Connah's Quay Low Carbon Power

Environmental Statement Volume II
Chapter 10: Traffic and Transport

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Table of Contents

Plates

Tables

10. Traffic and Transport

10.1 Introduction

Overview

10.1.1 This chapter of the Environmental Statement (ES) presents an assessment of the likely significant environmental effects of the Connah's Quay Combined Cycle Gas Turbine (CCGT) fitted with Carbon Capture Plant (CCP) (hereafter referred to as the Proposed Development) with respect to Traffic and Transport during the construction, operation (including maintenance), and decommissioning phases of the Proposed Development.

10.1.2 This chapter is supported by the following figures (**EN010166/APP/6.3**):

- **Figure 3-3: Areas Described in the ES**; and
- **Figure 10-1: Local Highway Network**.

10.1.3 **Figure 3-3: Areas Described in the ES** (**EN010166/APP/6.3**) identifies the different components of the Order limits which are referenced throughout this chapter.

10.1.4 This chapter is supported by the following appendices in (**EN010166/APP/6.4**):

- **Appendix 1-A: Scoping Report**;
- **Appendix 1-B: Scoping Opinion**;
- **Appendix 2-B: Scoping Opinion Responses**;
- **Appendix 7-A: Legislative, Policy and Guidance Framework for Technical Topics**; and
- **Appendix 10-A**: **Transport Assessment**.

10.1.5 This chapter is supported by a Transport Assessment (TA), provided at **Appendix 10-A** (**EN010166/APP/6.4**). The TA considers relevant planning policy, a review of the existing situation, local collision analysis, the potential trip generation of the Proposed Development during construction, operation (including maintenance) and decommissioning, and the effects on the surrounding highway network. Whilst this chapter has been produced in accordance with Institute of Environmental Management and Assessment[1] (IEMA) Guidelines (Ref 10-1), the TA solely considers the potential traffic impact of the Proposed Development from a transport policy perspective and is produced to satisfy the requirements of the Local Highway Authority (LHA)

[1] The Institute of Environmental Management Assessment (IEMA) has changed its name to the Institute of Sustainability and Environmental Professionals (ISEP). Where general reference is made to the institute in this document, the following distinction has been made: ISEP (formerly IEMA). When referencing legacy IEMA documents, this distinction is not made.

and the North and Mid Wales Trunk Road Agent (NMWTRA), at the Development Consent Order (DCO) application stage.

Legislation, Policy and Guidance

10.1.6 Legislation, planning policy, and guidance relating to Traffic and Transport and pertinent to the Proposed Development are listed in **Table 10-1**. Further detail regarding these can be found in **Appendix 7-A: Legislative, Policy and Guidance Framework for Technical Topics** (**EN010166/APP/6.4**).

Table 10-1: Legislation, Planning Policy, and Guidance relating to Traffic and Transport

Type	Legislation, Policy and Guidance
Legislation	• Infrastructure Planning (Environmental Impact Assessment (EIA)) Regulations 2017 (Ref 10-2); • Well-being of Future Generations (Wales) Act 2015 (Ref 10-3); and • Active Travel (Wales) Act 2013 (Ref 10-4).
National Planning Policy	• The Overarching National Policy Statement (NPS) for Energy (EN-1) (Ref 10-5); • NPS for Natural Gas Electricity Generating Infrastructure (EN-2); (Ref 10-6) • The NPS for Natural Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) (Ref 10-7); • The NPS for Electricity Networks Infrastructure (EN-5) (Ref 10-8); • Planning Policy Wales (PPW) (Ref 10-9); • Wales Transport Strategy (2021) (Ref 10-10); and • Technical Advice Note 18: Transport, Welsh Government (2007) (Ref 10-11).
Local Planning Policy	• Flintshire County Council (FCC) Local Development Plan (LDP) (2015-2030) (Ref 10-12); and • North Wales Joint Local Transport Plan (LTP) 2015 (Ref 10-13).
National Guidance	• Institute of Environmental Management and Assessment (IEMA) Guidelines on: Environmental Assessment of Traffic and Movement, July 2023 (IEMA Guidelines (Traffic)) (Ref 10-1); and • Department for Transport, 2023; Transport Analysis Guidance (TAG) Unit M4 – Forecasting and Uncertainty (Ref 10-14).

10.2 Consultation and Scope of Assessment

Consultation

EIA Scoping Opinion

10.2.1 A request for an EIA Scoping Opinion was sought from the Secretary of State (SoS) through the Planning Inspectorate (PINS) in February 2024 as part of the EIA Scoping Process. The EIA Scoping Opinion was adopted on 20th March 2024 (**Appendix 1-B: Scoping Opinion** (**EN010166/APP/6.4**)).

10.2.2 Key issues raised in the Scoping Opinion are summarised and responded to in **Appendix 2-B: Matters Raised in the Scoping Opinion** (**EN010166/APP/6.4**). A summary of consultation undertaken in relation to the traffic and transport assessment through the Scoping process is provided in **Table 10-2.**

Statutory Consultation

10.2.1 **Table 10-3** provides a summary of the comments received during the Statutory Consultation process and how these have been addressed within the Application.

