

AA.23.19.09 Immingham Green Energy Terminal

Prepared for:	Becky Garrett
Prepared by:	Harry Robinson (SYSTRA)
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Reviewed/approved by:	Terry Dale (SYSTRA)

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Introduction and background

In September 2023, Associated British Ports [ABP] (the Applicant) submitted an application for a Development Consent Order [DCO] to authorise the construction and operation of a new multi-user green energy terminal [the project] to be located on the eastern side of the Port of Immingham.

National Highways has been identified as a statutory consultee pursuant to Section 42 of the Planning Act 2008, and as a relevant consultation body for the purposes of Regulations 11 and 13 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. The Local Planning Authority [LPA] is North East Lincolnshire Council [NELC].

Jacobs SYSTRA Joint Venture [JSJV] has reviewed the following documents:

- Immingham Green Energy Terminal 6.2 Environmental Statement Chapter 11: Traffic & Transport (TR030008 Volume 6);
- 6.4 Environmental Statement Appendices Appendix 11.B: Traffic and Transport Cumulative Effects Assessment,
- Immingham Green Energy Terminal 6.7 Outline Construction Traffic Management Plan (TR030008 Volume 6); and
- Volume 6 Appendix A: Outline Construction Worker Travel Plan.

The project is classified as a Nationally Significant Infrastructure Project [NSIP] and comprises the construction and operation of a new multi-user green energy terminal to be located on the eastern side of the Port of Immingham. The project will include:

- a. *On the marine side, a terminal for liquid bulks comprising:*
 - i. *a jetty including a loading platform, associated dolphins, fenders and walkways, topside infrastructure but not limited to control rooms, marine loading arms, pipe-racks, pipelines and other infrastructure.*
 - ii. *a single berth, with a berthing pocket with a depth of up to 14.5m below chart datum.*

- iii. Related landside infrastructure including, but not limited to, a jetty access ramp, a flood defence access ramp and works to raise the seawall locally under the jetty access ramp.*
- b. Associated Development on the landside, comprising:*
 - i. A corridor between the new jetty and Laporte Road which would support a private road (the 'jetty access road'), pipe-racks, pipelines to enable the ammonia import to the East Site, as well as security gates, a security building, a power distribution building and associated utilities.*
 - ii. 'East Site - Ammonia Storage' on which an ammonia storage tank and related plant including an ammonia tank flare would be constructed as well as additional buildings (including welfare building, power distribution building and a process instrumentation building), pipe-racks, pipelines, pipes, cable-racks, utilities and other infrastructure.*
 - iii. Construction of a culvert under Laporte Road for pipelines, pipes and cables and other conducting media linking the two parts of the East Site.*
 - iv. 'East Site – Hydrogen Production Facility' on which up to three hydrogen production units and associated plant including flue gas stacks and flare stacks would be constructed together with additional buildings (including process control building, power distribution buildings, process instrumentation buildings, analyser shelters), piperacks, pipelines, pipes, utilities and other infrastructure.*
 - v. Underground pipelines, pipes, cables and other conducting media, between the East and West Sites, for the transfer of ammonia, hydrogen, nitrogen and utilities, with cathodic protection against saline corrosion.*
 - vi. West Site' involving the construction of up to three hydrogen production units with associated flue gas stacks and flare stacks and up to four liquefier unit; hydrogen storage tanks, hydrogen trailer filling stations, a hydrogen vent stack and associated process equipment; and hydrogen vehicle and trailer filling stations, hydrogen compressors and associated process equipment. Also additional buildings (including but not limited to control room and workshop building, security and visitor building, contractor building, warehouse, driver administration building, safe haven building, electrical substation and metering station, power distribution buildings, process instrumentation buildings, analyser buildings and additional temporary buildings during construction), process and utility plant including cooling towers and pumps, fire water tank, pipe-racks, pipelines, pipes, cable-racks, utilities and other infrastructure.*
 - vii. Formation of temporary construction and laydown areas on Queens Road and off Laporte Road.*
 - viii. Temporary removal of street furniture and modification of overhead cables on Kings Road associated with the transport of large construction components from the Port to the Site.*

Background

In September 2022, JSJV reviewed the Environmental Impact Assessment Scoping Report [EIA Scoping Report] accompanying the scoping request.

The EIA Scoping Report identified transport as a key topic that should be ‘Scoped In’ to the ES due to the significant environmental effects likely to arise as a result of transport related activities.

JSJV welcomed the methodology used by AECOM, which had been informed by guidelines set out in the “*Guidelines for the Environmental Assessment of Road Traffic*” by the Institute of Environmental Management and Assessment [IEMA]. However, no mention was made to the preparation of a Transport Assessment [TA] or Travel Plan [TP].

