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10. Traffic and Transport

10.1. Introduction

10.1.1. This chapter of the Environmental Statement (ES) addresses the potential effects of the Proposed Development on traffic and transport. The assessment considers:

- the present-day and future baseline conditions during construction;
- the effects of construction traffic on the local road network including Strategic Road Network (SRN) as a result of the Proposed Development;
- the effects of operational traffic (including maintenance) on the local road network as a result of the Proposed Development; and
- the potential effects of the eventual decommissioning of the Proposed Development.

10.1.2. The assessment of cumulative traffic and transport effects associated with the Proposed Development and other committed developments in the vicinity will be detailed in the Transport Statement which forms part of the ES.

10.2. Legislation, Planning Policy and Guidance

Planning Policy Context

National Planning Policy

10.2.1. The Overarching National Policy Statement (NPS) for Energy ('EN-1') was updated in 2024 (Department for Energy Security & Net Zero (DESNZ)). Section 5.14 of NPS EN-1 outlines the planning policy for traffic and transport, including guidance on traffic and transport assessment as part of the Environmental Impact Assessment (EIA). The most relevant paragraphs for this chapter are paragraphs 5.14.4 to 5.14.8 which state:

"The consideration and mitigation of transport impacts is an essential part of Government's wider policy objectives for sustainable development as set out in Section 2.2 of this NPS."

"If a project is likely to have significant transport implications, the applicant's ES (see Section 4.3) should include a transport appraisal. The DfTs Transport Analysis Guidance *TAG and Welsh Governments WelTAG provides guidance on modelling and assessing the impacts of transport schemes."

"National Highways and Highways Authorities are statutory consultees on NSIP applications including energy infrastructure where it is expected to affect the strategic road network and / or have an impact on the local road network. Applicants should consult with National Highways and Highways Authorities as appropriate on the assessment and mitigation to inform the application to be submitted."

"The applicant should prepare a travel plan including demand management and monitoring measures to mitigate transport impacts."

10.2.2. In terms of decision making, Section 5.14.18-21 of the NPS states that the Secretary of State should ensure that the applicant has sought to mitigate the impacts on the surrounding road infrastructure that may occur as a result of a new Nationally Significant Infrastructure Project (NSIP). Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the Secretary of State should consider requirements to mitigate the adverse impacts on transport networks arising from the development.

10.2.3. On 24 April 2025, DESNZ published a consultation on revisions to the NPS, which concluded on 29 May 2025. The outcome of the Consultation is still awaited, however it is not anticipated to result in changes which would materially alter the conclusions as set out in this Chapter.

10.2.4. Table 10.1 provides a summary of relevant NPS advice regarding traffic and transport, including signposting to where matters are considered in this Chapter.

Table 10.1: Summary of relevant NPS advice regarding traffic and transport

Summary of NPS	Consideration within the Application
NPS EN-1	
Paragraph 5.14.5 states: *"If a project is likely to have significant transport implications, the applicant's ES (see Section 4.3) should include a transport appraisal. The DfT's Transport Analysis Guidance (TAG)266 and Welsh Governments WelTAG267 provides guidance on modelling and assessing the impacts of transport schemes. ."*	A Transport Statement has been included as part of the Application.
Paragraph 5.14.7-9 states: "*The applicant should prepare a travel plan including demand management and monitoring measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by active, public and shared transport to:* • *reduce the need for parking associated with the proposal* • *contribute to decarbonisation of the transport network* • *improve user travel options by offering genuine modal choice."* *"The assessment should also consider any possible disruption to services and infrastructure (such as road, rail and airports)".* *"If additional transport infrastructure is needed or proposed, it should always include good quality walking, wheeling and cycle routes, and associated facilities (changing/storage etc.) needed to enhance active transport provision."*	A Travel Plan has been included as part of the Application.

Summary of NPS	Consideration within the Application
Paragraph 5.14.11-17 outlines the requirement to provide mitigation measures for any transport impacts associated with the project, including during the construction phase.	Any mitigation measures deemed necessary have been set out in the Transport Statement which has been included as part of the Application.

National Planning Policy Framework

10.2.5. The revised National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, (MHCLG) 2019) was published in December 2024 and sets out the Government's planning policies for England. While the consultation NPPF is not adopted, it shows clear intention for direction of travel. In addition, whilst it does not set specific policies for NSIPs, its policies may be of relevance to decision making.

10.2.6. In determining planning applications, paragraph 116 states that:

> "Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe, in all tested scenarios."

10.2.7. Paragraph 118 states that all developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.

Local Development Plan Policy

10.2.8. The statutory development plan for the area currently comprises the following documents:

- North Lincolnshire Core Strategy (North Lincolnshire Council, 2011a) - adopted June 2011;
- Housing and Employment and Land Allocations (North Lincolnshire Council, adopted March 2016); and
- Saved Policies of the North Lincolnshire Local Plan (Local Development Frameworks Government Office for Yorkshire and The Humber, 2007) - adopted May 2003, saved September 2007.

10.2.9. It is considered that these documents may be 'important and relevant' as defined by EN-1. The following Core Strategy Policy is considered relevant to the Proposed Development.

10.2.10. Core Strategy Policy CS18 promotes sustainable resource use and supports development that reduces the need to travel.

10.2.11. Core Strategy Policy CS25 explains that the council will support and promote a sustainable transport system in North Lincolnshire that offers a choice of transport modes and reduces the need to travel through spatial planning and design and by utilising a range of demand and network management tools.

10.2.12. Saved policies of the North Lincolnshire Local Plan that are relevant to the Proposed Development include:

- T2 – Access to Development which states that larger developments should be served adequately by:
  - being readily accessible by a choice of transport modes; and
  - existing public transport services and infrastructure; or
  - additions or extensions to such services linked directly to the development; and
  - the existing highway network;
- T14 - The North Lincolnshire Strategic Road Network (NLSRN) which notes traffic will be concentrated onto the NLSRN roads where its main purpose is to carry traffic of more than local significance and that developments, which compromise the function of the NLSRN in traffic and safety terms, will not be permitted;
- T15 – Highway Improvements which states that where new highway infrastructure is being developed, or is included as an element of a development proposal, the design of the highway should take into account safety and environmental factors;
- T23 - Water Freight which aims to ensure transfer of bulk goods from sea to inland makes optimum use of railways, rivers, canals and pipelines/conveyor belts where appropriate;
- Policy T24 – Road Freight which states that the environmental impact of moving freight by road will be reduced by:
  - concentrating lorries onto the NLSRN; and
  - banning heavy goods vehicles from sensitive areas; and
  - encouraging the development of rail freight facilities; and
  - encouraging the use of the waterways'.

10.2.13. North Lincolnshire Local Transport Plan 2011 – 2026 also sets out a programme for a wide range of improvements to local transport over the period 2011 to 2026. The 'goals' of the plan include:

- facilitating economic growth by targeting transport improvements in key development areas and along key strategic network corridors;
- reducing transport related carbon dioxide emissions and protect and enhance the natural and built environment through sustainable transport solutions;
- improving transport safety and security relating to death or injury from transport, in order to contribute to safer and stronger communities;
- providing equal opportunities through improvements in accessibility to key local hubs and services by sustainable modes of transport;
- enhancing people's health and wellbeing through the promotion of healthy modes of travel and by providing a high quality integrated transport system that contributes towards long term sustainable regeneration.

10.2.14. As part of the Devolution process for North Lincolnshire, a new 'Greater Lincolnshire Local Transport Plan' will be produced, which will replace the existing LTP for North Lincolnshire. A timescale for this is not yet known.

Other Guidance

Planning Practice Guidance

10.2.15. Planning Practice Guidance titled 'Travel Plans, Transport Assessments and Statements' published in March 2014 (MHCLG, 2014) has been used to inform this assessment.

Guidelines for Environmental Assessment of Road Traffic

10.2.16. The 'Environmental Assessment of Traffic and Movement' guidance published in July 2023 by the Institute of Environmental Management and Assessment (IEMA) (herein referred to as the 'IEMA 2023 guidelines') provides a basis for a comprehensive and consistent approach to the appraisal of traffic and transport impacts. Extensive reference has been made to these guidelines throughout the preparation of this Chapter.

Department for Transport Circular 01/2022: The Strategic Road Network and the Delivery of Sustainable Development

10.2.17. Circular 01/2022: 'The Strategic Road Network and the Delivery of Sustainable Development' published in 2022, by the Department for Transport, sets out the way in which National Highways will engage with

the development industry to deliver sustainable development and, thus, economic growth, whilst safeguarding the primary function and purpose of the strategic road network. This guidance will be used to inform the Transport Statement which will accompany the application.

10.2.18. National Highways' Guidance Document 'Planning for the Future' sets out the approach taken (by National Highways) to engaging in the planning system and the issues considered when engaging on draft planning documents and planning applications. It provides further advice on the information National Highway would expect to see included in a planning proposal and outlines the support offered at every stage of the planning process.

10.3. Assessment Methodology

Consultation

10.3.1. The consultation undertaken with statutory consultees to inform this Chapter, including a summary of comments raised *via* the formal Scoping Opinion (**ES Volume II, Appendix 1B (Application Document Ref. 6.3**) and in response to the formal consultation and other pre-application engagement is summarised in Table 10.2.

Table 10.2 Consultation Responses

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
Secretary of State	June 2024 (Scoping Opinion)	The Scoping Report proposes to scope out an assessment of the effects of operational traffic by applying screening criteria in order to determine the potential for significant air quality effects. The Inspectorate is content for this matter to be scoped out of the ES, should the traffic levels be below the relevant screening thresholds. The ES should cross reference with the findings in the traffic and transport chapter to justify this position. The Inspectorate draws the Applicant's attention to ID 3.3.1 in relation to the estimation of operational traffic	Further assessment of the operational phase is presented in Section 10.7, paragraphs 10.7.30 to 10.7.47 of this Chapter to quantify the operational impacts as requested and demonstrate that the impacts fall below the screening thresholds.
		The Scoping Report proposes to scope out the operational traffic assessment on the basis that the operational traffic movements are assumed will be below screening thresholds specified in the Institute of Environmental Management and Assessment (IEMA) Guidelines – Environmental Assessment of Traffic and Movement (2023). No estimate of	Further assessment of the operational phase is presented in Section 10.7, paragraphs 10.7.30 to 10.7.47 of this chapter to quantify the operational impacts as requested and demonstrate that the impacts fall below the screening thresholds.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		operational traffic volumes is provided, but having regard to the characteristics of the site, the Proposed Development, the receiving environment and the anticipated magnitude of the impacts, the Inspectorate is content for this matter to be scoped out of the ES. The ES description of development should clearly set out the operational vehicle types and numbers (with reference to thresholds within guidance) to justify this position and evidence any agreement reached with relevant highways authorities.	
		The ES should provide a prediction of traffic flows (including the anticipated duration) which are likely to be required during decommissioning which could impact transport network and highlight any differences between the construction and decommissioning phases. The Applicant's attention is drawn to the suggested Requirement pertaining to	Traffic generation associated with the decommissioning stage is anticipated to be no worse or less than the construction stage. However, the future baseline year for decommissioning (2055) is difficult to predict accurately so that no quantitative analysis can be carried out at this stage. Decommissioning impacts are discussed

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		a Decommissioning Traffic Management Plan proposed by National Highways	further in Section 10.7, paragraphs 10.7.48-10.7.49 of this Chapter.
		The Scoping Report states that waterborne transport may be utilised for the delivery of Abnormal Indivisible Loads (AIL) and deliveries of plant during construction. The ES should assess the impacts to navigation of any waterborne transport with consideration on the worst-case number of AIL and delivery routes. The ES should also assess any obstruction impacts resulting from the use of Railway Wharf upon the operation of Keadby Lock and impacts on commercial navigation in the River Trent arising from construction of new pipelines or intake/discharge infrastructure (see comments from the Canal and River Trust and Associated British Ports in Appendix 2). If mitigation is required (eg a Wharf Management Plan), it should be clear how this will be secured in the DCO.	Further information on the management of Abnormal Indivisible Loads (AIL) delivered using Railway Wharf is provided within the **Navigational Risk Assessment** in **ES Volume II Appendix 12C (Application Document Ref. 6.3)**.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The Scoping Report 6.3.2.1 listed those effects associated with HGV traffic increases that will be considered in the ES. The ES should also identify impacts to railway assets associated with HGV traffic/haulage routes that may utilise railway assets (such as bridges and level crossings) during the construction and operational phases and assess these where there is the potential for significant effects.	The construction and operational traffic routes are not anticipated to have an impact to the railway assets.
North Lincolnshire Council	May 2024 (Scoping Opinion)	All construction traffic should access the site via the existing entrance on the A18. Highways would not be supportive of construction traffic travelling along the B1392 through Keadby. This routing was used during the construction of Keadby 2 and agreed as part of the DCO for Keadby CCS A temporary 40 mph speed limit has previously been implemented at the site entrance on the A18 and consideration should be given to this again. It is worth noting that whilst we would be supportive of a temporary 40	Noted. All construction traffic will access the Site from the A18. A temporary speed limit reduction is likely to be proposed but a permanent reduction in the speed limit is not being requested. This is stated at Paragraph 10A.5.8 **in ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**).

