

Application WNS/2021/1819/EIA – Land North of Bell Plantation

Introduction

This note has been produced in response to further questions raised by Save Towcester Now (STN), following a meeting with National Highways on 24 July 2024. We have reviewed the questions (in italics) and provided a response to each in turn. Our ongoing aim is to provide clarity and transparency about the factors considered in our decision making. This response builds on our initial note to STN dated 05 July 2024 and covers several technical aspects such as traffic modelling, safety, standards as well as policy and legal context.

Question

Modelling 60% development

Why, when Footnote 21 of Section 49 in the DfT circular (page 8 final paragraph) is clear on the point of including the full buildout of any committed or allocated developments starting within 3 years, has the applicants modelling work assumed just a blanket 60% buildout?

LHA response of 16th May also reference 49 and that “full amount of development to be built should be included”. They also state that the LPA should be made aware of the implications of underestimating the potential impacts.

Response

The following table confirms that most committed developments were included with full build out by the opening year, including all the AL sites.

List of committed developments considered in the 2025 Opening Year for DHL application			
Sl no	Development	Application Ref	Build-out considered for Opening Year
1	Policy AL3 - Land to the east of Tiffield Road and to the north west of the A43, Towcester	S/2020/1644/EIA	100%
2	Policy AL1 - Bell Plantation, Land adjoining Bell Plantation, Watling Street, Towcester	WNS/2021/2168/MAO	100%
3	Policy AL2 - Woolgrowers Field, Land North of Greens Norton Road, Towcester	S/2020/2045/MAO	100%
4	Policy AL4 - Podium Business Park, Shacks Barn Farm, A43 Oxford Road, Silverstone	S/2020/2337/MAO	100%
5	Policy AL5 - Furtho Pits, Old Cosgrove Road, Old Stratford	WNS/2022/1741/EIA	100%

6	Silverstone Circuits - Silverstone Airfield, Dadford Road, Silverstone	S/2017/1444/EIA	60%
7	Silverstone Park, Dadford Road, Silverstone	S/2019/1793/MAO (Variation of Condition 3 to S/2016/1795/EIA)	60%
8	Towcester South SUE - Land at Towcester Vale, Towcester	S/2007/0374/OUTWNS	60%
9	Aston Martin Cognizant F1, Buckingham Road, Silverstone	S/2021/0435/MAF (Variation of Condition 2 to S/2019/1490/MAF)	100%

Source: Tables 2.1 and 2.3 of the AIMSUN Modelling Report (dated December 2023)

Considering the trip generation of the three sites included with less than 100% build out we have interrogated the trip generation methodology to calculate the additional trips that would be added to the network if these sites were included with 100% build out. The additional PCU (Passenger Car Unit equivalent) trips added to the Aimsun model network in the peak periods (2 hours each) would be as follows:

AM 60%>100% = +993

PM 60%>100% = +931

However not all of these trips will impact on the A43 / A5 Tove roundabout, so these flows have been broken down into individual movements. To aid with understanding the magnitude of impact the additional turning flows have further been disaggregated to the number of additional PCUs per cycle of the traffic signal sequence. The following tables summarise the calculated additional trips per signal cycle:

AM:

Towcester Bypass (N) to Towcester Bypass (S)	+3 PCUs
Towcester Bypass (S) to Towcester Bypass (N)	+2 PCUs
Towcester Bypass (N) to A5 (S)	+1 PCUs
Towcester (S) to Mill Lane	
A5 (S) to A5 (N)	
A5 (N) to Towcester Bypass (S)	

PM:

Towcester Bypass (S) to Towcester Bypass (N)	+3 PCUs
Towcester Bypass (N) to Towcester Bypass (S)	+2 PCUs
Towcester Bypass (N) to A5 (S)	+1 PCUs
A5 (S) to A5 (N)	
A5 (N) to A5 (S)	
A5 (N) to Towcester Bypass (S)	

NB: Greyed out figures are unlikely to impact Tove Roundabout due to availability of alternative routes.