Given the nature and scale of development and its proximity to the SRN, JSJV recommended that the application be accompanied by a TA, TP, and Construction Traffic Management Plan [CTMP] to identify the impact of the development on access and accessibility, sustainability, and the free flow of traffic, and to inform the preparation of the ES.

In June 2023, JSJV reviewed the ‘Addendum to the Preliminary Environmental Information Report’ (PEIR). Again, it was reiterated that the DCO should be accompanied by a TA and TP.

Cumulative Effects

JSJV recommended that the following emerging developments be considered alongside the Immingham Green Energy Terminal application, within the ES and requested TA:

- Immingham Eastern Ro-Ro Terminal: roll-on/roll-off [Ro-Ro] facility at Immingham Port; and
- Station Road South Killingholme, works on land to the east of Rosper Road, Killingholme (planning reference: PA/SCO/2022/7).

Existing situation

The location of the application site, relative to the Strategic Road Network [SRN], is presented in **Figure 1**.

The site is located approximately:

- 1.6km to the north of the A180 / A1173 junction [Stallingborough Interchange].
- 3.2km to the southeast of the A160 / Manby Road junction;
- 5.3km to the east of the A160 / A1077 junction; and
- 6km to the east of the A180 / A160 junction [Brocklesby Interchange].



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

Collision data analysis

ABP has obtained Personal Injury Collision [PIC] data from NELC for the 6-year period 2017-2022. ABP notes a total of four accidents (three slight and one serious) have occurred at the A180/A1173 junction during the assessment period. ABP concludes *“this is not considered to constitute an existing road safety issue at this location”*.

JSJV would consider it inappropriate to use 2020 and 2021 data for this analysis because the traffic flows during these years were materially influenced by the COVID19 pandemic. However, as can be seen from **Figure 2**, JSJV would agree that there has been a relatively small number of collisions at the junction from 2015-2022. Consequently, we do not consider there to be a pre-existing highway safety issue at the A180/A1173 junction; we do note nonetheless, the occurrence of a serious incident on the westbound off slip.

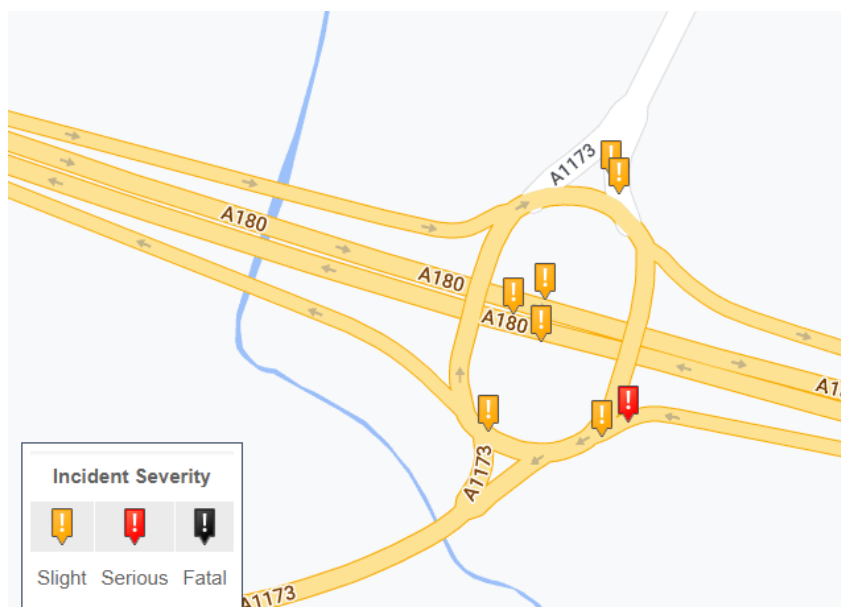


Figure 2. Collisions at A180 / A1173 2015-2022 (source: CrashMap)

Chapter 11: Traffic and Transport

ABP states a separate TA has not been prepared as the full details of trip generation and distribution for both the construction phase and operational phases are included within Section 11.7 of the Traffic and Transport chapter.

After a review of the Traffic and Transport chapter, JSJV considers the information and material included as what would be expected within a TA and therefore the assessment is sufficient to reach a view without the need for a separate TA.

However, JSJV would still expect a Travel Plan to be prepared for the operational stage of the project in order to manage down the traffic impact of development and maximise the accessibility of and within sites by walking, wheeling, cycling, public transport, and shared travel, in line Circular 01/2022 and NPPF policy.

Policy review

JSJV would note that ABP has reviewed the following policy documents within the Traffic and Transport chapter:

- National Planning Policy Framework [NPPF] (2021);
- Planning Practice Guidance (2014);
- North East Lincolnshire Local Plan 2013 to 2032 (adopted 2018); and
- DfT Circular 01/2022 – Strategic Road network and the delivery of sustainable development.

