



National Highways Planning Response (NHPR 24-01) Formal Recommendation to an Application for Planning Permission

From: Divisional Director
Operations Directorate
Highways England.
North East Region
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To: **North Lincolnshire Council – Dean Watson**

CC: transportplanning@dft.gov.uk
spatialplanning@nationalhighways.co.uk

Council's Reference: PA/2023/421

Location: VPI Power Station, Rosper Road, South Killingholme, DN40 3DZ

Proposal: Planning permission for the construction and operation of a post-combustion carbon capture plant, including carbon dioxide compressor and metering, cooling equipment, stacks, substations, internal roads, partial ditch realignment, new and modified services, connections, accesses, maintenance and laydown areas.

National Highways Ref: NH/23/04269

Referring to the consultation on a planning application dated **April 2 2024** referenced above, in the vicinity of the M180/A160 that forms part of the Strategic Road Network, notice is hereby given that National Highways' formal recommendation is that we:

- ~~a) offer no objection (see reasons at Annex A);~~
- ~~b) recommend that conditions should be attached to any planning permission that may be granted (see Annex A – National Highways recommended Planning Conditions & reasons);~~
- c) recommend that planning permission not be granted for a specified period (see reasons at Annex A);**
- ~~d) recommend that the application be refused (see reasons at Annex A)~~

This represents National Highways' formal recommendation and is copied to the Department for Transport as per the terms of our Licence.

Should the Local Planning Authority not propose to determine the application in accordance with this recommendation they are required to consult the Secretary of State for Transport, as set out in the [Town and Country Planning \(Development Affecting Trunk Roads\) Direction 2018](#), via transportplanning@dft.gov.uk and may not determine the application until the consultation process is complete.

The Local Planning Authority must also copy any consultation under the 2018 Direction to PlanningYNE@nationalhighways.co.uk

Signature:

Date: April 30 2024

Name: Simon GP Geoghegan

Position: Planning and
Development

National Highways, 2 City Walk, Leeds LS11 9AR

Standing advice to the local planning authority

The Climate Change Committee's [2022 Report to Parliament](#) notes that for the UK to achieve net zero carbon status by 2050, action is needed to support a modal shift away from car travel. The NPPF supports this position, with paragraphs **74** and **109** prescribing that significant development should offer a genuine choice of transport modes, while paragraphs **108** and **114** advise that appropriate opportunities to promote walking, cycling and public transport should be taken up.

Moreover, the build clever and build efficiently criteria as set out in clause 6.1.4 of [PAS2080](#) promote the use of low carbon materials and products, innovative design solutions and construction methods to minimise resource consumption.

These considerations should be weighed alongside any relevant Local Plan policies to ensure that planning decisions are in line with the necessary transition to net zero carbon.

Annex A National Highway's assessment of the proposed development

National Highways has been appointed by the Secretary of State for Transport as a 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.

Highways Act Section 175B

In accordance with Section 175(b) of the Highways Act 1980 (as inserted by The Infrastructure Act 2015) National Highways ~~consents~~/does not consent to the formation of an access on to the A180 Trunk Road. ~~This consent is valid only for application XXXXXXXX and to the layouts shown on drawing XXXXXXXX~~

Recommended Non-Approval

It is recommended that the application should not be approved until **June 28 2024**.

Reason

This review has highlighted the need for further information as follows:

1. The junction capacity assessments should be revised in accordance with the comments set out in this Technical Memorandum.

We also note that the following points, from our previous reviews, should also be addressed in the future:

- A. Traffic Management proposed on the SRN should be agreed with the relevant National Highways team and be designed in accordance with relevant policies and design guidance;
- B. Temporary signage should be agreed with the relevant National Highways team and be designed in accordance with relevant policy; and
- C. The National Highways Abnormal Loads Team (through [ESDAL](#)) should be consulted regarding any AIL deliveries well in advance to ensure the suitability of the route(s).

This notwithstanding, the JSJV would also reiterate that the following Condition should be imposed on any planning consent, should the LPA be minded to approve:

“Unless otherwise agreed in writing by the Local Planning Authority in consultation with National Highways (or its successors) decommissioning of the development hereby approved shall not commence unless and until a Decommissioning Traffic Management Plan has been submitted to and approved in writing by the Local Planning Authority in consultation with National Highways (or its successors). Thereafter unless otherwise approved in writing decommissioning shall be undertaken in accordance with the approved plan.”

The inclusion of the Condition ensures that any effects from the decommissioning phase are to be reviewed and agreed upon by National Highways immediately prior to decommissioning

DevHU0163 Phillips 66 and VPI

Prepared for: Simon Geoghegan
Prepared by: Joshua Bell
Date: 15th April 2024
Case Reference: DevHU0163
Document Reference: DevHU0163 004 TM
Reviewed/approved by: Terry Dale

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Introduction

In March 2023, Phillips 66 Limited submitted a planning application [ref. PA/2023/422] for:

“... the construction and operation of a post-combustion carbon capture plant, including carbon dioxide compression and metering, cooling equipment, stacks, substations, new and modified services, connections, internal roads, new access onto Eastfield Road, and maintenance and laydown areas (EIA development)”.

Further, in March 2023, VPI Immingham LLP submitted a planning application [ref. PA/2023/421] for:

“... the construction and operation of a post-combustion carbon capture plant, including carbon dioxide compressor and metering, cooling equipment, stacks, substations, internal roads, partial ditch realignment, new and modified services, connections, accesses, maintenance and laydown areas”.

We note that both proposals comprise the portions of the Humber Zero development. For context, the application sites are located respectively at Phillips 66 Ltd, Eastfield Road, South Killingholme, and VPI Power Station, Rosper Road, South Killingholme. The Local Planning Authority [LPA] and Local Highway Authority [LHA] is North Lincolnshire Council [NLC]. Further, the applicant’s planning consultant is AECOM.

