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| | Pell Frischmann |
| Project | Northampton Gateway SRFI: DCO Amendment |
| Client | West Northamptonshire Council |
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| Prepared by | J Yeung |
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# Overview

West Northamptonshire Council (WNC) has commissioned Pell Frischmann to undertake a technical review of the applicant's response, dated 3rd July 2025, to WNC comments issued on 6th June 2025 regarding the Transport Assessment Addendum (TAA) for the DCO application (application reference: 2025/1867/DCO) for the Northampton Gateway SRFI scheme.

The submission comprises a series of responses to WNC comments, supported by appendices including revised impact assessment and technical note for HGV distribution.

A Technical Note (this TN) has been prepared and the structure of this TN is set out as follows:

- **Section 1**: Review of the responses table from the applicant.
- **Section 2**: Review of the Technical Note contained in TAA Appendix 1.
- **Section 3**: Review of TAA Appendix 2 which contains the methodology for HGV distribution
- **Section 4**: Summary of the findings.

The remainder of this audit will include comments based on a Red, Amber, Green (RAG) classification, as follows:

**Red**: comments that could have a potential significant impact on the overall conclusions of the assessment and which should be addressed accordingly.

**Amber**: comments that could result in changes to the assessment and should be addressed accordingly.

**Green**: comments that are unlikely to have a significant impact on the assessment, but where further clarification is required

In addition to the RAG classification, recommendations to WNC are made using a purple highlight, as follows:

**Action/ Recommendation for WNC**: comments which denote requirement for a decision from WNC or a recommendation for a proposed planning condition.

# 1 Responses to WNC Comments issued on 6th June 2025

| Comment ID | WNC comments (June 2025) | TTP Consulting response (July 2025) | WNC response (August 2025) |
|---|---|---|---|
| **General** | | | |
| 1 | The proposals seek to increase the mezzanine floor space by 111,480 sqm at the already approved Northampton Gateway Strategic Rail Freight Interchange (SRFI) development site. | Correct. | Acknowledged, no further action is required. |
| 2 | The current proposals include an improvement scheme at the site access roundabout on the A508 (partial signalisation). | Further to assessment based on the new traffic flow information from the latest version of the NSTM the minor improvement works at the site access are not required and will be removed from the DCO amendment (see **Appendix 1**) | Acknowledged, no further action is required. |
| 3 | It is noted that the Northampton Gateway SRFI development was granted permission in October 2019 (Development Consent Order 2019) and that the supporting Transport Assessment (TA) was dated May 2018. The NSTM model would likely have been based on 2015 baseline data. This data and assessment from the previous TA are now several years old and therefore any reliance on its data / assumptions would be questioned as part of the review process for a new planning application. | Assessment has been carried out using the latest version of NSTM and traffic data. | Acknowledged, no further action is required. |
| 4 | The approved Northampton Gateway SRFI scheme includes 468,000 sqm of warehousing and ancillary building with 155,000 sqm of mezzanine floor space (includes HGV parking of approximately 120 spaces). | Correct. | Acknowledged, no further action is required. |
| 5 | As part of the approved schemed a package of highway mitigation measures was secured. The highway improvement measures included an upgrade to M1 Junction 15 and the A45, improvements to M1 Junction 15A, a bypass for the village of Roade, the implementation of environmental weight restrictions, improvements along the A508 as part of the A508 route upgrade, and financial contributions towards improvements to the A45 Queen Eleanor Interchange, and junctions along the A5076, and a Knock Lane and Blisworth Road maintenance and minor works fund. | Correct. These improvement works were designed based on the traffic flow forecasts from the original NSTM, which have been shown to be materially higher than the forecasts from the latest version of the NSTM. It therefore follows that the completed highway improvements will provide significantly more headroom on the highway network to accommodate additional traffic than was assessed at the time of the DCO. | Acknowledged, no further action is required. |
| 6 | The phased construction of the offsite highway works described above commenced in 2021 and are now reported to be largely complete. | The highway works are now complete. | Acknowledged, no further action is required. |