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		mph speed limit and would not support any requests for a permanent reduction.	
		The DCO for Keadby CCS included the provision for improvements to the site access on the A18 to create a ghost island as the intention was to route all construction and operational traffic through this junction and avoid the need for any operational traffic along the B1392 through Keadby. It would be beneficial to know what the intentions are regarding this part of these proposals	B1392 has now been excluded from the list of construction traffic routes. This is stated at Paragraph 10A.5.2 in **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**). It is also no longer proposed to undertake any work on the A18 at the site access (to create a ghost island) as it was concluded in the Keadby CCS Power Station DCO Examination that it was not required. This is stated at Paragraph 10A.5.8 **in ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**).

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		A recommendation that the applicant agree the scope of the Transport Assessment with North Lincolnshire Council prior to starting any work	The approach to the assessment and trip generation was discussed and agreed with North Lincolnshire Council on 30 July 2025.
National Highways	May 2024 (Scoping Opinion)	We would expect the applicant to set out the volume of traffic forecast to route via the SRN over the construction and operational phases of the proposed development. We would expect this information to be set out in a Transport Assessment [TA] and Travel Plan [TP].	A Transport Statement has been prepared and is provided in **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**). This includes details (in Section 10A.10, Paragraphs 10A.10.6 to 10A.10.9) on the volume of traffic expected to use the SRN.
		The transport documentation prepared as part of the DCO application should be compliant with DfT Circular 01/2022	Noted. **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**) complies with Circular 01/2022 and provides a Vision for what the of what the development is seeking to achieve.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The Report notes that the TA will include a review of highway safety issues including examination of personal injury accident data. We would expect data for a five-year period to be reviewed; however, it is important to highlight that the years 2020 and 2021 should be excluded due to the impact of the COVID-19 pandemic and associated national lockdown restrictions.	The 2016-22 (excluding 2020-2021) period has been reviewed. Details are provided in Paragraphs 10.5.16 to 10.5.21 of this Chapter and in Section 10A.4 **in ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**).
		The Transport Assessment should set out the transport vision for the development and how the transport vision will be achieved. Significant emphasis should be given to reducing the need to travel, especially by car, and maximising the use of active modes and public transport. Hence, the trip generation set out in the Transport Assessment should accord with that established in the Travel Plan. We would expect to see multi-modal [person] trip rates before and after the implementation of measures to maximise active and sustainable travel	The detailed assessment of trip generation and reduction of need to travel have been included in **ES Appendix 10A**: Transport Assessment (**Application Document Ref. 6.3**) and the Travel Plan contained within, respectively.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		and limit the use of the private car. We also expect any assumptions for the traffic distribution to be a set out with supporting information	
		Subject to the impact of the proposed development on the SRN, further assessments may be required. With regard to a threshold which may warrant a junction capacity assessment, the Applicant should make reference to the following guidance: NPPF, National Highways' Guidance Document 'Planning for the Future' and the DfT Circular 01/2022. Further, the Applicant should note that the 2007 DfT guidance that describes a '30- vehicle threshold for discussions' does not, for National Highways, justify junction capacity assessments not being undertaken.	Noted. **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**) provides an assessment of the impact on the SRN and concludes that further assessment has not been required. National Highways has accepted this in correspondence received on 30 July 2025. National Highways' Guidance Document 'Planning for the Future' and DfT Circular 01/2022 are referred to in Paragraphs 10.2.17 and 10.2.18 of this Chapter.
		The Applicant should review and include any relevant committed development traffic flows in the area that are likely to affect the flows at the relevant	Section 10.5.28 and Table 10.12 of this Chapter has provided details of the committed developments.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		junctions in the assessment years. In accordance with Planning Practice Guidance, these should include development that is consented or allocated where there is a reasonable degree of certainty will proceed within the next 3 years. Appropriate committed development flows should be agreed with the LPA.	
		Further to the committed development, we would note that any assumptions underpinning the projected levels of traffic should be clearly stated so as to avoid the default factoring up of baseline traffic	Full details on the approach to projected traffic levels are set out in Section 10.7 of this chapter and in Section 10A.5 of **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**). This include details of the TEMPro growth factors that have been used to inform the assessment.
		If the opening year assessments demonstrate that a mitigation scheme is required in order to accommodate the impact of the proposed	No mitigation schemes are required to accommodate the impact of the Proposed Development.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		development, there will be a number of requirements prior to determination of the planning application: GG142 walking, cycling and horse-riding assessment should be undertaken at the outset to inform the design of any mitigation scheme; As noted in Circular 01/2022, “GG 104 (or its subsequent update) identifies the framework and approach for safety risk assessment to be applied when undertaking any activity that may have an impact on safety on the SRN”. The design of road improvements should meet DMRB standards or clearly identify any departures from standard required; A Departure from Standards application may be required if the standards set out in DMRB are not achieved. This applies equally to over and under achievement of design standards; and • A Stage 1 Road Safety Audit should be undertaken prior to the submission of the planning application	

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The trip generation in the TA should accord with that set out in a Travel Plan, we would, therefore, request that a Construction Worker Travel Plan [CWTP] is submitted to accompany any forthcoming planning application. With regards to the preparation of a Travel Plan, we refer the applicant to paragraphs 44 and 47 from Circular 01/2022. The Travel Plan should include targets for mode shift away from the private car and confirmation of person trips by mode; the plan must set out clear targets and commitments to manage down the traffic impact of development and maximise the accessibility by walking, wheeling, cycling, public transport, and shared travel. Hence, suitable multi-modal (person) trip rates should be set out alongside any travel planning targets. This approach will enable an assessment of residual transport impacts relative to the current land	These documents have been provided as part of the Application as, **ES Appendix 10A:** Transport Assessment **(Application Document Ref. 6.3) Outline Construction Worker Travel Plan** (**Application Document 7.6**) and **Outline Construction Travel Management Plan** (**Application Document 7.5**) have been prepared and are provided with Travel Plan targets set out in the **CWTP** (**Application Document 7.6**) to target a shift away from private car with commitment to manage the level of traffic generated, with targets set at an appropriate level of the Proposed Development location.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		use (see Circular 01/2022, particularly, paragraphs 47-54). With reference to the DfT document 'Decarbonising Transport: A Better, Greener Britain' (July 2021), the Travel Plan should also consider how the design of the development will facilitate and ensure that "public transport and active travel are the natural first choice for daily activities.	
		The Report notes that a "Construction Traffic Management Plan to seek to control the routing and impact that HGVs will have on the local road network during construction" is also a mitigation measure. We welcome this approach and would note that a Construction Traffic Management Plan [CTMP] should be provided to National Highways for review and agreement in writing prior to commencement of construction.	A **CTMP** (**Application Document 7.5**) has been prepared and is included as part of this Application. The CTMP will be agreed with National Highways prior to commencement of construction.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		We welcome the confirmation that "the extent of the traffic data and scope for any traffic surveys that may be required will be agreed with the local highway authority and National Highways"	No traffic surveys have been deemed required. National Highways (and North Lincolnshire Council) has been engaged on the extent and availability of data used to inform the assessment.
		We request that the following Requirement be imposed on any Development Consent Order [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.	A Decommissioning Traffic Management Plan will be secured by Requirement of the **Draft DCO** (**Application Document Ref. 3.1**).

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
North Lincolnshire Council	February 2025 (PEI Report Consultation)	Table 10.1 – it's noted that a Transport Statement and Travel Plan will be submitted as part of the DCO application, although it is unclear whether the Travel Plan will cover both construction and operational phases. It is understood that there will be a requirement for a Construction Phase Traffic Management Plan and that a Framework CTMP will be submitted as part of the DCO application.	The Travel Plan within **ES Volume II Appendix 10A:** Transport Statement (**Application Document Ref. 6.3**) covers the Construction Phase of the Proposed Development only. The overall number of workers expected for the Operational Phase is very low and therefore a Travel Plan is not deemed to be required. An **Outline CTMP** (**Application Document Ref 7.5**) has been prepared and submitted as part of the DCO. There will be a Requirement on the **Draft DCO** (**Application Document Ref. 3.1)** that a final CTMP be developed and agreed prior to the commencement of construction.
		Para 10.2.12 – as part of the Devolution process for North Lincolnshire, a new 'Greater Lincolnshire	This has been reflected in this Chapter (at Paragraph 10. 2.24).

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		Local Transport Plan' will be produced, which will replace the existing LTP for North Lincolnshire.	
		Para 10.2.13 – emerging policy. The previous Draft Local Plan was withdrawn from Examination on 4th October 2024 following a decision from Cabinet on Monday 30th Sept 2024. A timetable for review of the Local Plan in a Local Development Scheme following withdrawal is yet to be released. The adopted Development Plan for the area remains: • Saved Policies of the Local Plan (2003) • Core Strategy (2011) • Housing and Employment Land DPD (2016) • Lincolnshire Lakes AAP (2016)	This section has been removed from the Chapter.
		Figure 10.1 – would query why the A18 between Frodingham Grange Roundabout (A1077) and Keadby Bridge (King George V Bridge) are not included as a link, as Frodingham Grange Roundabout would be the only permitted	The A18 between Frodingham Grange Roundabout (A1077) and Keadby Bridge (King George V Bridge) has now been included as a link considered for

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		access/egress point for construction vehicles. However, I wouldn't necessarily expect a significant discrepancy in traffic flows compared to the west of Keadby Bridge. We have traffic data from 2022 from outside 53 Doncaster Road, which we can share with the applicant if required.	assessment based on data that has been subsequently provided by NLC.
		Para 10.5.16 – Personal Injury Accident data. Can this be updated with data from 2023 and some of 2024 please.	Data for 2023 has now been included in the assessment. At the time of writing, no data for 2024 was available (on Crashmap).
		It is anticipated that construction will start between 2027 and 2034 and should last about 3.5 years. The construction workforce is expected to peak at 1,300 workers per day in months 26 and 27. We would want to see a monthly profile of staff numbers and HGV movements for the full construction period.	A monthly profile of movements of both construction workers movements and HGVs movements has been set out in Table 10A.4 in **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**). While the peak month has not changed from the initial

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
			assessment, the size of the peak workforce had reduced to 1,050 workers.
		The operational lifespan of the power station is expected to be around 25 years, so it is assumed that decommissioning activities would commence after 2063. It is noted that National Highways have suggested a Requirement for a Decommissioning Traffic Management Plan.	This will be a Requirement on the **Draft DCO** (**Application Document Ref. 3.1**).
		The site will be accessed via the existing access on the A18 and Mabey Bridge, which needs replacing. This will be completed ahead of the main construction works and access during that time will be via the skew bridge to the east. The skew bridge is also the access point for oversized loads. All HGVs will access/egress from the west and no HGVs or construction staff will access the site via the B1392. This is acceptable and in line with previous developments on the site. It is understood	All construction traffic will access the Site from the A18. A temporary speed limit reduction is likely to be proposed but a permanent reduction in the speed limit is not being requested. This is stated at Paragraph 10A.5.8 **in ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**).

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		that operational staff will also be required to access the site via the A18. It is noted that the applicant may request a Temporary Traffic Regulation Order to reduce the speed limit on the A18 in the vicinity of the site access. We would have no issues with a temporary speed reduction, supported by appropriate signage. However, the Local Highway Authority would not be supportive of a permanent reduction in the speed limit at this location. The developer would also be responsible for removing all associated signage once the TTRO ends.	
		Abnormal Indivisible Loads (AILs) will arrive by barge and be offloaded at Railway Wharf, which will be included within the Order limits. Components will cross the B1392 onto a temporary haul road to the site. Traffic management will be required on the B1392, and this will need to be agreed with NLC's Network Management Team.	Any traffic management associated with AILs will be agreed the NLC's Network Management Team.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		It is understood that Bonnyhale Road may also be used for a small number of AILs as per previous applications. We would like to see a restriction on the number of loads that will travel this way as per previous applications.	This has been discussed as part of the **Outline CTMP** (**Application Document Ref. 7.5**) which has been submitted as part of the Application. Further information will be provided in the final CTMP to be prepared by the Contractor.
		Chapel Lane will not be used by construction traffic or staff but will provide a connection to the proposed emergency vehicle access, only to be used as a secondary point of access and egress for emergency vehicles. This is acceptable.	NLC's comment that the use of Chapel Lane as an emergency route only is acceptable is noted.
		The DCO for Keadby 3 included localised widening on the A18 at the site access to provide a ghost island, it's unclear from the information provided whether this is still proposed or not. If isn't, then I would expect to see the rationale for this decision included in the Transport Statement.	This is not being allowed for as with the likely TTRO for the speed limit and the fact that the K2 construction works has been operating from the access without any safety issues arising, the widening is not deemed required.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
National Highways	February 2025 (PEI Report Consultation)	The Applicant states that since the proposed development is a '*first of a kind*' for this type of power station, a number of the design aspects and features of the proposed development cannot be confirmed until the detailed design of the proposed development has been completed, including building sizes. The Applicant finds it necessary that the consent retains some flexibility to allow for changing economic conditions and the advancement of hydrogen-fired CCGT technology in the period between preparing the application and starting construction. National Highways recommends that the Applicant clarifies whether potential development design changes could affect the trip generation of the proposed development. The Applicant should set out a range of reasonable operational scenarios and test these relative to Circular 01/2022.	Worst-case parameters have been defined within the Rochdale Envelope to ensure a conservative, and robust approach to the trip generation assessment has been taken. Any design development as the project progresses is not expected to affect the trip generation.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The Applicant has identified the potential to supply waste heat for local district heating as there are a number of theoretical identified heat users within a 15km radius of the site. A CHP [combined heat and power] is not proposed to be installed from the outset, but the proposed development will be CHP ready, with the inclusion of connection flanges at suitable locations to export waste heat in the future should this become viable. We recommend that the Applicant clarify how the supply of waste heat will be addressed in the TS, particularly in respect of the construction impacts.	A CHP Assessment has been undertaken which concludes that there are no CHP opportunities. However, to future proof for any potential CHP off-take, the connection flanges will be provided at this stage. As such, no further Traffic and Transport assessment has been undertaken with respect to the supply of waste heat.
		Construction of the proposed development is forecast to start in 2027, with the operational phase forecast to commence after 2030. Up to, approximately, 50 full-time staff are expected to be working at the development once operational. The Applicant must clarify within the TS the	The exact number of operational staff that would be in administrative roles is not known at this stage. The likely administrative staff trips have been considered as part of the trip generation for the operational Proposed Development (i.e. they are included in the total of 50 full-