The Jacobs SYSTRA Joint Venture [JSJV] reviewed the planning applications on behalf of National Highways and identified that further information was required, as set out in the respective correspondence [AA.23.19.26 TM and AA.23.19.25 TM].

Subsequently, a meeting was held with AECOM, National Highways, and the JSJV on 16th January 2024 to discuss the responses.

In February 2024, AECOM submitted a memorandum [memo] entitled ‘National Highways Response 1’ [16th February 2024]; the JSJV review of the information highlighted [TM 003] the need for further information as follows:

- 1) The distribution analysis study area should be extended to a point where the impact is not material;

- 2) The further traffic survey flows presented should be accompanied by an analysis to demonstrate that the flows are representative; and
- 3) The Applicant should discuss committed development with North Lincolnshire Council and North East Lincolnshire Council.

We also reiterated points from our previous reviews:

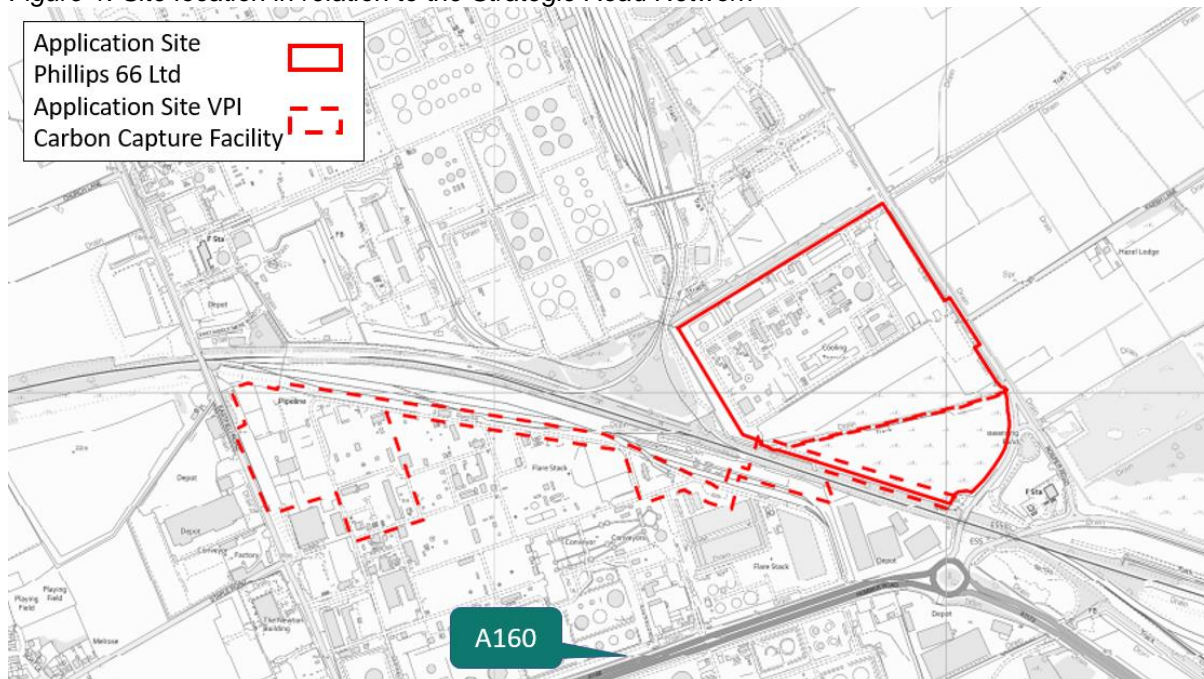
- 1) Traffic Management proposed on the SRN should be agreed with the relevant National Highways team and be designed in accordance with relevant policies and design guidance;
- 2) Temporary signage should be agreed with the relevant National Highways team and be designed in accordance with relevant policy; and
- 3) The National Highways Abnormal Loads Team should be consulted regarding any AIL deliveries well in advance to ensure the suitability of the route(s).

In March 2024, AECOM submitted a Memo, dated 27th March 2024, and this Technical Memorandum [TM 004] will set out our review of the information presented.

Existing Situation

The location of the application site is presented in **Figure 1**. As indicated, the application site is situated 500m to the north of the A160 / Eastfield Road Junction. At this location, the A160 forms a section of the SRN.

Figure 1. Site location in relation to the Strategic Road Network¹



Technical Review

Distribution and Impact

In our previous response we noted that the distribution analysis study area should be extended to a point where the impact is not material. In response, AECOM notes that further assumptions have been made with regard to M180 J4 and the junctions to the

¹ Extract from 'Sites Location Plan', produced by AECOM. 7th February 2023.

west. AECOM has applied the traffic distributions from a February 2024 traffic survey to the forecast traffic generation for the proposed developments. AECOM highlights that 43 two-way trips are forecast to assign to / from the M180 west of Junction 4; it is also noted that this equates to an increase of 1.6% in the AM peak hour and 1.4% in the PM peak hour. Further, AECOM notes that *“this proportion of traffic is considered to be immaterial and well within any daily variation in terms of its interaction with other junctions west of J4 on the M180”*.

We also note that AECOM states that:

“... a proportion of the construction traffic would potentially distribute onto the A181 towards Scunthorpe north of the M180 J3, (meaning the actual proportion reaching J1 and J2 would also be reduced, giving further evidence as to why these junctions do not require further assessment.”

And

“M180 J3 is also a free flow junction (e.g. vehicles do not need to go through a priority junction / roundabout to make the movement), therefore this would preclude the need for assessment of this particular junction.”

Considering the evidence presented, we are in agreement that junctions west of Junction 4 do not require capacity assessments.

Traffic Surveys

The JSJV noted that any traffic surveys should be demonstrated to be representative. In response AECOM notes that traffic surveys were undertaken on 20th February 2024 at:

- A160 / Eastfield Road Junction;
- M180 J5; and
- M180 J4.

The traffic data associated with the three new traffic counts is shown in Appendix B of the Memo.