| Comment ID | WNC comments (June 2025) | TTP Consulting response (July 2025) | WNC response (August 2025) |
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| 7 | Walking and cycling measures / strategies were also secured both on-site and off-site in order to help improve connectivity to residential areas within the walking and cycling catchments. | Correct. | Acknowledged, no further action is required. |
| 8 | As part of the approved development, a public transport strategy was developed which includes the introduction of a new bus service specifically serving the SRFI site, as well as building on the existing local bus network and providing additional bus stops on the A508 to the north and south of the A508/site access roundabout. | Correct. It should be noted that the new bus service will directly serve the site, entering via the new site access with bus stops provided along the length of the estate road within the site. | Acknowledged, no further action is required. |
| 9 | The approved Northampton Gateway SRFI was forecast to generate 1,044 two-way vehicle trips in the morning peak hour, 1,303 two-way vehicle trips in the evening peak hour, and 16,531 vehicle trips over a 24-hour period. | This is the forecast traffic prior to the impact of the Travel Plan. Accounting for the impact of the Travel Plan (year 5 target) the approved Northampton Gateway SRFI was forecast to generate 889 two-way vehicle trips in the morning peak hour, 1,096 two-way vehicle trips in the evening peak hour, and 14,116 vehicle trips over a 24-hour period. | Acknowledged, no further action is required. |
| 10 | The proposed increase in mezzanine floor space is reported to increase the off-site vehicle trips by 105 two-way trips in the morning peak hour, 128 two-way vehicle trips in the evening peak hour and 1,601 vehicle trips over a 24-hour period. This equates to a 10% increase in off-site traffic as a result of the proposals. However, these numbers are based on the application of a 50% reduction factor which has not been suitably justified (as discussed further below). | These are the vehicle trips prior to the impact on the Travel Plan. The 50% factor is discussed in the Vehicle Trip Generation table below. | The 50% factor has been reviewed in Section 2 of this TN. It is noted that a justification has been provided in **Appendix 1**. However, due to the incomparability between the application site and ITP surveyed site, it is considered that the justification is not appropriate. Therefore, further justification should be provided for the 50% factor, or no discount factor should be applied to the approved DCO trip rates in 2019.. |
| 11 | The proposed extensions and resulting trip generation should be accounted for within not just a revised TA but also the supporting documents such as the Travel Plan (TP), Service and Delivery Management Plan (SDMP), Car Parking Design and Management Plan (CPDMP) and Construction Traffic Management Plan (CTMP). | The requirement for these documents is already conditioned via the DCO. The additional mezzanine floor space would be contained within an existing permitted unit, which is required to conform with the requirements of the DCO, including preparation of a Travel Plan for the unit based on the approved Framework Travel Plan, and details of the car parking design and management. Hence no additional information is required to support the amendment to the DCO. | Acknowledged, however DCO-conditioned documents (e.g. Travel Plan (TP), Service and Delivery Management Plan (SDMP), Car Parking Design and Management Plan (CPDMP) and Construction Traffic Management Plan (CTMP)) should be updated to reflect the revised development. |
| 12 | The impact of the proposals on the site car and cycle parking strategy, forecast accumulation / demand and parking supply have not been discussed in this submission. | Parking at the site is dealt with via the DCO and the additional mezzanine floor space, secured via an amendment to the DCO, would continue to be captured by this. Hence no additional information is required to support the amendment to the DCO. | Further information or justification of no parking supply for additional mezzanine floor space are suggested to be provided in this DCO amendment application. |

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| 13 | It is noted that there was a variation to the DCO in 2023. Any implications as a result of the variation should be considered as part of this assessment. | The 2023 DCO amendment does not impact the proposed amendment to mezzanine floor space. The 2023 DCO amendment was to allow occupation on units ahead of the rail terminal being open. The amendment was made to avoid a potential situation where occupiers would not sign up to units at the site due to concerns that delay by Network Rail in providing the necessary rail connection would mean they could not operate from the site. In the event, this has not been required, as the rail connection was made in Easter of 2025 and the first unit at the site is not yet operational. | Acknowledged, no further action is required. |
| **Mezzanine Floor Space / Trip Generation** | | | |
| 14 | Reference is made to the acceptance of the 50% reduction factor for HGV trips as part of the approved scheme. However, this scheme was approved as part of a separate application and assessment that was undertaken in 2018 (approximately 6 years ago). Therefore, as mentioned above, the application of any trip reduction factors should be based on current available data and justification | See Vehicle Trip Generation table below. | See Comment ID 10. |
| **Vehicle Trip Generation** | | | |
| 15 | Vehicle trip rates for the proposed B8 warehousing extension has been extracted from the previously consented scheme with a 50% reduction factor being applied to take account of the mezzanine floorspace. | Correct. | See Comment ID 10. |
| 16 | Paragraph 3.6 states that 'HGV generations are typically related to the number of loading bays, which are located on the ground floor and hence do not increase when mezzanine levels are introduced.' However, this statement does not seem to acknowledge that increased turnover of the loading bays, afforded by increased storage space, would also be a contributing factor towards potential HGV trip generation numbers. | Do not agree. The 50% factor is also applied to HGV generations, therefore recognising that increased turnover could results in increased HGV movements. | Acknowledged, no further action is required. |