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		proportion of administrative staff versus operational staff to be working at the proposed development.	time staff) and the profile of staff trips set out in **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref 6.3**). Regardless of the proportion of the administrative staff trips, the profile of trip generation is not expected to change.
		Temporary and contractor employees associated with maintenance activities would also be employed, as required. The Applicant should provide details in regard to the number of potential temporary / contractor employees that might be required by the proposed development.	Trips associated with these uses are included within the overall trip generation set out in this Chapter.
		The PEIR outlines that there would be provision for several car parking spaces and cycle storage onsite for operational use, with additional car parking spaces to be provided to support outages, if required, however no specifics are given.	The current preliminary design for the operational scheme allows for 68 car parking spaces (including 6 accessible spaces) in the main car park, with a further 10 parking spaces (including 4

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		National Highways would highlight that the Applicant must include within the TS the number of parking spaces to be provided as part of the proposed development.	accessible spaces) in the visitor car park. A further approximately 20 overflow spaces will be provided. Car parking for the construction phase will be flexible depending on the phase of construction and the size of the workforce but will be managed within the construction site itself. Full details are set out in **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref 6.3**). The level of cycle parking to be provided will be defined during the detailed design stage.
		The Applicant states that an initial enabling works phase, including the replacement of Mabey Bridge, and construction of the emergency access crossing, would be undertaken over approximately 9 months.	It is not expected that staff reassignment would be required during this phase of the works.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		National Highways would advise that if the enabling works phase will result in staff traffic reassignment, the Applicant should consider this aspect and provide further details.	
		The Applicant states that due to uncertainties in the market and Government investment decisions in hydrogen production, transport, storage, and Capacity Market Auction reform, the application would be made on the basis that commencement of development can take place for up to seven years from the granting of consent. Consequently, a scenario where construction commences later in the programme, up to 2034 (seven years after the DCO could be granted) has also been considered by the Applicant as a reasonable worst-case for technical assessments where relevant. We would highlight that the TS should consider all reasonable scenarios, including any potential	The assessment has been undertaken on the basis of a 2036 construction year, giving a reasonable busiest case assessment. No significant phasing of the development is currently anticipated, so this has not been assessed.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		phasing of development and opening at dates further into the future when potential exists.	
		The Applicant states that a Decommissioning Plan, including a Decommissioning Environmental Management Plan [DEMP] will be produced within the period specified in the relevant legislation in force at the time of cessation of operations. National Highways would recommend that a Requirement of the DCO is in place to secure the provision of a DEMP. Further, we would recommend that a Requirement is imposed to secure the provision of a Decommissioning Traffic Management Plan [DTMP] also. We would recommend the following wording: “Unless otherwise agreed in writing by the Planning Inspectorate in consultation with National Highways (or its successors) decommissioning of the	A Decommissioning Environmental Management Plan will be included as a Requirement of the **Draft DCO** (**Application Document Ref. 3.1**).

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		development hereby approved shall not commence unless and until a Decommissioning Traffic Management Plan has been submitted to and approved in writing by the Planning Inspectorate in consultation with National Highways (or its successors). Thereafter unless otherwise approved in writing decommissioning shall be undertaken in accordance with the approved plan." The inclusion of the Condition ensures that any effects from the decommissioning phase are to be reviewed and agreed upon by National Highways immediately prior to decommissioning.	
		The Applicant considered a series of relevant transport policy, including the National Planning Policy Framework 2019 (with amends published July 2024) and Circular 01/2022, which the Applicant will use to inform the Transport Statement [TS] to accompany the application.	This has been updated in this Chapter.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		National Highways would highlight that the NPPF was revised in December 2024 and the Applicant must reference this updated version.	
		Further, we note that the Applicant must also consider Circular 01/2022 when preparing the TS to accompany the planning application for the proposed development. Circular 01/2022 states: "*Where a transport assessment is required, this should start with a vision of what the development is seeking to achieve and then test a set of scenarios to determine the optimum design and transport infrastructure to realise this vision.*" "*The company expects development promoters to enable a reduction in the need to travel by private car and prioritise sustainable transport opportunities ahead of capacity enhancements and new connections on the SRN*."	**ES Volume II, Appendix 10A**: Transport Statement (**Application Document Ref 6.3**) sets out the Transport Vision for the Proposed Development, as required by Circular 01/202.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		With reference to the prevailing policy, National Highways requires that the Consultant set out the vision for development. The Consultant should clearly describe the aims of the development in terms of transport and explain how the aims are in line with the prevailing policy. National Highways now expect development promoters to enable a reduction in the need to travel by private car and prioritise sustainable transport opportunities, ahead of capacity enhancements and new connections on the Strategic Road Network. Once we have agreed the vision for the development, we request that the Applicant submits a Travel Plan in line with the policy, which should demonstrate how the vision can be achieved. To do this, the applicant should 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. We recommend that the	

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		Travel Plan presents suitable multi-modal (person) trip rates alongside any travel planning targets. Once the vision and supporting travel planning are agreed upon, the approach enables an assessment of residual transport impacts. This should be undertaken in line with the Circular 01/2022.	
		The Applicant states that traffic impacts on the M180 have not been assessed due to development traffic representing a very low percentage of total traffic on the M180, which does not trigger the rule threshold guidelines. National Highways would highlight that, when preparing the TS and considering potential junction capacity assessments, the Applicant should refer to the following guidance: • National Planning Policy Framework (2024). • National Highways' guidance document 'Planning for The Future' (October 2023).	Further details on the traffic flows that are anticipated on the M180 are set out in **ES Volume II, Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**). The outcome of this assessment concludes that a junction capacity assessment is not required.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		• The Department for Transport's Circular 01/2022. In particular, we would refer the Applicant to 'Planning for the Future', which states that National Highways will look at planning applications assessed as being 'severe' on a case-by-case basis. This will consider the performance and character of the relevant section of the SRN and the predicted effects of the development on its safe operation. Further, the Applicant should note that the 2007 DfT guidance that describes a '30- vehicle threshold for discussions' does not, for National Highways, justify junction capacity assessments not being undertaken. In light of the above, the Applicant must consider the impact the proposed development will have on the safe and efficient operation of the SRN, including the M181/A18 roundabout and the M180 Junctions 2 and 3, during the construction and operation phases; and	

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		traffic generation, distribution, and assignment data for the SRN must be provided for review.	
		The Applicant obtained Personal Injury Accident [PIA] data from the CrashMap website for the five year period 2016 - 2019 and 2022. The study area included the M180 Junctions 1 and 2 also. The SRN areas of interest to National Highways are the M180 Junctions 2 and 3 and the M181/A18 Roundabout. Consequently, the Applicant must include PIA information for M180 Junction 3 and the M181/A18 Roundabout within the TS to accompany the planning application.	The Study Area for the PIA analysis has been expanded to include the M180 Junction 3 and the M181/A18 Roundabout within Section 10A.4 of **ES Volume II, Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**).
		Future year baseline traffic flows for the assessment year of 2036 for the peak of construction and the year of opening 2038 have been derived by the Applicant by applying the traffic growth factor obtained from TEMPro.	The TEMPro factors have been reviewed and updated. This includes expanding the geographical areas from which the factors were drawn as well as using 'A Roads' rather than all roads to define the factors. Full details are provided in Section 10A.8

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The Applicant provided future year baseline traffic flows for the assessment years of 2036 peak of construction and 2038 for the local road network only, and the future year baseline traffic flows for the SRN of interest will need to be considered also. National Highways has undertaken a high-level check of the TEMPro factor provided and would recommend the Applicant derives a new TEMPro factor to be used in any CTMP and TS traffic impact assessments. Furthermore, due to potential unsuitability of TEMPro for localised analyses, we advise the Applicant to also use an alternative method to verify traffic growth forecasts by comparison with actual count data for the relevant road section.	of **ES Volume II, Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**). The comment regarding the potential unsuitability of data has been noted. However, data has only be collected for 2024 for the locations assessed (other than on the A18 Doncaster Road in Gunness which was provided by North Lincolnshire Council for 2022). There are no further counts available on the A18 or A161 on the DfT Road Statistics which allow for a comparison with a more recent year as the majority of the data is estimated based on the previous year's count. Actual counts in most instances date back to 2018 if not earlier.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The Applicant states that the identified developments in the vicinity of the proposed development could result in cumulative impacts during its construction and operation, and that these effects will be considered in the Cumulative Effects Assessment. We would highlight that in accordance with Planning Practice Guidance, the committed development should include development that is consented or allocated where there is a reasonable degree of certainty will proceed within the next 3 years. We also invite confirmation that the committed development included in the assessment by the Applicant has been confirmed with the relevant Planning Authority. The confirmed committed developments will need to be considered within the CTMP and TS traffic impact assessments of the local road network, including the SRN.	Committed development have been considered and a full consistent list is being used throughout the ES. Details of the Scheme and the likely trip generation are set out in the ES and in **ES Volume II, Appendix 10A:** Transport Statement (**Application Document Ref. 6.3**). The list of Committed Schemes has been agreed with North Lincolnshire Council.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The Applicant highlights that construction traffic movements will take place along designated transport routes to be outlined within the Framework Construction Traffic Management Plan (FCTMP) which will be submitted alongside the final ES. The final CTMP will be prepared in accordance with the Framework CTMP and secured through a DCO requirement. We welcome the above approach, and we would reiterate that the CTMP should be provided to National Highways for review and agreement in writing prior to commencement of construction. Construction will then be expected to proceed in accordance with the approved CTMP. Further, the CTMP will need to include the following: • Length of construction period. • A dust management plan. • A noise management plan. • Pollution prevention measures. • Staffing numbers.	National Highways will be consulted on the final CTMP prior to its agreement.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		• Peak trip generation (including types of vehicles). • Contractor parking. • Any potential need to limit light intrusion on the SRN at the relevant locations. • Construction traffic routes. • Access routes, including consideration of abnormal loads and details of proposed signage, implementation and enforcement.	
		The Applicant estimates up to 200 HGV movements in total over the construction period to remove waste, with up to 10 HGV movements expected per day. National Highways would note that waste removal vehicular trips must be included in the CTMP assessment of the traffic impact that the proposed development could have on the SRN during construction period. Furthermore, details of waste management measures should also be provided within the CTMP to be submitted in support of the planning application.	All HGV and trips associated with the movement of materials during construction are outlined in the **Outline CTMP** (**Application Document Ref. 7.5**) and will be developed further within the final CTMP. An outline SWMP forms an appendix to the **Outline CEMP** (**Application Document Ref. 7.4**).

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The principal items of plant will be modular and delivered by ship to the Waterborne Transport Offloading Facility, with around 35 - 40 deliveries expected over a 12-month period. The components will then be lifted using a mobile crane onto a hauled trailer and transported to the main site along the existing temporary haulage route for assembly. These vehicular trips will also need to be considered when deriving the trip generation during construction period.	All HGV and trips associated with the movement of materials during construction are considered in the ES and in **ES Volume II, Appendix 10A:** Transport Statement (**Application Document Ref. 6.3**).
		Construction staff are anticipated to travel to the site via the existing trunk road and local networks, with the staff arriving by car using on-site parking. We would reiterate that the Applicant must include further details of the car park provision for both the construction and operational phases of the proposed development, and of trip generation and assignment, particularly during peak hours.	Full details of the traffic generation for the Construction and Operational Phases are provided in the **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**). .

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The Applicant assigned HGV trips to the M180 Junction 2 via the A18 and the A161. The construction workers trips assignment has been based on the geographic split of population within a 45 minute drive-time of the Proposed Development Site. National Highways would request that a detailed methodology be presented for review. The SRN will need to be included in any traffic assessments within the upcoming TS and CTMP, including AM and PM peak hours traffic generation and appropriate trip distribution / assignment data, in order for National Highways to determine the need or otherwise for junction capacity assessments.	
		We would recommend the Applicant includes within the CTMP a breakdown of the traffic generation for the entire construction period, rather than just for the peak period, with the AM and PM Peak hour traffic generations clearly stated. Vehicular trip distribution and assignment data should also be included.	Full details of the traffic generation are provided in **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**).

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The Applicant outlines a series of good practice mitigation measures that will be implemented during the construction phase to minimise traffic impacts on the local highway network. We welcome these initiatives, however, we would request that they are extended to the SRN, and this should be discussed in detail within the CTMP to be submitted.	This is outlined in the **Outline CTMP** (**Application Document 7.5**) and will be developed further as part of the development of the final CTMP.
		The Applicant highlights that a number of AIL movements are expected to be required during the construction programme associated with the delivery of large items of plant and equipment, however the exact number and size / weight are not known at this stage. We would suggest that, if an abnormal load is required, and depending on the load being moved and the route, advance warning may be required by: • The Police. • Highway authorities.	This is outlined in the **Outline CTMP** (**Application Document 7.5**) and will be developed further as part of the development of the final CTMP.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		• Bridge and structure owners such as Network Rail. The Electronic Service Delivery for Abnormal Loads (ESDAL) system can be used for route plotting. ESDAL will also: • Notify the Police, highways, and bridge authorities. • Provide advance notice of any possible route problems. • Save vehicle details and routes for future use. If ESDAL is not used, an abnormal loads movement application form will need to be completed. Sufficient time must also be allowed in order to get the necessary clearances from the police, highway, and bridge authorities. For example, a Special-Order application must be completed 10 weeks before the scheduled date of the move.	