Targeted Consultation

10.2.2 Following Statutory Consultation changes were made to the heights of the proposed absorber and HRSG stacks and the Applicant undertook further targeted consultation. This consultation included a Supporting Information Report which detailed the environmental considerations associated with these changes. This Targeted Consultation was held between Thursday 8 May to Friday 6 June 2025. Responses to this targeted consultation are presented in the **Consultation Report (EN010152/APP/5.1**) and **Table 10-4** below outlines how and where these comments have been addressed within this chapter of the ES.

Additional Technical Engagement

10.2.3 A summary of consultation undertaken outside of the EIA Scoping process and Statutory Consultation in relation to the traffic and transport assessment is provided in and **Table 10-5**. Engagement undertaken to inform the Navigational Risk Assessment is summarised in **Appendix 5-B Framework Navigational Risk Assessment** (**EN010166/APP/6.4**) and is not replicated in **Table 10-4**.

Table 10-2: EIA Scoping Opinion Responses

Comment ID	Consultee	Comment	Response
3.3.1	PINS	"*[PINS] is content that the number of vehicle trips predicted for the 66 staff required at the site during operation and 14 HGV trips a day is unlikely to result in a significant effect. It is noted that this is predicted to increase to 230 AADT during years of maintenance. However, the Inspectorate, noting the response by NRW and recognising that there is the potential for in-combination / cumulative effects as a result of other Proposed Developments within the vicinity of the site, deem that further information is required on the likely cumulative effects before this matter can be scoped out for traffic movements. The Applicant is encouraged to discuss this and seek agreement from the relevant consultation bodies*."	This chapter has considered the cumulative effects of the operational phase of the Proposed Development, with reference to traffic data from surrounding committed developments, as set out at paragraph10.2.4. Details of these committed developments are included in Section 10.4 with the assessment provided in Section 10.6. An additional 'sensitivity test' has been undertaken during the construction phase scenario in order to assess the potential impact associated with a maintenance outage. The sensitivity test is presented in paragraphs 10.6.31 to 10.6.36. This methodology was shared with FCC during an engagement session, as detailed in **Table 10-5**.
3.3.2	PINS	"*[PINS] directs the Applicant to comments in ID 2.1.12 which should be addressed in the ES in relation to decommissioning and therefore does not agree to scope out this matter on the information provided.*"	It is generally assumed that the environmental effects associated with the decommissioning phase would be no worse than those experienced during construction. Therefore, whilst included within the scope of assessment, decommissioning is not anticipated to present any significant environmental effects beyond those assessed

Comment ID	Consultee	Comment	Response
			for the construction phase of the Proposed Development.
3.3.3	PINS	"*The Scoping Report notes the use of walkover surveys to inform the baseline, however it is not explained as to the purpose of these. There is no information provided in relation to traffic survey work to be undertaken although it is noted that traffic count data is listed under 'sources of information'. The baseline data collection methodology should be clearly set out in the ES and effort should be made to agree the approach with relevant consultation bodies.*"	Walkover surveys would be undertaken for the purpose of confirming baseline observations made by a desktop study. This is considered to be general practice and can help inform a greater understanding of the existing transport conditions surrounding the Proposed Development. Traffic Survey work was detailed within the 'Planned Surveys' section of the Traffic and Transport section of **Appendix 1-A: EIA Scoping Report** (**EN010166/APP/6.4**). This set out the proposed locations for traffic survey, based on the likely routeing of construction / operational traffic to and from the Proposed Development. A summary of the baseline conditions is provided in Section 10.4. This includes the Automatic Traffic Count (ATC) surveys undertaken between Thursday 14th March 2024 and Wednesday 20th March 2024 and a further survey period between Thursday 18th April 2024 to Wednesday 24th April 2024.
3.3.4	PINS	*"When determining an appropriate assessment year and the forecasting method, the Applicant is requested to consider and comment in the ES on any implications of the Transport Analysis Guidance (TAG) "TAG Unit M4 -*	Reference has been made to this guidance within Section 10.3 in defining the assessment methodology.

Comment ID	Consultee	Comment	Response
		Forecasting and Uncertainty" (published by the Department for Transport (DfT) in 2023) for and the latest Traffic Modelling Projections 2022."	
3.3.5	PINS	*"Whilst the policy and guidance section in the Scoping Report correctly references the Institute of Environmental Management and Assessment (IEMA) Guidelines for the Environmental Assessment of Traffic and Movement published in 2023, the assessment criteria list reflects that of IEMA's now superseded Guidelines for the Environmental Assessment of Road Traffic (1993). The assessment in the ES should use the latest guidance or provide commentary to justify why it has not been followed."*	The assessment presented in Section 10.6 is reflective of the latest IEMA Guidance (Ref 10-1), with reference to the assessment criteria list for each phase of development. Details of the assessment methodology are provided in Section 10.3, with appropriate guidance set out in **Table 10-1** and **Appendix 7-A: Legislative, Policy and Guidance Framework for Technical Topics** (**EN010166/APP/6.4**).
3.3.6	PINS	"*The ES should set out whether river transport could potentially be utilised in the construction and operation of the Proposed Development."*	This assessment assumes that river transport would be utilised during the construction phase to deliver Abnormal Indivisible Loads (AILs) to Port Mostyn, Ellesmere Port and / or Connah's Quay North. A **Navigation Risk Assessment** (**EN010166/APP/6.15**) has been prepared and is included as part of the Application
N/A	FCC	"*Planning/site constraints and opportunities:* *• Public Rights of Way within and surrounding the site"*	This is discussed within Section 10.4 and included within assessments within Section 10.6.