Guidelines for the Environmental Assessment of Road Traffic: Institute of Environmental Management and Assessment [IEMA]

In order to predict the magnitude of impacts more generally, ABP reference the two broad rules set out in the IEMA guidelines to define the threshold which will determine the significance of the effect and whether further detailed assessment is required or not.

- *Rule 1: Include highway links where traffic flows will increase by more than 30% (or where the number of HGVs will increase by more than 30%); and*
- *Rule 2: Include any other specifically sensitive areas where traffic flows have increased by 10% or more.*

It should be stressed that these criteria relate only to the assessment of environmental impacts and do not define the need or otherwise for operational assessment of the SRN.

JSJV would note ABP has assessed the following transport effects resulting from the operational and construction phases of the project:

- Accidents and Safety;
- Severance;
- Driver delay;
- Pedestrian Delay;
- Fear and Intimidation;
- Pedestrian Amenity; and

- Hazardous Loads.

JSJV would note, however, driver delay has not been fully assessed during the construction phase and further assessments will be required as stated later within the review.

Construction vehicle trip generation and distribution

Vehicle trip generation

ABP has derived vehicle trip generation from the anticipated HGV and daily workforce numbers associated with the construction phase of the project.

The largest number of HGV and daily workforce trips is predicted to occur during the first phase of construction works (2025-2027) with the peak month having been identified as month 23 in late 2026, which is the phase that has been assessed by ABP.

Vehicle trip generation has been based on the following:

- “For the terrestrial construction programme, this will involve a total workforce of 919 personnel on-site, which equates to a total of 612 car movements based upon an average of 1.5 workers per car.”
- “220 personnel associated with the marine construction works in which 20% are assumed to car share or use public transport which equates to a total of 176 personnel arriving by car each day.”
- “The number of HGV movements associated with the terrestrial construction is estimated at 71 HGV movements per day, one-way. For the marine construction programme, the HGV numbers would be substantially lower with many materials and components arriving by sea and it is estimated to generate a total of 10 two-way HGV trips per day.”
- “There will be a number of HGV trips associated with the waste onsite, and this is estimated to be an average of 23.4 HGV movements per day, one-way.”

JSJV would suggest the construction vehicle generation is derived appropriately.

The total daily traffic flow during the peak construction period is summarised in ‘Table 11-10’ of the Traffic and Construction chapter, replicated here in **Figure 3**.

Table 11-10: Total Daily Construction Traffic – Peak of Construction

	Type	To	From	Two-Way
Terrestrial and Jetty	HGVs (including waste)	Terrestrial 71 Waste 24 Jetty 4	Terrestrial 71 Waste 24 Jetty 4	Terrestrial 142 Waste 48 Jetty 8
	Landside Workers (assuming 919 workers with an average car occupancy of 1.5)	612	612	1,224
	Marine Workers (assuming 220 workers with an average car occupancy of 1.5)	147	147	294
All Vehicles		Workers 759 HGVs 99	Workers 759 HGVs 99	Workers 1,518 HGVs 199

Figure 3. Total daily peak construction traffic (Extracted from Traffic & Transport chapter)

ABP has presented the hourly arrival and departure profile across the day for the total daily construction traffic (workers and HGV), as shown in **Figure 4**.

Table 11-13: Construction Worker Traffic Daily Profile

Hour Beginning	Percentage split based upon survey and a working day between 07:00 and 19:00		Arrivals	Departures	Two Way
	Percentage of Daily inbound trips	Percentage of daily outbound trips			
0600	34%	2%	258	15	273
0700	25%	2%	190	15	205
0800	5%	2%	38	15	53
0900	4%	2%	30	15	46
1000	4%	3%	30	23	53
1100	4%	3%	30	23	53
1200	5%	4%	38	30	68
1300	4%	4%	30	30	61
1400	3%	3%	23	23	46
1500	2%	3%	15	23	38
1600	2%	5%	15	38	53
1700	3%	15%	23	114	137
1800	3%	35%	23	266	288
1900	2%	16%	15	121	137
2000	0%	1%	0	8	8
2100	0%	0%	0	0	0
Total	100%	100%	759	759	1518

Table 11-14: HGV Traffic Daily Profile

Hour Beginning	Percentage of Daily inbound trips	Percentage of daily outbound trips	Arrivals	Departures	Two Way
600	0%	0%	0	0	0
700	9%	8%	10	8	18
800	9%	8%	9	8	17
900	9%	8%	9	8	17
1000	9%	8%	9	8	17
1100	9%	8%	9	8	17
1200	9%	8%	9	8	17
1300	9%	8%	9	8	17
1400	9%	8%	9	8	17
1500	9%	8%	9	8	17
1600	9%	8%	9	9	18
1700	9%	8%	9	9	18
1800	0%	8%	0	10	10
1900	0%	0%	0	0	0
2000	0%	0%	0	0	0
2100	0%	0%	0	0	0
	100%	100%	100	100	200

Figure 4. Daily traffic profile (Extracted from Traffic & Transport chapter)

ABP notes that:

“...during the weekday AM peak, 08:00 to 09:00 there is anticipated to be 53 worker trips and during the weekday PM peak 17:00 to 18:00 there is anticipated to be 137 worker trips on the road network.”