The Memo notes that *“in order to validate the new traffic surveys, a comparison was made against available WebTRIS data”*. Further, it is noted that *“the WebTRIS data was filtered to include weekdays only and then averaged over the entirety of 2023 (excluding the Christmas week (Mon 25 Dec to Mon 31 Dec 2023))”*.

The Memo presents a comparison of WebTRIS and the traffic surveys which highlights the variance between the two data; this has been extracted and included in **Table 1** for reference. JSJV notes that the maximum variance is 67 vehicle trips which equates to 13.5%. This notwithstanding, the traffic survey has recorded a greater number of vehicle movements than the WebTRIS data in this instance, and in the majority of comparisons. As such, we would consider the traffic data appropriate for use.

Table 2. WebTRIS and Traffic Survey Comparison

Junction	Maximum Variance (number of vehicles / %)
M180 Junction 5	57 (7.3%)
A160 / Eastfield Road Junction	35 (7.7%)
M180 Junction 4	67 (13.5%)

This notwithstanding, we do note that there is no information provided with regard to existing queues. The availability of queue data, associated with both the new surveys and the Immingham Eastern Ro-Ro Terminal [IERRT] Transport Assessment [TA], should be clarified as this is required to calibrate and validate the traffic models.

Committed Development

We previously noted that the Applicant should obtain confirmation from North Lincolnshire Council [NLC] and North East Lincolnshire Council [NELC] regarding committed developments. AECOM notes that both were contacted and a number of developments were highlighted.

The Memo details each committed development and sets out a justification for their inclusion in, or exclusion from, the capacity assessments. We have reviewed each proposed development and would note that the justification for not including committed developments includes:

- Traffic flow diagrams not available for junctions covered in the AECOM assessments;
- Construction periods not overlapping; and
- Immaterial traffic generation.

This notwithstanding, AECOM confirms that the following are included as committed development:

- Viking CCS CO2 gathering network;
- Immingham Green Energy Terminal;
- Immingham Eastern Ro-Ro Terminal; and
- North Killingholme Power Project.

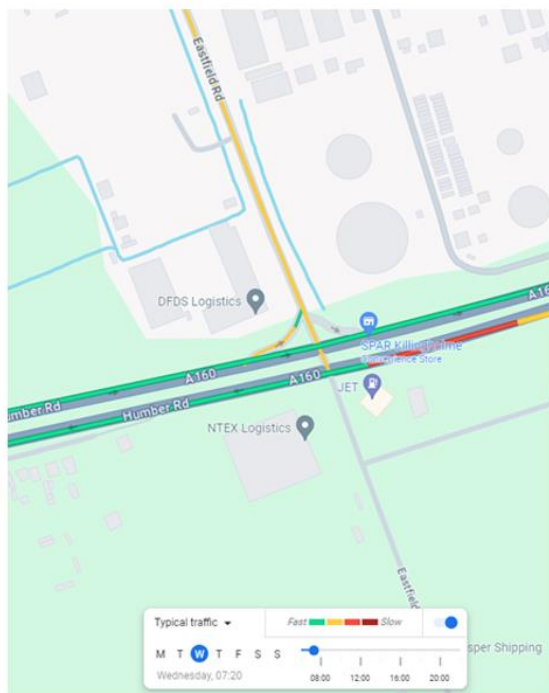
Considering the information presented we consider this to be appropriate.

Capacity Assessments

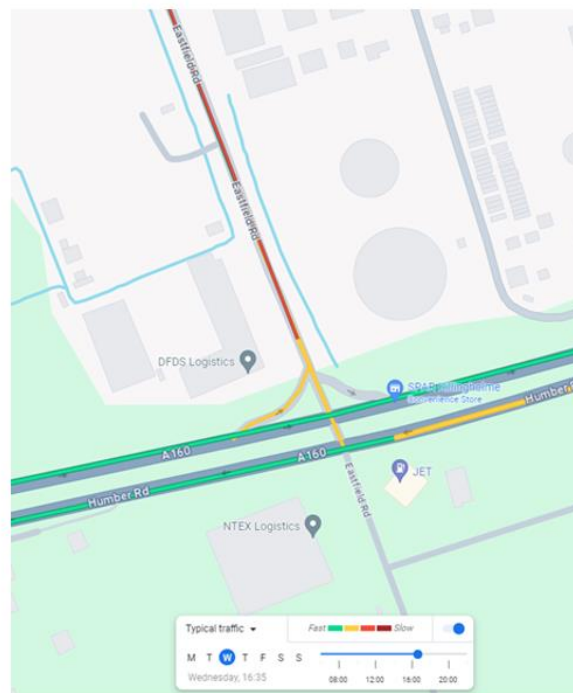
Junction A – A160 / Eastfield Road junction (signalised junction, LinSig modelling)

The typical traffic conditions from Google Maps indicate that A160 / Eastfield Road junction experiences queueing during the AM and PM peak hours, as shown in **Figure 2**. The junction will see 234 and 243 additional trips in the AM and PM respectively.

Figure 2. A160 / Eastfield Road Junction²



Wednesday 07:20



Wednesday 16:35

The submitted LinSig PDF modelling output for the A160 / Eastfield Road junction has been reviewed and we note the following with regard to geometric parameters:

- A160 (east) – lane lengths, widths and radii are satisfactory;
- Eastfield Road (south) – lane length is input as 3.7 passenger car units (PCU), our understanding is that this should be coded as a full lane of length 60 PCU;
- A160 (west) – lane lengths, widths and radii are satisfactory;
- Eastfield Road (north) –
 - lane 4/1: length and width are satisfactory; radius should be revised to approximately 20m; and
 - lane 4/2: length is input as 11.8 PCU, our understanding is that this should be coded as a full lane of length 60 PCU, width is acceptable, right-turn radius should be revised to approximately 25m.
- Geometric parameters are being used to calculate saturation flows.