Comment ID	Consultee	Comment	Response
N/A	FCC	"*Two [Public Rights of Way (PRoW)] (66 & 67) form part of the network around Little Leadbrook Farm linking Leadbrook Drive to Allt Goch Lane which are affected by the proposed Repurposed CO_2 Connection Corridor. The Scoping Report Document (Reference 60717119) suggests that these two PRoW would be temporarily affected while the pipeline is repurposed. It is anticipated that one formal legal temporary closure (comprising both footpaths) would be required.* *There is no requirement to provide an alternative route while a route is temporarily closed but for routes of higher importance we would likely request alternatives so as to not detrimentally affect users.* *On-site management to minimise risks to users and potentially safeguard safe passage for pedestrians while keeping PRoW open would be welcome if it is achievable but this would depend on each site. Risk Assessments and methodology of working are sought for each specific PRoW affected if temporary closures were not to be pursued and on-site management sought.*"	The temporary impact upon PRoWs 66 and 67 during construction is considered in Section 10.6 (paragraphs 10.6.17 and 10.6.18). The temporary disruption would be mitigated by a temporary diversion for the duration of the construction period within the Proposed CO_2 Connection Corridor, with no permanent changes to the PRoWs occurring. As described in **Chapter 5: Construction Management and Programme** (**EN010166/APP/6.2.5**), there would be no works within the Repurposed CO_2 Connection corridor and as such there would be no impact on any PRoWs in this area.

Comment ID	Consultee	Comment	Response
N/A	FCC	"*With regard to Public Footpath 28 in Connah's Quay, this route has been partially obstructed by vegetation for many years. The route connects to Public Footpath No. 27 in Connah's Quay, which is shown crossing the Chester - Holyhead railway line. The status of both Public Footpath 27 & 28 have been subject to scrutiny in recent years and there is doubt over their physical existence (more so Public Footpath 27). The alignment of Public Footpath 28 doesn't appear to be affected necessarily by the Indicative Enhancement Area, however the proposal as a whole project represents an opportunity to improve the network at this location as part of a wider community benefit. We would welcome engagement from the applicant further on in the process to discuss this matter.*"	This point has been acknowledged and is discussed within Section 10.4. No works are proposed to Public Footpaths 27 and 28, or others which the Proposed Development does not directly impact.
N/A	FCC	"*The Council is satisfied that Scoping Report Document (Reference 60717119) covers the key issues relating to traffic and transport.* *The Council note the content of the Chapter 8 'Traffic and Transport' scope and consider that the information will provide for a robust assessment of the traffic and transport impacts associated with the construction phase of the proposed development.*"	The position of FCC on the scope of the Traffic and Transport assessment is acknowledged. The Applicant discussed these matters with FCC in January 2025 as detailed in **Table 10-5**.

Comment ID	Consultee	Comment	Response
N/A	Flint Town Council	*"Opportunities to improve active travel routes in the area in line with Flintshire County Council definitive map for active travel routes in the area."*	Walking and cycling route allocations and improvements, as identified by FCC as part of their obligations under the Active Travel (Wales) Act 2013, are presented and discussed, as relevant to the Proposed Development within Section 10.4.
N/A	Flint Town Council	*"Opportunities for innovative technologies zero carbon technologies for alternative fuels in the required vehicles as part of the construction phase to reduce the number of and impact of road haulage vehicles."*	Prior to construction of the Proposed Development, the Applicant would consider opportunities for zero/low emission construction/plant vehicles. This would include investigation of potential opportunities for alternative fuels in the required vehicles to reduce the impact of road haulage during the construction phase
N/A	Network Rail	"*During and post construction phase it is not clear whether transport or pedestrian routes will include those that cross a level crossing. Network Rail's position is that there shouldn't be any increase or change in usage to Level Crossings may require appropriate mitigation. The transport assessment should include an assessment of any level crossing used during the construction of the proposed development and future access routes to the site."*	Level crossings would not typically be used by vehicular or pedestrian traffic associated with the construction and operational phases of the Proposed Development. However, Abnormal Indivisible Loads (AILs) originating from the Port of Mostyn would be required to cross the level crossing at the entrance to the port as shown in **Figure 3-1: Order limits** (**EN010166/APP/6.3**).
N/A	Maritime & Coastguard Agency (MCA)	"*The MCA would expect that the impacts and effects in relation to shipping and navigation to be subject to further consideration by the*	Further engagement with the Harbour Master for the Dee Conservancy, the Harbour Master for Ellesmere Port and the Port of Mostyn has been undertaken. **A Navigational Risk**