“...during the weekday AM and PM peak periods, 08:00 to 09:00 and 17:00 to 18:00 respectively there would be a maximum of 18 HGVs on the road network, which is not considered to represent a severe impact.”

JSJV has reviewed WebTRIS data for the A180 to confirm whether or not 08:00-09:00 and 17:00-18:00 is the weekday peak periods, as shown in **Figure 5**. The data was extracted from the WebTRIS count point on the A180 to the east of the A180/A160 junction and west of the A180/A1173 junction.

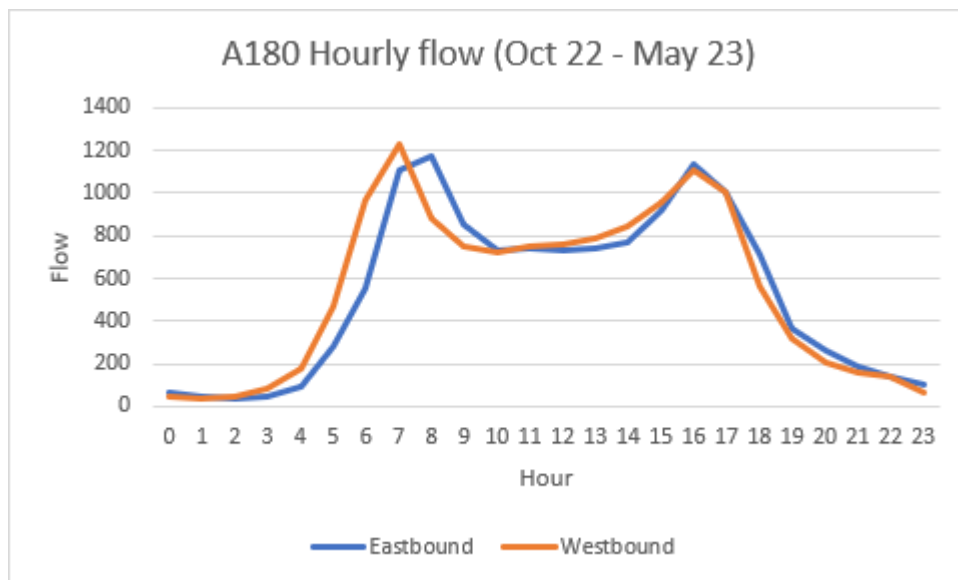


Figure 5. A180 average daily flow between October 2022 and May 2023 (weekdays only)

As can be seen from **Figure 5**, JSJV would consider 07:00-08:00 and 16:00-17:00 as more appropriate weekday peak hour periods than 08:00-09:00 and 17:00-18:00 for the SRN.

As is shown in **Figure 4**, ABP anticipates the project to generate 205 two-way construction worker trips and 18 two-way HGV trips between 07:00-08:00, and 53 two-way construction worker trips and 18 two-way HGV trips between 16:00-17:00.

ABP notes there will be on average a total of 1.5 workers per vehicle, as a result, JSJV has summarised the construction vehicle trip generation in **Table 1**, assuming 1.5 workers per light vehicle.

Table 1. ABP proposed construction vehicle trip generation summary

		AM Period			PM Period		
		Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
08:00-09:00 /17:00-18:00	HGV	9	8	17	9	9	18
	Light vehicles	25	10	35	15	76	91
	Total	34	18	52	24	85	109
	PCU	48	30	78	38	99	136
07:00-08:00 /16:00-17:00	HGV	10	8	18	9	9	18
	Light vehicles	127	10	137	10	25	35
	Total	137	18	155	19	34	53
	PCU	152	30	182	33	48	80
PCU variance		+104	+0	+104	-5	-51	-56

As can be seen in **Table 1**, it is important to consider the correct network peak hour as when comparing construction vehicle trip generation between 08:00-09:00 / 17:00-18:00 and 07:00-08:00 / 16:00-17:00, the variance differs greatly.

In any case, the volume of vehicle trips shown in **Table 1**, during all hours presented, has the potential to result in a material impact on the operation of the SRN.

Construction worker vehicle trip distribution

ABP has distributed the proposed construction worker trips onto the network based on 2011 census data 'Location of usual residence and place of work by method of travel to work' for North East Lincolnshire 001 MSOA. JSJV would consider this an appropriate choice.

