Our ref: AA.22.11.13
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FAO:

September 2 2022

Dear Sir/Madam,

DRAX BIOENERGY WITH CARBON CAPTURE AND STORAGE PROJECT
As you will be aware, National Highways has confirmed its registration as an Interested Party for this application. Hence, to inform discussions during the pre-examination and examination of this application, we have undertaken a detailed review of the submitted transport related evidence. Our full comments are provided in the attached Technical Memorandum and are summarised below.

Existing highway operation
The Applicant should present collision data analysis for the period 2015-2019 to ensure that a full 5-year period, unaffected by the covid-19 pandemic, has been reviewed. National Highways would also note that the analysis provided by the Applicant does not include all recorded collisions on the SRN and further analysis is required to cover M62 Junction 36 and the M62 mainline east and west of the junction. Where a collision resulted in fatal or serious injury and/or where a cluster of collisions are recorded, National Highways requests that the causation factors be considered to identify any pre-existing trends that may be exacerbated by the proposal.

We are confident that the surveyed traffic flows for M62 Junction 36 (2018) are robust given that a comparison has identified that traffic flows have reduced at this location between 2018 and 2022, and the daily traffic profile appears not to have materially changed.

Operational Phase
The Applicant has provided insufficient evidence to justify the stated number of workers. However, even if the number of staff were to be doubled the impact at M62 Junction 36 would be in the order of 48 two-way trips. On this basis, and considering the previous agreements at the pre-application stage, National Highways would agree that the trip generation associated with the operational phase of development is unlikely to generate a significant impact on the operation of the SRN during the AM & PM peak hour periods.

Construction Phase

Clarification is required to confirm whether the worst-case peak for M62 Junction 36 has been assessed in the construction phase. If the worst-case peak has not been assessed, then further analysis will be required. The worst-case morning and evening weekday peak should be derived by considering the maximum combined base traffic flows and development traffic flows i.e., the worst-case peak period traffic flows may be outside of the traditional network peak. Hence, there may be a requirement to assess the shoulder peak periods of the worst-case peak periods.

We accept that Construction Option 2 is predicted to generate a greater number of vehicle movements during the peak construction year than the corresponding peak construction year in Option 1. We note that for 29 continuous months (Jan-25 to May-27) there are in excess of 100 two-way PCUs forecast to use M62 Junction 36 between 07:00 and 08:00. However, Option 1 also has the potential to create material impacts in different time periods. For example, there are forecast to be over 100 two-way PCUs using M62 Junction 36 between 07:00 and 08:00 for the following consecutive months:

- 16 consecutive months from May 2025 – August 2026; and
- 15 consecutive months from February 2028 – April 2029.

We would note that 100 PCUs is an arbitrary benchmark for the purposes of comparison. This benchmark has no relevance to Policy and should not be used to justify the proposed development's impact.

Consequently, we accept the proposal to assess Option 2 as an indication of greatest impact during any hourly peak period. However, a likely condition of the consent will relate to the preparation and agreement to Construction Phase Traffic Management Plan (CTMP) which will be directly related to the construction scenario that is selected by the Applicant; this is discussed later in this response.

For the purposes of future year assessment, the proposed background growth factors are acceptable.

We would also agree that M62 Junction 36 has a very high sensitivity, however, would state that both M62E and M62W may also be impacted during the construction phase and, as such, further justification should be provided to explain the suggested low sensitivity for the M62 mainline.

The proposed construction phase trip generation and trip distribution are acceptable. However, we would request that the total vehicle trip generation is presented in Passenger Car Units [PCUs] such that the HDVs are properly accounted for. We would also reiterate that further clarification is required to confirm that the worst-case peak periods (and potentially the corresponding shoulder periods) for M62 Junction 36 have been assessed.

National Highways is in the process of reviewing the submitted Junctions10 model for M62 Junction 36 and will provide our comments in due course. Hence, at this time, we would withhold any comments on the robustness of the model until we have reviewed the files.

National Highways would also withhold comment on the submitted assessment until all inputs have been agreed (peak periods and Do Minimum mitigation). We would, however, state that the following guidance in the DfT Circular 02/2013 is relevant:

> "*Development proposals are likely to be acceptable if they can be accommodated within the existing capacity of a section (link or junction) of the strategic road network,* ***or they do not increase demand for use of a section that is already operating at over-capacity levels****, taking account of any travel plan, traffic management and/or capacity enhancement measures that may be agreed. However, development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe*".

Decommissioning Phase

National Highways support the proposed approach to assess the construction phase and decommissioning together in terms of traffic impacts (due to a similar impact). However, we anticipate the need for the following planning condition:

> *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.*

M62 Junction 36 planned improvements

As requested in our meeting on 25/08/2022, please see the following evidence regarding the referenced junction improvements at the M62 Junction 36:

- The scheme was derived as part of the East Riding of Yorkshire Local Plan which was adopted in April 2016. The scheme is currently under review, with modelling being carried out to understand whether the mitigation is still required (ERYC are currently doing the 5 year Local Plan review);
- The East Riding Infrastructure Study (2014) was the driver for the mitigation and includes a description and very basic plans within Appendix G of Appendix E; and
- Contributions have started to be collected by ERYC but remain well short of the cost of the scheme. Therefore, although committed within the ERYC Local Plan there are no timescales for delivery.

Considering the above, we request that the ES assesses with and without the scheme in place (in the DoMinimum and, consequently, the DoSomething scenarios).

Construction Phase Traffic Management Plan

National Highways anticipate the need for the following planning condition to be attached to any granted DCO:

> *Unless otherwise agreed in writing by the Local Planning Authority in consultation with National Highways (or its successors) no construction shall commence unless and until a Construction Phase 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 the construction shall be undertaken in accordance with the approved plan.*

As a minimum, we would expect that the Construction Phase Traffic Management Plan address the following:

- Details and maintenance of any construction traffic management signage;
- Details and maintenance general road user management signage (e.g., Delays Likely and their duration);
- The need for and details of any general road user diversionary routes;
- A commitment to following due process regarding AILs; and
- The need for and maintenance of temporary works (to be informed by the operational assessments).

AIL and Dilapidation Surveys

It is proposed that a Highway Condition Survey (HCS) will be carried out along the designated route for abnormal and indivisible loads (AIL) ahead of the first AIL delivery, and after the final AIL. This is with a view to any construction related defects being made good. We support this approach and would request that the surveys be provided to National Highways for review withing the Construction Phase Traffic Management Plan; a commitment to make good any defects should also be included in the plan.

We would also request that the Applicant engages closely with National Highways before undertaking any surveys or other works on the SRN as such works are of high risk to road users, contractors, and National Highways operatives. The details of works, relevant safety risks associated with any works shall be identified, and appropriate mitigations shall be agreed with National Highways prior to commencement.

No works to the SRN should be undertaken prior to an agreement with National Highways.

We are open to holding further discussions regarding AIL deliveries and the proposed Statement of Common Ground.

Framework Construction Worker Travel Plan

A firm financial commitment should be made to specific incentives, rather than a description of potential example incentives. However, we accept that an agreement regarding the monitoring of construction worker traffic could be included in the Statement of Common Ground.

If the construction site will have a capped number of parking spaces available to construction workers of no more than 450 spaces, then the proposed parking provision of 800 car parking spaces (500 standard spaces + 300 overflow spaces) should be justified or revised. The CWTP should also provide specific commitments to how the proposal to provide favourable parking locations for those that travel to the Site with two or more passengers will be enforced and how many car parking spaces will be specifically allocated for only workers who car share.

Subject to the impact at the SRN, there may be a requirement for National Highways to request that the arrival and departure movements for construction staff occur outside of the SRN peak periods. This could be achieved through the Construction Phase Traffic Management Plan.

Environmental impacts

Whilst we would withhold comment on the effect on intimidation and fear until the impact of the Scheme at the SRN has been agreed upon, we would state that severance and pedestrian amenity are not matters for National Highways.

Conclusion

I trust this response is helpful, but should you require any further information please do not hesitate to contact me. I would suggest that we arrange a meeting to discuss the findings of our review. It may be beneficial for this meeting to take place following receipt of our Junction10 model review.

Yours sincerely

Simon GP Geoghegan
Planning and Development

Technical Memorandum

Drax Bioenergy with Carbon Capture and Storage Project, Selby

Prepared for:	Huw Williams
Prepared by:	Andy Tennant
Date:	01/09/2022
Case Reference:	AA.22.11.13
Document Reference:	AA.22.11.13 TM
Reviewed/approved by:	Terry Dale

Introduction

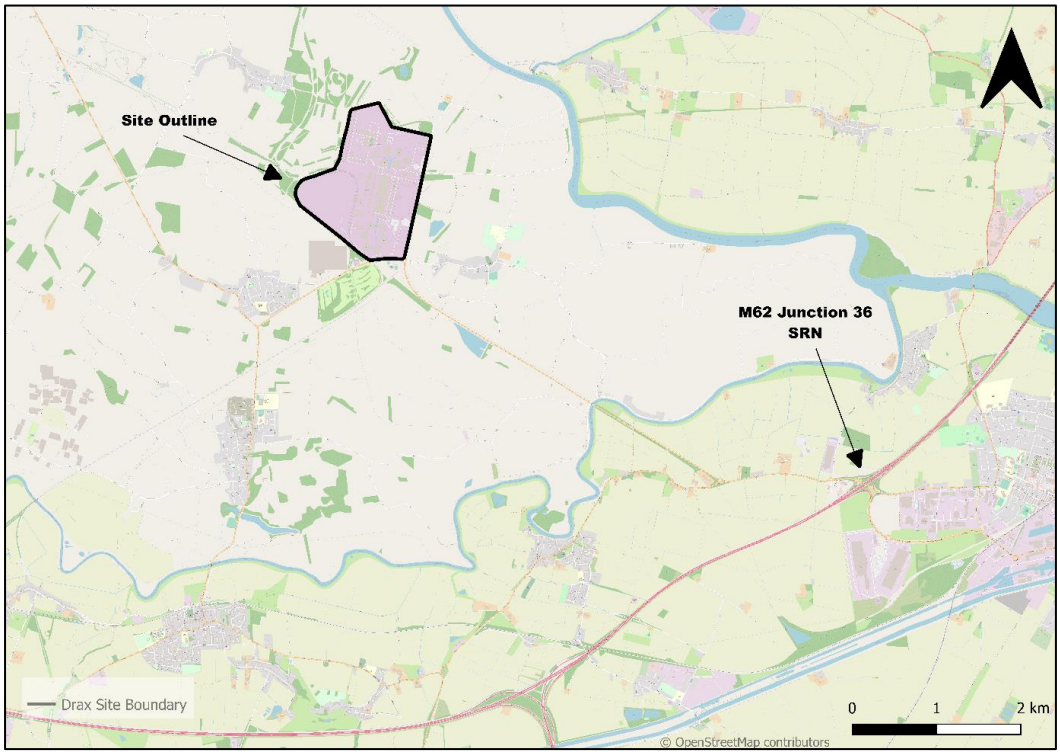
In July 2022, National Highways was consulted on the Drax Bioenergy with Carbon Capture and Storage Project [Drax BECCS].

Drax BECCS is classified as a Nationally Significant Infrastructure Project [NSIP], under the Planning Act 2008 (PA2008) and requires a Development Consent Order [DCO] for its construction and operation.

Jacobs SYSTRA Joint Venture [JSJV] has summarised the review process for NSIP applications, described the consultation history for Drax BECCS, and has reviewed the evidence submitted to support the application.

Drax BECCS location, in relation to the Strategic Road Network [SRN], is presented in Figure 1. The site is located approximately 7km from the M62 Junction 36.

Figure 1: Site location in relation to the SRN



NSIP review process

The major infrastructure projects dealt with by the Planning Inspectorate under the Planning Act 2008 [PA2008] are known as NSIPs. Projects are within the six general fields of energy; transport; water; waste water; waste and business and commercial. Examples include power stations; railways and major roads; reservoirs; harbours; airports; offshore wind farms and sewage treatment works. The thresholds for NSIPs are set out in sections 15 to 30 of the PA2008.

The PA2008 process was introduced to streamline the decision-making process for major infrastructure projects. The six stages in the process are:

- **Pre-application:** Before submitting an application, potential applicants have a statutory duty to carry out consultation on their proposals. The Planning Inspectorate cannot consider representations about the merits of a proposed application at the Pre-application stage of the process.
- **Acceptance:** The Acceptance stage begins when an applicant submits an application for development consent to the Planning Inspectorate. There follows a period of up to 28 days (excluding the date of receipt of the application) for the Planning Inspectorate, on behalf of the Secretary of State, to decide whether or not the application meets the standards required to be accepted for examination.
- **Pre-examination:** If the application is accepted for examination, the public will then be able to register with the Planning Inspectorate to become an Interested Party by making a Relevant Representation. A Relevant Representation is a summary of a person's views on an application, made in writing. An Examining Authority is also appointed at the Pre-examination stage, and all Interested Parties will be invited to attend a Preliminary Meeting, run and chaired by the Examining Authority. Although there is no statutory timescale for this stage of the process, it usually takes approximately three months from the Applicant's formal notification and publicity of an accepted application.
- **Examination:** The Planning Inspectorate has up to six months to carry out the examination. During this stage Interested Parties who have registered by making a Relevant Representation are invited to provide more details of their views in writing. Careful consideration is given by the Examining Authority to all the important and relevant matters including the representations of all Interested Parties, any supporting evidence submitted and answers provided to the Examining Authority's questions set out in writing or posed at hearings.
- **Recommendation and Decision:** The Planning Inspectorate must prepare a report on the application to the relevant Secretary of State, including a recommendation, within three months of the close of the six month Examination stage. The relevant Secretary of State then has a further three months to make the decision on whether to grant or refuse development consent.
- **Post-decision:** Once a decision has been issued by the relevant Secretary of State, there is a six week period in which the decision may be challenged in the High Court. This process of legal challenge is known as Judicial Review.