Comment ID	Consultee	Comment	Response
		applicant, including effects of transportation of AIL by vessel to the Port. *It is our understanding that the site falls within the jurisdiction of a Statutory Harbour Authority (SHA) – Dee Conservancy. The SHA is responsible for maintaining the safety of navigation within their waters during the construction and the operational phase of the project.* *Therefore, the applicant should consult and work with the SHA to develop a robust Safety Management System (SMS) for the project in accordance with the Port Marine Safety Code (PMSC) and its associated Guide to Good Practice, to ensure that the risk and impact on other marine users are As Low As Reasonably Practicable (ALARP). Further local stakeholder engagement may also be required to determine the minimum acceptable provision and to determine the necessary risk mitigation measures for construction and operation of the project. From the Guide to Good Practice, section 7 Conservancy, a Harbour Authority has a duty to conserve the harbour so that it is fit for use as a port. The harbour authority also has a duty of reasonable care to see that the harbour is in a fit condition for a vessel to be*	**Assessment** (**EN010166/APP/6.15**) has subsequently been prepared and is included as part of the Application.

Comment ID	Consultee	Comment	Response
		able to use it safely. Section 7.8 Regulating harbour works covers this in more detail. *The MCA would expect no effects to be scoped out of the assessment with regards to shipping and navigation, pending the outcome of the discussion with the SHA and further stakeholder consultation."*	

Table 10-3: Statutory Consultee Responses

Consultee	Comment	Response
FCC	"*The submitted environmental statement will need to have regard for Planning Policy Wales (PPW) (edition 12, 2024) and any relevant legislation and guidance such as relevant Technical Advice Notes that is in force/adopted in Wales. Also the application should have regard to the respective and relevant policies within the Flintshire Local Development Plan (LDP) adopted by the Council on 24 January 2023.*"	Legislation, planning policy, and guidance relating to Traffic and Transport and which are pertinent to the Proposed Development are listed in **Table 10-1** and are inclusive of PPW, TAN 18, and the Flintshire LDP, as well as other relevant policy documents, legislation and guidance. Further detail regarding these can be found in **Appendix 7-A: Legislative, Policy and Guidance Framework for Technical Topics** (**EN010166/APP/6.4**).
FCC	*"The main access to the site will be derived from Kelsterton Road with an alternative access from the B5129. Mitigation is proposed through the submission of a Construction Traffic Management Plan together with a Construction Worker Management Plan.* *In terms of Abnormal Indivisible Loads (AIL's) it is suggested that an access could be created directly from the A548 with the reinstatement of former junction however the detail relating to its design is not available at this time.* *The Highway Authority must be notified in advance of all individual abnormal load movements. If there are any movement that require a special order due to their size/weight, then the haulier must provide the Authority with sufficient notice. If, following swept path analysis, the haulier identifies street furniture that will need to be removed on a temporary basis, risk and method statements mut be submitted to the*	This point is noted, the Applicant has been in further discussion with FCC regarding the creation of an access directly from the A548 to facilitate AIL movements as detailed in **Table 10-5**.

Consultee	Comment	Response
	Authority for approval. The County Council will not provide this service, therefore, the haulier will be required to appoint a fully accredited contractor to undertake this work. Pre and post movement highway conditions surveys will be required when movements take place under specific orders."	
FCC	*"The alignment of FP. 28 doesn't appear to be affected necessarily by the Indicative Enhancement Area, however the proposal as a whole project represents an opportunity to improve the network at this location as part of a wider community benefit. Engagement with regard to FP 28 is necessary which Uniper have some control over, but FP. 27 is outside of their site and a possible enhancement between FP. 28 and Kelsterton Road is also on third-party land."*	This point has been acknowledged and is discussed within Section 10.4. No works are currently proposed to any footpaths for which the Proposed Development does not directly impact.
Welsh Government Transport Division	*"Having reviewed the provided information, should the applicant decide to submit a full planning application in respect of the above, the Welsh Government would advise as follows:* *Once all (Abnormal Indivisible Load (AIL) routes are confirmed, where a route includes any part of the Strategic Road Network (SRN), the Welsh Government must be consulted and all necessary approvals secured prior to the commencement of any works on site.* *Where any such proposed route requires accommodation works to be undertaken on the SRN to accommodate the AIL, full details of the works and any non-compliant aspects regarding the Design Manual for Roads and Bridges must be submitted and approval gained during the planning process."*	The Applicant has prepared an AIL routing Study (Appendix A of the **Framework CTMP** (**EN010166/APP/6.6**)) to explore potential routes to the Main Development Area from the three identified ports. The **Framework CTMP** (**EN010166/APP/6.6**) identifies the requirement for a further assessment to be undertaken once the final details of AIL dimensions are available. During this process, should any works be identified on the SRN, the Welsh Government would be engaged.