| Comment ID | WNC comments (June 2025) | TTP Consulting response (July 2025) | WNC response (August 2025) |
|---|---|---|---|
| 17 | In relation to trip generation forecasts, it is acknowledged that mezzanine floorspace would not generate trips on a pro-rata basis with conventional floor space. However, the application of any reduction factors would need to be evidenced based and fully justified. In this instance, a 50% factor was applied but the robustness / suitability of this significant level of reduction is queried. | The 50% factor was agreed with WNC (formerly Northamptonshire Council Council) and National Highways as acceptable and appropriate as part of the DCO. WNC accepted this position as recently as 2022 as part of the new planning application for Plot 7 at Northampton Gateway. National Highways continue to accept this approach and do not object to the proposed amendment to the DCO. | Acknowledged that the 50% factor was agreed with WNC and National Highways previously as part of the initial 2019 DCO approval. However, as identified in Comment ID 10, due to the incomparability between the application site and ITP surveyed site, it is considered that the justification is not appropriate. Therefore, further justification should be provided for the 50% factor, or no discount factor should be applied to the approved DCO trip rates in 2019.. |
| 18 | An assessment of the forecast trip generation rates and associated reduction factors for the proposed extension should be based on current available data (e.g. survey data of comparable sites / comparable TRICS sites). | This has been undertaken, see **Appendix 1**. | See Comment ID 10. |
| 19 | Once the above has been undertaken a comparison could be made with the previously used rates to provide assurance that a reliable and robust assessment has been undertaken. | This has been undertaken, see **Appendix 1** and demonstrates that the assessment is reliable and robust. | See Comment ID 10. |
| 20 | It is noted that following a meeting with the applicant on 1st May 2025, the applicant referred to new survey data of other comparable sites which they intend to use in their justification of vehicle trip rates related to the proposed additional mezzanine floor space. The applicant was to provide further details of this analysis in order to justify the rates / reduction factors used in their assessment. We await this further information | See above.<br>Whilst the work presented in **Appendix 1** demonstrates a reliable and robust assessment, additional assessment work has also been undertaken as part of **Appendix 1** of this letter, as follows:<br>1. Trip generation in accordance with DCO trip rates assumptions (50% factor for mezzanine floor space)<br>2. Trip generation based on observed survey data for warehousing units with mezzanine floor space (ITP trip rates)<br>3. A sensitivity test, in which the DCO trip rates are applied at 100% | Considering the justification is not appropriate for the 50% factor (See Comment ID 10), the scenarios undertaken for junction capacity assessment should be reviewed. |

| Comment ID | WNC comments (June 2025) | TTP Consulting response (July 2025) | WNC response (August 2025) |
|---|---|---|---|
| **Person Trip Generation** | | | |
| 21 | Similar to the comments made above, an all-mode trip generation exercise should be undertaken for the proposed expansion, based on current available data. | An all-mode assessment is included in the TA Addendum. This has been updated within **Appendix 1** to also consider the alternative trip rate scenarios described above. The assessment concludes that the pedestrian, cyclist and public transport improvements identified and implemented as part of the DCO will accommodate the addition trips by sustainable modes. | Trip generation has been reviewed in Section 2 of this TN. The approach for estimating the trip generation is considered acceptable. No further action is required for this comment. |
| **Trip Distribution and Assignment** | | | |
| 22 | Vehicle trip distribution for the proposed extension has been based on the 2018 TA. The NSTM model would likely have been based on 2015 baseline data. This is not accepted due to the age of the previous data / assessment. | The development vehicle trip distribution was agreed with WNC and National Highways as part of the DCO. The light vehicle trip distribution was based on the NSTM, adjusted to appropriately represent trips to and from the M1 South. The HGV distribution is based on a bespoke HGV distribution. This point has been further discussed with WNC via email exchanges and WNC have confirmed that the continued application of the development light vehicle trip distribution agreed as part of the DCO remains appropriate. WNC have requested details on the bespoke HGV distribution. The agreed position was set out in Appendix 7 of the 2018 TA, which is attached at **Appendix 2** of this letter. | **Appendix 2** has been reviewed in Section 3 of this TN.<br><br>The approach for determining the HGV trip distribution is considered appropriate. In a review of HGV trip distribution there may be some potential issues with national traffic distribution, with approach used for the strategic road network based on 2014 DfT statistics, i.e. prior to considering the impacts of Brexit and the COVID-19 pandemic. However, these impacts would lie outside the jurisdiction of WNC, with the approach to HGV distribution regionally (within 25 miles) considered to be acceptable. |
| 23 | The current proposals should be based on more recent traffic background data, growth rate, trip generation, committed / allocated land use and infrastructure assumptions. | **Appendix 1** provides an assessment based on information from the latest NSTM. | Noted that the assessment is now applying the latest NSTM provided by WNC. No further action is required for this comment. |
| 24 | The assessment should utilise the Northamptonshire Strategic Transport Model (NSTM) which is a tool that is currently used in the assessment of large-scale development proposals which would potentially have wider scale / strategic impacts. The NSTM utilises 2026 and 2031 design year land use and infrastructure assumptions contained with the 'Uncertainty Log.' This would need to be verified and updated as necessary for the specified study area. | **Appendix 1** provides an assessment based on information from the latest NSTM. | Noted that the assessment is now applying the latest NSTM provided by WNC. No further action is required for this comment. |