JSJV would note ABP has not provided traffic flow diagrams, however, has presented the distribution in a table, shown in **Figure 6**.

Table 11-15: Construction Worker Distribution

Route	Distribution
Laporte Road	21%
Manby Road	8%
Pelham Road	20%
A180 (W)	9%
A180 (E)	26%
A1173 (S)	16%
TOTAL	100%

Figure 6. ABP proposed construction worker distribution

JSJV has presented the distribution shown in **Figure 6** on the local network shown in **Figure 7**.

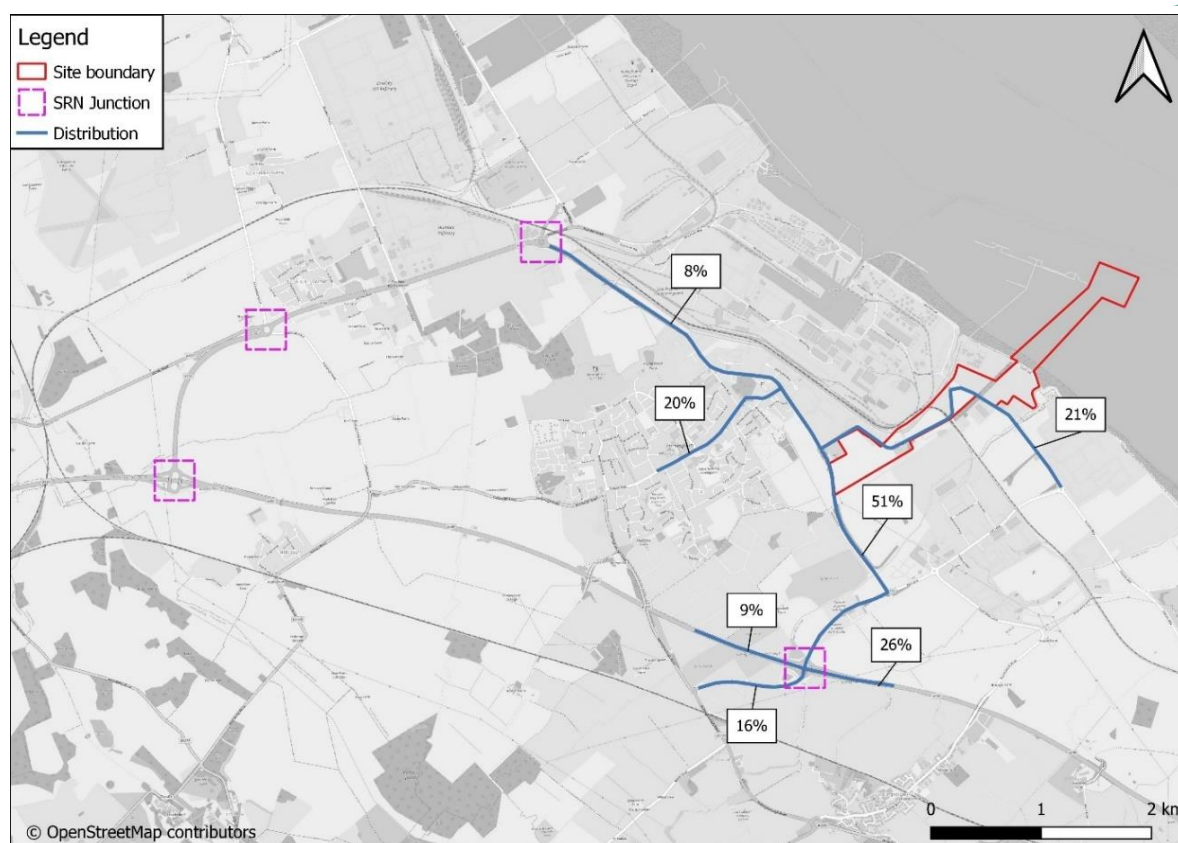


Figure 7. ABP construction worker trip distribution

JSJV has applied ABP's construction worker trip distribution to the light vehicle trip generation in **Table 1** for both the 08:00-09:00 / 17:00-18:00 and 07:00-08:00 / 16:00-17:00 periods, the results are shown in **Table 2**.

Table 2. Construction worker vehicle trip assignment

		AM Period			PM Period		
		Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
08:00-09:00 /17:00-18:00	A180 W	2	1	3	1	7	8
	A189 E	7	3	9	4	20	24
	A1173	4	2	6	2	12	15
	A180 / A1173 Total	13	5	18	8	39	47
	Manby roundabout	2	1	3	1	6	7
07:00-08:00 /16:00-17:00	A180 W	11	1	12	1	2	3
	A189 E	33	3	36	3	7	9
	A1173	20	2	22	2	4	6
	A180 / A1173 Total	65	5	70	5	13	18
	Manby roundabout	10	1	11	1	2	3

As can be seen in **Table 2**, when applying ABP's construction worker vehicle distribution to the construction worker trip generation, the project is forecast to generate a total of 18 two-way light vehicle trips between 08:00-09:00 and 47 two-way light vehicle trips between 17:00-18:00; and 70 two-way light vehicle trips between 07:00-08:00 and 18 two-way light vehicle trips between 16:00-17:00 at the A180 / A1173 junction.