Consultee	Comment	Response
DB Cargo	"*DB Cargo do not have any issue in principle with the development proposals to provide low carbon power generation within Connah's Quay.* *DB Cargo do however identify areas of potential concern during the construction phase associated with abnormal load movements and associated disruption to Weighbridge Road and access to their sidings site. Due to the limited information available in this respect at this stage the further information required so that DB Cargo can fully review their position has been detailed. In summary:* • *Details of number, size and frequency of AILs movements.* • *Details of the timing of AIL deliveries and what notice would be provided to local landholders/operators ahead of these movements taking place.* • *Details of any road closures that may be required.* • *Details of works that may be required along Weighbridge Road to facilitate the AIL movements that may impact its operation and availability to DB Cargo.* • *Details of how impacts will be minimised.* *Confirmation of any proposed direct engagement with local landowners/operators in terms of ensuring any Construction Management Plan takes fully into account the access requirements of local landowners/operators.* *It is confirmed that DB Cargo would be happy to provide any further information or clarification on any points or issues raised in this response should Uniper require. This is in*	The Applicant has prepared an AIL routing Study (Appendix A of the **Framework CTMP** (**EN010166/APP/6.6**)) to explore potential routes to the Main Development Area from the three identified ports. Routes from Ellesmere Port and Connah's Quay North would be required to use A548 Weighbridge Road and based on current AIL assumptions, no works would be required at this location. AILs from the Connah's Quay North jetty would additionally require to use Weighbridge Road through the Shotton site. The **Framework CTMP** (**EN010166/APP/6.6**) identifies the requirement for a further assessment to be undertaken once the final details of AIL dimensions are available. During this process, should any works be identified in the vicinity of Weighbridge Road DB Cargo would be engaged.

Consultee	Comment	Response
	particular with regards to how their sidings site operates and their access requirements. DB Cargo would also welcome early engagement in terms of any Construction Management Plan being prepared and would be keen to work proactively with Uniper to minimise potential for impact and disruption."	
Maritime & Coastguard Agency	"*The MCA notes in Chapter 2-17 that the Planning Inspectorate confirmed in its' Scoping Opinion of 20/3/24 that "the Proposed Development is unlikely to result in significant effects relating to shipping and navigation and therefore shipping and navigation can be scoped out". This is on the understanding that the applicant adheres to best practice methods and established procedures. However, this should be agreed in consultation with The Dee Conservancy and detailed further in the Environmental Statement (ES). It is our understanding that a "workshop that will be held with the Statutory Harbour Authority (Dee Conservancy for Port of Mostyn and Connah's Quay North; Manchester Ship Canal Company for Port of Ellesmere)". The outcome of this workshop is envisaged to be a high-level navigational risk assessment (NRA) which the MCA welcomes. This should include a range of potential project impacts on shipping and navigation and other marine users (including effects of transportation of AIL by vessel to the Port) which could occur during the construction, operation, and decommissioning phases of the project. This assessment will be used as evidence for the ES.* *In Section 2.4.9 of the PEIR, we note that "The Applicant proposes to undertake technical engagement to clarify the responsibilities for the safety of navigation in relation to the shipborne deliveries for the Proposed Development with*	Further engagement with the Harbor Master for the Dee Conservancy and the Port of Mostyn has been undertaken. An **Framework Navigational Risk Assessment** (**EN010166/APP/6.15**) has subsequently been prepared and is included with the Application.

Consultee	Comment	Response
	Natural Resources Wales (NRW) and Port of Mostyn, as it is understood that responsibility for safety of navigation in the Dee Conservancy is split between NRW (conservancy, harbour and local lighthouse authority) and Mostyn Docks Ltd (pilotage authority and statutory harbour authority for the Port of Mostyn". We trust that these discussions will be considered within the NRA going forward."	

Table 10-4: Targeted Consultation

Consultee	Summary of Comment	Response
Flint Town Council	**Mitigation, Monitoring, and Compensation**: The Council expects: • transparent, accountable mitigation strategies for all identified environmental risks—including noise and vibration (e.g., from pile driving) in relation to nearby Listed Buildings; and • clear summaries of these assessments for public understanding. Full details of compensation mechanisms available to adversely affected residents and businesses, including: • how compensation will be calculated; • who will administer the scheme; and • how the public will be made aware of it. Additionally, the Council requests: • clarification on how often the project's environmental performance will be reviewed; and • how local residents will be kept informed of those findings.	Details of all mitigation and monitoring proposed is included within the Commitments Register (**EN010166/APP/6.10**).