The traffic signal details within the model have been reviewed and we note the following:

² © Google 2024

- There is a need to confirm that the signal phasing, staging, intergreens and cycle time represent the current on site operation;
- It is noted that, for the existing junction, the AM and PM are each assessed with fixed green time allocated to each stage; and
- An alternative assessment has been undertaken with adjusted fixed green times allocated for the PM With Development scenario.

The traffic demand input within the model has been reviewed and we note the following:

- Spot checks have been undertaken by the JSJV on the traffic inputs and these are seen to align with the traffic flow diagrams; and
- It is noted that the traffic flows are unusual with respect to the layout, for example during the PM peak the second highest movement at the junction is Eastfield Road (north) right-turn, which is catered for by only one lane shared with ahead movements.

With regard to calibration and validation of the LinSig model, we note the following

- There has been no calibration and validation undertaken in association with the submitted LinSig outputs;
- There has been no queue data presented, queue data should be presented for the purpose of model calibration and validation; and
- The model should be reviewed to ensure that the queues on each lane align with the hourly average queues observed on each lane.

The results within the submitted LinSig have been reviewed and we note the following:

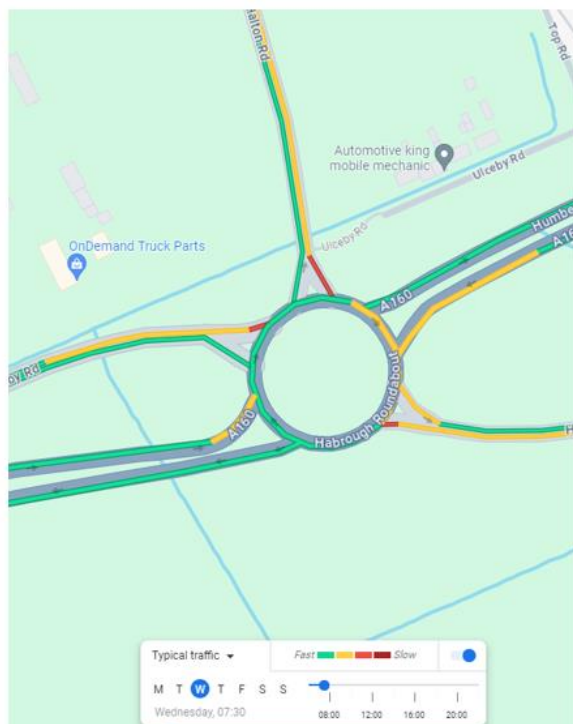
- With the existing green times, there is a significant impact on the Eastfield Road (north) ahead/right-turn arm during the PM peak, with the queue increasing from 27 PCU to 127 PCU as a result of the development;
- The assessment undertaken with revised green times for the PM With Development scenario shows the Eastfield Road (north) ahead/right-turn queue reducing from 127 PCU to 35 PCU;
- The aforementioned comments should be addressed and the assessment resubmitted; and
- In addition to the PDF output, the LinSig soft copy input file should be provided for review.

Junction B – A160 / Habrough Road / Ulceby Road / East Halton Road junction (Habrough Roundabout, Junctions 10 modelling)

The typical traffic conditions from Google Maps indicate that Habrough Roundabout experiences minimal queueing during the AM peak hour, as shown in **Figure 3**. From a review of the traffic flow diagrams, it is noted that the junction will see 1 and 228 additional trips in the AM and PM respectively. We would request clarification on the AM figure.

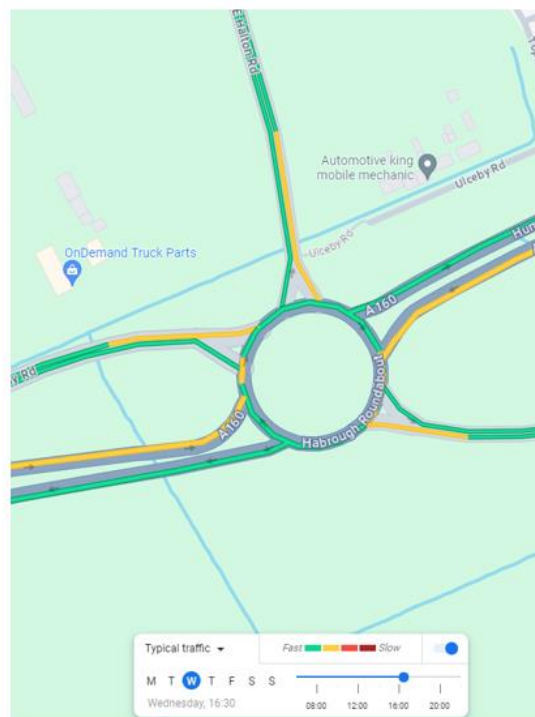
Figure

3.



Wednesday 07:30

Habrough

Roundabout³

Wednesday 16:30

The submitted Junctions 10 PDF modelling output for Habrough Roundabout has been reviewed and we note the following:

- A 'one hour' traffic flow type has been used;
- AM assessment hour – 08:00 to 09:00;
- PM assessment hour – 16:00 to 17:00;
- Arm names should be provided in the model to allow checking; and
- From review of 2025 base traffic flows compared against the OD matrices, it is seen that the A160 (east) is arm 1.

The geometric parameters input within the submitted model have been reviewed and we note the following based on aerial imagery:

- A160 (east) – we estimate half width to be 7.4m and entry width to be 8.4m, compared with 8.36m and 9.32m input in the model;
- Habrough Road – we estimate half width to be 3.9m and entry width to be 6.4m, compared with 7.43m and 9.04m input in the model;

³ © Google 2024

- In the model, arms 1, 2 and 5 are provided with half width greater than 7m, however based on review of the traffic flows it appears that arms 1 and 3 are the two lane approaches (e.g. A160 east and A160 west);
- The above are examples of anomalies which have been noted, all geometric parameters should be reviewed; and
- All input geometry measurements should be shown on CAD PDF for review, adhering to the guidance in the Junctions 10 manual, measurements should reflect the road markings and not the entire available road surface.