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| 25 | It is noted due to other schemes within the surrounding area the NSTM has been recently updated (validated/calibrated). Hence, this would help streamline and minimise the length of time taken for the utilising the NSTM to test the proposed development scenarios. | **Appendix 1** provides an assessment based on information from the latest NSTM. | Noted that the assessment is now applying the latest NSTM provided by WNC. No further action is required for this comment. |
| 26 | To initiate the use of NSTM please contact WNC's Highways Development Management team directly. | Traffic flow data and development select link analysis have been provided from the latest NSTM. | Noted that the assessment is now applying the latest NSTM provided by WNC. No further action is required for this comment. |
| 27 | The relevant PCU conversion factors used in the development of the traffic flow diagrams should be clarified. | The same PCU conversion factor as used in the DCO have been applied to the development traffic flows. This is 1 HGV equals 2.3 PCUS, which is in accordance with the factor used in the NSTM. | Acknowledged, no further action is required. |
| 28 | It is noted that following a meeting with the applicant on 1st May 2025, the applicant had initiated the use of the NSTM in order to obtain flow difference plots and junction turning movements for the 2031 reference case model (for site access and M1 Junction 15 only) such that a direct comparison can be made of the forecast baseline network flows between the superseded and current versions of the NSTM. Noting that the applicant's assessment was based on the older / superseded model version. | **Appendix 1** provides an assessment based on information from the latest NSTM.<br>Note that this assessment includes consideration of three different assumptions regarding trip rate and traffic generation:<br>1. Trip generation in accordance with DCO trip rates assumptions (50% factor for mezzanine floor space)<br>2. Trip generation based on observed survey data for warehousing units with mezzanine floor space (ITP trip rates)<br>3. A sensitivity test, in which the DCO trip rates are applied at 100%. | Noted that the assessment is now applying the latest NSTM provided by WNC. Additionally, the scenarios undertaken for junction capacity assessment are considered appropriate. No further action is required for this comment. |
| 29 | The model plots indicate that the current version of the NSTM has materially lower network flows near the application site during both the AM (up to 760 two-way vehicles lower on the A508) and PM (up to 616 two-way vehicles lower on the A508) weekday peak periods. | Noted. **Appendix 1** provides an assessment based on information from the latest NSTM. This concludes that with the materially lower traffic flows the minor highway works that were proposed at the site access are not required to accommodate the additional traffic from the proposed increase in mezzanine floor space at the site. | Acknowledged, no further action is required. |
| 30 | Based on the above, the LHA have concerns regarding the accuracy and suitability of the impact analysis conducted by the applicant due to the use of the outdated model and its significantly higher network baseline flows. | As above, updated assessment is provided at **Appendix 1**. | Noted that the assessment is now applying the latest NSTM provided by WNC. No further action is required for this comment. |

| Comment ID | WNC comments (June 2025) | TTP Consulting response (July 2025) | WNC response (August 2025) |
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| 31 | The incorrect use of higher baseline network flow could be seen as a robust assessment. However, the LHA question the forecast performance of the highway network as well as the justification and proportionality of the proposed highway mitigation (noting that an agreement on forecast trip rates and traffic generation has not yet been achieved). | As above, updated assessment is provided at **Appendix 1**. This concludes that with the materially lower traffic flows the minor highway works that were proposed at the site access are not required to accommodate the additional traffic from the proposed increase in mezzanine floor space at the site. The assessment includes consideration of three different assumptions regarding trip rate and traffic generation. | Noted that the assessment is now applying the latest NSTM provided by WNC. No further action is required for this comment. |
| 32 | We cannot properly determine the impact of the proposals nor the requirement / suitability of the highway mitigation measures until an updated modelling / traffic impact assessment is undertaken. | See the updated assessment is provided at **Appendix 1**. | Noted that the assessment is now applying the latest NSTM provided by WNC. No further action is required for this comment. |
| 33 | The above, relates to the site access and M1 Junction 15 only. Further NSTM 'select link' analysis outputs are currently being produced to help better understand the potential wider network implications of the proposals. | Segro have recently completed the significant infrastructure upgrades to the A508 and M1 Junction 15 (and M1 Junction 15a) that were demonstrated via the DCO to accommodate much greater traffic flows than are now forecast. It therefore follows that the completed highway improvements will provide significantly more headroom on the highway network to accommodate additional traffic than was assessed in the DCO. | Noted that the assessment is now applying the latest NSTM provided by WNC. No further action is required for this comment. |
| **Assessment of Impacts** | | | |
| 34 | The impact assessment of the submission cannot be agreed until the fundamental issues raised above have been addressed (e.g. trip generation and distribution). | The points around trip generation and distributed have been addressed. | **Appendix 2** has been reviewed in Section 3 of this TN.<br><br>It is considered that the approaches to trip generation and distribution are appropriate.<br><br>In the review of HGV trip distribution there may be some potential issues with national traffic distribution (see Comment ID 22), with approach used for the strategic road network based on 2014 DfT statistics, i.e. prior to considering the impacts of Brexit and the COVID-19 pandemic. However, these impacts would lie outside the jurisdiction of WNC, with the approach to HGV distribution regionally (within 25 miles) considered to be acceptable. |
| 35 | The TA addendum has limited its assessment to the A508 access roundabout and M1 Junction 15. The study extent cannot be agreed until the issues raised above have been addressed. | The points around trip generation and distributed have been addressed. | See WNC Comment ID 34. |