The Drax BECCS application is currently at the pre-examination stage. The application was accepted for examination on 20 June 2022.

National Highways policy

National Highways' document 'The strategic road network, Planning for the future: A guide to working with Highways England on planning matters' (2015) states the following regarding NSIPs:

- *121. As a statutory consultee in respect of all Nationally Significant Infrastructure Projects (NSIP) promoted by third parties, the promoters of such developments are required to consult with us where their proposals are likely to affect road or transport operation and/or planning on roads for which we are the highway authority. As with other planning matters we recommend that you enter into discussions with us at the earliest opportunity.*
- *122. The regulations relating to NSIPs do not specifically require that promoters identify their proposed access arrangements or any proposed highway mitigation works during the consultation stage prior to submitting a Development Consent Order (DCO) application.*
- *123. Promoters are encouraged to seek consensus with interested parties, including ourselves where applicable, in order to satisfy the Planning Inspectorate (PINS) that full and thorough pre-application consultation with interested parties has been carried out. Where possible, we will work towards agreeing a Statement of Common Ground at an early stage so that this can be an input to the examination.*
- *124. In any case, promoters must provide sufficient detail to allow the assessment of the impact of their proposals on the SRN, and the suitability and deliverability of their proposed transport arrangements, including means of access, when they submit their application and draft DCO.*
- *125. On the basis of the discussions held and the information provided we will make representations on proposals, or will seek to ensure that requirements we deem essential are incorporated in the DCO.*

Pre-application stage

This application has been subject to extension consultation with National Highways at the pre-application stage. In September 2020, National Highways undertook a review of a Transport Scoping Note [TSN]; the key conclusions were:

- The trip generation associated with the worst-case overlap between the demolition and construction phase of the development will affect a material impact on the operation of the SRN over the AM & PM peak hour periods; and
- The trip generation associated with the operational phase of development will not affect a material impact on the operation of the SRN during the AM & PM peak hour periods.

In February 2021, National Highways offered comments on the Environmental Impact Assessment [EIA] and Scoping Report [SR] for this development proposal. National Highways provided comments on the existing situation in terms of accessibility, safety, and SRN operation. The review also offered comments on baseline traffic flow conditions, likely significant effects, assessment scenarios and the significance of effects. Key conclusions drawn from this review included:

- The most significant impacts associated with the proposed scheme will be during the construction phase, with negligible vehicle movements during operation;

- Assumptions at this stage will need to be demonstrated within forthcoming assessment material, along with the identification of peak traffic flow impacts; and
- Detailed capacity assessments of the M62 J36 should be included as this will form the principal access route for construction traffic.

In February 2021, National Highways provided the following comments on a TSN:

- Effective Travel Plan measures and wider management of construction phase demands will be required to minimise the impacts on M62 J36 and the wider SRN. A monitoring and enforcement strategy will be required;
- If measures fail to avoid significant cumulative traffic flow impacts at M62 J36 then consideration may need to be given to capacity enhancements to mitigate the impact of development traffic increases. It may be necessary to monitor actual traffic flow increases, or arrivals at the site, throughout the Construction Phase;
- It may be necessary to demonstrate local area assignment assumptions and journey time variance, to determine the risk of construction staff using M62 J34 (instead of M62 J36) to access the M62 Westbound; and
- Confirmation should be provided that parking opportunities for construction personnel should be limited to the 400 designated spaces, that no alternative on-site parking will be available for use, and that off-site fly-parking will be managed.

In April 2021, National Highways provided confirmation that both DfT and National Highways are in agreement with the proposed AIL approach in principle.

In May 2021, National Highways reviewed a TSN, however, comments were provided via email on 4 May 2021 and the email is not available at time of writing.

In June 2021, National Highways shared M62 J36 Classified Turning Count and Queue data for review by the BECCS project team.

In January 2022, National Highways reviewed the Section 42 Letter, Section 48 Notice and Consultation Brochure also submitted to support the project proposal and the DCO application. National Highways reiterated its stance that it would support the production of a Construction Environmental Management Plan [CEMP], Construction Traffic Management Plan [CTMP], and outline a Construction Workers Travel Plan [CWTP].

Also, in January 2022, National Highways reviewed the Preliminary Environmental Impact Report [PIER] prepared by WSP and submitted as part of the DCO application. Comments at this stage included:

- Further trip estimates and junction capacity assessment work should be undertaken in the Environmental Statement;
- JSJV and National Highways will further review the proposed impact of the route from the Port of Goole on the M62 Junction 36 in the ES and CTMP;
- WSP state it is anticipated that there will be no residual traffic and transport effects associated with the Proposed Scheme during construction, operation or decommissioning. JSJV comment that this will be subject to further analysis in the ES;
- JSJV advised that the NSIP BECCS at Drax should consider the cumulative assessment of the Selby District Local Plan in its assessments;

- Given the proposed development's scale and proximity to the Strategic Road Network, JSJV would agree that a CTMP should be produced and agreed with National Highways prior to the determination of this planning application; and
- JSJV would support the production of a Construction Worker Travel Plan alongside the ES to demonstrate how the impact of construction workers will be minimised on the SRN.

Relevant Representation

JSJV has suggested that National Highways register as an Interested Party by making a Relevant Representation. Subsequently, National Highways has confirmed its registration as an Interested Party.

Meeting: 25/08/2022

National Highways and JSJV met with the applicant and their transport consultants (WSP) on 25/08/2022. Key comments from this meeting can be summarised as follows:

- JSJV and WSP discussed the potential for pre-commencement requirements;
- WSP noted that the AIL route has already been agreed in principle with DfT and NH and that application of the formal process will also be required in due course;
- NH and JSJV commented on the use of pre-covid 2018 traffic flows and stated that a comparison against 2022 survey data may be required;
- JSJV queried the proposed 20% mini bus usage for construction workers and stated that this must be justified through the CWTP;
- JSJV explained that we must consider peak traffic impacts across the duration of the construction period as well as peak hour snapshots of August 2026. This will inform the consideration of appropriate mitigation as may be required;
- NH queried WSP's proposed SRN network peak periods referencing WSP's traffic flow diagrams which state that "The network peaks included in the traffic flow diagrams from the NDC surveys are from 07:15 - 08:15 and 16:30 - 17:30". WSP to review; and
- The Applicant noted the need to consider how the proposed development's traffic coincides with the Read School parent/pupil pick up period.

The agreed actions can be summarised as follows:

- NH to investigate the Local Plan scheme at M62 junction 36 and provide any evidence associated with the scheme (timescales for delivery and supporting modelling);
- WSP to provide the proposed Junctions10 model for M62 junction 36; and
- WSP to provide the proposed trip distribution excel file.

Preparation for examination

National Highways has commissioned JSJV to review the evidence submitted to support the application. Upon review, JSJV would suggest that the following evidence may be relevant to National Highways and should be reviewed:

- Environment Statement [ES] Chapter 1: Introduction
- ES Chapter 2: Site and Project Description
- ES Chapter 5: Traffic and Transport
- ES Appendix 5.1: Outline Construction Management Traffic Plan [CTMP]
- ES Appendix 5.2: Construction Worker Travel Plan [CWTP]
- ES Appendix 5.3: Traffic flow diagrams
- ES Appendix 5.4: Personal Injury Collision [PIC] data
- ES Appendix 5.5 Schedule Planner
- ES Appendix 5.6: Junction modelling outputs

Site description

The application site is approximately 125 ha and is split into the following land parcels:

- Drax Power Station Site – the land occupied by the Drax Power Station;
- East Construction Laydown Area – area required during the construction phase of the Proposed Scheme for temporary works situated to the east of the Drax Power Station, across New Road. (N.B. There are several parcels of land within the Drax Power Station Site which would be used for construction laydown. These areas have been termed 'Drax Power Station Site Construction Laydown Areas');
- Habitat Provision Area – the land within the Order Limits that may be used for environmental mitigation for the Proposed Scheme. This parcel is located to the north and north east of the Drax Power Station; and
- Surrounding road network.

The proposed development comprises:

- Up to two Carbon Capture Plants;
- Additional Common Plant infrastructure and modification works to the Drax Power Station that are required to support and integrate with one or both Carbon Capture Plants;
- Infrastructure to transport compressed carbon dioxide from the Carbon Dioxide Processing and Compression Plant to storage and transport infrastructure operated by National Grid Carbon Limited;
- Minor vegetation and street furniture management and other works to facilitate access during construction;
- Additional supporting infrastructure and other works for the Proposed Scheme;
- Temporary construction laydown areas; and
- Habitat Provision Area.

ES Traffic and Transport chapter

Study area

The relevant sections of the study area considered as part of this assessment are:

- M62 Junction 36 Dumbbell Roundabout (Ref: Junction 4a / 4b);
- M62 eastbound mainline from Junction 36 (Ref: Link 6); and
- M62 westbound mainline from Junction 36 (Ref: Link 9).

Elements scoped out of the assessment

The A63 / A162 four-arm roundabout (Ref: Junction 7) has been removed from the study area. JSJV would suggest that this is acceptable because the junction is not located on, or in close proximity to, the SRN.

Elements scoped into the assessment

The following elements have been scoping in for the construction phase assessment:

- Construction Traffic - temporary increases in Heavy Duty Vehicular [HDV] traffic associated with the import and export of construction materials by road;
- Construction Worker Movements - temporary increases in Light Duty Vehicular [LDV] vehicular traffic associated with the construction workforce;
- Site Access - the creation of new construction site access to the east Construction Laydown Area from the public highway; and
- Abnormal & Indivisible Loads [AIL] - The delivery of AIL and associated demand and traffic management.

It has been proposed that decommissioning impacts are to be no worse than those during the construction phase following the implementation of a Decommissioning Traffic Management Plan [DTMP] for the works. Consequently, the construction phase and decommissioning have been assessed together. JSJV support this approach subject to the following planning condition being attached to any granted DCO:

> *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 above condition ensures that any effects from the demolition phase are to be reviewed and agreed upon by National Highways immediately prior to decommissioning.

The following elements have been scoped in for the operational phase assessment:

- Operational Traffic - increases in HDV traffic associated with the import and export of raw materials; and
- Operational Workforce Movements – increases in LDV traffic associated with the operational workforce.

The ES proposes that *"a workforce of 50 full time staff will be required for the operational phase of the Proposed Scheme"* and *"given this, when compared to the workforce at the Drax Power Station Site at the time of collection of the baseline traffic flow data during 2018, there would be an overall net-reduction of circa 180 people in the workforce".*

The assessment of the operational phase has been limited to reviewing the change in traffic flows on the links and junctions within the study area. The assessment shows that there would be fewer than 30 two-way trips generated (LDV and HDV) at all junctions within the study area, this is with the exception of Junction 1 which would see a total of 34 two-way trips (LDV and HDV) in peak periods.

A total of 34 two-way movements are forecast on the basis of:

- 50 staff working across three shift patters, equating to 17 movements each way (17 workers arriving to start work and 17 workers departing from work); and
- A vehicle occupancy rate of one worker per vehicle. The distribution of construction workers for the operational phase was assumed to be the same as the distribution of construction workers during the construction phase, with 70% of trips using M62 Junction 36.

JSJV would suggest that the Applicant has provided insufficient evidence to justify the stated number of workers. However, given that 50 staff are forecast to generate 24 two-way trips at M62 Junction 36 and, therefore, even if the number of staff were to be doubled to 100, the impact at M62 junction 36 would be in the order of 48 two-way trips. On this basis, and considering the previous agreements at the pre-application stage, JSJV would agree that the trip generation associated with the operational phase of development is unlikely to generate a significant impact on the operation of the SRN during the AM & PM peak hour periods.

PIC analysis

PIC data has been analysed for the period 01/01/2017 to 31/01/2021. The ES identifies that the following collisions were recorded at M62 Jct. 36 and the links east and west of this junction on the M62.

Table 1: Proposed collision data analysis

Junction/link	Slight collisions	Serious collisions	Fatal collisions
M62 J36	2	1	0
Link 6 – M62 (E)	0	0	0
Link 9 – M62 (W)	0	0	0

JSJV has reviewed CrashMap (www.crashmap.co.uk) for the period 2017-2021. Figure 2 shows the recorded collisions at M62 Junction 36, Figure 3 shows the recorded collisions on the M62 west of Junction 36, and Figure 4 shows the recorded collisions on the M62 east of Junction 36.