The traffic demand input within the submitted model has been reviewed and we note the following:

- The HV Percentages are set to 10% for each movement, this should be revised to reflect the traffic survey data;
- The traffic inputs show that arm 1 is the A160 (east) and arm 3 is the A160 (west); and
- Spot checks have been undertaken by the JSJV on the traffic inputs and these are seen to align with the traffic flow diagrams.

With regard to calibration and validation of the Junctions 10 model, we note the following

- There has been no calibration and validation undertaken in association with the submitted Junctions 10 outputs;
- There has been no queue data presented, queue data should be presented for the purpose of model calibration and validation; and
- Calibration should be undertaken using the 'direct' intercept adjustment, to ensure that the model queues align with the highest of the 15-minute average queues observed on each arm.

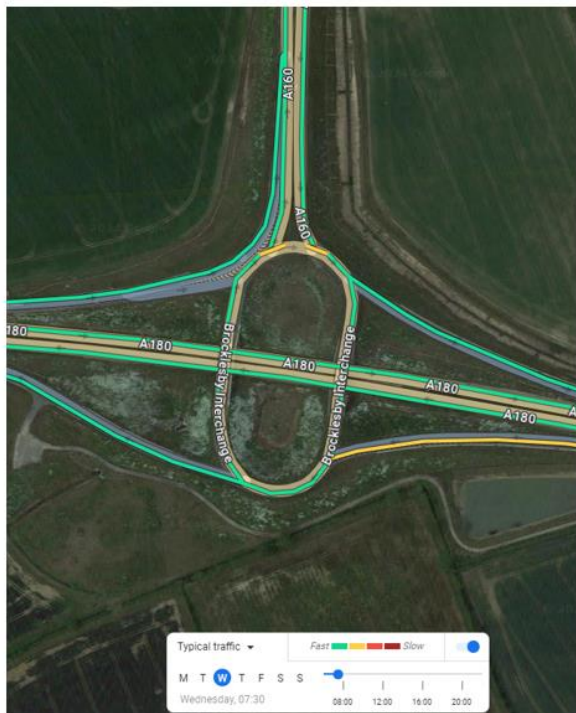
The results within the submitted Junctions 10 have been reviewed and we note the following:

- There is a significant impact on the A160 (west) arm during the AM peak, with the queue increasing from 23 PCU to 114 PCU as a result of the development;
- We expect the performance of the A160 (west) arm to improve given our recommendation regarding geometric parameters;
- The aforementioned comments should be addressed and the assessment resubmitted; and
- In addition to the PDF output, the Junction 10 soft copy input file should be provided for review.

Junction C – A160 / A180 junction (Brocklesby Interchange, Junctions 10 modelling)

The typical traffic conditions from Google Maps indicate that Brocklesby Interchange experiences slow moving traffic during the AM and PM peak hours, as shown in **Figure 4**. The junction will see 185 and 232 additional trips in the AM and PM respectively.

Figure 4. Brocklesby Interchange⁴



Wednesday 07:30



Wednesday 16:30

The submitted Junctions 10 PDF modelling output for Brocklesby Interchange has been reviewed and we note the following:

- A 'one hour' traffic flow type has been used;
- AM assessment hour – 08:00 to 09:00;
- PM assessment hour – 16:00 to 17:00;
- Arm names should be provided in the model to allow checking; and
- From review of 2025 base traffic flows, it is seen that the A160 Humber Road is arm 1.

The geometric parameters input within the submitted model have been reviewed and we note the following based on aerial imagery:

- A160 Humber Road – we estimate half width to be 7.7m and entry width to be 8.6m, compared with 8.17m and 9.38m input in the model;
- A180 (east) off-slip – we estimate half width to be 3.5m and entry width to be 5.0m, compared with 8.3m and 8.99m input in the model – it is concluded this is a result of measurements including areas which are not available for drivers to use, such as areas beyond lane edge marking, this should be revised;

⁴ © Google 2024

- Inscribed circle diameters are input at 163.8m, 373.6m and 325.2m for arms 1, 2 and 3 respectively, this should be revised to reflect on site dimensions;
- The comments are examples of anomalies which have been noted, all geometric parameters should be reviewed; and
- All input geometry measurements should be shown on CAD PDF for review, input geometry is required to reflect the road markings.

The traffic demand input within the submitted model has been reviewed and we note the following:

- The HV Percentages are set to 10% for each movement, this should be revised to reflect the traffic survey data;
- The traffic inputs show that arm 1 is the A160 Humber Road;
- A180 (west) off-slip bypass utilisation is set to 100%, this should be confirmed from the traffic surveys; and
- Spot checks have been undertaken on the traffic inputs which are seen to align with the traffic flow diagrams.

With regard to calibration and validation of the Junctions 10 model, we note the following:

- There has been no calibration and validation undertaken in association with the submitted Junctions 10 outputs;
- There has been no queue data presented, queue data should be presented for the purpose of model calibration and validation; and
- Calibration should be undertaken using the 'direct' intercept adjustment, to ensure that the model queues align with the highest of the 15-minute average queues observed on each arm.