| Comment ID | WNC comments (June 2025) | TTP Consulting response (July 2025) | WNC response (August 2025) |
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| 36 | The 2031 baseline flows have been derived from the 2018 TA which is not considered appropriate. Reference should be made to the current version of the NSTM (which has a material difference in network flows). | Updated assessment based on the traffic flows from the latest NSTM has been provided. | Noted that the assessment is now applying the latest NSTM provided by WNC. No further action is required for this comment. |
| 37 | The suitability of using isolated LinSig model is queried considering the potential interaction of adjoining junctions. The suitability of this approach would be informed by current data / surveys / NSTM and junction model outputs. Though it is noted that the current submission suggests that this would not be an issue. | The updated modelling provided in **Appendix 1** demonstrates that there is no blocking back or interaction between the site access and M1 J15. This was also demonstrated to be the case in the DCO. The site access and the M1 J15 and A45 improvements that have been implemented as part of the Northampton Gateway SRFI scheme were designed based on the materially greater traffic flows assessed in the DCO.<br><br>As per WMC's observations, the traffic flows on the A508 have reduced by 760 two-way trips in the AM peak hour and 616 two-way trips in the PM peak hour, as compared to the traffic flows assessed in the DCO. The additional mezzanine floor space would add 105 two-way trips and 128 two-way trips in the AM and PM peak hour.<br><br>Hence, even allowing for this additional traffic, if can be seen that there is still a material reduction in overall traffic levels at the site access and M1 J15 as compared to that assessed in the DCO and for which it was agreed with National Highways and WNC that the highway improvements now implemented as part of the DCO would mitigate against. No further improvements are therefore required. | Acknowledged.<br><br>It is believed that the approach to junction modelling is appropriate.<br><br>The calculation of trip generation and the junction capacity assessments have been reviewed in Section 2 of this TN. Points requiring clarification should be addressed. |
| 38 | Clarification is sought as to what is the anticipated opening year of the proposed development with extensions. The modelled design years should also account for the realistic year of opening. | The amendment to increase mezzanine floor space has been made in response to changing market conditions, as occupiers now require much greater volumes of mezzanine floor space than was previously the case. This will not in itself change the opening year associated with the development. The first unit at the site is under construction and is expected to open in late 2025. The DCO considered a 5 year build out period and hence the 2031 assessment year remains appropriate and robust. | Acknowledged, no further action is required. |
| 39 | Due to capacity issues identified an improvement scheme has been put forward at the A508 site access roundabout which involves partial signalisation of the A508 southbound approach arm and circulating carriageway. | Based on the updated traffic flow information, the minor highway improvement at the site access is not required and will be removed from the amendment to the DCO. | Acknowledged, no further action is required. |

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| 40 | Increases in delay and queuing were also identified at the M1 Junction 15 using an isolated LinSig model. However, no mitigation has been put forward as the impact was not categorised as severe although there are reported negative values of Practical Reserve Capacity (PRC). | National Highways have confirmed no objection to the proposed amendment to the DCO based on the submitted assessment and concluded that there would not be any adverse impact of the operation of M1 J15 resulting from the proposed DCO amendment. | Acknowledged, no further action is required. |
| 41 | We do not necessarily agree with the above, but will await a full response/ revised assessment addressing the issues raised in this note. | See above. | Although the assessment approach is considered appropriate, there are still a few comments which will need to be addressed in relation to the accuracy of the assessment, which have been previously referred to. |
| 42 | Full model summary results covering all scenarios have not been provided within the TA addendum. | See response to below point. | Acknowledged, no further action is required. |
| 43 | The LinSig model output file for the Site Access / A508 roundabout only covers the '2031 with mitigation' weekday AM and PM scenarios. The 'without extension,' 'with extension without mitigation' and 'with extension with mitigation' scenarios should be provided for the AM and PM peak hour periods for all design years. Similar comments apply for the M1 Junction 15 model where only the 'with extension' scenario was presented | The minor highway works are no longer required and therefore this falls away. The assessment of the existing site access roundabout that is provided in Appendix 1 considers both the forecast operation without the additional mezzanine floor space and the operation with the additional mezzanine floor space. | Acknowledged, no further action is required. |
| 44 | The above would help inform of the suitability / proportionality of any forms of mitigation proposed. The acceptability of net additional impact is fundamentally based on a comparison of different scenarios and hence this should be included as part of the submission. | See above. | Acknowledged, no further action is required. |
| 45 | Fully scaled, annotated and dimensioned layout plans of the modelled junctions and the geometric parameters used should be provided to help in the review / audit process of the traffic models. | These are provided at Appendix C and D of Appendix 1 to this letter. For M1 J15, the assessment uses the National Highways approved LinSig model from the DCO but updated based on the as-built drawings and configs provided by National Highways. It should be noted that National Highways reviewed and accepted the updated J15 model. | The review of the junction modelling output report identified some impacts on M1 Junction 15 which are understood to be limited and concentrated within National Highways' strategic road network with no significant adverse impacts on WNC highway network. |
| 46 | A Stage 1 Road Safety Audit should be provided in relation to proposed works on the public highway. The RSA would need to be undertaken by pre-approved independent auditors with the RSA brief agreed by the relevant authorities (LHA/NH). The RSA should be compliant with DMRB GG119: Road Safety Audit. | As the minor works are no longer proposed there is no requirement to undertake a RSA. | Acknowledged, no further action is required. |

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| 47 | A Draft Stage 1 RSA was submitted on 30th May 2025 with the final version yet to be issued. The Draft RSA document raises issues and provides recommendations to address the concerns. | As the minor works are no longer proposed there is no requirement to undertake a RSA. | Acknowledged, no further action is required. |
| 48 | We await the final version of the Stage 1 RSA to be issued alongside the Designer's Response to the issues raised and any subsequent design revision. | As the minor works are no longer proposed there is no requirement to undertake a RSA. | Acknowledged, no further action is required. |

# 2 Appendix 1 – Updated Impact Assessment in Response to WNC Comments

## 2.1 Introduction

A technical note, included in TAA Appendix 1 has been prepared by the applicant in response to the comments received from WNC. It considers a range of trip rate scenarios and provides an updated assessment of both the site access junction and M1 Junction 15. This assessment is based on updated traffic forecasts provided by WNC, derived from the latest version of Northamptonshire Strategic Transport Model (NSTM).