These additional trips would be added both to the Do Minimum and the Do Something scenarios, having a similar impact on the performance of each and therefore a negligible impact on the relative performance of these scenarios. As such including these additional trips would not materially affect the conclusions of the modelling assessment and there is no justification to request sensitivity tests using full build out of all committed developments for this application.

Question

Sensitivity Testing – to look again at base data used for modelling traffic impact to confirm it is accurate and representative.

Focussing on the base data used for modelling. The 2021 survey was (a) COVID impacted and (b) drawn on a day when there was an accident on M1, bloating A5 traffic and suppressing A43 traffic, so not representative. Additionally, the Do Nothing modelling shows queuing from Abthorpe to Tove that is way lower than reality.

Whatever methodology used, if the base data is wrong, then the answer cannot be right.

Response

The base model data from 2021 was the most reliable data source when the DHL application was first submitted, and the model validation report was reviewed and agreed at the time. Further data showing a stronger post-covid recovery and the impact of the M1 collision only came to light in summer 2023 long after the principle of using the Aimsun model had been established.

In reviewing this application and our approach, we acknowledge that we could have reviewed the suitability of continuing with the same model and whether an updated validation or sensitivity tests should have been requested. However, we also need to consider whether that would be a proportionate and reasonable approach.

The ongoing peer review has considered the potential impact of increasing the base traffic load. This has shown that the additional traffic, added into the do minimum and do something scenarios, does not change the overall conclusions of our assessment that the cumulative impact (of the additional development trips and mitigation works) is not expected to result in a severe adverse impact.

Question

Safety (i) HGVs

To re-examine the modelling around the Tove roundabout as shown by Mark.

Approximately two vehicles per minute (predominantly HGVs) will be leaving the DHL site. 44T HGVs are permitted up to 16.5m - we know that currently only 1 can 'fit' on the N and E arms of Tove, straddling 2 lanes.

We do not believe that this was correctly represented on modelling video shown, which in fact, showed all traffic behaving impeccably. So – is there is something non-representative about that video - does it reflect correct scale and geometry? Have NH carried out its own remote/visual survey.

Indeed, the May 2023 NH response actually refers to a number of existing inadequacies that NH now appear happy to allow to remain, with additional traffic on top.

Response

The trip generation agreed for the DHL site is shown below:

Average Weekday Vehicle Trip Generation AL1 DHL Site										
Peak Period	Hour Start	Vehicle Trip Generation (Vehicles)								
		Light Vehicles			Heavy Vehicles			Total Vehicles		
		Arr.	Dep.	Total	Arr.	Dep.	Total	Arr.	Dep.	Total
AM	07:00	168	78	246	12	17	29	180	95	275
	08:00	185	58	243	14	20	34	199	78	277
PM	16:00	60	147	207	14	15	29	74	162	236
	17:00	87	147	234	10	14	24	97	161	258

These figures were developed from a 4-week survey of trips from the Magna Park development with figures from the busiest week (based on considering total PCU, Passenger Car Unit, volumes). The observed figures were converted into trip rates per 100sqm and then multiplied by the proposed floorspace for the DHL application.

The HGV figures were split into OGV1 and OGV2 (Other Goods Vehicles, see below for full definition) based on data from DfT published on the [Road Traffic Statistics website](#), the full methodology is presented in the Aimsun forecasting report. This gives a split of 28% OGV1 and 72% OGV2.

OGV	Other goods vehicle (over 3.5 tonnes maximum gross vehicle weight). Where no other data are available, it can be assumed that vehicles over 6.6m long are OGVs.
OGV1	Other goods vehicle 1 (2 and 3-axle rigid vehicles)
OGV2	Other goods vehicle 2 (4-axle rigid vehicles and articulated vehicles with any number of axles)

Source: CD 244 Traffic assessment; Abbreviations

These trip generation figures equate to less than 1 additional articulated vehicle travelling through the Tove Roundabout each signal cycle.