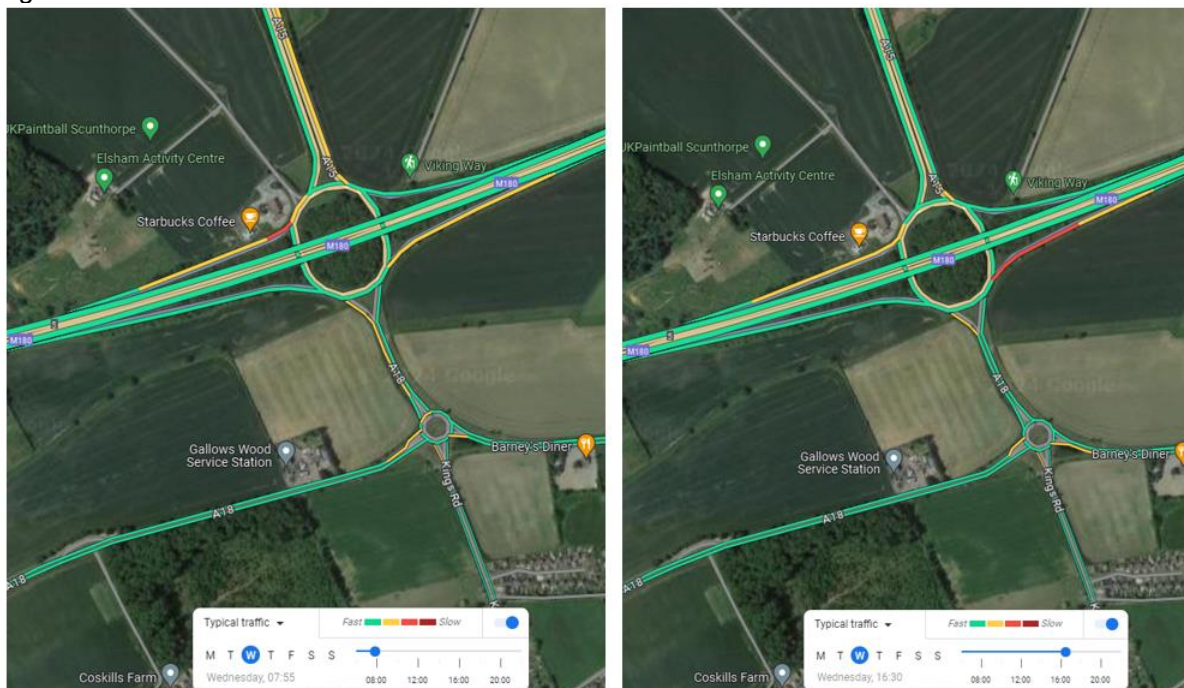
The results within the submitted Junctions 10 have been reviewed and we note the following:

- The junction is shown to operate within capacity in all scenarios;
- The aforementioned comments should be addressed and the assessment resubmitted; and
- In addition to the PDF output, the Junction 10 soft copy input file should be provided for review.

Junction D – A180 off-slip / A18 / M180 off-slip / A15 junction (M180 Junction 5, Junctions 10 modelling)

The typical traffic conditions from Google Maps indicate that M180 Junction 5 experiences queueing during the PM peak hour, as shown in **Figure 5**. The junction will see 103 and 83 additional trips in the AM and PM respectively.

Figure 5. M180 Junction 5⁵



Wednesday 07:55

Wednesday 16:30

The submitted Junctions 10 PDF modelling output for M180 Junction 5 has been reviewed and we note the following:

- A 'one hour' traffic flow type has been used;
- AM assessment hour – 08:00 to 09:00;
- PM assessment hour – 16:00 to 17:00;
- Arm names should be provided in the model to allow checking; and
- From review of 2025 base traffic flows, it is seen that the A180 on / off slips is arm 1.

The geometric parameters input within the submitted model have been reviewed and we note the following based on aerial imagery:

- A180 (east) off-slip – we estimate half width to be 6.4m and entry width to be 7.2m, compared with 7.75m and 8.71m input in the model;
- M180 (west) off-slip – we estimate half width to be 6.0m and entry width to be 7.1m, compared with 6.6m and 7.88m input in the model;
- Inscribed circle diameters should be revised to reflect on site dimensions, for example arm 3 is input as 268.1m and we estimate this should be 153m;

⁵ © Google 2024

- These are examples of anomalies which have been noted, all geometric parameters should be reviewed; and
- All input geometry measurements should be shown on CAD PDF for review, input geometry is required to reflect the road markings.

The traffic demand input within the submitted model has been reviewed and we note the following:

- The HV Percentages are set to 10% for each movement, this should be revised to reflect the traffic survey data;
- The traffic inputs show that arm 1 is the A180 off-slip; and
- Spot checks have been undertaken by JSJV on the traffic inputs and these are seen to align with the traffic flow diagrams.

With regard to calibration and validation of the Junctions 10 model, we note the following

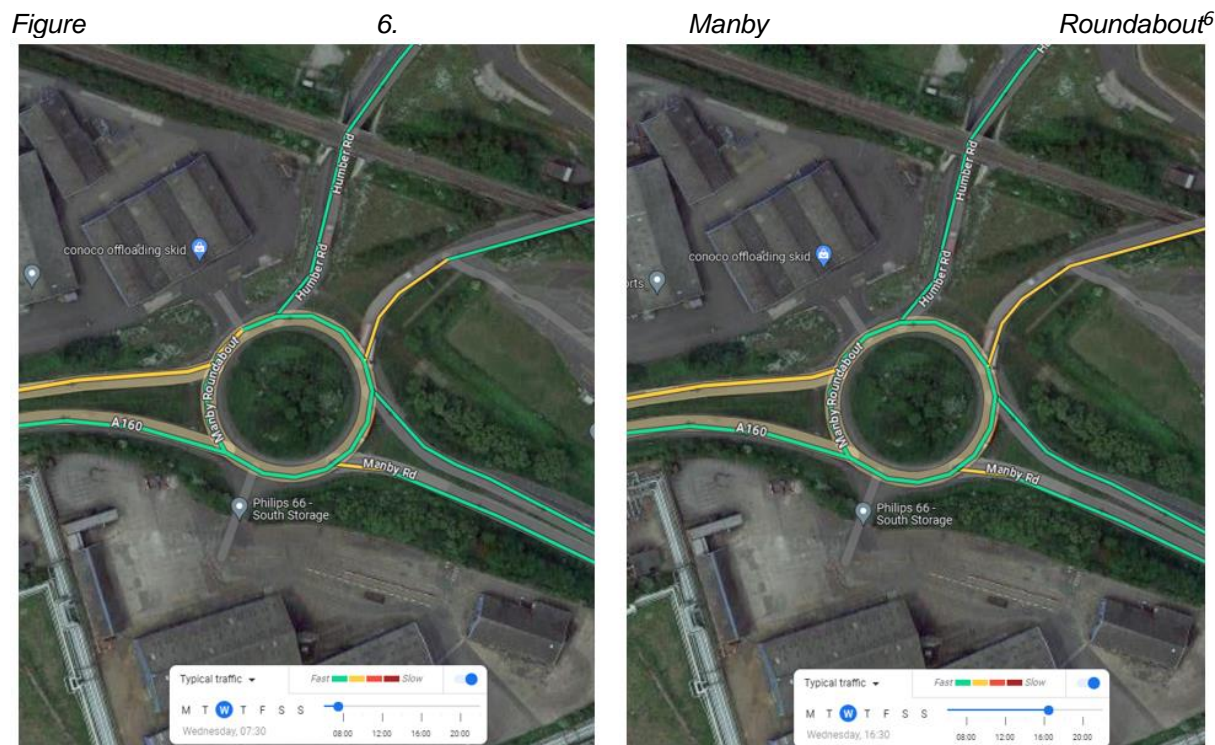
- There has been no calibration and validation undertaken in association with the submitted Junctions 10 outputs;
- There has been no queue data presented, queue data should be presented for the purpose of model calibration and validation; and
- Calibration should be undertaken using the 'direct' intercept adjustment, to ensure that the model queues align with the highest of the 15-minute average queues observed on each arm.