## 2.2 Comparison of Trip Rates

This section of Appendix 1 presents a comparison between two sets of vehicle trip rates in response to comments from WNC. The comparison supports the assessment of a proposed increase in mezzanine floor space.

DCO Vehicle Trip Rates with 50% Factor Applied

The vehicle trip rates for the proposed mezzanine floor space were obtained from the Northampton Gateway SRFI application. WNC acknowledged that the proposed mezzanine floor space will not generate trips on a pro-rata basis with conventional floor space. Therefore, a 50% reduction has been applied to the resultant trip generations, which agreed as part of the 2019 DCO application approval.

Observed Vehicle Trip Rates for Units (ITP trip rates)

The second set of trip rates are derived from recent survey work conducted by ITP in 2023 at Segro's Rugby Gateway and Kettering Gateway sites. The vehicle trip rates with mezzanine floor space were extracted from the ITP report.

It is understood that the trip rates are extracted from Table 4-6 of the ITP report and include data for units with and without mezzanine space.

Resultant Trip Rates

Trip generations for "DCO Vehicle Trip Rates with 50% Factor Applied" and "Observed vehicle trip rates for units (ITP Trip Rates)" scenarios have been presented in Appendix 1. It shows that the DCO trip rates will generate 29 fewer trips in AM Peak but 17 more trips in PM Peak.

Comparison between Two Sets of Trip Rates

As the mezzanine space will be constructed within a warehousing and ancillary building, a comparison is undertaken in TAA Appendix 1 to determine the appropriate trip rates for the full floor area for the unit (i.e. floor area for warehousing / ancillary + mezzanine). Appendix 1 demonstrates that the greater the percentage of total floor area containing mezzanine floor space at the site, the lower the overall vehicle trip generation. The comparison indicates that the trip generation using the 50% reduction factor aligns with the surveyed trip rates from ITP, with a maximum difference of 92 additional vehicle trips in the PM peak hour.

The comparison approach has been reviewed. It is considered that the surveyed Segro's Rugby Gateway and Kettering Gateway sites by ITP is not directly comparable to the application site, as presented in the following table below:

| Usage of Floor Areas | Application Site | ITP Surveyed Site |
|---|---|---|
| With Mezzanine Floor Space ($m^2$) | 734,480 (= 468,000 + 155,000 + 111,480) | 147,562 (= 84,170 + 63,392) |
| Without Mezzanine Floor Space ($m^2$) | - | 118,255 |
| **Total Floor Space ($m^2$)** | **734,480** | **265,817** |

Although the floor area usage is consistent across both sites, the application site has a significantly greater floor space than the ITP surveyed site. As a result, the comparison sites may not be directly comparable for the purpose of derivation of trip rates.

Furthermore, the trip rates applied to the fully consented conventional floor space are not specified in Appendix 1. Therefore, it is not possible to fully verify the graphs presented for the justification of 50% discount for previously approved 2019 DCO trip rates.

To conclude, although the comparison has been set out to justify the use of 50% DCO trip rates are appropriate for this application, it is considered that the comparison is not appropriate due to the incomparable of the sites and lack of trip rate provisions. If the 50% DCO trip rates cannot be justified appropriately, it is suggested that no discount rate should be applied to the trip rates..

According to the findings above, it is considered that the comparison is not appropriate due to the difference in size between application site and the ITP surveyed sites. Further justification should be required for the 50% discount to the DCO trip rates. Otherwise, DCO trip rates with no discount factor is recommended for the additional mezzanine floor space in this application (i.e. sensitivity testing as represented by Scenario (c) as referred to in Section 2.3 of this TN).

## 2.3 Trip Generation Scenarios

Vehicle Trip Generation

The following trip rates and generation scenarios have been considered for the additional mezzanine floor space in TAA Appendix 1:

- **Scenario (a)** – DCO vehicle trip rates with 50% factor applied
- **Scenario (b)** – Observed vehicle trip rates for units (ITP trip rates)
- **Scenario (c)** – Sensitivity test using DCO trip rates without 50% reduction factor (i.e. 100% of DCO trip rates)

The resultant trip generation for each scenario has been calculated based on the proposed additional mezzanine space only. However, based on the issue raised in Section 2.2, the ITP surveyed site might not be considered comparable to the application site and hence the 50% discount is not justified appropriately. Further review should be carried out for both Scenario (a) and (b).

The adoption of Scenario (a) and (b) should be considered based on the conclusion in Section 2.2.

While the use of these scenarios to estimate vehicle trip generation is generally agreed upon, only two-way trip rates are provided in Appendix 1, rather than the arrival and departure trip rates. Therefore, it is not possible to carry out a review of the calculated trip generations.