JSJV would note that the distribution and assignment shown in **Table 2** is different to the ABP distribution and assignment within the Traffic and Transport chapter. As shown in **Figure 8**, JSJV would note that ABP has incorrectly presented the number of workers per vehicle.

Table 11-16: Construction Worker Traffic Distribution

Route	Landside		Marine	
	Assumed Number of Workers at the Peak Month	Assumed Number of Worker Car Trips (Based Upon an Average of 1.5 Workers per Car)	Assumed Number of Workers at the Peak Month	Assumed Number of Worker Car Trips (Based Upon an Average of 1.5 Workers per Car)
Laporte Road	193	128	31	37
Manby Road	76	51	12	14
Pelham Road	180	120	29	35
A180 (West)	87	58	13	16
A180 (East)	240	160	38	46
A1173 (South)	142	95	23	28
TOTAL	919	612	147	176

Figure 8. ABP construction worker vehicle distribution

As can be seen in **Figure 8**, for the PM, ABP has multiplied the workers trips by what seems to be 1.2 instead of dividing by 1.5; subsequently, this would equate to more cars per worker rather than 1.5 workers per car.

JSJV would recommend that ABP reviews its construction worker vehicle distribution and presents the results on flow diagrams.

HGV trip distribution

ABP has assumed the following vehicle distribution shown in **Figure 9** for HGVs.

Table 11-19: HGV Distribution

Route	Distribution
A180 (West)	55%
A180 (East)	45%
TOTAL	100%

Figure 9. ABP proposed HGV trip distribution

JSJV has applied ABP's HGV trip distribution to the HGV trip generation in **Table 1** for both the 08:00-09:00 / 17:00-18:00 and 07:00-08:00 / 16:00-17:00 periods, the results are shown in **Table 3**.

Table 3. HGV trip assignment

		AM Period			PM Period		
		Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
08:00-09:00 /17:00-18:00	A180 W	5	4	9	5	5	10
	A189 E	4	4	8	4	4	8
	Total	9	8	17	9	9	18
07:00-08:00 /16:00-17:00	A180 W	6	4	10	5	5	10
	A189 E	5	4	8	4	4	8
	Total	11	8	19	9	9	18

As can be seen in **Table 3**, when applying ABP's HGV distribution to the HGV trip generation, the project is forecast to generate a total of 17 two-way HGV trips between 08:00-09:00 and 18 two-way HGV trips between 17:00-18:00; and 19 two-way HGV trips between 07:00-08:00 and 18 two-way HGV trips between 16:00-17:00 at the A180 / A1173 junction.

Total construction vehicle trip generation

JSJV has presented the total construction vehicle trip generation in PCUs anticipated at the A180 / A1173 junction during the peak construction period in Table 4.

Table 4. Total construction PCU trips at A180 / A1173

		AM Period			PM Period		
		Arr.	Dep.	Tot.	Arr.	Dep.	Tot.
08:00-09:00 /17:00-18:00	A180 W	15	12	27	14	19	33
	A189 E	17	12	28	14	30	44
	A1173	4	2	6	2	12	15
	A180 / A1173 Total	35	25	61	30	61	92
07:00-08:00 /16:00-17:00	A180 W	25	12	37	13	15	28
	A189 E	44	12	56	13	17	29
	A1173	20	2	22	2	4	6
	A180 / A1173 Total	90	25	115	28	35	63

Table 4 presents our understanding of the total peak hour period, PCU trips expected during the construction phase. As can be seen, it is forecast that the project will generate a total of **61 two-way PCU trips between 08:00-09:00** and **92 two-way HGV trips between 17:00-18:00**; and **115 two-way HGV trips between 07:00-08:00** and **63 two-way HGV trips between 16:00-17:00** at the A180 / A1173 junction.

The volume of vehicle trips shown in **Table 4**, during all hours presented, has the potential to result in a material impact on the operation of the SRN. Consequently, JSJV would recommend that ABP provides a junction capacity assessment for the A180 / A1173.

Assessments

Due to the anticipated increase in traffic, JSJV would recommend the Applicant provides junction capacity assessments for the following SRN junction:

- A180 / A1173 junction.

ABP should provide capacity assessments during the peak construction period.