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The Applicant states that although approximately 200 additional staff could be on-site on any one day during an outage (which may occur once every 2-5 years and last approximately 3 months), no additional impact avoidance measures are considered necessary as both the HGV and staff vehicle numbers would be considerably lower than during construction. We would specify that an hourly break down of the vehicular trips to take place during outages must be included in the TS. Furthermore, depending on the trip generation during the AM and PM peak hours and the trip distribution and assignment of those trips, short term management measures might need to be implemented by the Applicant during the outage periods.	This level of detail is not available at this stage. The impacts will, as noted, be less than during the Construction Phase. The Applicant will consider the implementation of short-term management measures, once further details on the scale of the workforce during outages is confirmed.
		The Applicant states that driver delay will be considered in the TS to be submitted with the application.	Full details on the Operational Phase trip generation are set out in **ES Volume II,**

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		National Highways would highlight that the TS must present detailed traffic generation information for the standard peak hours, including residual traffic impacts, taking account of the measures identified to achieve the development vision, together with appropriate traffic assignment and distribution data for the operational stage of the proposed development, for the road network in vicinity of the proposal site, including the SRN. We would further highlight that if the TS suggests that there is no impact on the SRN during the AM and PM peaks because trips to and from the development occur outside peak hours, a condition may be required to ensure changeover periods remain outside these peaks.	**Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**).

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		Regarding the decommissioning aspect, we would note that the DTMP will need to include an hourly break-down of the traffic to be generated by the proposed development during the decommissioning phase and appropriate traffic assignment and distribution data for the SRN of interest	These details will be considered as part of the Decommissioning Environmental Management Plan and Decommissioning Traffic Management Plan which will both be secured by a Requirement of the **Draft DCO** (**Application Document Ref. 3.1**).
	July 2025 (Direct Engagement)	The Applicant should specify the number of parking spaces to be provided as part of the proposed development, for both the construction and operational phases of the proposed development.	The current preliminary design for the operational scheme allows for 68 car parking spaces (including 6 accessible spaces) in the main car park, with a further 10 parking spaces (including 4 accessible spaces) in the visitor car park. A further approximately 20 overflow spaces will be provided. Car parking for the construction phase will be flexible depending on the phase of construction and the size of the workforce but will be managed within the construction site itself.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
			Full details are set out in **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref 6.3**).
		The Applicant should provide a breakdown of the traffic generation for the entire construction period, rather than just for the peak period.	Full details of the breakdown of the traffic generation for the entire construction period, rather than just for the peak period are provided in Annex A in **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref 6.3**).
		The Applicant should provide details in regard to the number of potential temporary/contractor employees that might be required by the proposed development during the operational phase. The Applicant should also clarify the proportion of administrative staff versus operational staff to be working at the proposed development.	Trips associated with these uses are included within the overall trip generation set out in this Chapter and in the full trip generation details in **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**).

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		The Applicant should clarify whether potential development design changes could affect the trip generation of the proposed development.	Any design development as the project progresses is not expected to affect the trip generation.
		It is recommended that a Requirement of the DCO is in place to secure the provision of a DEMP. Further, we would recommend that a Requirement is imposed to secure the provision of a Decommissioning Traffic Management Plan (DTMP).	A Decommissioning Environmental Management Plan (DEMP) and Decommissioning Traffic Management Plan (DTMP) will be included as a Requirement of the **Draft DCO** (**Application Document Ref. 3.1**).
Canal & River Trust	February 2025 (PEI Report Consultation)	10.7.11 of the PEIR confirms that delivery of AIL to the Proposed Development Site will use the same routes as those used for the delivery of AIL associated with the construction of Keadby 2 Power Station. It is expected that the largest abnormal loads will be received at the Port of Immingham and barged down the River Trent to the Waterborne Transport Offloading Area at Keadby Railway Wharf.	This has been set out in the **Outline CTMP** (**Application Document 7.5**) that has been submitted as part of the DCO that the Applicant will work with the Canal & River Trust to minimise and use and impacts on Keadby Lock during AIL use. An assessment of the impacts of the using the lock has been undertaken as part of **ES Volume I Chapter 12:** Water

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		We consider that implications of the use of Railway Wharf upon the operation of Keadby Lock should be considered within the Environmental Statement to be submitted with the application. We note that the PEIR indicates that this will be assessed (table 12-2 on page 12).	Environment and Flood Risk. (**Application Document Ref. 6.2**).
		Previously, for the Keadby 2 project, it was agreed with the applicant that Notices to Mariners (Notices and Stoppages) through the Trust can be used to provide mariners with forewarning of closures. During the development of Keadby 2, it was observed that some vessels arrived at the offloading point outside of times agreed by the Trust, often due to delays occurring at sea. This resulted in unscheduled closures of Keadby Lock, which prevented craft utilising this structure. Unscheduled closures of the lock can result in boats becoming stranded, which could have health and safety	The Applicant is liaising with the Canal & River Trust around the requirement for any closures.

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		implications should they become stranded on the River Trent, which is a tidal river.	
		For the Keadby 3 Carbon Capture Power Station Project , the Development Consent Order was subject to a requirement for the provision of a Wharf Management Plan under Schedule 2, Article 25 to include “processes for agreeing in advance the general principles around scheduling of abnormal load deliveries that would temporarily obstruct the entrance to Keadby Lock and notifying the Canal and River Trust as to the timing of such deliveries, and measures that seek to avoid such deliveries occurring outside of the notified timings”. We consider that a similar approach could be used to address this risk in this latest application. The Trust’s position is that the aim of the Wharf Management Plan should be to prevent all arrivals outside of scheduled times. The Trust accept that in a very limited number of cases that may be	A Wharf Management Plan will be a Requirement of the draft DCO for the Proposed Development as is set out **in ES Volume II, Appendix 12C:** Navigational Risk Assessment (**Application Document Ref. 6.3**).

Consultee or Organisation approached	Date and nature of consultation	Summary of consultee response	How comments have been addressed in this chapter
		unavoidable and would welcome any plan also including detail of the procedures to be followed in those instances.	
		The proposals include the temporary use of a cofferdam within the Stainforth and Keadby Canal in order to facilitate the construction of abstraction pipelines. We understand that the proposals seek to construct a cofferdam projection 10m from the north bank of the canal, leaving a 20m side navigable space to the north. The provision of a 20m wide space is considered sufficient. To assist the application, it may be useful for the impact of this temporary restriction in width to be included in the Traffic and Transport Chapter of the Environmental Report.	This has been addressed in **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**), Paragraph 10A.5.9.

Overview

10.3.2. The environmental impact of the traffic predicted to be generated by the Proposed Development has been assessed with reference to the IEMA 2023 guidelines and other guidance as detailed in Section 10.2. In accordance with guidance, issues including; Severance; Driver Delay; Pedestrian Delay; Non-motorised User Amenity; Fear and Intimidation; Road Safety; Road Safety Audits; and Hazardous Loads/Large Loads, associated with the Proposed Development, have been assessed.

10.3.3. Any likely significant environmental effects relating to air quality and noise and vibration generated by traffic associated with the Proposed Development are considered in the relevant chapters of this ES (i.e. **ES Volume Chapter 8**: Air Quality and **ES Volume I Chapter 9**: Noise and Vibration (**Application Document Ref. 6.2**)).

Extent of Study Area

10.3.4. The study area for this assessment has been defined by reference to the IEMA 2023 guidelines, which sets out two broad rules as follows:

- Rule 1 – include highway links where traffic flows are predicted to increase by more than 30% (or where the number of HGV is predicted to increase by more than 30%); and
- Rule 2 – include any other specifically sensitive areas where the traffic flow (or HGV component) is predicted to increase by more than 10%.

10.3.5. These criteria can similarly be applied to changes in other modes of transport as useful context to inform an assessor's judgement.

10.3.6. Paragraph 2.17 of the IEMA (2023) guidelines goes on to state:

"It should be noted that the Rule 1 and Rule 2 'criteria' process may not be appropriate for some impacts, and it is generally accepted by regulators and practitioners that it should not be applied to assessments of air quality, noise, road safety and driver delay. For these impacts, a separate study area and assessment criteria should be agreed with the relevant stakeholders."

10.3.7. To define the study area, a network of road links has been identified and then tested against Rules 1 and 2. The road links that have been considered in determining if the above rules are satisfied, and which form the study area, are listed below and shown on **Plate 10-1**.

- A18 (west of construction site access);

- A161 (between M180 Jct 2 and the A18);
- A18 Station Road (immediately to the west of King George V Bridge);
- A18 High Levels Bank (east of Tudworth Roundabout); and
- A18 Doncaster Road (between the A18 Station Road and the Frodingham Grange Roundabout).

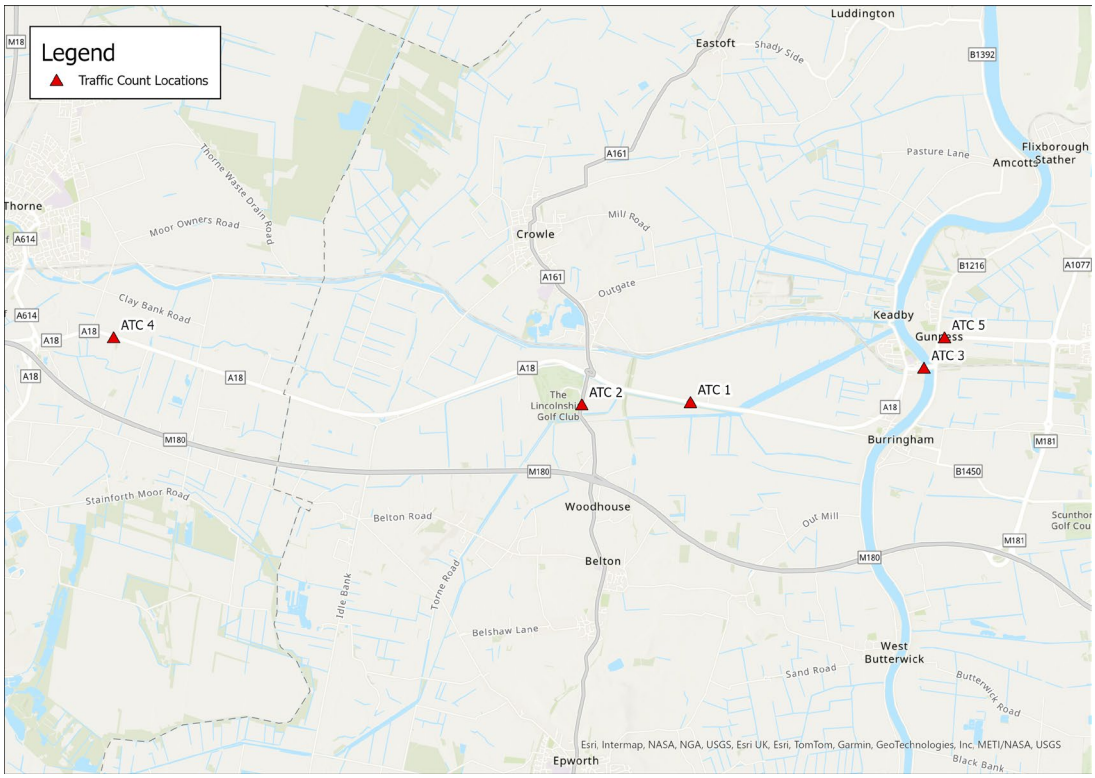

Plate 10.1: Highway Links within Study Area

Sensitivity of Receptors

10.3.8. The sensitivity of a road, or the immediate area through which it passes, can be defined by the type of user groups who may use it. Vulnerable users may include elderly residents and children. It is also necessary to consider footpath and cycle route networks that cross the roads within the study area.

10.3.9. A desktop exercise has been undertaken to classify the sensitivity of the routes within the study area. The classification of the link sensitivity is based on professional judgement. For example, if the route passes a school, care home or similar it would have a higher sensitivity due to the presence of vulnerable users. Similarly, if the route went through the middle of a town or village, it would have a higher sensitivity than if there was limited frontage

development in the study corridor. **Table 10.3** identifies the links, the assigned sensitivity rating and the justification:

Table 10.3 Sensitivity of Receptors

Link No.	Link Description	Link Sensitivity	Rationale
1	A18 (west of the Site Access)	Very Low	The A18 between the Site Access and the A161 passes through open country. It is a single carriageway road and is subject to the 60mph national speed limit for single carriageway roads. There are no pedestrian footways or frontage development along the road.
2	A161 (between the A18 and M180 Jct 2)	Very Low	The A161 is a single carriageway road passing through open country and is subject to the 60mph national speed limit. No footways are provided on either side of the carriageway. Frontage development is limited to a garden nursery and farm outbuildings.
3	A18 Station Road (west of King George V Bridge)	Low	The A18 Station Road is a single carriageway road and is subject to a 30mph speed limit. The road is suburban in nature with footways provided on either side of the carriageway.
4	A18 High Levels Bank (east of Tudworth Roundabout)	Very Low	The A18 between the junction with the A161 and Tudworth Roundabout passes through open country. It is a single carriageway road and is subject to the 60mph speed limit for single carriageway roads. There are no pedestrian footways with little frontage development along the road.
5	A18 Doncaster Road (between the A18 Station	Low	The A18 Doncaster Road is a single carriageway road and is subject to a 30mph speed limit for approximately 100m east from the

Link No.	Link Description	Link Sensitivity	Rationale
	Road and the Frodingham Grange Roundabout)		A18 Station Road where, it changes to 40mph. Further east, the speed limit changed to the National Speed limit The road is suburban in nature with a footway on the south side and on-carriageway cycle lanes provided.