It is recommended to provide the arrival and departure trip rates in this section.

Person Trip Generation

It is acknowledged that the person modal split is obtained from the approved Framework Travel Plan, with the percentages after five years of completion used to calculate two-way personal trips for scenarios. It is also agreed that the forecasted HGV trips will not be affected by the modal shift set out in the approved Framework Travel Plan, as the HGV trips are associated with the delivery and collection of goods from / to the site.

TAA Appendix 1 further outlines a range of walking and cycling strategies that were developed in agreement with the highway authorities as part of the DCO. In addition, a new bus service will be provided specifically serving the SRFI site.

## 2.4 Assessed Traffic Flows

Background Traffic Flows

It is understood that the 2031 background traffic flows have been obtained from the latest version of NSTM. The updated traffic flows include the consented traffic associated with Northampton Gateway SRFI but do not account for the additional traffic generated by additional mezzanine space.

Development Traffic Flows

It is acknowledged that the trip distribution is extracted from the approved TA. It has been used to assign the trips generated by each scenario and has been agreed with WNC. However, as mentioned above, no arrival and departure trip rates have been provided in TAA Appendix 1. It is not possible to undertake a review of the vehicle distribution.

It is also understood that the distribution for HGVs differs from that of light vehicles, reflecting the nature and purpose of the trips. The methodology of HGV distribution is discussed further in this TN, under the technical review of Appendix 2.

Total Traffic Flows

The resultant traffic flows are contained in the flow diagram in TAA Appendix 1.

## 2.5 Junction Modelling

A508 Site Access Roundabout

The capacity of the roundabout has been assessed using the ARCADY module within the JUNCTIONS software. Revised 2031 background traffic flows and trip generation for each scenario have been assessed in TAA Appendix 1. It is understood that the NSTM has been validated and calibrated by WNC.

The assessment results show that the roundabout will operate within theoretical capacity in the AM and PM peak hours, i.e. ≤0.85 (85%) of RFC for both Scenario (a) and (b). For Scenario (c), it slight exceedance of the 0.85 RFC threshold during the AM peak hour.

The junction modelling has been reviewed and considered to be appropriate. Furthermore, the results show that the capacity decreased from 0.80 during existing AM peak to 0.87 in Scenario (c). Although the forecasted results show Scenario (c) is predicted to operate above the 0.85 RFC threshold during the AM peak period, it is considered that a 0.07 decrease in capacity where the RFC is below 1.0 will not have a significant adverse impact on the operational performance of the junction.

**Action for WNC**: WNC to consider whether the impact of Scenario (c) is acceptable at the site access roundabout.

M1 Junction 15

The capacity of M1 Junction 15 has been assessed using LinSig modelling software. Revised 2031 background traffic flows and trip generation for each scenario have been assessed in TAA Appendix 1. It is understood that the NSTM has been validated and calibrated by WNC. The results indicate that the junction is expected to operate over its capacity under all scenarios, even without accounting for the additional mezzanine space. However, given the limited impact from the trip generations of additional mezzanine floor space, the author of TAA Appendix 1 concludes that the additional mezzanine space can be satisfactorily accommodated at M1 Junction 15.

The LinSig modelling output report has been reviewed, with several queries identified as follows:

Coding:

- Lane 9/1 has been modelled as a single short lane. However, street view imagery shows that there are supposed to be two short lanes for turning onto the A508 southbound. The current assumption in the model might be considered robust for the assessment.
- The model currently applies a multiple lane function to Lane 1/4. However, it is recommended to separate these into three distinct lanes, as per the existing road layout, since each lane serves a different destination on Arm 3. While shared lanes might be appropriate at the approach, individual lane definitions are necessary where they diverge to ensure accurate vehicle routing and lane assignment.

Saturation Flows:

- Saturation flows have been assigned directly to the lanes, including the mentioned Lane 1/4, and lanes within the gyratory. It is suggested that saturation flows should be assessed by the geometry rather than manually input, as the current values might be overestimated without any supporting evidence. Please note that nearside lanes typically have lower saturation flow values than offside lanes.

Whilst queries have been identified in relation to the M1 Junction 15 LinSig model, it is acknowledged that National Highways have raised no objection to the additional mezzanine floor space based on this assessment. Subsequently, no adverse impacts/ issues have been identified in relation to the local highway network managed by WNC.

# 3 Appendix 2 – Technical Note 3 – HGV Distribution

TAA Appendix 2 was prepared in 2017 to set out the methodology of HGV distribution for Northampton Gateway SRFI application. The content of Appendix 2 presents as follows:

- HGV trip generation for Northampton Gateway SRFI
- Methodology used to calculate the HGV trip distributions
- Distribution for proposed HGV trips
- Sense check of the resultant distribution compared to traffic count data

The applicant has confirmed that the HGV distribution used in the latest DCO application is based on methodology set out in TAA Appendix 2, which is agreed by WNC in the previous application. However, given it was prepared in 2017, the methodology for HGV distribution has been reviewed in this TN to ensure the approach remains current and appropriate.