Please note that Section D.2.7 of TAG Unit M3.1 gives the PCU for HGVs on motorways and all-purpose dual carriageways as 2.5. Given the nature of the highway network around the proposed development site, we request that the PCU equivalent value of 2.5 is used in order to ensure an appropriate assessment of anticipated vehicular traffic associated with the development.

Subject to the impact at the SRN, there may be a requirement for National Highways to request mitigation measures, e.g., that the arrivals and departures of construction staff occur outside of the SRN peak periods.

Committed developments

Although ABP has not carried out capacity assessments, a list of committed developments within the Traffic and Transport Cumulative Effects Assessment has been provided that may result in cumulative impacts alongside the projects construction period:

- NEL Energy Park, Mauxhall Farm, Stallingborough (Ref DM/1145/19/FUL)
- Business Park, Stallingborough Interchange (Ref DM/0105/18/FUL)
- North Beck Energy Centre (Ref DM/0026/18/FUL)
- South Humber Bank Energy Centre (Ref EN010107)
- Immingham Eastern Ro-Ro Terminal (Ref TR030007)
- Able Marine Energy Park (Ref TR030001)
- VPI Immingham OCGT (Ref EN010097)
- North Killinghome Energy Park (Ref EN010038)
- Great Coates Renewable Energy Centre (Ref DM/0329/18/FUL)
- South Humber Bank Energy Centre (Ref DM/1070/18/FUL)
- 525 residential development, Stallingborough Road, Immingham (Ref DM/0728/18/OUT)
- VPI Immingham Energy Park "A" (Ref PA/2018/918) m. Rock revetment repair and reinforcement, Humber Estuary (Ref DM/1071/22/FUL)

JSJV has reviewed the above developments and would consider them to be appropriate; however, we would suggest that ABP also considers the inclusion of construction traffic associated with the enabling works on land east of Rosper Road, Killingholme (PA/2023/502).

Operational vehicle trip generation and distribution

Vehicle trip generation

ABP has derived vehicle trip generation from the anticipated HGV and daily workforce numbers associated with the operational phase of the project.

ABP states:

“The trip generation during the operational phase is estimated to be 120 employee trip movements, with 67 working a shift pattern and 53 working a “normal” Monday to Friday.”

The total daily operational traffic is summarised in ‘Table 11-22’ of the Traffic and Construction chapter, as shown in **Figure 10**.

Table 11-22: Total Daily Operational Traffic

Type	To	From	Two-Way
HGVs	48	48	96
Shift Workers	67	67	134
“Normal” Monday to Friday workers	53	53	106
Total	168	168	336

Figure 10. ABP proposed daily operational traffic

ABP notes that there is expected to be a total of only 53 workers travelling in the peak hours and have assumed a worst-case scenario with regard to travelling by car. Furthermore, ABP states that:

“It is assumed that these HGV movements would be spread out during the day and on a 24-hour basis. This equates to an average of around four HGV two way per hour (two arrivals and two departures)”.

JSJV would note that, rather than estimating car trips, Circular 01/2022 puts a greater emphasis on forecasting person trips and effective, robust travel planning. Hence, JSJV would expect TA’s to set out the forecast person trip generation for the development, how the need to travel will be minimised, and the anticipated shift towards more sustainable modes. The measures and initiatives employed to achieve the mode shift should be set out in the TP and referenced within the TA.

To this end, paragraph 44 states that:

“...promoters must put forward clear targets and commitments to manage down the traffic impact of development and maximise the accessibility of and within sites by walking, wheeling, cycling, public transport, and shared travel. Targets for achieving a modal shift to sustainable transport will need to be subject to sustained monitoring and management by an appointed travel plan coordinator.”

Given the above, ABP should forecast the person trip generation for the development, set out how the need to travel will be minimised, based upon sound, deliverable, and secured travel planning initiatives, and forecast the anticipated shift towards more sustainable modes. Once the residual traffic generation is determined, its impact on the operation of the SRN should then be established.

On this basis, JSJV would typically expect the trip generation methodology to be revised to reflect Circular 01/2022 policy. However, considering the predicted operational impact on the SRN as highlighted within the next section, it is not anticipated that the proposed development traffic generation will have a significant material impact on SRN junction capacity. To this extent, JSJV would consider the use of the vehicle trip generation, shown in **Figure 10**, to be adequate.

Nonetheless, JSJV would still expect a Travel Plan to be prepared for the operational stage of the project in order to manage down the traffic impact of development and maximise the accessibility of and within sites by walking, wheeling, cycling, public transport, and shared travel.

Vehicle trip distribution

As shown in **Figure 11**, ABP has distributed the proposed operational worker trips on to the network based on the distribution presented in **Figure 6**.