10.3.10. Traffic impacts on the M180 have not been assessed due to development traffic representing a very low percentage of total traffic on the M180, which does not trigger the rule threshold guidelines. However, further details on the level of traffic anticipated to be generated on the M180 are provide in the **ES Volume II Appendix 10A**: Transport Statement (**Application Document Ref. 6.3**).

10.3.11. No Proposed Development construction or operational traffic is proposed to use the existing Keadby 1 Power Station access through the village of Keadby, so no road links in the village are included as receptors.

Assessment Methods

10.3.12. The assessment methodology adopted, as contained in IEMA 2023 guidelines, is recognised as the industry standard methodology for the assessment of traffic and highway impacts. The guidelines outline the issues and the respective changes in volume and composition of traffic regarded as necessary before each issue results in traffic and transport impacts.

10.3.13. **ES Volume I Chapter 5**: Construction Programme and Management (**Application Document Ref. 6.2**) provides details on the indicative construction programme for the Proposed Development. On this basis, the following assessment scenarios have been considered:

- construction phase: (subject to the necessary consents being granted and an investment decision being made), it is the aim that construction would commence in 2027 at the earliest and in 2034 at the latest (7 years later) and is anticipated to last approximately three and a half to four years.
- opening year (for the purposes of assessment in this chapter, 2038); and
- decommissioning (it is envisaged that the Proposed Development would have an operational life of circa 25 years. Taking into account the

assessed opening year, decommissioning activities within this chapter are assumed to commence after 2063).

10.3.14. The following environmental effects are susceptible to changes as a result of the Proposed Development.

- **Severance:** Severance occurs in a community when a major artery separates people from places and other people. Severance occurs from difficulty of crossing a road or where the road itself creates a physical barrier. Severance can be caused to pedestrians or motorists. The IEMA 2023 guidelines suggest that changes in total traffic flow of 30%, 60% and 90% result in slight, moderate and substantial changes in severance respectively.
- **Driver Delay:** The IEMA 2023 guidelines state that delays to non-development related traffic can occur as a result of a development, but that these are only likely to be significant when the highway network surrounding a development is already at, or close, the capacity of the system. The Transport Statement (Appendix 10A) has considered the potential for driver delay.
- **Pedestrian Delay:** The IEMA 2023 guidelines states that the assessment of pedestrian delay serves as a proxy for the delay that other modes of non-motorised users may experience when crossing roads. The guidelines recommend that professional judgement is used to determine the significance of changes in non-motorised user delay, taking account of locational context. The IEMA Guidelines also refers to TAG Unit A4-1 and DMRB LA112 as being useful resources to assist the assessment. DMRB LA112 includes criteria which consider the change in journey distance experienced by walkers, cyclists and horse-riders (WCH) in order to determine the magnitude of impact of a scheme.
- **Non-Motorised User Amenity:** Pedestrian amenity is broadly defined as the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition, pavement width and separation between traffic and pedestrians. The impact manifests itself in fear and intimidation, exposure to noise and vehicle emissions. The IEMA 2023 guidelines suggest that a doubling or halving of total traffic flow or the HGV composition could lead to perceptible negative or positive impacts upon pedestrian amenity.
- **Fear and Intimidation:** Drawing upon the IEMA 2023 guidelines, with regard to fear and intimidation, the following is stated: “previous work

that put forward thresholds for fear and intimidation based on an earlier study (Crompton and Gilbert, 1976) can be useful." and; "The extent of fear and intimidation is dependent on:

- The total volume of traffic
- The heavy vehicle composition
- The speed these vehicles are passing
- The proximity of traffic to people – and/or the feeling of the inherent lack of protection created by factors such as a narrow pavement median, a narrow path or a constraint (such as a wall or fence) preventing people stepping further away from moving vehicles."

- Thresholds have been set that seek to categorise fear and intimidation depending on existing road conditions and likely additional flow of traffic resultant from the Proposed Development. The IEMA 2023 guidelines includes a weighting system to support the assessment (paragraphs 3.32 to 3.40 and Tables 3.1 to 3.3). This produces an overall score for the level of fear and intimidation and the guidance suggests how changes in that overall score, resulting from the Proposed Development, equate to different magnitudes of impact. The IEMA 2023 guidelines provides scores for the degree of hazard at a given location, as shown in **Table 10.4** . The level of fear and intimidation is then classified into four categories, based on the degree of hazard score, as shown in **Table 10.5**.

Table 10.4 Fear and Intimidation degree of hazard (IEMA 2023 guidelines, 2023)

Average hourly traffic flow (18hr AAWT) (a)	Total 18-hour heavy vehicle flow (b)	Average vehicle speed (c)	Degree of hazard score
>1800	>3000	>40	30
1200-1800	2,000-3,000	30-40	20
600-1200	1,000-2,000	20-30	10
<600	<1,000	<20	0

Table 10.5: Levels of fear and intimidation (IEMA 2023 guidelines, 2023)

Level of fear and intimidation	Total hazard score (a)+(b)+(c)
Extreme	71+
Great	41-70
Moderate	21-40
Small	0-20

- **Road Safety:** Highway safety is assessed by the frequency and severity of injury accidents that are attended by the police and recorded in official accident statistics. Intensification of use or changes in the composition of traffic has the potential to have an effect on collision rates. The examination of recent collision statistics on routes within the study area will highlight any hotspots that need further examination, noting that it is an explicit requirement of planning and highway authorities that any planning application proposals do not unacceptably increase safety risks. No new access points are proposed on to the public highways part of the Proposed Development.
- **Hazardous Loads/Large Loads:** Assessed based on the estimated number and composition of such loads. Where the number of movements is considered to be significant, a risk analysis should be undertaken to illustrate the potential for an accident to happen and the likely effect of such an event.

Significance Criteria

10.3.15. Using the information set out above, the magnitude of traffic impacts is defined in **Table 10.6**.

Table 10.6: Sensitivity of Receptors

Type of Impact	Magnitude of Impact			
	Very Low	Low	Medium	High
Severance	Change in total traffic flow of <30%	Change in total traffic flow of 30% to 60%	Change in total traffic flow of 60% to 90%	Change in total traffic flow of >90%

Type of Impact	Magnitude of Impact			
	Very Low	Low	Medium	High
Driver Delay	Magnitude of impact derived using professional judgment informed by the increase in vehicle delay and whether a junction or link is at, or close to capacity.			
Pedestrian Delay	WCH journey length increment <50m	WCH journey length increment >50-250m	WCH journey length increment >250-500m	WCH journey length increment >500m
Non-motorised User Amenity	Change in traffic flow (or HGV Component) <50%	Change in traffic flow (or HGV Component) of 51% to 100%	Change in traffic flow (or HGV Component) of 101% to 150%	Change in traffic flow (or HGV Component) of >151%
Fear and Intimidation	No change in hazard level	One step change in hazard level, with: <400 vehicle increase in average 18hr AV two-way all vehicle flow; and / or <500 HV increase in total 18hr HV flow	One step change in hazard level, but with: >400 vehicle increase in average 18hr AV two-way all vehicle flow; and / or >500 HV increase in total 18hr HV flow	Two step changes in hazard level
Road Safety	Magnitude of impact derived using professional judgment informed by the frequency and severity of collisions within the study area and the forecast increase in traffic, noting that it is an explicit requirement of planning and highway authorities that any planning application proposals do not unacceptably increase safety risks.			

Type of Impact	Magnitude of Impact			
	Very Low	Low	Medium	High
Hazardous/Large Loads	Based on the probability of a personal injury collision, categorised as fatal or serious, involving a hazardous/large load occurring.			

10.3.16. By combining the receptor sensitivity with the magnitude of impact using the assessment matrix shown in **Table 10.7**, traffic effects are classified as negligible, minor, moderate or major (adverse or beneficial).

Table 10.7: Classification of Effects

Type of Impact	Sensitivity / Importance of Receptor			
	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Negligible	Negligible	Negligible

10.3.17. Only moderate and major effects are considered to be significant for the purposes of the EIA Regulations; minor and negligible effects are 'not significant'.

Sources of Information / Data

10.3.18. A series of 7-day automatic traffic counts (ATC) were undertaken 11-18 July 2024 at the following locations to provide a baseline for comparison on the road links:

- Link 1: A18 (west of construction site entrance to Keadby 2 Power Station);
- Link 2: A161;
- Link 3: A18 Station Road (west of King George V Bridge); and
- Link 4: A18 High Levels Bank (east of Tudworth Roundabout).

10.3.19. Counts on Link 1 were disrupted half way through the week and were repeated in early September 2024.

10.3.20. Data for the A18 Doncaster Road (between Station Road and the Frodingham Grange roundabout) was provided by NLC. This data is for 2022 and is deemed suitable for use in this assessment.

10.3.21. In addition to the ATC counts, the impact of the Proposed Development will be examined at the junction of the A18 and the construction site access for the overall network morning (AM) and evening (PM) peak hours using the Link 1 count data when available. This will be reported in the Transport Statement.

10.4. Use of Rochdale Envelope

10.4.1. The maximum parameters adopted for building sizes within the Rochdale Envelope defined for the Proposed Development in **ES Volume I Chapter 4**: The Proposed Development (**Application Document Ref. 6.2**) do not have any material impact on vehicle numbers accessing the Site and therefore are not considered further in this assessment.

10.4.2. The construction assessment has been based on the worst-case assumption of activities not commencing until 2034, seven years after the earliest anticipated construction start date. Consequently, the results presented in this assessment are representative of earlier assessment years and the overall effect of the Proposed Development may be less than that presented, as background traffic is expected to increase year on year. Use of the Rochdale Envelope therefore does not change the conclusions of the impact assessment and does not result in any additional significant traffic effects being identified. It is considered that a worst-case scenario has been assessed in line with the Rochdale Envelope approach.

10.5. Baseline Conditions

Existing Baseline

Site Location

10.5.1. The Site is located within the wider Keadby Power Station site, approximately 4.1km to the west of the town of Scunthorpe. The village of Keadby is the nearest settlement which lies immediately adjacent to the Site boundary and

approximately 1km east of the Site at its closest point (refer to **ES Volume III, Figure 3.1:** Indicative Parts of Site Plan (**Application Document Ref. 6.4**)).

10.5.2. Access to the Site during both construction and operation will be via the existing perpendicular bridge (Mabey Bridge) and skew bridge construction access points off the A18, built for construction vehicles during construction of Keadby Wind Farm.

10.5.3. The skew bridge access was constructed to carry oversized turbine blades into the Keadby Wind Farm site. The angle of the skewed bridge means that any oversized loads are forced to travel to and from the west. The skew access would only be used, during the replacement of Mabey Bridge during the initial early phase works which will be completed ahead of the main construction works commencing.

10.5.4. The perpendicular access road crosses Hatfield Waste Drain over a private bridge (Mabey Bridge). The access road continues for circa 1km north towards the Stainforth and Keadby Canal, crossing the canal and existing Scunthorpe to Doncaster passenger railway line on the North Pilfrey Bridge (Network Rail asset number DOW/26AA at 17m 0550yds). The bridge was constructed in 2012 and has been used by construction vehicles during the construction of Keadby 2 Power Station. The access road then links to Bonnyhale Road and onwards towards the Proposed Development along existing private access roads. This would be the main route used during the construction and operation of the Proposed Development.

10.5.5. Abnormal Indivisible Loads (AIL) access is proposed via an existing offloading point (Waterborne Transport Offloading Area) at Railway Wharf on the River Trent. This route crosses a short section of the B1392 and then incorporates an existing temporary haul road that runs to the east of PD Port Services freight yard, through an agricultural field (owned by SSE). The route crosses over an existing outage car park and into the Keadby 1 Power Station site. Should it be required, small numbers of AIL may also use an alternative route, by road via Ealand and Bonnyhale Road.

10.5.6. The A18 continues westwards from the Site access to form a gyratory junction with the A161. The A161 is a single-carriageway link following a north-south alignment between J2 of the M180 and the A18 to the north. This section of the A161 is subject to the National Speed Limit and is rural in nature, with no footways provided on either side of the carriageway. The

M180 Junction 2 is a grade separated junction with priority arrangements from the off-slip roads.

10.5.7. The A18 continues to the west to join the M180 Junction 1 via the Tudworth roundabout.

10.5.8. To the east of the access to the Site, the A18 continues in an easterly direction where it meets the B1392. The A18 is subject to the National Speed Limit which reduces to a 40mph speed limit as the road bends towards the north and bypasses Althorpe. The speed limit reduces further to 30mph on the approach to the B1392.