The results within the submitted Junctions 10 have been reviewed and we note the following:

- The junction is shown to operate within capacity in all scenarios;
- The aforementioned comments should be addressed and the assessment resubmitted; and
- In addition to the PDF output, the Junction 10 soft copy input file should be provided for review.

Junction E – A160 / Humber Road / Manby Road junction (Manby Roundabout, Junctions 10 modelling)

The typical traffic conditions from Google Maps indicate that Manby Roundabout does not experience significant queueing during the AM and PM peak hours, as shown in Figure 6. The junction will see 43 and 28 additional trips in the AM and PM respectively.



Wednesday 07:30

Wednesday 16:30

The submitted Junctions 10 PDF modelling output for Manby Roundabout has been reviewed and we note the following:

- A 'one hour' traffic flow type has been used;
- AM assessment hour – 08:00 to 09:00;
- PM assessment hour – 16:00 to 17:00;
- Arm names should be provided in the model to allow checking; and
- From review of 2025 base traffic flows, it is seen that the Humber Road (east) is arm 1.

The geometric parameters input within the submitted model have been reviewed and we note the following based on aerial imagery:

- Inscribed circle diameters should be revised to reflect on site dimensions, we estimate this should be 84m, currently different values are input for each arm, the roundabout is symmetric and these values should be consistent;
- These are examples of anomalies which have been noted, all geometry should be reviewed; and

⁶ © Google 2024

- All input geometry measurements should be shown on CAD PDF for review, input geometry is required to reflect the road markings.

The traffic demand input within the submitted model has been reviewed and we note the following:

- The HV Percentages are set to 10% for each movement, this should be revised to reflect the traffic survey data;
- The traffic inputs show that arm 1 is Humber Road (east); and
- Spot checks have been undertaken on the traffic inputs which are seen to align with the traffic flow diagrams.

With regard to calibration and validation of the Junctions 10 model, we note the following

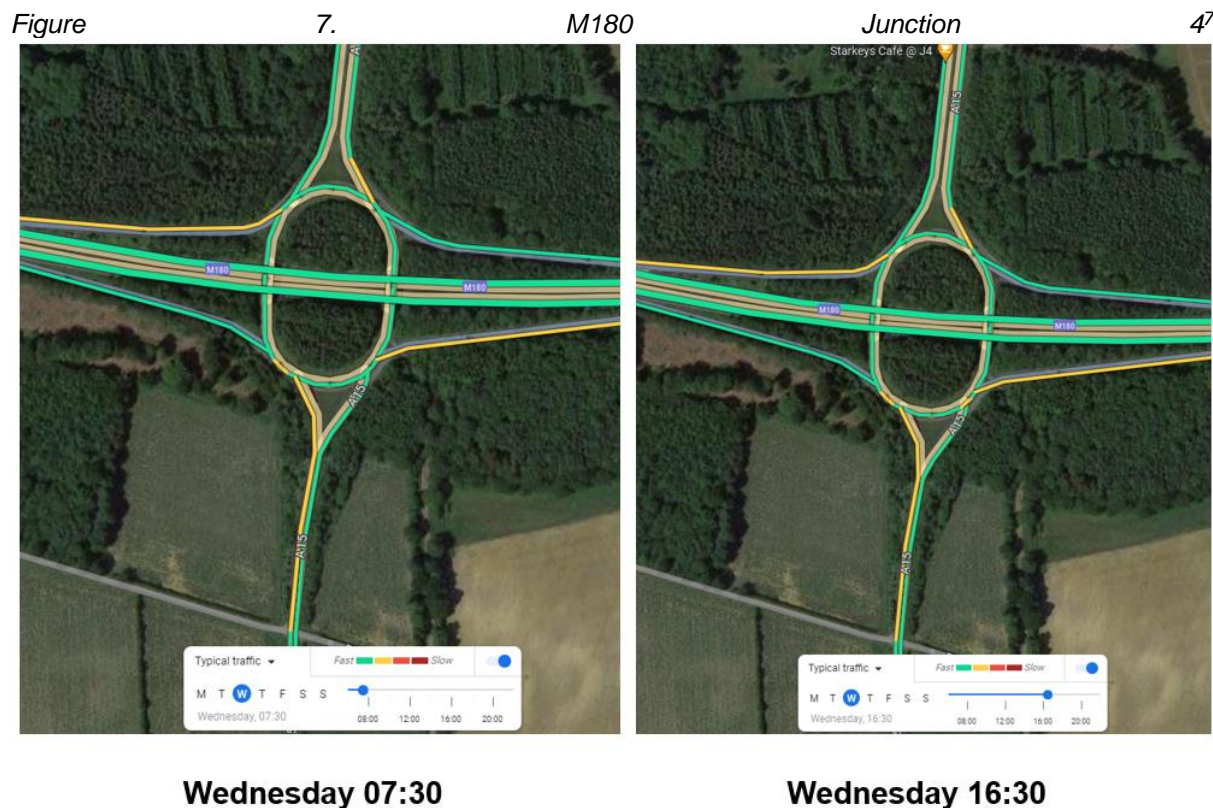
- There has been no calibration and validation undertaken in association with the submitted Junctions 10 outputs;
- There has been no queue data presented, queue data should be presented for the purpose of model calibration and validation; and
- Calibration should be undertaken using the 'direct' intercept adjustment, to ensure that the model queues align with the highest of the 15-minute average queues observed on each arm.