Question

Safety (ii) RSA

a) Is a stage 1 RSA adequate for a decision of such magnitude and therefore do you really believe it is appropriate that a stage 2 RSA should be deferred until 'after the event'?

Response

Under para 25 of Circular 01/2022, the preliminary design of any mitigation scheme on the SRN will need to be supported by a Stage 1 RSA, to demonstrate that road safety issues have been considered. Once planning approval has been granted the scheme would undergo detailed design, to ensure that it complies with all technical requirements set out in the DMRB. Upon completion of the detailed design a Stage 2 RSA must be carried out, which will include a review of actions related to the problems identified during the Stage 1 audit.

Question

b) The mitigation scheme now EXCLUDES widening and a third lane and therefore relies solely on a SHORT extension of 2-lane to the northbound exit and intergreens. Does this solve the problems NH set out in their statutory responses?

Response

The design risks identified related to the additional circulatory lane are eliminated by removing this element from the scheme and therefore addresses the concerns previously raised.

Question

c) How much scope is there, in reality, to affect much improvement, and is it right and safe that intergreens vary between arms?

Response

Intergreen timings are a vital safety feature of signal control which determine the timing between two green signals that conflict. These vary on a junction depending on the geometry between any two conflicting movements and are largely fixed. The Aimsun modelling has used the same intergreen values as are already in use with the exception that some scenarios extended these to create longer gaps for Towcester Road traffic.

The durations of the green times in the model have also been heavily scrutinised and while these do vary by time period and scenario this is expected as the timings used in the signal controller will be configured to optimise for the traffic conditions at different times of day.

While the junction is constrained by the highway boundary the proposed mitigation has identified scope to provide an additional lane on the northbound A5 exit. This, combined with changes in flow patterns arising from the southern link road, facilitates changes to lane destinations on the approaches giving rise to more efficient use, particularly on the A5 approaches.

These physical changes in turn allow for slight changes to the balance of signal timings across the junction and lead to a slight overall increase in the junction capacity. This has been verified through our peer-review which demonstrates that the changes to the junction provide additional capacity at the junction across the peak periods which is proportionate to the forecast number of additional trips.

Question

Safety (iii) Cycling and Pedestrian Safety and access

LTN 1/20 "Cycle Infrastructure Design" and the NPPF demands "attractive and well designed walking and cycling networks" and NH has a responsibility to "support modal shift". When factoring in pedestrians, cyclists and high speed routes, there is an ideal minimum 4.5 meters. How can the 2m provision can ever be considered to be safe, ignoring government guidance as it does (both extracts from LTN 1/12 "Shared Use Routes for Pedestrians and Cyclists")?

NB although we note your citing of para 50 of 1/2022, other elements appeared to have been ignored (see below). See below (from NPPF) - note primacy of safety for NMU, and no time aspect to cumulative impact:

Response

As part of the works for the new site access roundabout, the existing footpath beside the A5 will be upgraded to a shared use footway to the pedestrian crossing of the A43 (E). Requirements for the design of walking, cycling and horse-riding facilities on and/or adjacent to the SRN are covered by DMRB standard CD143 Designing for walking, cycling and horse-riding. While LTN 1/20 concerns design standards for local roads.

The achievable width for a section of the footpath is constrained by third-party land not within the control of the developer. CD143 para E/5.3 states that: "Widths of unsegregated shared use routes shall be a minimum of:

- i) 3.0 metres where there are 200 users an hour or more; or
- ii) 2.0 metres where there are less than 200 users per hour."

Since it is expected number of users would be relatively low (less than 200 per hour), a footway width of 2.0m is considered to be acceptable.

115. Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

116. Within this context, applications for development should:

- a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

Question

"Severe Cumulative Impact" Review non-use of NPPF para 115

We discussed this at length when we met and we were all in agreement that with all AL sites built out at the end of the Local Plan period in your own words "there is likely to be a severe cumulative impact which would adversely affect the operation of the Tove roundabout". You explained why within the DfT Circular you do not have to consider the 2031 situation in your Planning Response, however we highlighted that the NPPF (namely para 115) clearly provides a policy route to do just this and indeed recommend refusal of the DHL application on highway grounds. You said you would review this and advise why the NPPF wasn't considered and used in this way.

Response

NPPF para 115 is referring to the cumulative impact of the development plus any proposed mitigation, assessed against a Do Minimum scenario including all committed development (either allocated in a local plan or with direct planning permission). As opposed to, an assessment of multiple development sites collectively assessed against a Do Nothing (or Do Minimum with only other committed sites included).

Question

Pedestrian crossing at A5 How do pedestrians and cyclist from Greens Norton get safely to the site (in absence of formal crossing point over A5)?

Response

We have revisited the Transport Assessment and the WCHAR that were submitted as part of the application. Although Greens Norton is considered to be on the edge of the acceptable limit for walking and cycling, we need to consider whether such a request is proportionate and reasonable as part of the planning conditions test. Given the expected numbers who would be making that journey via foot and cycle, upon assessment we did not consider this to be a reasonable request for the developer.

Question

Ensure the pedestrian crossing on Westbound A43 has been 'owned' by DHL

Response

We have reviewed this position with our legal team, who have advised that although the DHL drawing shows 'works by others,' this does not mean that DHL are obliged to provide the crossing should other developments not go ahead. We agree that the distance between DHL and Greens Norton is within suitable distance for walking and cycling. However, when considering the planning tests highlighted in paragraph 57 of the NPPF, the scale of work required to provide a connection to Greens Norton is disproportionate to the likely low level of demand for walking and cycling. Therefore, we do not deem it appropriate to request a condition to provide such facilities.

Question

Northampton Gateway additions

Response

In April 2023, Ministers approved an amendment to the Northampton Gateway DCO. Reconfirming its status as a rail freight terminal, the amendment directs that rail infrastructure within the site must be completed prior to any warehousing being occupied. On completion of the rail infrastructure, no more than 232,260m² of warehousing is to be occupied until the connections to the main railway line have been completed, enabling the rail terminal to become operational. The DCO permits up to 468,000m² of warehousing and ancillary buildings, with additional floorspace of up to 155,000m² provided in the form of mezzanines.

Question

To check whether Rail Freight Terminal to Road Freight Terminal – has the westbound traffic been factored in to all modelling?

Response

As confirmed by the development list above, Northampton Gateway was not explicitly included in the traffic forecast. This is a reasonable approach considering the primary area of influence from the DHL site and Northampton Gateway based on typical commuting trips.

We understand the concerns primarily relate to the impact of HGV trips heading to or from Northampton Gateway using the A43 corridor. These movements are strategic freight journeys and are covered through national road traffic forecasts which have informed the background traffic growth factors used in the assessment. The full methodology for the background traffic growth is set out in section 2.5 and Appendix E of the modelling report 'JN2138-Rep-0025.1 AIMSUN Modelling Report 2025 Future Year', SAJ Transport Consultants, Dec 2023.

As the national road traffic forecasts are based on wider population and economic data it accounts for the general increase in demand for travel, including freight. It is possible that the specific location of Northampton Gateway may somewhat concentrate trips to the A43 corridor but any difference between the use of national growth forecasts and specific trip figures from the rail freight interchange will be very small, in the order of a handful of trips per peak hour. As such explicitly including trip generation figures from Northampton Gateway in assessments for the DHL site would not materially impact the outcomes or conclusions from this work.

Conclusion

We have undertaken a thorough review of the additional questions raised by STN following our meeting on the 24 July 2024 with the continued aim of providing clarity and transparency about the factors considered in our decision making. The review has carefully considered aspects such as our approach to traffic modelling, standards and the interpretation of policy and legal perspectives. As a result of our review, we continue to conclude that our decision accords with policy requirements and therefore remains appropriate.