10.5.9. The existing main access to Keadby Power Station is taken from the B1392, named Station Road, although this would not be used for access to the Site during construction or operation of the Proposed Development. This two lane single carriageway links the A18 at Keadby to the A161 at Eastoft. The road is subject to a 30mph speed limit within the village and to a distance of approximately 400m north of Keadby Power Station entrance, beyond which the National Speed Limit applies. Adjacent to the existing Keadby Power Station site entrance, it is approximately 5.5m in width. Footways are provided within the village, and the road is street lit.

10.5.10. The B1392 joins the A18 at a priority junction on the southern edge of Keadby, near Althorpe station. Left and right turning lanes are provided from the B1392, while a right turning lane from the A18 is also provided.

10.5.11. The A18 crosses the River Trent to the east of the junction with the B1392, via the King George V bridge. This bridge has footway on its northern side which is provided on a separate structure. There is a bend in the carriageway at the eastern end of the bridge before the road turns to the north. The speed limit increases from 30mph to 40mph near its junction with the B1216 Station Road. The A18 continues through the village of Gunness, and then continues east towards Scunthorpe, with the speed limit increasing to the National Speed Limit at the eastern edge of the village.

10.5.12. The A18 meets the M181 and A1077 at the Frodingham Grange roundabout junction on the western edge of Scunthorpe, before continuing into the town.

10.5.13. Chapel Lane runs to the east of the Site, from the B1392, and provides access to the rear entrance to Keadby 1 and Keadby 2 Power Station. This route will not be used by construction traffic or construction staff during construction of the Proposed Development, nor by operational staff accessing the Site during normal operations. However, Chapel Lane will provide a connection to the proposed Emergency Vehicle Access which

would only be utilised as a secondary point of access and egress for emergency vehicles and/ or pedestrians in the event of an emergency to and from the Main Site over a new private bridge. Chapel Lane is a single carriageway, which is subject to a 30mph speed limit in the residential area to the east and the National Speed Limit in the rural section to the west and south. In the residential area, the carriageway is approximately 5.8m wide, and on-street parking occurs along the northern side, which results in width for just one vehicle to pass at a time. In the rural section of the road approaching the Site, the width ranges between approximately 4.8m and 6.3m.

Existing Baseline Traffic Flows

10.5.14. The following highway links form the highway network of interest for this assessment:

- A18 to the west of the Site access;
- A161 between the A18 and the M180 Jct 2;
- A18 Station Road to the west of King George V Bridge;
- A18 High Levels Bank (east of Tudworth Roundabout); and
- A18 Doncaster Road (between the A18 Station Road and the Frodingham Grange Roundabout)

10.5.15. Baseline 24 hour annual average daily traffic (AADT) two-way link flows for the study area and are provided in **Table 10.8**.

Table 10.8: 2024 Baseline Traffic Flows (24-hour AADT)

Link	Link Description	Total Vehicles	Total HGVs
1	A18 (west of the Site access / existing access for Keadby 2 Power Station construction vehicles)	8,928	618
2	A161 (between the A18 and the M180 Jct 2)	6,479	668
3	A18 Station Road (to the west of King George V Bridge)	13,403	772
4	A18 High Levels Bank (east of Tudworth Roundabout)	7,335	774

Link	Link Description	Total Vehicles	Total HGVs
5	A18 Doncaster Road (between the A18 Station Road and the Frodingham Grange Roundabout)	12,469	587

Baseline Accident Record

10.5.16. Personal Injury Accident (PIA) data has been obtained from the Crashmap website for the five year period 2017 to 2019 and 2022 to 2023 (2020-2021 are excluded due to the abnormal traffic flow during Covid-19) for the study area, which includes the A18 from its junction with Tudworth Roundabout to its junction with Frodingham Grange Roundabout and the A161 to its junction with the M180. The study area also includes Junctions 1 and 2 of the M180 including slip roads.

10.5.17. There has been a total of 83 collisions within the analysed data for the study period which covers a distance of approximately 14 miles and data from 2017 to 2019 and 2022 to 2023. The period of 2020-2021 has been deliberately excluded due to Covid-19. Of these, the majority (58) were recorded as 'slight' in severity, with 21 recorded as 'serious' and two fatal accidents. The year-on-year trend for overall PIA occurrence is also relatively consistent. **Table 10.9** summarises the accidents that have occurred over the specific period.

Table 10.9: Summary of Recorded Accidents (2017 – 2019, 2022 – 2023)

Location	Accident Severity				
	Slight	Serious	Fatal	Total	HGV Involved
Frodingham Grange Roundabout	20	7	0	27	7
A18 (between Tudworth Roundabout & A18 / A161 Junction)	5	7	0	12	5
A18 (between A18 / B1392 and Frodingham	3	1	0	4	3

Location	Accident Severity				
	Slight	Serious	Fatal	Total	HGV Involved
Grange Roundabout)					
Tudworth Roundabout	5	2	0	7	3
A18 / A161 Junction	6	0	1	7	2
M180 Junction 2 (including slip roads)	6	2	0	8	0
A18 (between A18 / A161 and A18 / B1392)	3	0	0	3	1
M180 Junction 1 (including slip roads)	1	0	0	1	1
A18 / B1216 Junction	7	1	0	8	2
A161 (between M180 Junction 2 and A18)	6	2	0	8	5
M181/ A1077(M) Roundabout	2	0	1	3	0

10.5.18. No accidents occurred at the A18/ construction site access junction.

10.5.19. There were five accidents that occurred within the study area over the five year study period that involved a pedal cyclist. Four were of slight severity and three of serious severity. Of the four slight severity accidents, one

occurred at the A18/ A161 junction in 2017 and involved a rear-end shunt between a car and cyclist. It should be noted that improvements to the junction were undertaken in 2019 comprising junction priority changes. Of the remaining slight severity accidents, one occurred on the A18 south of the B1392 in 2018 and involved a car passing a cyclist on its offside, though there was no impact. One occurred on the A18 Station Road south of the B1216 in 2017 and involved a car turning left and colliding with a cyclist and one occurred at the A18/ B1216 junction in 2018 involving a car turning right at the junction and colliding with a pedal cyclist. The serious accident occurred on the A18 Doncaster Road in 2016 and involved a car rear-ending a cyclist. The other accident occurred at the Frodingham Grange Roundabout in 2018 and involved a cyclist rear-ending a car that was waiting to proceed.

10.5.20. There was one accident that occurred within the study area over the five year study period involving a pedestrian. The accident of serious severity occurred in 2017 at the Frodingham Grange Roundabout and involved a pedestrian crossing the carriageway and colliding with a car.

10.5.21. In summary, the cause of the majority of accidents within the study area was driver error due to lack of awareness or loss of control as opposed to any deficiencies on the road links or design of the junctions.

Future Baseline for Construction

10.5.22. It is currently anticipated that (subject to the necessary consents being granted and an investment decision being made), the earliest date that construction work would commence is around 2027.

10.5.23. The Applicant would appoint one or more EPC contractors for the construction of the Proposed Development. Additional contractors are likely to be appointed to early works (including the Mabey Bridge replacement) which would be undertaken over a circa 9 month period before the main works phase. Construction activities for the main works phase are expected to be completed within approximately three years, followed by commissioning.

10.5.24. As the Development Consent Order (DCO) could be valid for seven years after receipt and could be started at any time, it is necessary to derive a realistic worst-case future assessment year.

10.5.25. Baseline traffic flows on the road network are projected to increase year on year. For the purposes of this assessment and to represent a realistic worst-case scenario, a three and a half year build programme, with the early works phase (including Mabey Bridge replacement) starting in 2034 and ending in

Q3 2034; and the main construction works on the Site starting in Q4 2034 and ending in Q4 2037, peaking in 2036, is assumed for the purpose of this assessment.

10.5.26. Future year baseline traffic flows for the assessment year of 2036 for the peak of construction have been derived by applying the national standard programme Trip End Model Presentation Program (TEMPro) to derive traffic growth factors, as indicated in **Table 10.10**. These growth factors have been taken into account when comparing the baseline and future traffic scenarios.

Table 10.10: TEMPro traffic growth factors (average day)

Year	Growth Factor
2024 - 2036	1.0935
2022 – 2036	1.1012

10.5.27. Future year baseline traffic flows for the assessment year of 2036 peak of construction are presented in **Table 10.11**.

Table 10.11: 2036 Future Year Baseline Traffic Flows (24-hour AADT)

Link	Link Description	Total Vehicles	Total HGVs
1	A18 (west of the Site access/ existing construction site access for Keadby 2 Power Station)	9,763	676
2	A161 (between the A18 and the M180 Jct 2)	7,086	730
3	A18 Station Road (to the west of King George V Bridge)	14,657	844
4	A18 High Levels Bank (east of Tudworth Roundabout)	8,021	847
5	A18 Doncaster Road (between Station Road and Frodingham Grange Roundabout)	14,935	850

10.5.28. The assessment has had regard to the traffic generated by 'committed' developments, in accordance with the methodology for assessing potential cumulative effects with other schemes, as detailed in **ES Volume I Chapter**

21: Cumulative and Combined Effects (**Application Document Ref. 6.2**); as follows:

- EN010116 - Energy Recovery Facility (ERF) converting up to 650,000 tonnes per annum of Refuse Derived Fuel (RDF)
- EN010148 - Tween Bridge Solar Farm - The project will comprise the construction, operation, management and decommissioning of a ground mounted solar photovoltaic (PV) electricity generating facility exceeding 50 megawatt (MW) output capacity, together with associated works including substation, energy storage and green infrastructure.
- EN020034 - A proposal to reinforce the 400kV high voltage power network between North Humber and High Marnham
- PA/SCR/2021/8 - Moors Solar Farm – EIA screening request relating to a proposed 49.9MW solar farm (Culham Renewables - Moors Solar Farm).
- PA/SCR/2021/7 - Pilfrey Solar Farm – EIA screening request relating to a proposed 49.9MW solar farm (Lidsey Renewables Ltd – Pilfrey Solar Farm).
- PA/2024/123 - Scunthorpe Electric Arc Furnace - Hybrid application comprising full planning permission for the construction of a new electric arc furnace and compressor building and outline planning permission for ancillary plant buildings and structures up to a maximum height of 72m associated with the new electric arc furnace (scale, appearance, landscaping and layout reserved for subsequent consideration)
- EN0710003 - The Humber Carbon Capture Pipeline – an onshore underground CO2 pipeline and associated above ground infrastructure to transport captured carbon dioxide from emitters in the Humber region (to be selected by UK Government as part of the Carbon Capture Usage and Storage Cluster Sequencing process) from Drax (in North Yorkshire) to Easington on the coast (within East Riding of Yorkshire) to connect with a secure offshore storage in the North Sea (with the offshore storage and associated transportation pipeline subject to separate consent).

Table 10.12 Anticipated traffic flow of committed developments

Application number	Highway AM Peak Flow (veh)	Highway PM Peak Flow (veh)	Daily flow (veh)
EN010116	58	95	1,479, including 707 HGVs)

Application number	Highway AM Peak Flow (veh)	Highway PM Peak Flow (veh)	Daily flow (veh)
EN010148	No detailed assessment of the peak hour traffic impact is available in the public domain.		198 (two-way) including 57 HGVs
EN020034	No specific traffic flow details are available in the public domain. However, the PEI Report indicates that there would likely be no significant effects on the A18 (on routes to be used by the Proposed Development) or on the A161 (north of the M180 Junction 2).		
PA/SCR/2021/8	9	9	-
PA/SCR/2021/7	9	9	-
PA/2024/123	No significant change in traffic flow is predicted during construction and operation.		
EN0710003	No detailed assessment of the traffic impact is currently available in the public domain.		

10.5.29. The identified proposed developments in the vicinity of the Proposed Development could potentially result in cumulative impacts during its construction and operation as shown in **Table 10.12** . The effects have been considered in the Cumulative Effects Assessment in **ES Volume I Chapter 21**(**Application Document Ref. 6.2**).

Future Baseline for Operation (2038)

10.5.30. This section assesses the future baseline for operation in 2038.

Table 10.13: TEMPro traffic growth factors in 2038 (average day)

Year	Growth Factor
2024 - 2038	1.1032
2022 - 2038	1.1105

10.5.31. Future year baseline traffic flows for the assessment year of 2038 (the assumed latest year of opening) are presented in **Table 10.14**.

Table 10.14: 2038 Future Year Baseline Traffic Flows (24-hour AADT)

Link	Link Description	Total Vehicles	Total HGVs
1	A18 (west of the Site access/ existing construction site access for Keadby 2 Power Station)	9,850	682
2	A161 (between the A18 and the M180 Jct 2)	7,148	736
3	A18 Station Road (to the west of King George V Bridge)	14,786	852
4	A18 High Levels Bank (east of Tudworth Roundabout)	8,092	854
5	A18 Doncaster Road (between Station Road and Frodingham Grange Roundabout)	15,061	857

10.6. Development Design and Impact Avoidance

Construction

10.6.1. Traffic movements will be controlled during the Proposed Development construction phase in order to minimise potential impacts on the surrounding road network, namely construction HGV arriving or departing the Site would travel to/ from the west via the A18, A161 and onwards to the M180 Junction 2.

10.6.2. As with the construction of Keadby 2 Power Station, a TTRO is likely to be proposed by the appointed contractor(s) to reduce speed on the A18 in the vicinity of the Proposed Development access from the A18 during the construction phase. It is proposed that this will be secured at the appropriate

time, prior to construction works, with North Lincolnshire Council as highway authority.