The results within the submitted Junctions 10 have been reviewed and we note the following:

- The junction is shown to operate within capacity in all scenarios;
- These comments should be addressed and the assessment resubmitted; and
- In addition to the PDF output, the Junction 10 soft copy input file should be provided for review.

Junction F – M180 off-slips / A15 junction (M180 Junction 4, Junctions 10 modelling)

The typical traffic conditions from Google Maps indicate that M20 Junction 4 does not experience significant queuing during the AM and PM peak hours, as shown in **Figure 7**. The junction will see 44 and 43 additional trips in the AM and PM respectively.



The submitted Junctions 10 PDF modelling output for M180 Junction 4 has been reviewed and we note the following:

- A 'one hour' traffic flow type has been used;
- AM assessment hour – 08:00 to 09:00;
- PM assessment hour – 16:00 to 17:00;
- Arm names should be provided in the model to allow checking; and
- From review of 2025 base traffic flows, it is seen that the M180 (east) on/off slips is arm 1.

The geometric parameters input within the submitted model have been reviewed and we note the following based on aerial imagery:

- M180 (east) off-slip – we estimate half width to be 6.2m and entry width to be 8.3m, compared with 6.1m and 8.9m input in the model;
- M180 (west) off-slip – we estimate half width to be 6.0m and entry width to be 7.1m, compared with 6.6m and 7.88m input in the model;
- Inscribed circle diameters should be revised to reflect on site dimensions, for example arm 1 is input as 75.2m and we estimate this should be 114m;

⁷ © Google 2024

- These are examples of anomalies which have been noted, all geometry should be reviewed; and
- All input geometry measurements should be shown on CAD PDF for review, input geometry is required to reflect the road markings.

The traffic demand input within the submitted model has been reviewed and we note the following:

- The HV Percentages are set to 10% for each movement, this should be revised to reflect the traffic survey data;
- The traffic inputs show that arm 1 is M20 (east) off-slip; and
- Spot checks have been undertaken on the traffic inputs which are seen to align with the traffic flow diagrams.

With regard to calibration and validation of the Junctions 10 model, we note the following:

- There has been no calibration and validation undertaken in association with the submitted Junctions 10 outputs;
- There has been no queue data presented, queue data should be presented for the purpose of model calibration and validation; and
- Calibration should be undertaken using the 'direct' intercept adjustment, to ensure that the model queues align with the highest of the 15-minute average queues observed on each arm.

The results within the submitted Junctions 10 have been reviewed and we note the following:

- The junction is shown to operate within capacity in all scenarios, with the exception of arm 2 which is understood to be the A15 (south);
- The comments should be addressed and the assessment resubmitted; and
- In addition to the PDF output, the Junction 10 soft copy input file should be provided for review.

Other Comments

We previously noted that:

- 1) Traffic Management proposed on the SRN should be agreed with the relevant National Highways team and be designed in accordance with relevant policies and design guidance;
- 2) Temporary signage should be agreed with the relevant National Highways team and be designed in accordance with relevant policy; and
- 3) The National Highways Abnormal Loads Team should be consulted regarding any AIL deliveries well in advance to ensure the suitability of the route(s).

In response, AECOM states that:

"These points are noted, and appropriate actions will be taken within the relevant timeframes to ensure information is provided to National Highways."

We welcome the approach and will review the information at the appropriate stage.

Summary and Conclusions

The Jacobs SYSTRA Joint Venture [JSJV] has reviewed the information accompanying the planning application and, on the basis of our review, the recommendation to National Highways in relation to this development proposals is:

Holding Recommendation – further information required (as identified below)

This review has highlighted the need for further information as follows:

- 1) The junction capacity assessments should be revised in accordance with the comments set out in this Technical Memorandum.

We also note that the following points, from our previous reviews, should also be addressed in the future:

- 1) Traffic Management proposed on the SRN should be agreed with the relevant National Highways team and be designed in accordance with relevant policies and design guidance;
- 2) Temporary signage should be agreed with the relevant National Highways team and be designed in accordance with relevant policy; and
- 3) The National Highways Abnormal Loads Team should be consulted regarding any AIL deliveries well in advance to ensure the suitability of the route(s).

This notwithstanding, the JSJV would also reiterate that the following Condition should be imposed on any planning consent, should the LPA be minded to approve:

“Unless otherwise agreed in writing by the Local Planning Authority in consultation with National Highways (or its successors) decommissioning of the development hereby approved shall not commence unless and until a Decommissioning Traffic Management Plan has been submitted to and approved in writing by the Local Planning Authority in consultation with National Highways (or its successors). Thereafter unless otherwise approved in writing decommissioning shall be undertaken in accordance with the approved plan.”

The inclusion of the Condition ensures that any effects from the decommissioning phase are to be reviewed and agreed upon by National Highways immediately prior to decommissioning.