Figure 2: Recorded collisions at M62 Junction 36 (2017-2021)

Figure 3: Recorded collisions on the M62 east of M62 Junction 36 (2017-2021)

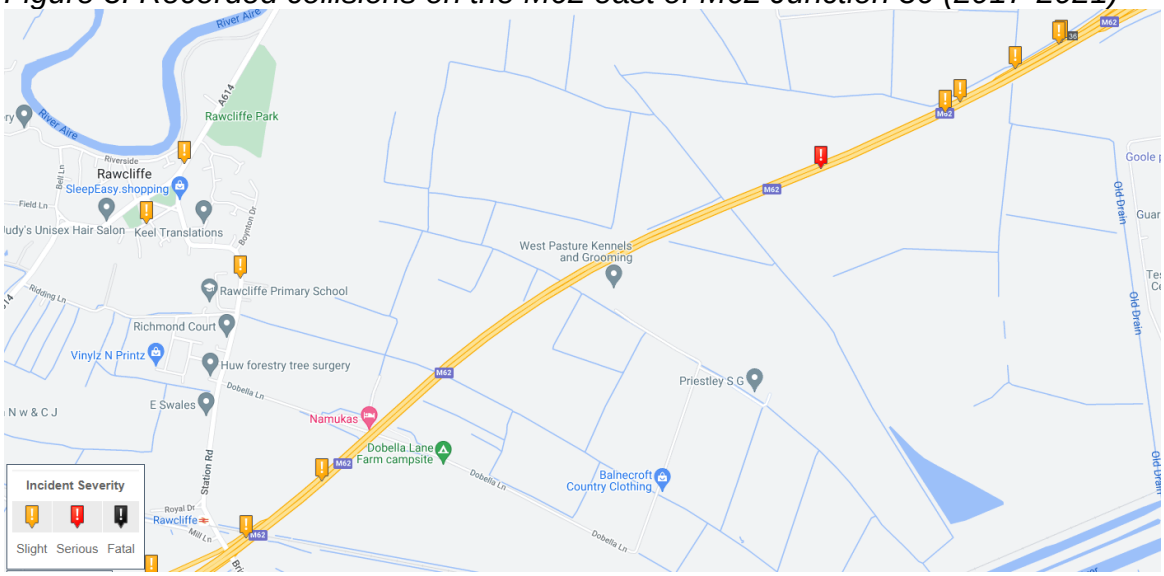
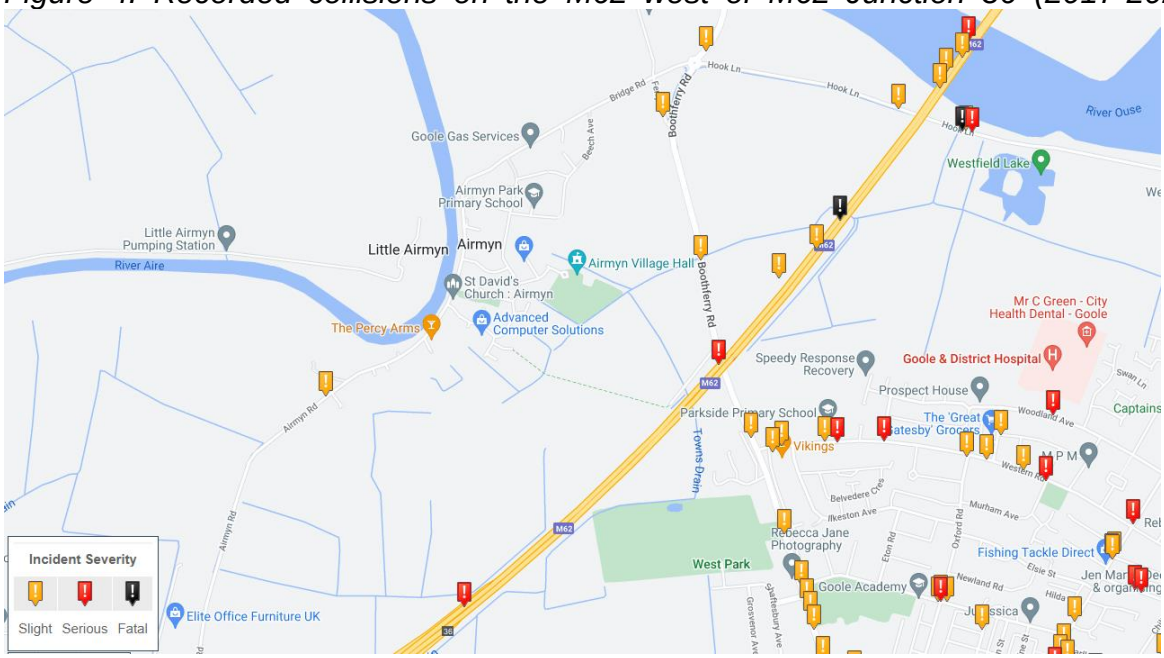


Figure 4: Recorded collisions on the M62 west of M62 Junction 36 (2017-2021)



JSJV would recommend that the Applicant present collision data analysis for the period 2015-2019 to ensure that a full 5-year period, unaffected by the covid-19 pandemic, has been reviewed.

JSJV would also note that the analysis provided by the Applicant does not include all recorded collisions on the SRN and a further analysis is required to cover M62 Junction 36 and the M62 mainline east and west of the junction. Where a collision resulted in fatal or serious injury and/or where a cluster of collisions are recorded, JSJV would recommend that the causation factors be considered to identify any pre-existing trends.

Base traffic flows

The ES has used surveyed traffic flows from October 2018 to assess M62 Junction 36. These surveyed traffic flows were provided by National Highways at the pre-application stage.

The following is stated within "ES Appendix 5.3 Traffic Flow Diagrams" document:

- Traffic surveys for Junction 4a and 4b (M62 Junction 36) are sourced from surveys provided to WSP by National Highways;
- The survey was undertaken by NDC on Thursday 11th October 2018; and
- The peak periods selected match the bold peak periods highlighted on the surveys in cell MI15 for the AM Peak and MI36 for the PM Peak.

In August 2022, with regards to the collection of traffic data, National Highways stated that:

> *"Having examined (neutral) traffic levels between February and June (2022), it appears that volumes across the SRN as a whole and individual stretches of the SRN are stable. We have no reason to think that this won't continue into the autumn, and so the previous guidance note should be considered 'withdrawn' and surveys can take place as normal from September. This does not of course mean that things have returned to a pre-Covid situation.*

Additionally, TAG unit M1.2 Data Sources and Surveys states the following:

> *"3.3.6 Surveys should typically be carried out during a 'neutral', or representative, month avoiding main and local holiday periods, local school holidays and half terms, and other abnormal traffic periods. However, there can be instances where a particular period (e.g. weekends or school holidays) is of interest, for example in regions with relatively high levels of seasonal tourism. The period for the surveys should be selected with careful consideration of the purpose of the transport model.*
>
> *3.3.7 Neutral periods are defined as Mondays to Thursdays from March through to November (excluding August), provided adequate lighting is available, and avoiding the weeks before/after Easter, the Thursday before and all of the week of a bank holiday, and the school holidays. Surveys may be carried out outside of these days/months, ensuring that the conditions being surveyed (e.g. traffic flow) are representative of the transport conditions being analysed/modelled".*

JSJV has compared the October 2018 traffic survey data with available 2022 traffic survey data. The following WebTRIS points provide daily traffic flow data for the complete months of June 2022, July 2022, and October 2018:

- M62 J36 eastbound diverge;
- M62 J36 westbound merge; and
- M62 westbound mainline within J36.

In terms of monthly data across a year, the WebTRIS point for M62 westbound mainline within J36 has the most complete set of monthly data for 2018, with only the June 2018 monthly data being incomplete.

In line with TAG guidance, JSJV has excluded survey data for Thursday 2nd June 2022 because this was a bank holiday (Spring Bank Holiday – Moved for Platinum Jubilee).

October 2018 profile (Thursdays)

JSJV has reviewed the traffic flows for Thursdays in October 2018 on the westbound mainline of the M62. This is to ensure that the surveyed Thursday is comparable to the average Thursday in October.

Table 2: M62 westbound mainline

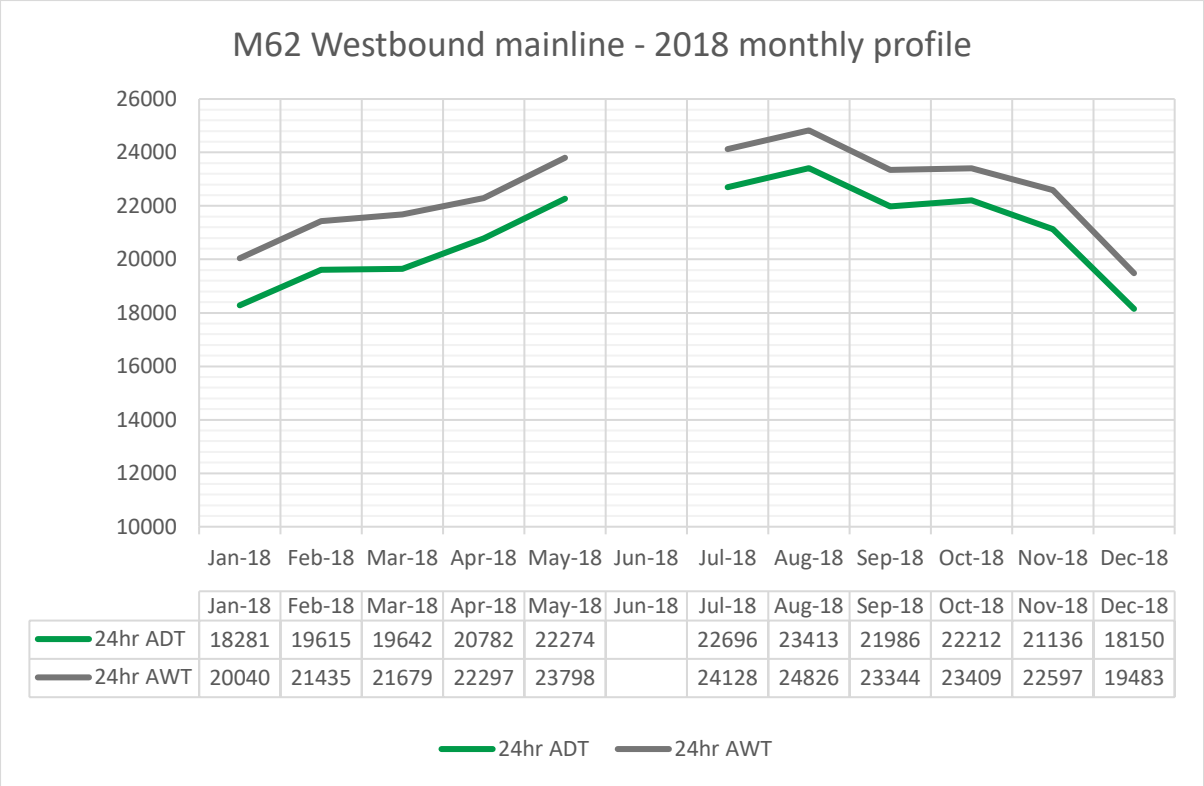
	07:00-08:00	16:00-17:00
11th October 2018	1931	1931
Average Thursday October 2018	1966	2003
Variance	-35	-72
Variance (%)	-2%	-4%

JSJV would conclude that Thursday 11th October is not materially different to the average Thursday in October 2018.

Monthly profile for October

JSJV has reviewed the traffic flows for each month of 2018 (except June) on the M62 westbound mainline. This is to review the profile of traffic flows across the year.

Figure 5: Monthly traffic flows in 2018



	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
24hr ADT	18281	19615	19642	20782	22274		22696	23413	21986	22212	21136	18150
24hr AWT	20040	21435	21679	22297	23798		24128	24826	23344	23409	22597	19483

Figure 5 shows that August 2018 experienced the highest traffic flows in 2018 and December 2018 experienced the fewest. In terms of average traffic flows, October 2018 was a fairly average month in 2018.

2018 – 2022 comparison

M62 Junction 36 eastbound diverge

JSJV has compared average data for Thursdays in June and July 2022 with the surveyed day Thursday 11th October 2018. For both the average Thursdays in June and July 2022, and Thursday 11th October 2018, the peak periods at M62 Junction 36 eastbound diverge are 07:00-08:00 and 17:00-18:00.

Table 3: M62 Junction 36 eastbound diverge

	07:00-08:00	17:00-18:00
11th October 2018	739	768
Average Thursday, June/July 2022	565	594
Variance	174	174
Variance (%)	24%	23%

Compared to the 2022 traffic flows, Table 3 shows that the 2018 traffic flows at the M62 Junction 36 eastbound diverge are 24% higher in the morning peak period and 23% higher in the evening peak period.

M62 J36 westbound merge

JSJV has compared average data for Thursdays in June and July 2022 with the surveyed day Thursday 11th October 2018. For both the average Thursday in June and July 2022, and Thursday 11th October 2018, the peak periods at M62 J36 westbound merge are 07:00-08:00 and 16:00-17:00.

Table 4: M62 J36 westbound merge

	07:00-08:00	16:00-17:00
11th October 2018	636	629
Average Thursday, June/July 2022	510	550
Variance	126	79
Variance (%)	20%	13%

Compared to 2022 traffic flows, Table 4 shows that the 2018 traffic flows at the M62 Junction 36 eastbound diverge are 20% higher in the morning peak period and 13% higher in the evening peak period.

M62 westbound mainline within J36

JSJV has compared average data for Thursdays in June and July 2022 with the surveyed day Thursday 11th October 2018. For both the average Thursday in June and July 2022, and Thursday 11th October 2018, the peak periods at M62 westbound mainline within J36 are 07:00-08:00 and 16:00-17:00.