Table 11-23: Operational Worker Distribution

Route	Distribution	Operation weekday AM Peak worker trips	Operation weekday PM Peak worker trips
Laporte Road	21%	11	11
Manby Road	8%	4	4
Pelham Road	20%	11	11
A180 (W)	9%	5	5
A180 (E)	26%	14	14
A1173 (S)	16%	8	8
TOTAL	100%	5	53

Figure 11. ABP proposed vehicle trip assignment

As can be seen in **Figure 11**, the project is forecast to generate 27 one-way vehicle trips in the AM and PM peak period at the A180 / A1173 junction- JSJV would reiterate the peak periods should be 07:00-08:00 and 16:00-17:00.

JSJV would suggest 27 one-way vehicle trips will unlikely cause a material uplift in volume of traffic experienced on the SRN. However, JSJV would recommend ABP confirms the AM and PM peak traffic generation for the operational phase of the development for the periods 07:00-08:00 and 16:00-17:00.

Decommissioning phase

A Decommissioning Environmental Management Plan (DEMP) will be produced prior to decommissioning/demolition works being undertaken, which will detail measures to be implemented to avoid or reduce environmental impact. The provision of a DEMP will be secured by requirement of the DCO; JSJV agrees with this approach.

Construction Traffic Management Plan

JSJV has reviewed the Outline Construction Management Plan [OCTMP] and would offer the following comments.

It is stated that the contractor will liaise fully with the Police, Local Highway Authority and National Highways regarding any AIL movement to ensure that all required measures and approvals are in place. JSJV would consider this appropriate.

Additionally, it is also proposed that wheel cleaning facilities would be installed on site from the start of the construction phase, and all HGVs leaving the construction site would be required to wheel wash when exiting the site.

JSJV would note the OCTMP should also include the following:

- A dust management plan;
- noise management plan;
- Pollution prevention measures;
- Contractor parking.

Outline Construction Worker Travel Plan

JSJV would note ABP has prepared an Outline construction worker Travel Plan [OCWTP].

The following mitigation measures to reduce single occupancy car travel form construction workers are as follows:

- Appointment of a Travel Plan Coordinator.
- Monitoring performance against the targets of the CWTP, including a review of the number of car parking spaces on the site.
- Contractors would provide minibuses for transporting their workers from the key points of construction worker origin to the site.
- The contractor would encourage the use of common hotels and B&Bs by workers that are not from the local area, to encourage the use of shared transport modes such as minibus.
- The contractor will set up and manage a car share scheme for their workers.
- An onsite storage facility would be provided by the contractors. This facility would encourage construction workers to store their tools and PPE onsite. This would reduce the number of tools they would need to carry each day and would assist those workers who are considering cycling or car sharing as a potential travel mode.

JSJV would consider the measures stated within the OCWTP as appropriate and should help manage down single occupancy vehicle use. JSJV would recommend this is appropriately reflected within the

Summary and Conclusions

On the basis of this review, the recommendation to National Highways in relation to this development proposals is:

Holding recommendation – further evidence is required (as identified below).

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

- After a review of WebTRIS data for the A180, JSJV would consider 07:00-08:00 and 16:00-17:00 as more appropriate weekday peak hour periods than 08:00-09:00 and 17:00-18:00 for the SRN.
- The volume of construction worker vehicle trips has the potential to result in a material impact on the operation of the SRN.
- JSJV would note that ABP has incorrectly presented the number of workers per vehicle. JSJV would recommend that ABP reviews its construction worker vehicle distribution and presents the results on flow diagrams.
- The volume of construction vehicle trips distributed has the potential to result in a material impact on the operation of the SRN. Consequently, JSJV would recommend that ABP provides a junction capacity assessment for the A180 / A1173.
- Please note that Section D.2.7 of TAG Unit M3.1 gives the PCU for HGVs on motorways and all-purpose dual carriageways as 2.5. Given the nature of the highway network around the proposed development site, we request that the PCU equivalent value of 2.5 is used in order to ensure an appropriate assessment of anticipated vehicular traffic associated with the development.
- Subject to the impact at the SRN, there may be a requirement for National Highways to request mitigation measures, e.g., that the arrivals and departures of construction staff occur outside of the SRN peak periods.
- JSJV would suggest that ABP also considers the inclusion of construction traffic associated with the enabling works on land east of Rosper Road, Killingholme (PA/2023/502).
- JSJV would typically expect the operational trip generation methodology to be revised to reflect Circular 01/2022 policy. However, considering the predicted operational impact on the SRN as highlighted, it is not anticipated that the proposed development traffic generation will have a significant material impact on SRN junction capacity.
- Nonetheless, JSJV would still expect a Travel Plan to be prepared for the operational stage of the project in order to manage down the traffic impact of development and maximise the accessibility of and within sites by walking, wheeling, cycling, public transport, and shared travel.
- JSJV would note the OCTMP should also include the following:
 - A dust management plan;
 - noise management plan;
 - Pollution prevention measures;
 - Contractor parking.