10.6.3. In addition to the above, the Applicant would implement a range of good practice mitigation measures during the construction phase to minimise traffic impacts upon local highways, including:

- implementation of the CTMP which includes measures and procedures to encourage construction workers to adopt modes of transport which reduce reliance on single occupancy private car use. An **Outline CTMP** (**Application Document Ref. 7.5**) has been prepared and is included in the Application;
- liaison with the appointed contractor for the potential to implement construction worker minibuses and car sharing options (considered as part of the **Outline CTMP** (**Application Document Ref. 7.5**));
- The final CTMP to include measures to control the routing and impact of HGV on the local road network during construction. A routing plan will be provided in the final CTMP which HGV drivers would be required to adhere to. The CTMP would be secured by a Requirement of the **Draft DCO** (**Application Document Ref. 3.1**)**;** and
- working with contractors and suppliers to ensure that all relevant materials (including chemicals) bought to/removed from the Site that are classified as hazardous are transported in compliance with applicable regulations including the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG Regs) (as amended). This will include, for example:
  - consignments being marked with the familiar “Emergency Action Codes”; and
  - including a telephone number for advice in the event of an emergency.

Operation

10.6.4. Once the Proposed Development is operational, up to approximately 50 permanent operational roles would be created who will work shifts. Due to the very low traffic flows this would generate, and the proposed use of the new operational access off the A18, rather than via the existing Keadby

Power Station entrance, no additional impact avoidance measures are proposed.

10.6.5. Where chemicals and wastes transported to/ from the Site are deemed to be hazardous, they will be transported in fit for purpose vehicles and will comply with existing legal and regulatory duties. The regulation of hazardous loads is currently covered via the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) (United Nations, 2019). ADR sets out the requirements for the classification, packaging, labelling, and certification of dangerous goods. It also includes specific vehicle and tank requirements and other operational requirements. The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 apply ADR in Great Britain.

10.6.6. As described in paragraph 10.7.33, given the approximately 200 additional staff that could be on-site on any one day during an outage which may occur infrequently (once every 2-5 years) and be short-lived (approximately three months), no additional impact avoidance measures are considered necessary as both the HGV and staff vehicle numbers would be considerably lower than during construction. Section 10.7 further discusses the impact of the operational traffic.

Decommissioning

10.6.7. Decommissioning would be expected to require some traffic movements associated with the removal (and recycling, as appropriate) of material arising from demolition and potentially the import of materials for land restoration and re-instatement. To minimise the impacts of decommissioning upon local highways, it is anticipated that controls on traffic management would be secured via the Decommissioning Environmental Management Plan (DEMP) and a Decommissioning Traffic Management Plan (DTMP_) that would be prepared prior to demolition activities commencing. It is envisaged that the DEMP and DTMP would control the routing and impact of HGV. The DEMP and DTMP are secured by a Requirement of the **Draft DCO** (**Application Document Ref. 3.1**).

10.7. Likely Impacts and Effects

Construction

10.7.1. Access to and from the Site for all construction workers would be via the existing construction site entrance for Keadby 2 Power Station, located off the A18. Prior to the main construction works commencing, an Early Preparation Works phase including the replacement of Mabey Bridge and access road will be completed. (refer to **ES Volume I Chapter 5**:

Construction Programme and Management (**Application Document Ref. 6.2**).

10.7.2. It is currently anticipated that (subject to the necessary consents being granted and an investment decision being made), the earliest date that construction work would commence is around 2027 lasting 42 months (comprising 6 months Early Preparation Works and a 36 month main construction build). For the purposes of assessment, the latest construction start date of Q4 2034 has been considered for the main works phase, which it is anticipated would be preceded by an Early Preparation Works phase which include the Mabey Bridge replacement (Q1-Q3 2034). This provides a 'realistic' worst-case scenario for traffic assessment purposes.

10.7.3. It is expected that the construction workforce could peak at circa 1,050 workers per day in months 26-27.

10.7.4. Core construction working hours for the Proposed Development would be 07:00 to 19:00 Monday to Friday (except bank holidays) and 08:00 to 13:00 on Saturday. However, it is likely that some construction activities may need to be undertaken outside of these core working hours.

10.7.5. Where on-site works are to be conducted outside the core hours, they would comply with any restrictions agreed with the local planning authority, in particular regarding control of noise and traffic in accordance with the relevant Requirements which would be secured by the **Draft DCO** (**Application Document Ref. 3.1**). Any such work will be minimised and will be carefully managed to reduce effects on local people.

10.7.6. HGV deliveries would not be undertaken outside of core working hours, unless agreed with the local planning authority on a case by case basis.

10.7.7. Weekday construction worker shift is likely to generate approximately 450 vehicular trips (one-way) during the AM arrival and PM departure periods at the peak of construction.

10.7.8. HGVs delivering construction materials would access the Site from the existing Keadby 2 construction site entrance located off the A18, with all HGVs arriving and departing to/ from the west via the A18, A161 and onwards to the M180 Junction 2. The volume of HGV associated with construction of the Proposed Development on the network is predicted to be at its maximum of 828 daily two-way HGV movements (414 in and 414 out) during the initial Site Enabling and Preparation phase of construction following Mabey Bridge replacement works. This is associated with the potential cut and fill of the top layer of ground within the Site to improve the

geotechnical condition of the ground. The import and export of material will occur over a three month period during months 7 and 9 of the construction programme. During the remainder of the construction period HGV movements will vary with 120 daily two-way HGV movements (60 in and 60 out) from month 24 to month 35 of construction, 60 daily two-way HGV movements (30 in and 30 out) from months 9 to 23 and months 36 to 42 of construction and 10 daily two-way HGV movements (5 in and 5 out) from months 1 to 6 of construction.

10.7.9. Combining construction workforce vehicle movements with construction HGV movements over the entire construction programme shows the overall peak to occur in Months 26 and 27 when 1,020 two-way vehicle movements are anticipated (900 two-way car/ van movements and 120 two-way HGV movements per day).

10.7.10. A number of AIL movements are expected to be required during the construction programme associated with the delivery of large items of plant and equipment. The exact number and size/ weight is not known at this stage and is based on specific construction methodologies and will be confirmed at the detailed design stage, although estimated numbers and the duration of AIL deliveries have been made in **ES Volume I Chapter 5**: Construction Programme and Management (**Application Document Ref. 6.2**). However, it is expected that the proposed construction methodology will favour modularisation with preassembly off-site supplemented by on-site construction.

10.7.11. It is anticipated that delivery of AIL to the Site will use the same routes as those used for the delivery of AIL associated with the construction of Keadby 2 Power Station. It is expected that the largest abnormal loads will be received at the Port of Immingham and barged down the River Trent to the Waterborne Transport Offloading Area at Keadby Railway Wharf, which is included within the Site boundary (refer to **ES Volume III Figure 3.3:** Indicative Parts of the Site Plan (**Application Document Ref. 6.4**)). The components will then be transported to the Site crossing the B1392 onto the temporary haul road that runs to the east of PD Port Services. Traffic management in the form of Stop/ Go signs will be used to halt traffic along the B1392 in order to allow the abnormal loads to cross the B1392.

10.7.12. The smaller abnormal loads are expected to be transported by road from Immingham Dock via the M180 to Junction 2 and then from the A161 to the A18, entering the Site either via the existing construction access road off the A18 and passing over North Pilfrey Bridge, or utilising Bonnyhale Road via

Ealand; both these routes were used for the delivery of abnormal loads into the Keadby 2 construction project.

10.7.13. All three AIL routes are therefore already established route options and are considered suitable for the transportation purposes required.

10.7.14. Table 10.15 summarises the expected profile of construction phase peak traffic levels.

Table 10.15 Daily Construction Vehicle Profile (Peak Month of Construction)

Hour Beginning	Construction Worker Vehicles (Plant)		Construction HGVs	
	Arrival	Departure	Arrival	Departure
06:00	135	0	0	0
07:00	248	0	5	5
08:00	45	0	5	5
09:00	23	0	5	5
10:00	0	0	5	5
11:00	0	0	5	5
12:00	0	0	5	5
13:00	0	0	5	5
14:00	0	0	5	5
15:00	0	0	5	5
16:00	0	45	5	5
17:00	0	68	5	5
18:00	0	315	5	5
19:00	0	23	0	0
Total	**450**	**450**	**60**	**60**

10.7.15. **Table 10.16** summarises the likely changes in link flows within the study area for the assessment year 2036, peak of construction. HGV traffic has been assigned to the most direct route to the strategic road network which is the M180 Junction 2 via the A18 and the A161.

10.7.16. HGV routes to and from the Site are shown in **Plate 10.2**.

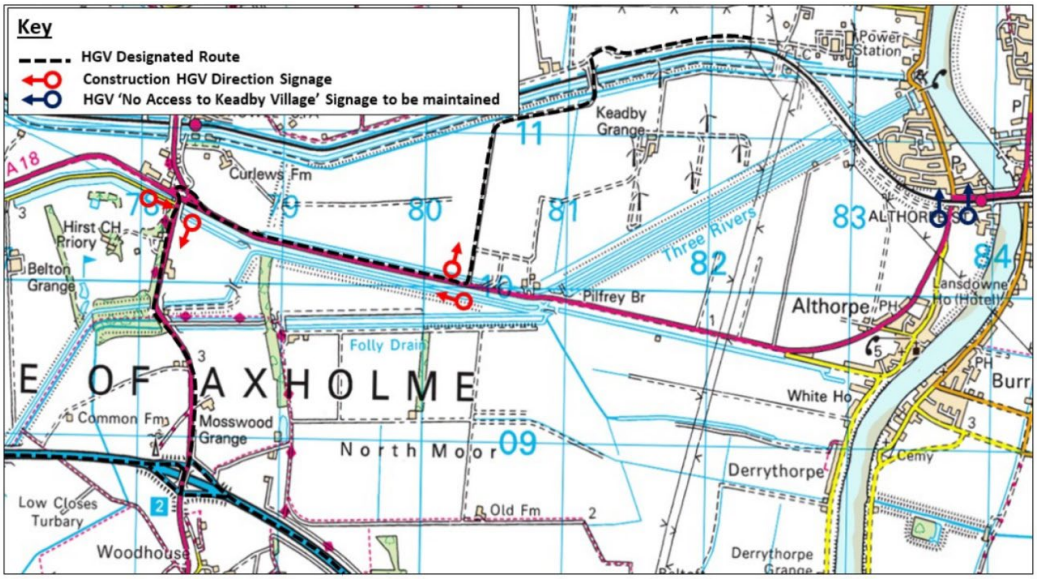

Plate 10.2: HGV Designated Route Plan (Proposed Development Construction)

10.7.17. The construction workers assignment has been based on the geographic split of population within a 45 minute drive-time of the Site.

Table 10.16 2036 Base + Peak of Construction Daily Two-Way Traffic Flows

Link No.	Link Description	Baseline Flow		Construction Traffic		Percentage Increase	
		Total veh.	Total HGV	Total veh.	Total HGV	Total veh.	Total HGV
1	A18 (west of the construction site access for Keadby 2)	9,763	676	753	120	7.7%	17.7%

Link No.	Link Description	Baseline Flow		Construction Traffic		Percentage Increase	
		Total veh.	Total HGV	Total veh.	Total HGV	Total veh.	Total HGV
2	A161 (between the A18 and the M180 Jct 2)	7,086	730	623	120	8.8%	16.4%
3	A18 Station Road (to the west of King George V Bridge)	14,657	844	267	0	1.8%	0.0%
4	A18 High Levels Bank (east of Tudworth Roundabout)	8,021	847	129	0	1.6%	0.0%
5	A18 Doncaster Road (between Station Road and Frodingham Grange Roundabout)	14,935	850	267	0	1.8%	0.0%

10.7.18. The additional traffic due to the Proposed Development construction activities will result in some increases in traffic flows including HGV on the roads leading to the Proposed Development.

10.7.19. In accordance with IEMA 2023 guidelines, only those sensitive links that show a greater than 10% increase in total traffic flows (or HGV component) or, for all other links, a greater than 30% increase in total traffic or the HGV component are considered when assessing the traffic impacts upon receptors. The assessment has been completed using the matrix provided in

Table 10.6 to assess the transportation effects associated with construction traffic at the peak of construction.

Severance

10.7.20. The predicted change in total traffic associated with Proposed Development construction activities is considerably less than 30% on each link road (very low impact). Therefore, the severance effect would be negligible (**not significant**).

Driver Delay

10.7.21. Driver delay will be considered in the Transport Statement to be submitted with the application. Previous studies in this area indicate that the driver delay effect of the Proposed Development is likely to be negligible (**not significant**).

Pedestrian delay

10.7.22. There will not be any change in walking, cycling and horse riding routes during the construction period. Therefore, the effect for pedestrian amenity would be negligible (**not significant**).

Non-motorised User Amenity

10.7.23. The change in total traffic (or HGV component) is considerably less than 50% on each link road (very low impact). Therefore, the effect for pedestrian amenity would be negligible (**not significant**).

Fear and Intimidation

10.7.24. Table 10.17 and Table 10.18 shows the fear and intimidation degree of hazard of accessed links in 2036 Baseline and 2036 With construction traffic respectively. All road links have a ‘Moderate’ level of fear and intimidation in both the Baseline and With construction traffic scenarios.

10.7.25. No change is anticipated in all links. Therefore, the effect on fear and intimidation would be negligible (**not significant**).