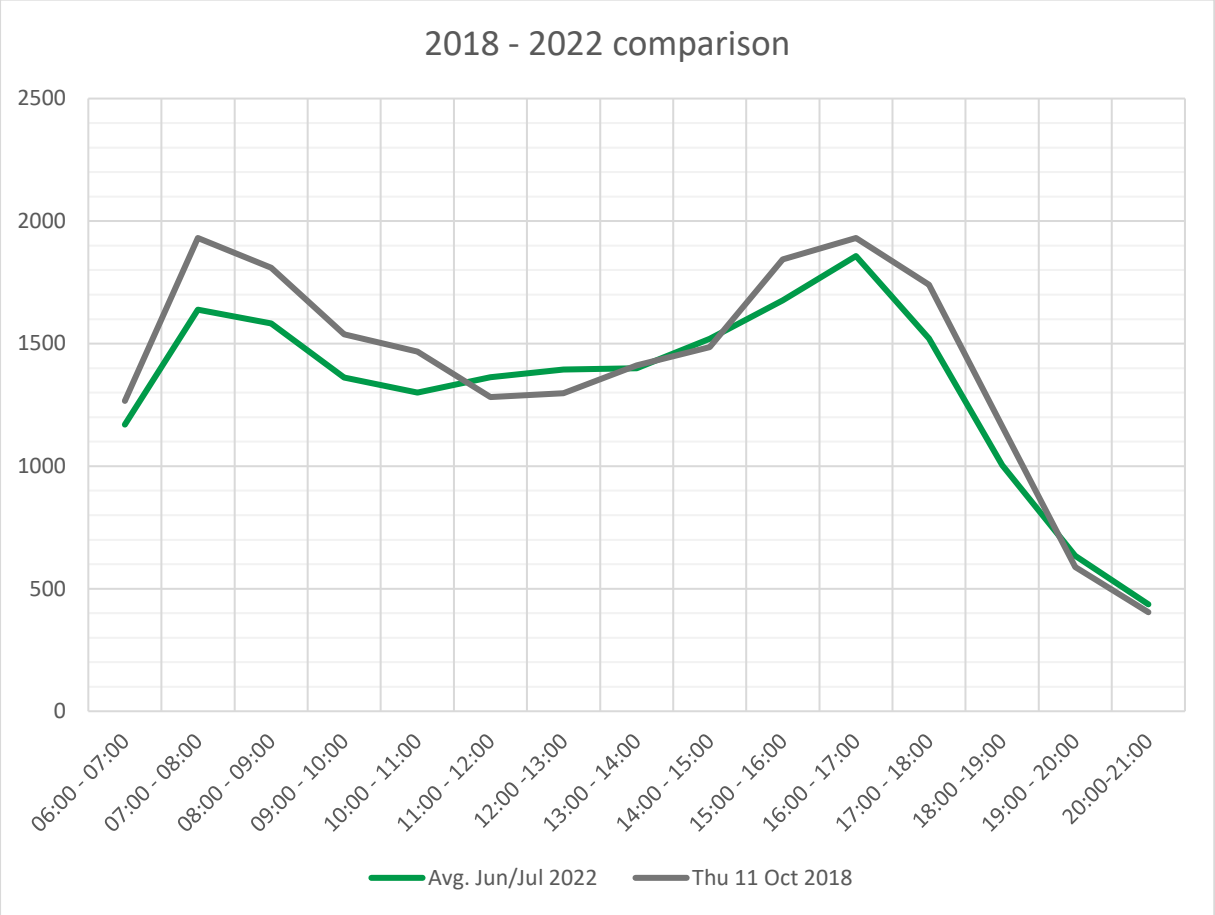
Table 5: M62 westbound mainline within J36

	07:00-08:00	16:00-17:00
11th October 2018	1931	1931
Average Thursday, June/July 2022	1638	1857
Variance	293	74
Variance (%)	15%	4%

Compared to 2022 traffic flows, Table 5 shows that the 2018 traffic flows at the M62 Junction 36 eastbound diverge are 15% higher in the morning peak period and 4% higher in the evening peak period.

The Figure 6 shows that the profile across the surveyed Thursday and average Thursdays in June/July.

Figure 6: Profile across the surveyed Thursday and average Thursdays in June/July



Given the above analysis, JSJV would conclude that the daily traffic profile has not materially changed from 2018 to 2022. We would, however, note that the traffic flows for the morning and evening peak periods have reduced from 2018 to 2022.

Base traffic flows conclusion

Consequently, JSJV would suggest that:

- The surveyed traffic flows from 2018 are robust because traffic flows have reduced from 2018 to 2022; and
- The daily traffic profile has not materially changed from 2018 to 2022.

Peak periods

The ES describes the network peak periods as 08:00 - 09:00 and 17:00 - 18:00.

The supporting evidence in the ES Appendix 5.3 provides the following analysis.

Table 6: 2018 traffic flows at M62 Junction 36 in the weekday AM

Time period	Total vehicles
07:00 to 08:00	2533
07:15 to 08:15	2770
07:30 to 08:30	**2858**
07:45 to 08:45	2799
08:00 to 09:00	2677
08:15 to 09:15	2482
08:30 to 09:30	2276
08:45 to 09:45	2121
09:00 to 10:00	1979

Table 7: 2018 traffic flows at M62 Junction 36 in the weekday PM

Time period	Total vehicles
16:00 to 17:00	2691
16:15 to 17:15	2872
16:30 to 17:30	2959
16:45 to 17:45	**2961**
17:00 to 18:00	2887
17:15 to 18:15	2596
17:30 to 18:30	2322
17:45 to 18:45	2049
18:00 to 19:00	1798

The evidence contained in ES Appendix 5.3 shows that the network peaks for M62 Junction 36 are from 07:30 - 08:30 and 16:45 - 17:45. JSJV would suggest that clarification is required to confirm whether the worst-case peak for M62 Junction 36 has been assessed. If the worst-case peak has not been assessed, then further analysis will be required. The worst-case morning and evening weekday peak should be derived by considering the maximum combined base traffic flows and development traffic flows.

JSJV would also note that there may be a requirement to assess the shoulder peak periods of the worst-case peak periods.

Proposed phasing plan

Two options are being considered for the construction of the Proposed Scheme:

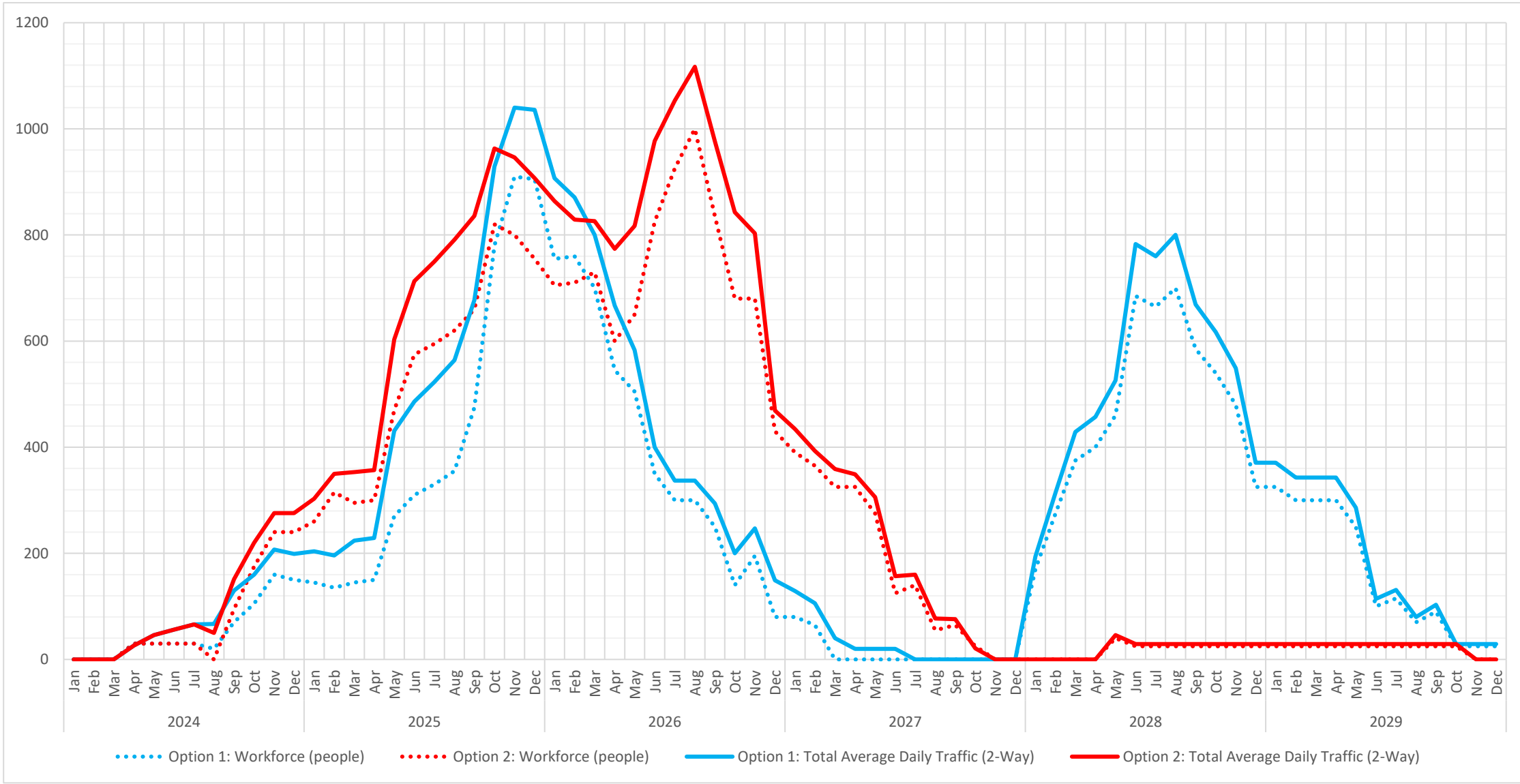
- Option 1: The Carbon Capture Plant associated with Unit 2 is programmed to be constructed first along with the Common Plant, with the Carbon Capture Plant associated with Unit 1 to follow sequentially; and
- Option 2: The Carbon Capture Plant associated with Unit 1 and Unit 2 as well as the Common Plant to be constructed at the same time.

The ES assesses Option 2 because it is seen as the “worst case for traffic and transport”. It is stated that “Option 2 is predicted to generate a greater number of vehicle movements during the peak construction year than the corresponding peak construction year in Option 1”.

The forecasted construction programme has been informed by a Schedule Planner, which the Applicant prepared in combination with an Engineering, Construction, Procurement contractor. It is stated that, “this assessment is based on the information provided, and, whilst not being definitive as to how the construction phase will take place, is considered to be a robust basis for assessment”.

Using the detailed Schedule Planner that is appended to the ES, JSJV has prepared the Figure 7 which shows the workforce and traffic associated with each construction option.

Figure 7: Graph showing the proposed workforce and traffic associated with each construction option.



The ES states that "Option 2 is predicted to generate a greater number of vehicle movements during the peak construction year than the corresponding peak construction year in Option 1".

JSJV would make the following observations:

- The peak construction year for Option 1 is 2025, whereas the peak construction year for Option 2 is 2026; and
- The peak of Option 2, in terms of people and vehicle trip generation, is more spread out than Option 1. However, due to the combined construction of Units 1 and 2 in Option 2, Option 2 still results in a greater maximum monthly vehicle trip generation than Option 1.

On the basis that the duration of the construction peak is significantly greater for Option 2, JSJV agree that Option 2 is more likely to represent a worse-case scenario in terms of traffic and transport.

Notwithstanding the above, JSJV would note that Option 1 results in greater traffic generation than Option 2 over the Christmas period of 2025. Furthermore, Option 1 creates a second peak construction period in 2028 (June – August), whereas Option 2 only has one construction peak period (albeit, spread out across a longer time period) .

Further comments are provided later in the TM regarding how the duration of construction impact should be considered.

Assessment methodology

The environmental effects of traffic generated by the Proposed Scheme have been assessed with reference to the DMRB LA104 (Highways England, 2020b) and Guidelines for the Environmental Assessment of Road Traffic (Institute of Environmental Assessment, 1993) (hereafter referred to as 'GEART').

No allowance has been made for the delivery of construction materials by water or rail (in order to assess the 'worst case' construction phase and operational phase road traffic impact). Although Drax Power Station has water and rail facilities the Proposed Scheme will not involve use of, or modification of either facility. The rail facilities are currently operating at capacity. JSJV supports this worst-case assumption.

The following assessment scenarios have been considered:

- Existing: 2018 Baseline;
- Year of submission: 2022 Baseline - March and October 2018 surveyed traffic flows and TEMPRO traffic growth applied; and
- Peak construction year
    - 2026 Future Baseline - 2022 Baseline with TEMPRO traffic growth applied
    - 2026 Do Minimum – this will be the 2026 Future Baseline plus 'reasonably foreseeable' committed development (Without Development)
    - 2026 Do Something – this will be the 2026 Do Minimum plus construction traffic (With Development – Construction Phase)

JSJV supports the proposed assessment year of 2026 for the construction phase (with the Option 2 schedule) but would reiterate that the worst case should be assessed.

Background growth factors

The proposed TEMPro Growth Factors differ from those originally proposed within the EIA Scoping Report. It is explained that this is because TEMPro v7.2c was released after the submission of the EIA Scoping Report and that "the same methodology has been applied but the rates reflect the latest available forecasts and are therefore considered appropriate".

Growth factors for the AM Peak Hour (07:00 – 09:59) and PM Peak Hour (16:00 – 18:59) are proposed for use in the peak hour junction capacity assessments. These growth factors were determined using the following criteria in TEMPro:

- Base year of 2018 and future years of 2022 and 2026.
- Location of Selby and East Riding.
- National Traffic Model (NTM) Adjusted (RTF 2018 Scenario 1 – Reference).
- Trip end origin / destination.
- Area Type (Rural).
- Road Type (All).