Table 10-5: Additional Relevant Engagement

Consultee	Date	Details
FCC	13/01/2025	Further and separate engagement was undertaken between AECOM and Highways representatives from Flintshire County Council on 13th January 2025. The purpose of the meeting was to outline the methodology of assessment, which was agreed through the Screening Opinion, has been incorporated. This included outlining HGV and light vehicle routeing

Consultee	Date	Details
		assumptions for construction / operational traffic, as well as discussing the identified impacts in relation to Traffic and Transport. The meeting confirmed agreement from Flintshire County Council on the approach taken to transport assessment and how this would be set out for consideration. Abnormal Indivisible Load (AIL) deliveries were discussed, and any available updates shared. It was agreed that following the Front End Engineering Design (FEED) stage these discussions would be progressed as necessary, through further consultations with the relevant information.
FCC	14/07/2025	Further and separate engagement was undertaken between AECOM and Highways representatives from Flintshire County Council on 14th July 2025. The purpose of the meeting was to provide a general project update and to then present the access strategy that has evolved following earlier meetings on TA methodology and initial AIL consideration. FCC noted that the Proposed Development option for access off the A548 for AIL vehicles offered good connection links which would limit the interventions require
National Highways	03/07/2025	Further correspondence has been from National Highways related to the **Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**) and potential impacts of the SRN. This included a series of questions which are replicated in **Table 10-6** along with responses provided by the Applicant.

Table 10-6: Response to National Highways

Reference	National Highways Comment	Applicant's Response
2-01	'*The TA should be prepared in accordance with the DfT Circular 01/2022, which sets out National Highways' policy for planning matters. This will ensure that the TA meets the requirements for a site that is proposed to generate a significant number of construction trips during the initial stages of the development and decommissioning*'	The TA prepared as part of the DCO Application has been prepared in accordance with this, and will include reference to the DfT Circular 01/2022, within Section 1.4 '*Legislation and Planning Policy Context*'
2-02	'*It would be beneficial to review the existing travel plan for the Connah's Quay Power Station site to provide context on current travel behaviours, access arrangements and any sustainable transport initiatives already in place. Additionally, if available any traffic data relating to the existing site should be provided in order to inform the baseline conditions*'	The proposals will result in a relatively low number of operational staff during normal operations, and therefore will not result in a material change to the scale of employees at Connah's Quay Power Station. With this in mind, the primary scope for Traffic and Transport will relate to the temporary construction phase, which will seek to minimise single-occupancy vehicle travel amongst construction workers. As such, a **Framework Construction Worker Travel Plan** (**CWTP**) (**EN010166/APP/6.7**) has been prepared and is included within the Application. Baseline traffic surveys have been undertaken on the local highway network surrounding the existing site, inclusive of Kelsterton Road which provides direct access to the existing Power Station. This has been set out within Section 1.2 of the **Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**).
2-03	'*The study area does not include the SRN. It is requested the Applicant extend their study area and provide further information on baseline conditions and the impact of the*	The study area set out in **Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**) is considered to be relative to the anticipated scale of daily traffic movements during the

Reference	National Highways Comment	Applicant's Response
	development on the SRN, specifically the A550, A494 and M56'	peak period of the temporary construction phase and has been informed by the baseline traffic surveys. At this stage, specific details of construction traffic routeing, beyond the extents set out, are not known. The routeing strategy for heavy vehicles is centered around use of the trunk road network, an appropriate approach, with vehicles exiting the site directly onto the A548. Light vehicles associated with construction worker traffic have been distributed onto the local highway network based on analysis of Census Journey to Work Data, which is an accepted industry methodology. The resulting impact of these combined vehicle trips on the A548 (to the east of Connah's Quay Power Station, and prior to the wider SRN) is shown within Section 1.6 of the **Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**) as 3% across a typical weekday. This level of impact is not considered to be of a magnitude that would dictate further assessment, nor is it associated with a permanent increase in traffic on the local or strategic road network. Rather, this assessment has considered a worst-case assessment of the peak period during the temporary construction phase of development. Furthermore, management measures in the form of a **Framework CWTP** (**EN010166/APP/6.7**) and **Framework CTMP** (**EN010166/APP/6.6**) have been prepared and submitted, in order to support the mitigation associated with these temporary traffic increases during the construction phase. Once a final contractor is appointed, and more specific logistical details are known, measures can be refined to

Reference	National Highways Comment	Applicant's Response
		ensure that both heavy vehicles and light vehicle trips do not have a material impact on the local or strategic road network.
2-04	'*It is agreed that walking, cycling and use of public transport would be viable for construction staff based in the local areas such as Connah's Quay and Shotton, however it is anticipated that the majority of staff would be travelling in from the wider area and are likely to use private cars or LGVs. Further information is requested on the assumed mode split.*'	Section 1.2 of the **Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**) demonstrates that there are realistic and viable opportunities for use of alternative travel modes (to the private vehicle) for construction workers travelling to the site from local areas. However, it is acknowledged that a number of construction worker trips may originate from outside of these areas, and, due to the scale of the project teams, will likely be located at designated hotels and B&B type facilities, for which it is proposed that minibus transport will be provided by the appointed contractor; this will be set out in the final CWTP(s). There is no further information to share on modal split as the contractor for the works has not been appointed and will prepare detailed versions of the CWTP and CTMP in line with the framework versions of these plans submitted as part of the Application. In recognition of this **Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**) has robustly assumed that all construction workers will travel to site through car modes, with an element of car sharing assumed, at 2.33 per vehicle. This is considered to be a reasonable assumption that doesn't account for local workers making use of the nearby opportunities for sustainable travel, nor does it allow for implementation of measures / travel incentives that will be included within the final CWTP(s).
2-05	'*The study area does not include the SRN. It is requested the Applicant extend their study area and provide further information on recorded personal injury collisions on the*	The study area set out is considered to be commensurate with the assessment study area, which is informed by the likely routeing of heavy vehicles and light vehicles during the

