average speed through the junction will be affected by the traffic lights and reduced speed areas within the circulatory. These speeds must be justified in the report and consistent with Base model.

- There are multiple connectors with variable-width lanes representing taper lanes. These, along with the lane change distance and emergency stop of the downstream connector, should be calibrated to prevent vehicles from using the narrow end of the taper and ensure the models operate as expected. These will affect all the locations where these connectors have been used, such us the merge/diverge sections on the M69, for example link 10099 (M69 southbound off-slip) is coded as 169 metres long, but only 80 metres are wide enough to fit a vehicle.
- Multiple long reduced speed areas (RSA) have been coded throughout the model, the use of these should be justified in the report. The RSAs coded near signalised junctions should be calibrated to match the saturation flow at the intersection.

3. M69 Junction 2

No immediate issues have been identified during the network review; however areas of clarification are required as detailed below .

- There are multiple connectors with variable-width lanes representing tapper lanes. These, along with the lane change distance and emergency stop of the downstream connector, should be calibrated to prevent vehicles from reaching the end of the tapper and ensure the models operate as expected.
-

4. A5 Longshoot to Dodwells

No immediate issues have been identified during the network review; however areas of clarification are required as detailed below.

- There are multiple connectors with variable-width lanes representing taper lanes. These, along with the lane change distance and emergency stop of the downstream connector, should be calibrated to prevent vehicles from reaching the end of the taper and ensure the models operate as expected.
- It should be noted that there is a new signalised junction on Leghorn Road / A47 (Long Shoot) which should be included in the forecast models as it may affect the operation of the A5 corridor.
- Multiple long reduced speed areas (RSA) have been coded throughout the model, the use of these should be justified in the report. The RSAs coded near signalised junctions should be calibrated to match the saturation flow at the junction.
- Multiple priority rules have been included to represent Keep Clear / Yellow box behaviours that are not painted on the road. These behaviours must be justified in the report and consistent with Base model.

5. Recommendation

It is recommended that areas of clarification/justification above are addressed prior to further use of the models for analysis of development impacts.

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