The proposed background growth factors are presented in Table 8Table 8.

Table 8: Proposed background growth factors

Assessment years	Location	AM peak	PM peak	Weekday
2018-2022	Selby	1.0368	1.0350	1.0359
	East Riding	1.0339	1.0317	1.0338
	Average	1.0354	1.0334	1.0349
2022-2026	Selby	1.0339	1.0332	1.0333
	East Riding	1.0350	1.0292	1.0299
	Average	1.0345	1.0332	1.0316

The below background growth factors were proposed at the scoping stage.

Table 9: Background growth factors that were proposed at the scoping stage

Average: Selby / East Riding	AM Peak	PM Peak
2018-2021	1.0361	1.0343
2018-2026	1.0981	1.0949

The review of the scoping note prompted the following comments from National Highways:

> *Noted. The proposed approach is considered appropriate.*
>
> *We have reviewed the NTM adjusted TEMPro growth factors derived by WSP. Our own analysis using the TEMPro 7.2 dataset and the criteria adopted by WSP has identified very similar growth rates – for example, our own 2018-2028 growth rates are 1.11282 in the AM peak and 1.10963 in the PM peak. The difference in growth rates is not an issue of concern.*
>
> *It is noted that WSP have derived growth rates for all road types. Highways England has reviewed alternative growth rates for motorway and principal road types. The motorway 2018-2028 growth rates are 1.11790 in the AM peak and 1.11470 in the PM peak. This equates to a growth differential of just 0.5% over a ten-year period and is unlikely to be a material issue. On this basis, Highways England accept the proposed use of WSP growth rates for all road types, and the NTM adjusted TEMPro growth rates shown in Table 4 are accepted for use.*

JSJV has undertaken an independent analysis using TEMPro and the background traffic growth factors are shown in Table 10. JSJV is aware that TEMPro version 8.0 has been released but due to version 8.0 not becoming official until November 2022, JSJV has used TEMPro version 7.2.

Table 10: JSJV background growth factors

Assessment years	Location	Road type	AM peak	PM peak	Weekday
2018-2022	Selby	Motorway	1.0532	1.0514	1.0523
	East Riding		1.0502	1.0480	1.0502
	Average		**1.0517**	**1.0497**	**1.0513**
	Selby	Principle	1.0477	1.0459	1.0468
	East Riding		1.0448	1.0426	1.0447
	Average		**1.0463**	**1.0443**	**1.0458**
2022-2026	Selby	Motorway	1.0486	1.0479	1.0479
	East Riding		1.0451	1.0438	1.0446
	Average		**1.0469**	**1.0459**	**1.0463**
	Selby	Principle	1.0465	1.0458	1.0458
	East Riding		1.0430	1.0417	1.0425
	Average		**1.0448**	**1.0438**	**1.0442**

The difference to the proposed background growth factors is presented below.

Table 11: Review of proposed background growth factors

Assessment years	Location	Road type	AM peak	PM peak	Weekday
2018-2022	Average	Motorway	-0.0163	-0.0163	-0.0164
	Average	Principle	-0.0109	-0.0109	-0.0109
2022-2026	Average	Motorway	-0.0124	-0.0127	-0.0147
	Average	Principle	-0.0103	-0.0106	-0.0126

The proposed background growth factors are lower than those derived by JSJV for both the Motorway and Principal road types. However, in line with the previous comments at the scoping stage, the identified growth differential is unlikely to be a material issue and the proposed background growth factors are acceptable.

In order to avoid double counting, alternative assumptions have been applied to the future household and jobs forecasts to reflect that the peak hour traffic flows. Table 12 presents the proposed background growth factors with alternative assumptions applied.

Table 12: Proposed background growth factors with alternative assumptions

Assessment years	Location	AM peak	PM peak
2022-2026	Selby	1.0340	1.0333
	East Riding	1.0253	1.0238
	Average	1.0297	1.0286

The following developments have been scoped into the Traffic and Transport assessment:

- 2019/1343/EIA – Eggborough Demolition Works and Redevelopment;
- Barlow Mound Resource Recovery Operations;
- 21/03027/STPLF - Erection of Employment Units – Rawcliffe Road Airmyn;
- 19/01430/STPLF – Train Manufacturing Plant;
- 15/00305/STOUT - Up to 838 New Homes - A164 Rawcliffe Road; and
- 18/03879/STREM - Erection of a building for use as B8, B1(a) and B2.

JSJV supports the approach to use alternative assumptions to avoid double counting from the committed development traffic.

Netting off

It is acknowledged that the traffic generation from the consented DCO for 'Drax Repower' has not been discounted (netted-off) in order to form a robust assessment. JSJV supports this approach.

Sensitive receptors

The following sensitivity is suggested for the SRN:

- Link 6 (M62 E): low sensitivity because the road is a three-lane motorway with a National speed limit and is subject to Motorway regulations.
- Link 9 (M62 W): low sensitivity because the road is a three-lane motorway with a National speed limit and is subject to Motorway regulations.
- Junction 4 (M62 Junction 36): very high sensitivity in both the AM and PM peak periods.

JSJV would agree that M62 Junction 36 has a very high sensitivity, however, would suggest that both M62E and M62W may be potentially impacted by the construction impacts of the scheme and as such further justification should be provided to explain the proposed sensitivity for the M62 mainline.

Construction trip generation

Trip generation

The ES proposed the following assumptions regarding construction traffic generation:

> *"It is anticipated that 80% of the workforce would be based locally and therefore travel from home and 20% of the workforce would be transient and therefore travel from local accommodation. It has been assumed that workers travelling from home will travel by private car as a driver or passenger, with an average vehicle occupancy of two workers per vehicle, with the remaining 20% travelling by minibus, with an average occupancy of seven workers per vehicle."*

The justification is that, "*these assumptions have previously been used as a basis for assessment within the Knottingley CCGT Power Station Transport Assessment (June 2013) which gained DCO consent in March 2015 and Eggborough CCGT Power Station which gained DCO consent in September 2018*" and that "*the Applicant has also confirmed these assumptions are in line with their experience of outages at Drax Power Station Site*".

The examination documents relating to the Knottingley CCGT Power Station have been archived and are no longer available on the National Infrastructure Planning website. However, JSJV has accessed the Transport Assessment for the Eggborough CCGT Power Station and can confirm that:

> *"In relation to traffic generation associated with construction workers, it has been assumed that 80% of workers will travel to site by private car with an average occupancy of two workers per vehicle and 20% will travel to site by minibus with an average occupancy of seven workers per vehicle. This is considered a realistic assumption given that the mode of arrival of construction workers can be controlled through travel planning measures and that construction workers would want to minimise their travel expenditure, particularly if having to pay for temporary accommodation. This assumption is based on those set out within the Knottingley CCGT Power Station Transport Assessment (June 2013) which gained DCO consent in March 2015 and was accepted by NYCC as a suitable basis for analysis during the scoping stage of this Transport Assessment. It is proposed that this level of traffic generation can be managed and maintained through availability of on-site parking spaces."*

Subject to a review of the proposed CWTP, JSJV supports the proposed assumptions for construction trip generation.

When this vehicle occupancy rate is applied to the workforce associated within the construction phase of the development, in the peak month of construction (August 2026), the following vehicle trip generations for construction workers, shown in Table 13, would be anticipated.

Table 13: Proposed Construction Worker Vehicle Generation (Peak Month)

Month of construction	Total workers per day	Number of cars / vans at 2 per vehicle	Number of minibuses at 7 per vehicle	Average two-way daily flow.
August 2026	1,000	400	29	858

JSJV accept the proposed Construction Worker Vehicle Generation.

It is proposed that the volume of HDVs on the network during the peak month of construction (in 2026) is to be a maximum of 270 two-way daily HDV movements (135 in and 135 out). JSJV can confirm that this level of HGV trip generation is in line with that contained in the proposed schedule planner and is, therefore, considered to be robust.

It is proposed that the HDV traffic will be managed through measures contained in the CTMP. JSJV supports this approach and has offered comments on the CTMP in a later section of this TM.

Profile across the day

During the construction phases it is proposed that the standard working periods would be Monday to Friday, 07:00 to 19:00, with all personnel working within a nine-hour period. It is also proposed that start-up and shutdown activities would take place during the one-hour period either side of standard working hours.

For the purposes of the assessment, it has been proposed that all construction worker related trips would arrive between 06:00 and 10:00 and depart between 16:00 and 20:00 (Mondays to Fridays). On Saturdays, it is proposed that working hours would be 07:00 and 14:30.

JSJV would note that the assumed arrival and departure profiles coincide with the network peak periods for M62 Junction 36.

It is stated that the proposed arrival and departure profile is based on that used for Eggborough CCGT Power Station which gained DCO consent in September 2018, and Keadby 3 Carbon Capture Power Station DCO, which is awaiting consent.

Table 14 shows the proposed percentage of daily inbound and outbound trips for the periods 06:00 – 10:00 and 16:00 – 20:00 used in this assessment.

Table 14: Construction Worker Vehicle Generation profile

Time period	% of daily inbound	% of daily outbound
06:00 – 07:00	30%	0%
07:00 – 08:00	55%	0%
08:00 – 09:00	10%	0%
09:00 – 10:00	5%	0%
16:00 – 17:00	0%	10%
17:00 – 18:00	0%	15%
18:00 – 19:00	0%	70%
19:00 – 20:00	0%	5%

JSJV would note that the proposed profile is not a direct match with that used for the Eggborough CCGT Power Station. Eggborough CCGT Power Station proposed 5% of daily outbound from 16:00 – 17:00 and 75% of daily outbound from 18:00 – 19:00. The average two-way daily flow of construction workers (agreed above) is 858. A difference of 5% of construction workers, therefore, represents 21 one-way trips. This difference is not considered to be a material concern and, therefore, the proposed Construction Worker Vehicle Generation profile is acceptable.

It is proposed that HDV deliveries are to be spread evenly over the 12-hour working day from 07:00 – 19:00.

The Eggborough CCGT Power Station Transport Assessment also assumed that the arrival and departure of HGVs from the Site will be spread evenly over the period 08:00 to 18:00 (10-hour working day).

It is proposed that the volume of HDVs on the network during the peak month of construction (in 2026) is to be a maximum of 270 two-way daily HDV movements (135 in and 135 out). Evenly split across a 12-hour day results in 11 one-way HDV movements per hour. Evenly split across a 10-hour day results in 14 one-way HDV movements per hour. This difference is not considered to be a material concern and, therefore, the proposed HDV profile is acceptable.

Based on the above, an overview of the daily vehicle profile for construction workers and HDV movements during peak month of the construction phase is presented in Table 15.

Table 15: Proposed Daily Vehicle Profile During Peak Month of Construction

Time period	Constructing worker vehicles (LDVs)		Construction HDVs	
06:00 – 07:00	129	0	0	0
07:00 – 08:00	236	0	11	11
08:00 – 09:00	43	0	11	11
09:00 – 10:00	21	0	11	11
10:00 - 11:00	0	0	11	11
11:00 - 12:00	0	0	11	11
12:00 - 13:00	0	0	11	11
13:00 - 14:00	0	0	11	11
14:00 - 15:00	0	0	11	11
15:00 - 16:00	0	0	11	11
16:00 – 17:00	0	43	11	11
17:00 – 18:00	0	64	11	11
18:00 – 19:00	0	300	11	11
19:00 – 20:00	0	21	0	0

The ES does state that the development is likely to generate 65 two-way trips in the AM peak hour (08:00–09:00) and 86 two-way trips in the PM peak hour (17:00– 18:00).

Whilst JSJV supports the above Proposed Daily Vehicle Profile, we would suggest that the total vehicle trip generation should be presented in Passenger Car Units [PCUs], so that the HDVs are properly accounted for. TAG UNIT M3.1 Highway Assignment Modelling (May 2020) states that the following PCU equivalent values should be used:

- LGVs on all road types: 1.0;
- HGVs on motorways and all-purpose dual carriageways: 2.5; and
- HGVs on other road types: 2.0

Considering the above, JSJV would suggest that, during the construction phase (Option 2), the development is likely to generate 98 two-way PCUs between 08:00 – 09:00 and 119 two-way PCUs between 17:00 – 18:00.

JSJV would also reiterate that further clarification is required to confirm that the worst case peak periods (and potentially the corresponding shoulder periods) for M62 Junction 36 have been assessed.