Reference	National Highways Comment	Applicant's Response
	SRN, specifically the A550, A494 and M56. It is also requested that the latest data is reviewed, noting 2023 data is now available on CrashMap'	construction and operational phases of development. The data used within the Preliminary Environmental Information Report was the most recently available data at that time. Notwithstanding this, the updated **Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**) and this chapter include 2023 data from CrashMap, which is acknowledged to have been made available since the production of the PEIR / Draft TA.
2-06	'*WSP note that changes to the scheme have been proposed since the writing of the Traffic and Transport Chapter of the ES and the Transport Assessment. Those changes are set out further in this report and clarity is sought on the impact of the changes to forecast trips generated by the operation, construction and decommission of the proposals*'	This is acknowledged, though the changes occurred after the preparation of the Preliminary Environmental Information Report, not the ES. The proposed scheme information and details available have informed us that changes are not forecast to affect the predicted trips generated during the construction, operation or decommissioning of the Proposed Development.
2-07	'*The current summary outlines the construction phasing and associated workforce estimates for the development of the Trains. Clarification is requested on whether the assessment also takes into account the demolition phase? Additional detail on the scope and timing of demolition works including potential need for AILs during this phase is requested*'	It can be confirmed that the forecasts for construction traffic generation are inclusive of the demolition of the existing gas treatment plant (GTP), existing GTP above-ground installation (AGI) and existing stores building, which would be undertaken over a six to nine-month period, during a site enabling works phase.
2-08	'*Construction worker trips are stated to be scheduled outside of weekday AM and PM peak periods, however it is considered likely that some trips would be made during these times. Further information is requested on the expected volumes of construction worker and HGV trips during weekday peak hours, specifically those that will use the SRN*'	Typical core construction working hours (08:00 to 18:00 hrs Monday to Friday and 08:00 to 13:00 hrs Saturday) would avoid construction workers travelling during the typical network weekday AM and PM peak periods. This is a typical approach and are secured through the **Framework CWTP** (**EN010166/APP/6.7**) and **Framework CTMP** (**EN010166/APP/6.6**). It is anticipated that HGV deliveries will be spread throughout the day to minimise impact on the local and strategic highway network.

Reference	National Highways Comment	Applicant's Response
		Construction traffic is calculated in a standard way per task and activity, this considered the average daily traffic and is not peak hour specific. HGVs are considered to be spread throughout the day and not required to attend specifically in peak hours. As set out above the early start and late finish hours will reduce the need for construction workers to travel during the network peak hours. Some of the measures that the contractor is likely to employ is local labour force and basing teams within local hotels and guest houses, given the impracticalities of travelling from far a field on a daily basis. As set out within Section 1.6 of **Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**), impact of combined vehicle trips on the A548 (to the east of existing Connah's Quay Power Station, and prior to the wider SRN) is shown to be 3% across a typical weekday. This level of impact is not considered to be of a magnitude that would dictate further assessment, particularly given that working hours dictate the majority of trips will take place outside of network AM and PM peak periods.
2-09	'*It is noted in the Section 2.16 that HGV traffic associated with the construction phase is expected to route 100% to the SRN via the A548 (East of Main Site). This routing strategy appears intended to minimise the impact of HGV movements on local roads. It is additionally noted that there is signage on the dumbbell roundabout indicating there is a low bridge on the B5129. This may render the route unsuitable for HGVs, please can the Applicant confirm if this constraint has been considered*'	This is acknowledged and has been considered in the current routeing assumption for HGVs, which avoids use of the B5129 and instead, sees heavy vehicles route directly from the A548 (East of Main Development Area), via the dumbbell roundabout, onto Kelsterton Road where access to the site is provided.