Table 10.17 2036 Baseline fear and intimidation degree of hazard

Link No.	Link Description	Average hourly traffic flow (18hr AAWT) (a)	Hazard Score	Total 18-hour heavy vehicle flow (b)	Hazard Score	Average vehicle speed (c)	Hazard Score	Total hazard score	Level of fear and intimidation
1	A18 (west of construction site access for Keadby 2)	554	0	646	0	52.3	30	30	Moderate
2	A161 (between the A18 and the M180 J2)	418	0	618	0	45.05	30	30	Moderate
3	A18 Station Road (west of King George V Bridge)	851	10	744	0	30.9	20	30	Moderate
4	A18 High Levels Bank (east of Tudworth Roundabout)	486	0	773	0	52.85	30	30	Moderate
5	A18 Doncaster Road (between Station Road and Frodingham Grange Roundabout)	785	10	514	0	38.2	20	30	Moderate

Table 10.18 2036 With construction traffic fear and intimidation degree of hazard

Link No.	Link Description	Average hourly traffic flow (18hr AAWT) (a)	Hazard Score	Total 18-hour heavy vehicle flow (b)	Hazard Score	Average vehicle speed (c)	Hazard Score	Total hazard score	Level of fear and intimidation
1	A18 (west of construction site access for Keadby 2)	596	0	766	0	52.3	30	30	Moderate
2	A161 (between the A18 and the M180 J2)	453	0	738	0	45.05	30	30	Moderate
3	A18 Station Road (west of King George V Bridge)	866	10	744	0	30.9	20	30	Moderate
4	A18 High Levels Bank (east of Tudworth Roundabout)	493	0	773	0	52.85	30	30	Moderate
5	A18 Doncaster Road (between Station Road and Frodingham Grange Roundabout)	800	10	514	0	38.2	20	30	Moderate

Road Safety

10.7.26. Accident data for the most recent five years available has been obtained for the study area and is summarised in Section 10.5. The statistics provide information on the location and severity of each PIA. Given that the level of increase in traffic flow resulting from the Proposed Development on road links is negligible, the effect on highway safety is considered negligible (**not significant**).

Road Safety Audits

10.7.27. No changes are being proposed to the public highway network, therefore there is no need for Road Safety Audits to be undertaken.

Hazardous/Large Loads

10.7.28. With regard to the delivery and removal of hazardous loads associated with the Proposed Development, IEMA (2023) guidelines) notes that some developments may involve the transportation of dangerous or hazardous loads by road and that, where this is likely to occur, an ES should clearly outline the estimated number and composition of such loads. Where the number of movements is considered to be significant, the assessment should include a risk or catastrophe analysis to illustrate the potential for an accident to happen and the likely effect of such an event. The extent of such analysis should clearly reflect the nature of the load being transported. For instance, much more detail is required for a development that involves the transportation of nuclear products than one that involves the delivery of petroleum, for example.

10.7.29. The full details for the expected hazardous substances and related quantities to be removed from the Site are not yet known but preliminary information has been compiled, and it is estimated that there would be up to approximately 200 HGV movements in total over the construction period to remove waste (land contaminated with heavy fuel oil) on average this is expected to be up to 10 HGV movements per day. On this basis, the number of movements is not considered to be significant against the assessment screening criteria and based on the baseline road traffic volumes on the primary route to Site, therefore no further assessment is required.

Compliance measures are outlined in Section 10.6 to ensure the appropriate carriage of hazardous goods to and from the Site.

Overview

10.7.30. In summary, the effects of Proposed Development construction traffic on all road links and junctions within the study area are considered to be negligible adverse, (**not significant**).

Opening and Operation

10.7.31. Once operational, up to approximately 50 permanent operational roles would be created. It is anticipated that staff would work a similar shift pattern to existing Keadby Power Station staff, likely working a two shift system 07:00 – 19:00 and 19:00 – 07:00. Administrative staff are anticipated to work an office-hour pattern between 08:30 and 18:00. Conservatively assuming a car occupancy of one, this could equate to an additional 50 cars accessing the Site per day (100 two-way vehicle movements).

10.7.32. There would also be additional HGV traffic of 15 HGVs per week generated by deliveries associated with day-to-day operations and maintenance of plan and/or equipment.

10.7.33. During a routine maintenance outage, it could be expected that up to 200 additional staff could be on-site on any one day. However, this kind of outage is expected to occur infrequently (once every 2-5 years) and are short-lived (approximately three months).

10.7.34. Fuel (hydrogen or natural gas) would be delivered by pipeline, therefore there would be no vehicular movements associated directly with the transport of gas to the Site.

10.7.35. **Table 10.19** summarises the expected profile of operational phase traffic levels.

Table 10.19 Daily Operational Vehicle Profile

Hour Beginning	Operational Worker Vehicles		Operational HGV	
	Arrival	Departure	Arrival	Departure
06:00	12	0	3	0
07:00	13	0	4	0
08:00	13	0	4	0

Hour Beginning	Operational Worker Vehicles		Operational HGV	
	Arrival	Departure	Arrival	Departure
09:00	12	0	3	0
10:00	0	0	0	0
11:00	0	0	0	0
12:00	0	0	0	0
13:00	0	0	0	0
14:00	0	0	0	0
15:00	0	0	0	0
16:00	0	12	0	3
17:00	0	13	0	4
18:00	0	13	0	4
19:00	0	12	0	3
Total	**50**	**50**	**15**	**15**

10.7.36. The route used by operational workers are not known at this stage. As such, to provide a busiest case assessment, it is assumed that all workers' route choices would simultaneously add trips to all the assessed road links. The HGVs will use the same routes that construction HGVs used (see **Table 10.20**). It is also assumed the 15 HGVs per week will access the Site on the same day for robustness.

Table 10.20 2038 Base + Operational Daily Two-Way Traffic Flows

Link No	Link Description	Baseline Flow		Operational Traffic		Percentage Increase	
		Total veh.	Total HGV	Total veh.	Total HGV	Total veh.	Total HGV
1	A18 (west of the construction site access for Keadby 2)	9,850	682	100	30	1.0%	4.4%
2	A161 (between the A18 and the M180 Jct 2)	7,148	736	100	30	1.4%	4.1%
3	A18 Station Road (to the west of King George V Bridge)	14,786	852	100	0	0.7%	0.0%

Link No	Link Description	Baseline Flow		Operational Traffic		Percentage Increase	
		Total veh.	Total HGV	Total veh.	Total HGV	Total veh.	Total HGV
4	A18 High Levels Bank (east of Tudworth Roundabout)	8,092	854	100	0	1.2%	0.0%
5	A18 Doncaster Road (between Station Road and Frodingham Grange Roundabout)	15,061	857	100	0	0.7%	0.0%

10.7.37. Traffic related to operational activities will result in some increase in traffic flows on the observed roads leading to the Proposed Development.

10.7.38. In accordance with IEMA 2023 guidelines, only those sensitive links that show a greater than 10% increase in total traffic flows (or HGV component) or, for all other links, a greater than 30% increase in total traffic (or the HGV component) are considered when assessing the traffic impacts upon receptors.

10.7.39. The assessment has been completed using the matrix provided in Table 10.6 to assess the transportation effects associated with operational traffic.

Severance

10.7.40. The predicted change in total traffic associated with Proposed Development operational activities is considerably less than 30% on each link road (very low impact). Therefore, the severance effect would be negligible (**not significant**).

Driver Delay

10.7.41. Driver delay has been considered in the Transport Statement submitted with the Application. This indicates that the driver delay effect of the Proposed Development is negligible (**not significant**).

Pedestrian delay

10.7.42. There will be no change in walking, cycling and horse riding routes during the operational period. Therefore, the effect for pedestrian amenity would be negligible (**not significant**).

Non-motorised User Amenity

10.7.43. The change in total traffic (or HGV component) is considerably less than 50% on each link road (very low impact). Therefore, the effect for pedestrian amenity would be negligible (**not significant**).

Fear and Intimidation

10.7.44. Table 10.21 and Table 10.22 shows the fear and intimidation degree of hazard of accessed links in 2038 Baseline and 2038 With operational traffic respectively. All road links have a ‘Moderate’ level of fear and intimidation in both the Baseline and With operational traffic scenarios.

10.7.45. No change is anticipated in all links. Therefore, the effect on fear and intimidation would be negligible (**not significant**).

Table 10.21 2038 Baseline fear and intimidation degree of hazard

Link No.	Link Description	Average hourly traffic flow (18hr AAWT) (a)	Hazard Score	Total 18-hour heavy vehicle flow (b)	Hazard Score	Average vehicle speed (c)	Hazard Score	Total hazard score	Level of fear and intimidation
1	A18 (west of construction site access for Keadby 2)	558	0	652	0	52.3	30	30	Moderate
2	A161 (between the A18 and the M180 J2)	421	0	624	0	45.05	30	30	Moderate
3	A18 Station Road (west of King George V Bridge)	857	10	751	0	30.9	20	30	Moderate
4	A18 High Levels Bank (east of Tudworth Roundabout)	490	0	780	0	52.85	30	30	Moderate
5	A18 Doncaster Road (between Station Road	792	10	519	0	38.2	20	30	Moderate

Link No.	Link Description	Average hourly traffic flow (18hr AAWT) (a)	Hazard Score	Total 18-hour heavy vehicle flow (b)	Hazard Score	Average vehicle speed (c)	Hazard Score	Total hazard score	Level of fear and intimidation
	and Frodingham Grange Roundabout)								

Table 10.22 2038 Operational fear and intimidation degree of hazard

Link No.	Link Description	Average hourly traffic flow (18hr AAWT) (a)	Hazard Score	Total 18-hour heavy vehicle flow (b)	Hazard Score	Average vehicle speed (c)	Hazard Score	Total hazard score	Level of fear and intimidation
1	A18 (west of construction site access for Keadby 2)	566	0	682	0	52.3	30	30	Moderate
2	A161 (between the A18 and the M180 J2)	428	0	654	0	45.05	30	30	Moderate

Link No.	Link Description	Average hourly traffic flow (18hr AAWT) (a)	Hazard Score	Total 18-hour heavy vehicle flow (b)	Hazard Score	Average vehicle speed (c)	Hazard Score	Total hazard score	Level of fear and intimidation
3	A18 Station Road (west of King George V Bridge)	865	10	751	0	30.9	20	30	Moderate
4	A18 High Levels Bank (east of Tudworth Roundabout)	497	0	780	0	52.85	30	30	Moderate
5	A18 Doncaster Road (between Station Road and Frodingham Grange Roundabout)	807	10	519	0	38.2	20	30	Moderate

Road Safety

10.7.46. Accident data for the most recent five years has been acquired for the study area and is summarised in Section 10.5. The statistics provide information on the location and severity of each Incident. Given that the level of increase in traffic flow resulting from the Proposed Development on road links is negligible, the effect on highway safety is considered to also be negligible (**not significant**).

Road Safety Audits

10.7.47. No changes are being proposed to the public highway network, therefore there is no need for Road Safety Audits to be undertaken.

10.7.48. Due to the very low traffic flows which would result once the Proposed Development is operational (for the purposes of this assessment, assumed to be 2038), the vehicle numbers generated would be considerably lower than experienced during the construction period. The overall effects during operation are therefore considered to be negligible adverse (**not significant**).

Decommissioning

10.7.49. The activities involved in the decommissioning process for the Proposed Development are not yet known in detail, as it has a design life of 25 years and an operational life that could extend longer than that. There would be expected to be some traffic movements associated with the removal (and recycling, as appropriate) of material arising from decommissioning and potentially the import of materials for land restoration and re-instatement. However, vehicle numbers are not expected to be higher than those experienced during the construction period.

10.7.50. Current baseline data collected for the purposes of this assessment would not be valid at the year of decommissioning (i.e. for the purposes of this assessment after circa 2055). However, as it is unlikely that baseline traffic figures on local roads would reduce appreciably over the next 25+ years, it is considered that the percentage increase in traffic due to decommissioning would be negligible and that overall, the effects of decommissioning traffic would be no greater than that of construction traffic. Effects are therefore assessed as likely to be **not significant**.

10.8. Mitigation, Monitoring and Enhancement Measures

10.8.1. No additional mitigation measures or enhancement measures other than those set out in Section 10.6 are considered necessary. However, the Contractor will review options for the use of waterborne transport when sourcing construction materials.

10.9. Limitations or Difficulties

10.9.1. Detailed construction information is not yet available as the construction contractor has not yet been appointed. Therefore, this assessment draws upon the experience and assessments undertaken for other similar projects. It is considered that the assumptions made have resulted in the assessment being robust.

10.10. Summary of Likely Significant Residual Effects

10.10.1. The additional traffic due to Proposed Development construction activities would result in small, temporary increases of traffic flows, including HGV, on the roads leading to the Site. In line with the significance criteria presented, the effects of construction traffic on all road sections and junctions are anticipated to be negligible and thus **not significant**. Notwithstanding this, a number of traffic management measures would be implemented during the Proposed Development construction phase to minimise traffic impacts upon the local road network (refer to Section 10.6).

10.10.2. The generation of traffic during Proposed Development operation would be minimal when compared to the construction phase. Therefore, Proposed Development operational phase traffic effects are also considered to be negligible and thus **not significant**.

10.10.3. The generation of traffic during the decommissioning phase is expected to involve traffic movements associated with the removal (and recycling, as appropriate) of material arising from demolition and potentially the import of materials for land restoration and re-instatement. However, the effects of decommissioning traffic would be no greater than that of the construction traffic and are, therefore, anticipated to be negligible and thus **not significant**. Notwithstanding, a DEMP and DTMP would be implemented during the decommissioning phase to control the impact and routing of HGV.

10.11. References

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