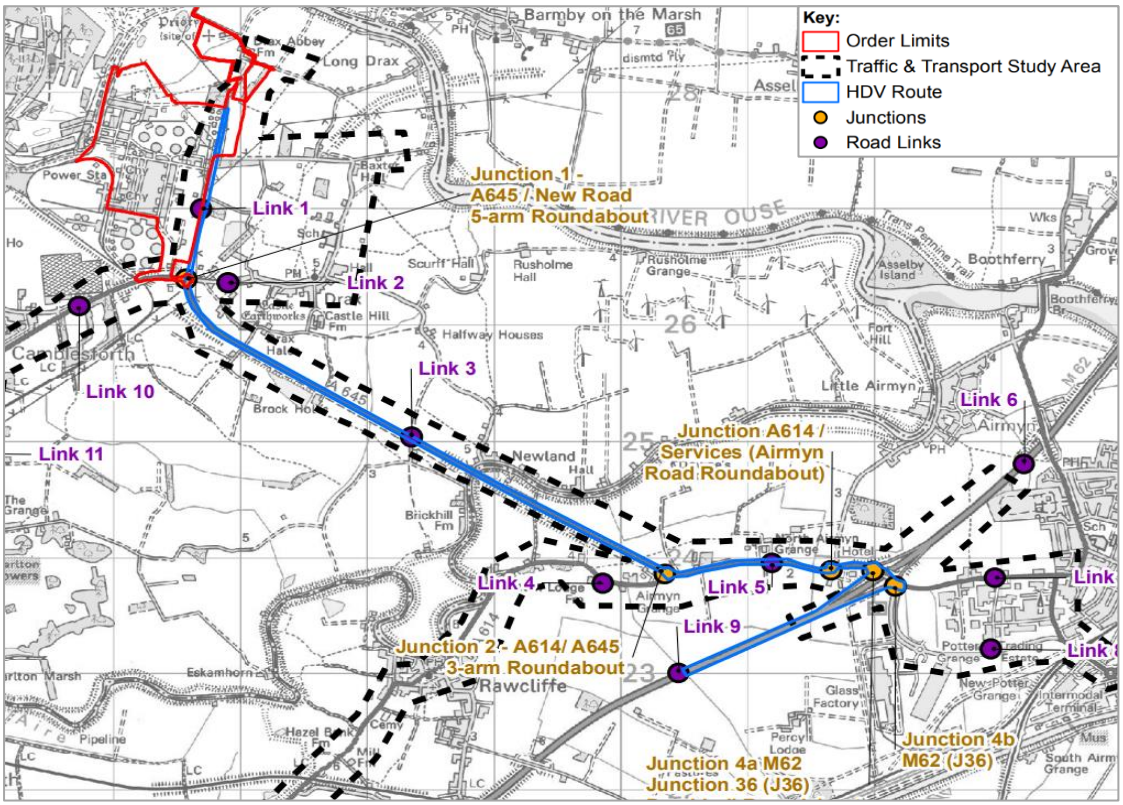
Construction trip distribution

Through EIA scoping for the development, National Highways and NYCC agreed that a gravity model could be used to distribute workers associated with the Proposed Scheme. Consequently, the proposed construction worker trip distribution is acceptable.

The gravity model was calibrated with an average trip length of 30 km, which reflected the remote nature of the application site, and the likely origin of workers from the neighbouring major urban centres of Hull, York, Leeds and Doncaster. The gravity model showed that 70% of car trips assigned via the M62 Junction 36, while the remaining 30% assigned via Selby.

It is proposed that the HDVs associated with the construction phase and decommissioning are distributed on fixed routes to and from the application site along the M62, A614 and A645 as show in Figure 8.

Figure 8: Proposed HDV routing



<u>JSJV supports the assumption that 100% of the HDV trip generation will use M62 Junction 36 as this represents a worst-case scenario.</u>

Trip assignment

JSJV has produced several figures showing the trip assignment at the M62 Junction 36. These have been prepared using the proposed trip generation, profile and trip distribution assumptions (70% of the construction worker trips use M62 Junction 36 and 100% of HDV trips use Junction 36).

Figure 9 shows the two-way trip assignment at M62 junction 36 across the working construction hours of a day. Figure 10 shows the two-way daily trip assignment at M62 junction 36 across the planned schedule for the Option 2 construction plan.

It is not possible to present trip assignment for the SRN peak periods because the ES does not include a trip profile for 15-minute periods. Consequently, Figure 11 shows the two-way trip assignment at M62 Junction 36 across the planned schedule for the Option 2 construction plan, for 08:00-09:00, 07:00 – 08:00, 17:00 to 18:00, and 16:00-17:00.

Figure 9: Two-way trip assignment at M62 junction 36 across the working construction hours of a day (PCUs)

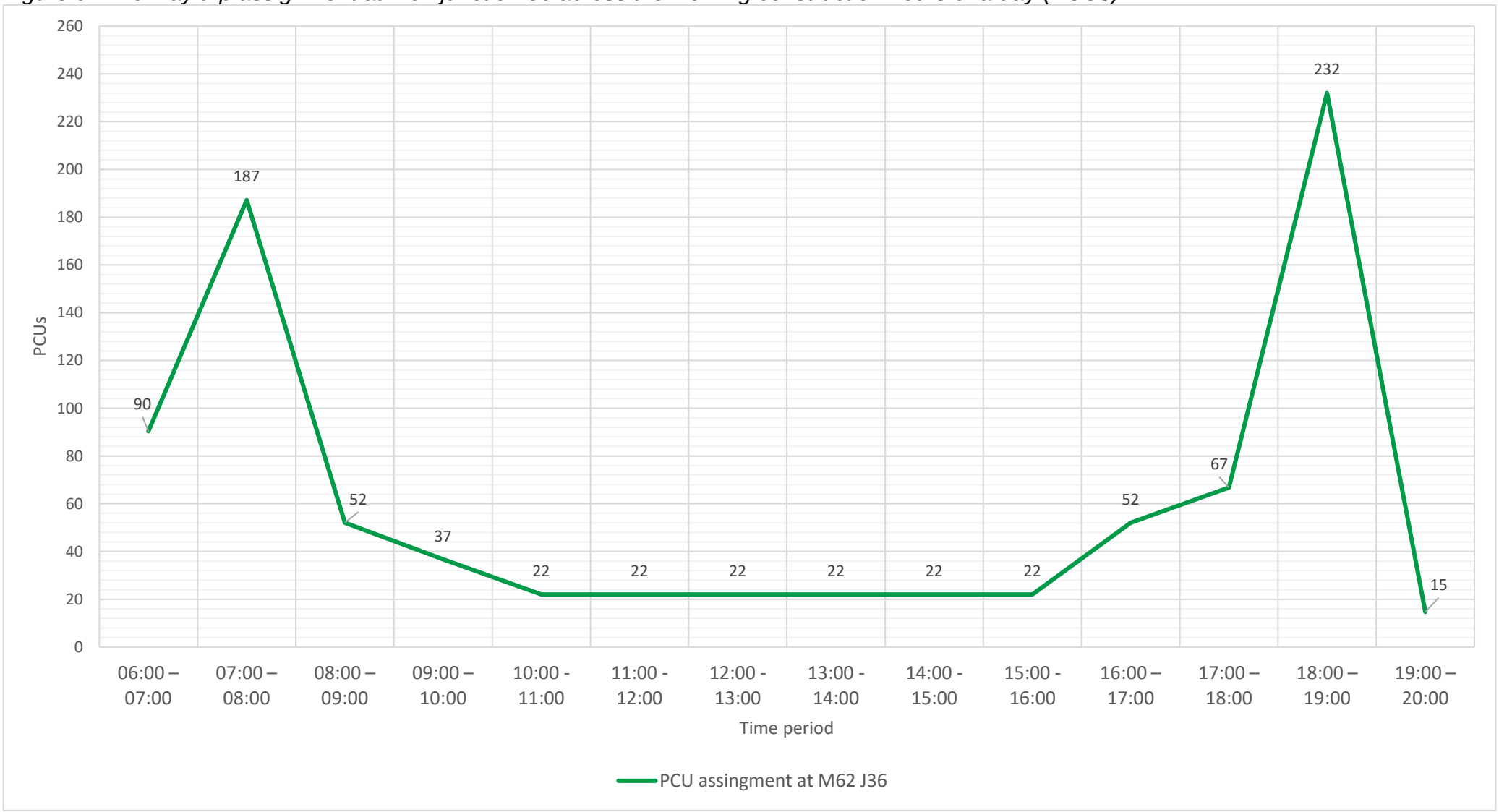


Figure 10: Two-way daily trip assignment at M62 Junction 36 across the planned schedule for the Option 2 construction plan (PCUs)

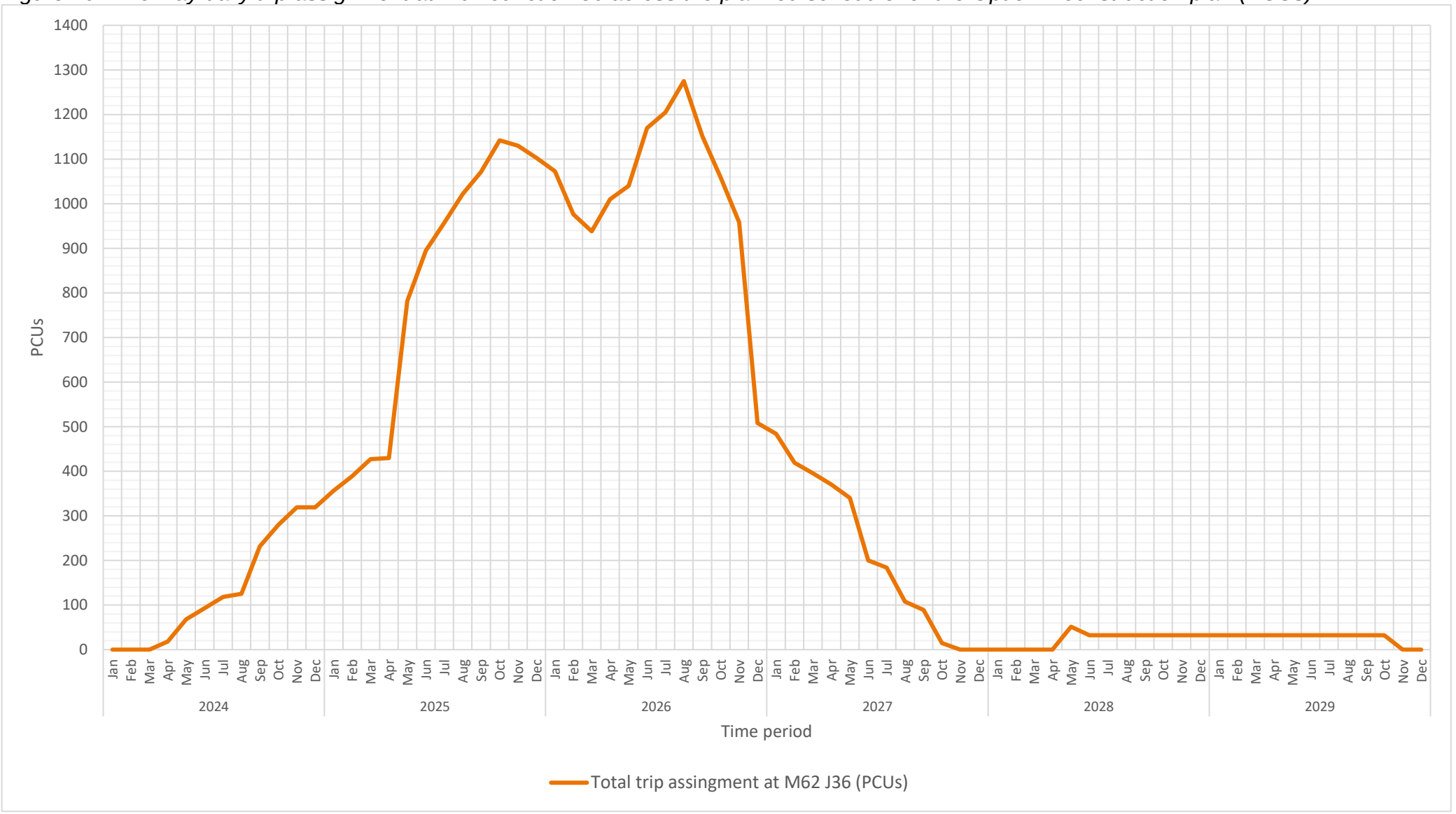


Figure 11: Two-way trip assignment at M62 Junction 36 across the planned schedule for the Option 2 construction plan