## 3.1 HGV Trip Distribution

It is agreed that the HGV distribution has been split into two components in TAA Appendix 2:

- Regional trip distribution (based on major regional freight traffic generators)
- National trip distribution (based on the location of the site in relation to the strategic road network and the major container ports)

Regional Trip Distribution

TAA Appendix 2 sets out a regional catchment area for the site based on a one-hour driving time, which equates to a 25-mile distance. The 2011 Census workplace population data for Middle Super Output Areas (MSOA) has been extracted to determine the HGV distribution in the regional catchment area for the following industries:

- Industry C – Manufacturing
- Industry G – Wholesale and retail trade; repair of motor vehicles
- Industry H – Transport and storage

Factors have been applied to the MSOAs which are partially located within the catchment area. The origin-destination points of the regional HGV trips are allocated to the centre of the largest employment area within each MSOA.

Based on the descriptions above, it is considered that the approach to develop the regional HGV distribution is appropriate. In addition, it is known that the 2011 Census workplace population data is the latest data that could be referred to given the work pre-dated the 2021 Census.

National Trip Distribution

TAA Appendix 2 suggests that the percentage split on strategic roads at a national level is estimated by the freight arriving at the UK ports, which is extracted from the UK port freight statistics: 2014 final figures (DfT, September 2015). Data for the top ten ports in terms of freight throughput across Great Britain has been used to determine the percentage split.

It is considered that the approach to determine the HGV split on the strategic road network is appropriate. However, the latest statistics for port freight across the UK were issued by the DfT in 2024. While the use of outdated 2014 data may have been acceptable previously, it does not account for the significant changes over the past decade, such as the impacts of Brexit and the COVID-19 pandemic. As a result, the national level HGV percentage split derived from the 2014 data could not accurately reflect the current freight movement patterns in this application.

While WNC have identified potential queries in relation to the national distribution approach for HGVs, it is acknowledged that any potential impacts would lie outside the jurisdiction of WNC. As such no further comments are raised.

## 3.2 HGV Trip Assignment

Percentage Split for Regional and National Trip Distribution

TAA Appendix 2 presents the percentage split between regional and national distribution by using the trip generation associated with rail terminals and warehousing. Trips to rail terminals and trips associated with warehousing are represented by the regional and national distribution respectively. According to the trip generation set out in Technical Note 2 from the previous granted application, the ratio between regional and national distribution is 30%:70%.

As the methodology had been agreed by WNC before, it is acknowledged that the regional and national distribution split has been calculated by the trip generation set out in Technical Note 2 for Northampton Gateway SRFI application, which was granted in 2019. No further review will be undertaken for this approach.

Resulting HGV Trip Distribution

This section of Appendix 2 presents the percentage split applied to the road network for regional, national and overall scenarios. Having reviewed the percentages assigned, it seems that the overall HGV trip distribution does not reflect the 30%:70% regional/ national distribution ratio. Further calculations are presented in the following table.

| HGV from / to | Distribution for Regional Area | Distribution for National Area | Overall Distribution set out in TAA Appendix 2 | Pell Frischmann Calculation (based on the 30%:70% ratio) |
|---|---|---|---|---|
| A45 | 43% | 29% | 36% | 33% (= 43% × 0.3 + 29% × 0.7) |
| M1 North (including A43) | 23% | 30% | 26% | 28% (= 23% × 0.3 + 30% × 0.7) |
| M1 South | 18% | 41% | 29% | 34% (= 18% × 0.3 + 41% × 0.7) |
| A508 | 16% | 0% | 9% | 5% (= 16% × 0.3 + 0% × 0.7) |
| **Total** | **100%** | **100%** | **100%** | **100%** |

To conclude, the calculated overall distribution did not reflect the 30%:70% ratio. However, given that the updated of data would only impact the national level trip distribution, WNC have no further comment on this approach.

# 4 Conclusion

West Northamptonshire Council (WNC) has commissioned Pell Frischmann to undertake a technical review of the applicant's response to WNC's comments submitted in support of an amendment to a DCO application (ref: S.I. 2019 No. 1358) for the Northampton Gateway SRFI scheme.

The review has considered the applicant's responses to WNC's comments in June, as well as the methodology of trip generation, trip distribution, and junction capacity assessment.

Following the review, Pell Frischmann recommend the following:

- Applicant to provide further justification for the 50% discount to the adopted DCO trip rates in support of the Scenario (a) assessment.
- The Scenario (b) assessment is not appropriate due to the sites being incomparable in terms of floor area, as such another assessment scenario will need to be considered.
- Provide arrival and departure trip rates for trip generation calculations.

Alternative to these recommendations, it is considered that the Scenario (c) sensitivity test assessment, which uses the DCO trip rates without any reduction factors applied to the additional mezzanine floor space, does not predict a significant adverse impact to the A508 site access roundabout. For Scenario (c) capacity is predicted to decrease from an RFC of 0.80 in the 2031 AM peak, to 0.87, i.e. still below and RFC of 1.0 and not demonstrating a significant adverse impact on the operational performance of the junction.

In conclusion, in lieu of the recommendations made above, WNC may wish to determine that the predicted impact to site access roundabout is acceptable when assessed using Scenario (c) sensitivity assessment.

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Ref. reference. Rev revision. Suit suitability.