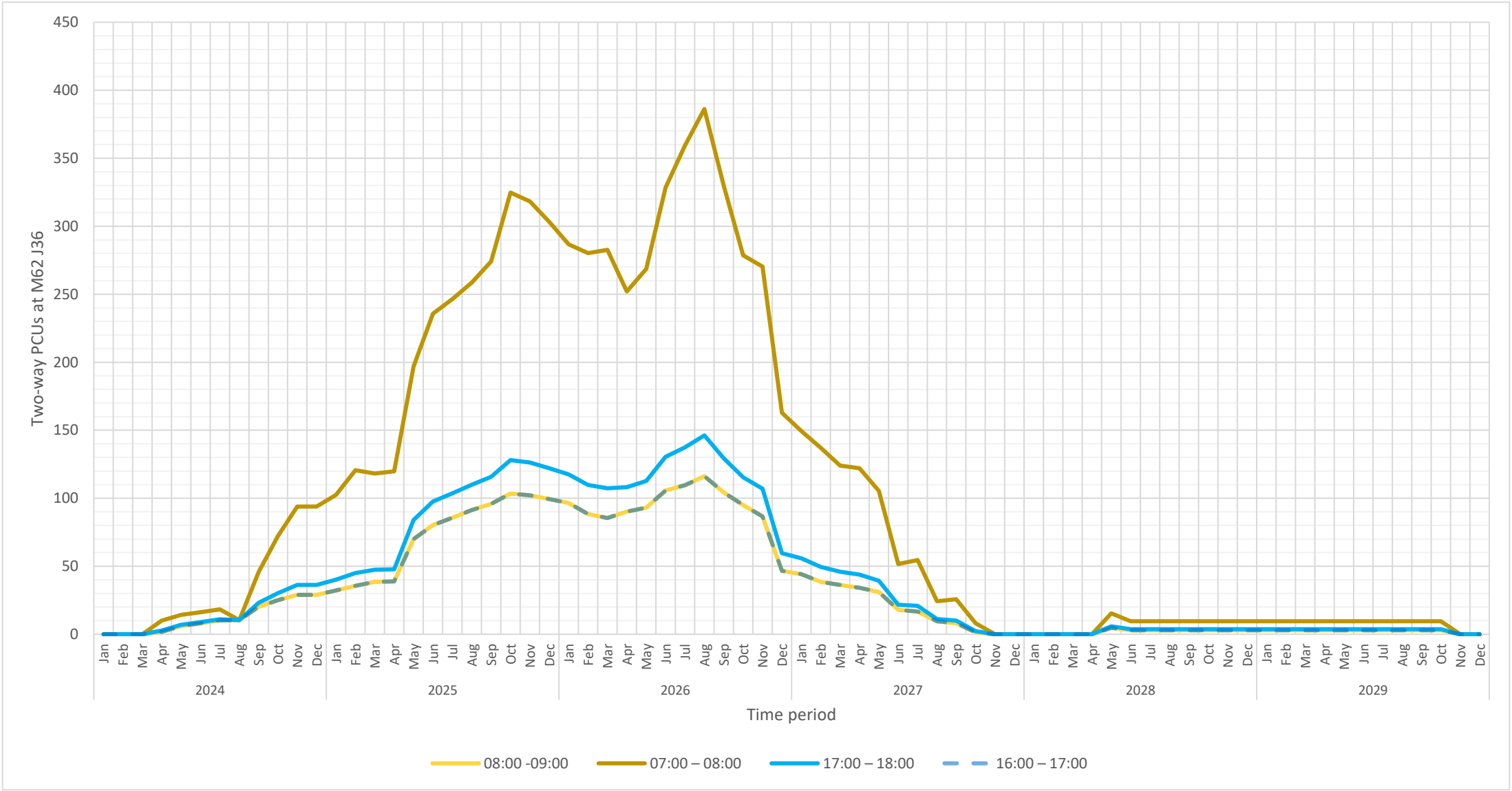
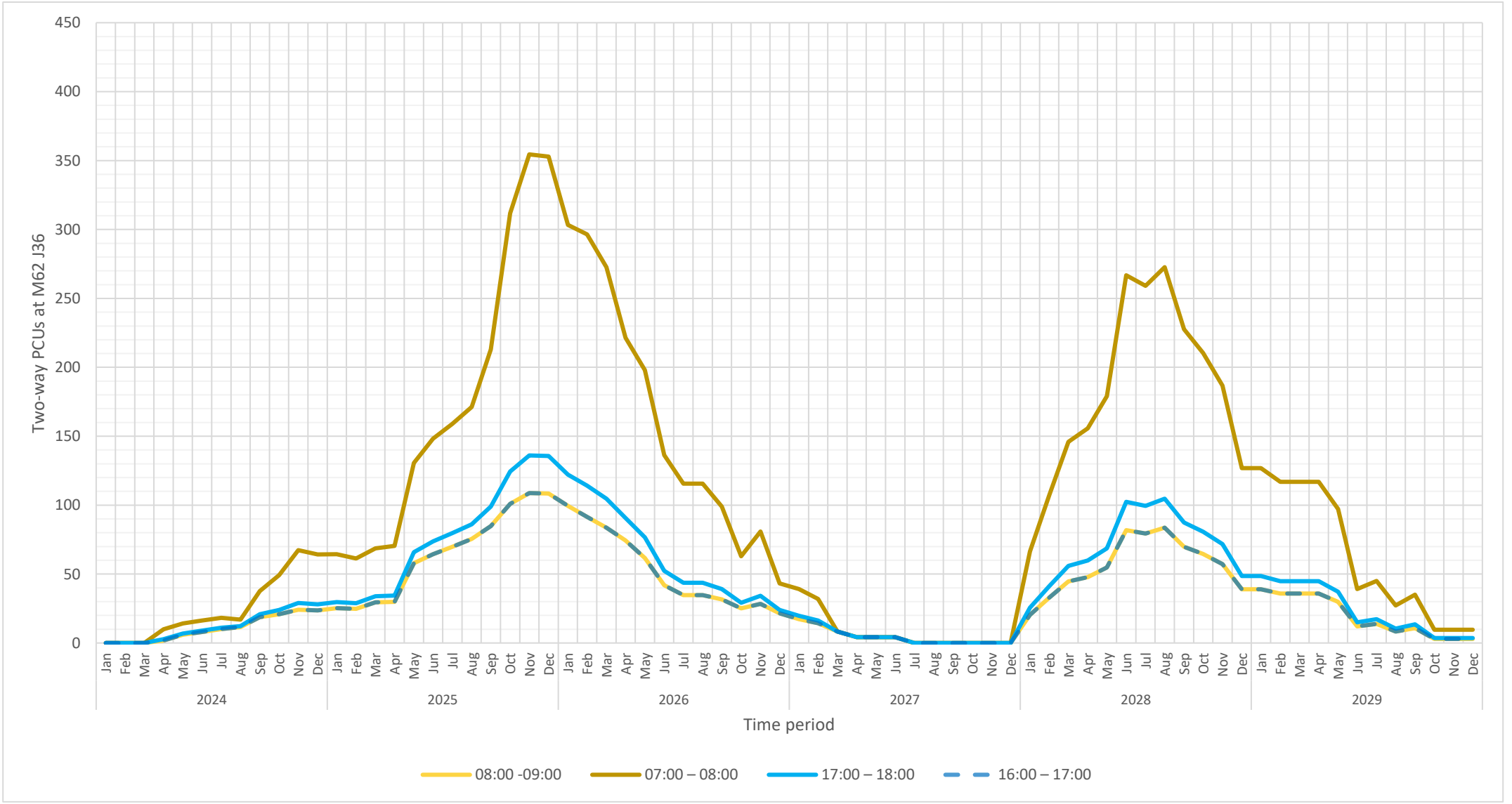


Figure 12: Two-way trip assignment at M62 Junction 36 across the planned schedule for the Option 1 construction plan



JSJV would reiterate that further analysis is required to assess the SRN peak periods (and, potentially, the corresponding shoulder peak periods).

However, the above figures show that, for 29 continuous months (Jan-25 to May-27), there are over 100 two-way PCUs forecast to use M62 Junction 36 between 07:00 and 08:00.

For Option 1 (as shown in Figure 12), there are forecast to be over 100 two-way PCUs using M62 Junction 36 between 07:00 and 08:00 for the following consecutive months:

- 16 consecutive months from May 2025 – August 2026; and
- 15 consecutive months from February 2028 – April 2029.

JSJV would note that 100 PCUs is an arbitrary benchmark for the purposes of comparison. This benchmark has no relevance to Policy and should not be used to justify the proposed development's impact.

M62 Junction 36 Dumbbell Roundabout junction capacity assessment

The ES has assessed the impacts of the development on driver delay at M62 Junction 36 using Junctions10 software. The geometric parameters for the junction were based on OS Data. A full set of measurements and Junctions 10 output files are included in Junction Modelling (Appendix 5.6). The analysis of all junctions has been undertaken using the 'ONE HOUR' method, which synthesises a 'bell curve' profile for peak hour traffic.

JSJV is in the process of reviewing the proposed Junctions10 model and will provide our review comments in due course. We would withhold comment on the robustness of the proposed assessment until we have reviewed the modelling files.

Notwithstanding the above, the proposed assessment results are presented below.

Table 16: Proposed 2018 baseline results for M62 Junction 36.

Arm	AM Peak			PM Peak		
	Max RFC	Queue (PCU)	Delay (s)	Max RFC	Queue (PCU)	Delay (s)
Overbridge (From west to east)	0.52	1.20	3.69	0.56	1.40	3.84
M62 Southbound Off-Slip	0.52	1.20	9.11	0.39	0.70	7.88
A614 Rawcliffe Road (East)	0.31	0.50	3.07	0.40	0.70	3.24
A161	0.18	0.30	3.94	0.26	0.40	4.20
A614 Rawcliffe Road (West)	0.67	2.20	8.48	0.77	3.40	12.08
Overbridge (From east to west)	0.46	1.00	4.59	0.58	1.50	5.59
M62 Northbound Off-Slip	0.43	0.90	3.22	0.43	0.90	3.26

JSJV would suggest that in the 2018 baseline scenario, all arms of M62 Junction 36 operate within their capacity.

Table 17: Proposed 2022 baseline results for M62 Junction 36.

Arm	AM Peak			PM Peak		
	Max RFC	Queue (PCU)	Delay (s)	Max RFC	Queue (PCU)	Delay (s)
Overbridge (From west to east)	0.54	1.30	3.84	0.58	1.50	4.02
M62 Southbound Off-Slip	0.55	1.30	9.92	0.41	0.80	8.37
A614 Rawcliffe Road (East)	0.32	0.50	3.18	0.42	0.70	3.37
A161	0.19	0.30	4.05	0.27	0.40	4.35
A614 Rawcliffe Road (West)	0.70	2.50	9.42	0.80	4.10	14.28
Overbridge (From east to west)	0.48	1.00	4.73	0.60	1.60	5.86
M62 Northbound Off-Slip	0.45	1.00	3.36	0.45	1.00	3.41

JSJV would suggest that in the 2022 baseline scenario, all arms of M62 Junction 36 operate within their capacity.

Table 18: Proposed 2026 baseline results for M62 Junction 36.

Arm	AM Peak			PM Peak		
	Max RFC	Queue (PCU)	Delay (s)	Max RFC	Queue (PCU)	Delay (s)
Overbridge (From west to east)	0.55	1.40	3.98	0.59	1.60	4.18
M62 Southbound Off-Slip	0.58	1.50	10.80	0.43	0.90	8.86
A614 Rawcliffe Road (East)	0.34	0.50	3.28	0.43	0.80	3.50
A161	0.20	0.30	4.16	0.28	0.40	4.50
A614 Rawcliffe Road (West)	0.73	2.90	10.43	0.83	4.90	16.88
Overbridge (From east to west)	0.49	1.10	4.87	0.62	1.70	6.12
M62 Northbound Off-Slip	0.46	1.10	3.49	0.47	1.00	3.55

JSJV would suggest that in the 2026 baseline scenario, all arms of M62 Junction 36 operate within their capacity. However, JSJV would note that the reported RFC for

A614 Rawcliffe Road (West) shows that this arm is starting to experience increased queues and delay.

Table 19: Proposed 2026 Do Minimum results for M62 Junction 36.

Arm	AM Peak			PM Peak		
	Max RFC	Queue (PCU)	Delay (s)	Max RFC	Queue (PCU)	Delay (s)
Overbridge (From west to east)	0.79	4.30	8.57	0.68	2.30	5.39
M62 Southbound Off-Slip	1.38	128.50	641.60	0.73	3.00	21.50
A614 Rawcliffe Road (East)	0.67	2.10	8.55	0.60	1.60	5.44
A161	0.29	0.50	5.19	0.67	2.20	11.24
A614 Rawcliffe Road (West)	1.12	72.80	202.00	1.20	113.00	299.34
Overbridge (From east to west)	0.57	1.50	5.79	0.89	7.70	20.24
M62 Northbound Off-Slip	0.72	3.10	6.85	0.66	2.20	6.43

In the 2026 Do Minimum scenario, the following sections of M62 Junction 36 are operating in excess of their theoretical capacity: M62 Southbound Off-Slip and A614 Rawcliffe Road (West). The Overbridge (from east to west) is also shown to be experiencing queuing a delays.

Table 20: Proposed 2026 Do Something results for M62 Junction 36.

Arm	AM Peak			PM Peak		
	Max RFC	Queue (PCU)	Delay (s)	Max RFC	Queue (PCU)	Delay (s)
Overbridge (From west to east)	0.79	4.40	8.71	0.68	2.30	5.49
M62 Southbound Off-Slip	1.39	135.40	682.10	0.73	3.00	22.06
A614 Rawcliffe Road (East)	0.67	2.20	8.68	0.61	1.60	5.62
A161	0.29	0.50	5.27	0.69	2.40	12.23
A614 Rawcliffe Road (West)	1.15	86.20	234.30	1.28	153.90	440.50
Overbridge (From east to west)	0.57	1.50	5.80	0.89	7.70	20.23
M62 Northbound Off-Slip	0.74	3.50	7.54	0.67	2.30	6.73

JSJV would suggest that in the 2026 Do Something scenario, the following sections of M62 Junction 36 are operating over their theoretical capacity:

- M62 Southbound Off-Slip
- A614 Rawcliffe Road (West).

The Overbridge (from east to west) is also shown to be experiencing queuing a delays.

The ES states that:

> *Junction 4 [M62 J36] would operate over capacity in the 2026 Do Minimum assessment scenario i.e., without the addition of the Proposed Scheme construction traffic and that the Proposed Scheme would also increase driver delay.*

JSJV agrees with the above statement.

The ES also states that:

> *It is understood that a highway improvement and contribution model has been identified at Junction 4 [M62 J36] to address the traffic impacts associated with committed development, including Short List 44 (ERYC Planning Reference: 21/03027/STPLF).*
>
> *As part of National Highways changing their notice from 'Non Determination to 'No Objection' for Short List 44, National Highways accepted a financial contribution through a legal agreement (e.g. S106), with the financial contribution going towards the costs of design, costing and construction of required improvements listed in the Local Plan Infrastructure Study (June 2014) and the Local Plan Infrastructure Delivery Plan (March 2015) regarding essential junction improvements at the M62 Junction 36.*
>
> *It is understood that the scheme comprises minor widening and partial signalisation of the junction and is due to be implemented between 2024 – 2029.*
>
> *Further discussions are required with National Highways to consider the temporary impacts of the Proposed Scheme in the context of the above highway improvement scheme and the Applicant's current operation including reduced workforce, and Drax Repower DCO consent which assessed the same peak construction year.*

JSJV has reviewed the planning context for planning application reference: 21/03027/STPLF and key information can be summarised as follows:

- The application seeks consent for the Erection of employment units (Use classes E(g)(ii) and/or E(g)(iii) and/or B2 and/or B8, with ancillary offices) and offices (Use class E(g)(i)) with electric vehicle charging hub and associated landscaping and infrastructure at Land South And South West Of Glews Garage Rawcliffe Road Airmyn East Riding Of Yorkshire;
- At the time of writing the application is awaiting decision (pending);
- On 25/03/2022, National Highways confirmed that subject to securing a financial contribution through a legal agreement (such as a S106) they have no objection to this development.

- This was on the understanding that the contribution being collected is towards the costs of design, costing and construction of required improvements listed in the Local Plan Infrastructure Study (June 2014) and the Local Plan Infrastructure Delivery Plan (March 2015) regarding essential junction improvements at the M62 Junction 36.

In addition to the above, JSJV can provide the following context for the junction improvements at the M62 Junction 36:

- The scheme was derived as part of the East Riding of Yorkshire Local Plan which was adopted in April 2016. The scheme is currently under review, with modelling being carried out to understand whether the mitigation is still required;
- The East Riding Infrastructure Study (2014) was the driver for the mitigation and includes a description and very basic plans within Appendix G of Appendix E; and
- Contributions have started to be collected by ERYC but remain well short of the cost of the scheme. Therefore, although committed within the ERYC Local Plan there are no timescales for delivery.

Considering the above, JSJV would suggest that the ES should assess with and without the scheme in place (in the DoMinimum and, consequently, the DoSomething scenarios).

The ES concludes that:

> *It is considered that the effect of the Proposed Scheme is negligible, but the cumulative impact of all committed development and background traffic growth is a temporary large adverse effect without mitigation being in place.*

No mitigation measures are proposed other than the CTMP and CWTP.

The ES states the following:

> *In summary significant cumulative effects are predicted at Junction 4 should short listed developments be built out and other background growth is realised without an upgraded junction being delivered. However, the impacts of the Proposed Scheme traffic are minimal and it is considered that the temporary construction phase impacts can be cost effectively mitigated through enhanced management of the construction traffic, with robust monitoring and reporting measures included in the Outline Construction Traffic Management Plan (CTMP) (Appendix 5.1 3) and Framework Construction Worker Travel Plan (CWTP) (Appendix 5.2). This would include working with National Highways, NYCC, and ERoY*

JSJV would withhold comment on the proposed assessment until all assessment inputs have been agreed upon (peak periods and DoMinimum mitigation) and until the proposed Junction10 model has been reviewed and approved. We would, however, suggest that the following guidance in the DfT Circular 02/2013 is relevant:

> "*Development proposals are likely to be acceptable if they can be accommodated within the existing capacity of a section (link or junction) of the strategic road network,* ***or they do not increase demand for use of a section that is already operating at over-capacity levels****, taking account of any travel plan, traffic management and/or capacity enhancement measures that may be agreed. However, development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe*".

Outline Construction Traffic Management Plan

JSJV can confirm that the construction programme and working hours in the CTMP correspond with those assessed in the Traffic and Transport chapter of the ES.

It is proposed that signage will be provided to ensure sufficient guidance for construction traffic and to ensure that the traffic does not deviate from a specified route. The CTMP explains that "*the location of signage will be developed as the Proposed Scheme progresses whilst also incorporating the outputs of ongoing consultation with the Local Highway Authority and National Highways*".

JSJV would suggest that National Highways requests for the following planning condition to be attached to any granted DCO:

> *Unless otherwise agreed in writing by the Local Planning Authority in consultation with National Highways (or its successors) no construction shall commence unless and until a Construction Phase 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 the construction shall be undertaken in accordance with the approved plan.*

As a minimum, JSJV would suggest that the Construction Phase Traffic Management Plan includes the following:

- Details and maintenance of any construction traffic management signage;
- Details and maintenance general road user management signage (e.g., Delays Likely and their duration);
- The need for and details of any general road user diversionary routes;
- A commitment to following due process regarding AILs; and
- The need for and maintenance of temporary works (to be informed by the operational assessments).

In order to facilitate the delivery of AILs, the ES proposes that it will be the responsibility of the haulage company to contact and inform the following key stakeholders in compliance with regulatory requirements. The ES states that "*the haulage company must be able to advise each of the following stakeholders in terms of proposed delivery dates and likely impacts*" and that "*the respective Highway Authorities should be given advance written notice of the AIL deliveries in compliance with regulatory requirements*".

National Highways should be consulted on any proposed AIL movements for this site. A Special Order application must be completed 10 weeks before the scheduled date of any AIL move. Further, details of the required process are explained in National Highways' "Aide Memoire for notification requirements for the movement of Abnormal Indivisible Loads or vehicles by road when not complying with The Road Vehicles (Construction and Use) Regulations 1986 (commonly known as C & U)".

JSJV would advise that the haulage company can use National Highways' electronic service delivery for abnormal loads (ESDAL) to:

- plot the route;
- notify the police, highways and bridge authorities of the abnormal load movements around the road network;
- get advance notice of any possible route problems; and
- save vehicle details and routes for future use.

It is proposed that a Highway Condition Survey (HCS) will be carried out along the designated route for abnormal and indivisible loads (AIL) ahead of the first AIL delivery, and after the final AIL. This is with a view to any construction related defects being made good. We support this approach but would suggest that the surveys be provided to National Highways for review withing the Construction Phase Traffic Management Plan; a commitment to make good any defects should also be included in the plan.

We would also suggest that the Applicant engages closely with National Highways before undertaking any surveys or other works on the SRN as such works are of high risk to road users, contractors, and National Highways operatives. The details of works, relevant safety risks associated with any works shall be identified, and appropriate mitigations shall be agreed with National Highways prior to commencement.

No works to the SRN should be undertaken prior to an agreement with National Highways.

A swept path analysis and 3D survey of the route has been undertaken to identify where street furniture needs to be removed, overhead lines lifted or switched off, and vegetation pruned.

In addition to road modifications, it is stated that traffic management would be required.

It is proposed that a Statement of Common Ground will be prepared with National Highways to incorporate the agreed position on AIL movements. The CTMP also states the following:

> *"Further detailed assessment would be undertaken to determine the exact temporary mitigation required for the M62, and other local required temporary mitigations, as well as the agreement of traffic management and coordination of the delivery with National Highways and Local Authorities."*

Considering the above, JSJV would agree that further discussions are required with National Highways regarding AIL deliveries.

Framework Construction Worker Travel Plan

Travel plan measures

The following measures are proposed:

- Measure 1: Travel Plan Coordinator;
- Measure 2: Travel Plan Steering Group;
- Measure 3: Construction Worker Travel Surveys;
- Measure 4: Travel Plan Marketing;
- Measure 5: Car Park Management Strategy;
- Measure 6: Car Sharing and Minibuses;
- Measure 7: Construction Worker Facilities;
- Measure 8: Senior Staff to Lead by Example; and
- Measure 9: Monitoring of Traffic Flows.

JSJV supports the proposal for a "member of staff working for Drax will be appointed to the role of Travel Plan Coordinator [TPC] as part of their overall responsibilities".

JSJV supports the proposal for the surveys to be funded by the Applicant and to be undertaken on a regular basis during the construction programme.

JSJV supports the proposal for a construction worker registration process will be integrated into the induction process to ensure that all construction workers are registered on a car sharing database and encouraged to assess car sharing to site with other construction workers, either by private car or contractor minibuses.

It is stated that additional incentives will also be offered to encourage car sharing. JSJV would suggest that a firm financial commitment should be made to specific incentives, rather than a description of potential example incentives.

The CWTP states the following:

> *"National Highways have requested the monitoring of construction worker traffic. The TPC and senior management will agree the arrangements for the monitoring of construction worker traffic with National Highways and review the data at the proposed TPSG to understand and agree if additional measures are required to support the management of the construction phase traffic impacts."*

JSJV supports this and would suggest that an agreement on monitoring of construction worker traffic could be included in the Statement of Common Ground.

Car parking

The CWTP states the following:

> *Construction workers will park within the existing 500 carparking spaces available within the Drax Power Station Site. However, provision for 300 overflow car parking spaces would be provided within the East Construction Laydown Area. The combined capacity of 800 carparking spaces across the two areas will not be required throughout the entire construction programme but is included to ensure operational resilience throughout the construction phase as the existing operational units will still require maintenance and outages.*
>
> *This CWTP aims to reduce single occupancy car use amongst construction workers and achieve an average car occupancy of two for home workers, and seven for transient workers throughout the Proposed Scheme's construction period*
>
> *In order to achieve the vehicle occupancy targets for daily car journeys in the construction phase, the construction site will have a capped number of parking spaces available to construction workers, with no more than 450 spaces. The remaining spaces on Site will be used for other existing operations.*
>
> *A car parking management scheme will be implemented which provides favourable parking locations for those that travel to the Site with two or more passengers; this will discourage single vehicle occupancy where possible. In addition, a car parking management strategy will be developed by the TPC and agreed by senior management and the Steering Group prior to the construction period.*

The strategy will incorporate measures for both construction workers and other visitors and will be a 'live' document in the sense that it will be subject to change and be sufficiently flexible to adapt to changing targets and objectives. Monitoring of the strategy will be carried out by the TPC to ensure that targets are achieved, and to minimise non-compliance by construction workers and other visitors and reported to the TPSG.

JSJV would suggest that if the construction site will have a capped number of parking spaces available to construction workers of no more than 450 spaces, then the proposed parking provision of 800 car parking spaces (500 standard spaces + 300 overflow spaces) should be revised.

JSJV would suggest that the CWTP should provide specific commitments to how the proposal to provide favourable parking locations for those that travel to the Site with two or more passengers will be enforced and how many car parking spaces will be specifically allocated for only workers who car share.

Hours of operation

Subject to the impact at the SRN, there may be a requirement for National Highways to request that the arrival and departure movements for construction staff occur outside of the SRN peak periods. This would be achieved by recommending that a condition for a Construction Traffic Management Plan be attached to any granted DCO.

Environmental impacts

In February 2021 National Highways stated the following:

HE accepts the suitability of the identified likely significant effects shown in Table 6.1 of the SR, and summarised as follows:

- *Traffic flows – increase on existing roads.*
- *Delay – traffic delays to non-development traffic.*
- *Road safety – likely effect on road safety as evidence by personal injury collision data for the most recent five-year period.*
- *Intimidation and fear – influenced by traffic volume, number of HGVs, proximity to people, and protection deficiencies such as narrow footways.*
- *Severance – consideration of specific local conditions and impact on pedestrian routes.*
- *Pedestrian amenity – delay to pedestrians.*

JSJV would withhold comment on the effect on intimidation and fear until the impact of the Scheme at the SRN has been agreed upon.

JSJV would suggest that severance and pedestrian amenity are not matters for National Highways.

Summary and Conclusions

This review has highlighted the need for further information and the requirement for recommending conditions as follows:

Further information:

1) Revised collision data analysis for the SRN;
2) Clarification is required to confirm whether the worst-case peak (and, potentially, the corresponding shoulder peaks) for M62 Junction 36 has been assessed. If it the worst-case peak has not been assessed, further analysis will be required;
3) JSJV is in the process of reviewing the proposed Junctions10 model and will provide our review comments in due course. We would withhold comment on the robustness of the proposed assessment until we have reviewed the modelling files;
4) The ES should assess with and without the Local Plan improvements at M62 Junction 36 in place (in the DoMinimum and, consequently, the DoSomething scenarios);
5) Further discussions are required with National Highways regarding AIL deliveries and the proposed Highways Condition Survey;
6) A firm financial commitment should be made to specific incentives for car sharing, rather than a description of potential example incentives;
7) An agreement on monitoring of construction worker traffic could be included in the Statement of Common Ground;
8) If the construction site will have a capped number of parking spaces available to construction workers of no more than 450 spaces, then the proposed parking provision of 800 car parking spaces (500 standard spaces + 300 overflow spaces) should be revised; and
9) The CWTP should provide specific commitments to how the proposal to provide favourable parking locations for those that travel to the Site with two or more passengers will be enforced and how many car parking spaces will be specifically allocated for only workers who car share.

Draft conditions (subject to change/addition once the above points have been resolved):

1) *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.*
2) *Unless otherwise agreed in writing by the Local Planning Authority in consultation with National Highways (or its successors) no construction shall commence unless and until a Construction Phase 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 the construction shall be undertaken in accordance with the approved plan.*

Subject to the impact at the SRN, there may be a requirement for National Highways to request that the arrival and departure movements for construction staff occur outside of the SRN peak periods. This would be achieved by recommending that a condition for a Construction Phase Traffic Management Plan be attached to any granted DCO.

JSJV would suggest that the wording of any recommended planning conditions will be directly related to the construction scenario that is selected by the Applicant. This will then ensure that applications to discharge conditions must be supported by evidence that relates to the actual, selected, construction scenario.