Reference	National Highways Comment	Applicant's Response
2-10	'*WSP request to be consulted upon the strategy for the movement of AILs including routes from Ports. Further information is requested on the expected volume, timing and vehicle types required to transport AILs*'	It can be confirmed that NH and their representatives will be formally informed and consulted on the AIL once the information and strategy is confirmed. The application considers the primary AIL routes options from three land side delivery points at Port of Mostyn, Connah's Quay North and Ellesmere Port. A formal process of liaison and communications between all relevant parties (appointed construction contractor, FCC, National Highways, Cheshire West and Chester Council and North and Mid Wales Trunk Road Agent) via a Local Liaison Committee will provide advance communication and authorisation of traffic management work and AIL delivery detail, with updates to be provided during the work, as appropriate. It is anticipated that up to 30 two-way (60 in total) AIL movements would be required during the construction period for each train of the Proposed Development. However, the exact number and size / weight of AILs would be determined at detailed design stage and would be based on specific construction methodologies that will be confirmed during this stage. Only AIL using from Ellesmere Port would use the SRN.
2-11	'*WSP agree that the impacts of the Scheme during operation are likely to be significantly lower than during construction. Therefore, the remainder of this review focusses on the construction impacts*'	Thank you for the confirmation and this is acknowledged.
2-12	'*WSP request to be consulted upon the development of the Framework Construction Traffic Management Plan. It is noted that at the peak of construction there are estimated to be over a thousand construction worker trips to the Site, therefore careful consideration will need to be given to the parking management strategy and use of other modes.*'	The **Framework CTMP** (**EN010166/APP/6.6**) contains appropriate detail relating to this. The appointed contractor would use this as a document to develop and submit a Detailed CTMP(s) to be agreed with the relevant Local Planning Authorities following consultation with the relevant highway authority. During the peak construction phase, there

Reference	National Highways Comment	Applicant's Response
		is estimated to be 1,374 two-way trips to site (comprised of 687 arrivals / 687 departures). It is proposed that sections of the car park would gradually be opened up as construction develops, with a defined number of construction worker car parking spaces to be provided during construction. Managing the number of parking spaces made available on-site would help to control the number of vehicles and promote sustainable transport options. It would be the responsibility of the CWTP and CTMP Co-ordinators, working closely with the Site Manager, to determine the number of spaces to be provided and supporting alternative measures. Car parking at the site would be monitored by the CWTP and CTMP Co-ordinators, with restricted access. The Site Manager and Co-ordinators would set the appropriate criteria for construction workers to receive a pre-allocated parking space.
2-13	'*WSP has considered the suggested routes to determine potential impacts on the Strategic Road Network (SRN). This review identified that the A548 (east of the Main Site access) and the B5129 could lead to use of the SRN, specifically the A550 and M56. Further information is requested from the Applicant relating to construction trips which will use the SRN. This should include consideration of peak hour trips as well as daily trips*'	Please refer to AECOM response to NH Comment (2-03), with reference to the chosen study area for assessment, and AECOM response to NH Comment (2-08), with reference to peak hour assessment.
2-14	'*It is noted that the Applicant has not used the most recent version of TEMPro (version 8.1). WSP recommends that the latest version be used to ensure consistency with current forecasting standards. Additionally, the Applicant should confirm that the 'motorway' road type has been selected*	This is acknowledged, and **Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**) reflects growth factors derived from the most up-to-date version of TEMPro. It would not be considered appropriate to use 'motorway' road types for any of the assessed study links, with reference to the

Reference	National Highways Comment	Applicant's Response
	when applying growth factors to the Strategic Road Network (SRN), particularly for routes such as the A550, A494, and M56. Further information is also requested on baseline flows along these SRN links'	reasoning provided in AECOM response to NH Comment (2-03). It is not considered to be commensurate with the forecasted level of temporary impact, during the construction phase, for an extended study area to be set out, beyond that which has already been assessed.
2-15	'*The rationale used to determine which committed developments were included or excluded from the future baseline assessment should be outlined, with reference to evidence considered. While the assessment includes a review of committed developments within the FCC area, it is recommended that the Applicant consults with CWaC to confirm whether there are any additional committed developments within their boundary that may have an impact, and should be considered*'	**Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**) sets out an expanded consideration of committed development, in line with the long and short-lists identified for the wider project, which were prepared, reviewed and considered for inclusion depending upon a number of criteria, as set out in further detail within **Chapter 24: Cumulative & Combined Effects** (**EN010166/APP/6.2.24**). It can be confirmed that the consideration of committed development has included all schemes within a 15 km distance of the Main Development Area, with proposed schemes included / discounted based on the level of information provided, extent of assessment study area, and forecasted years of traffic generation. **Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**) provides this information for review.
2-16	'*The over-arching principals of the assessment are agreed, including the consideration of the worst case Single Phase approach to construction. Further information is requested on the assumed mode split and vehicle occupancy for construction workers*'	This is acknowledged. With regard to construction worker travel modes, please see AECOM response to NH Comment (2-04).

Reference	National Highways Comment	Applicant's Response
2-17	'*Based on the forecast increase in traffic, it is not expected that these traffic volumes would have a significant impact on the operation of the SRN*'	This is acknowledged.
2-18	'*The assumption that 100% of HGVs are assigned to the A546 East is agreed however further information is requested on the anticipated volumes of HGVs using the SRN, specifically the A550, A494 and M56*'	As set out in AECOM response to NH Comment (2-03), specific details of construction traffic routeing, beyond the extents set out, are not known. The routeing strategy for heavy vehicles is centered around use of the trunk road network, which is an appropriate approach, with vehicles exiting the site directly onto the A548. The resulting impact of these combined vehicle trips on the A548 (to the east of existing Connah's Quay Power Station, and prior to the wider SRN) is shown within Section 1.6 of **Appendix 10-A: Transport Assessment** (**EN010166/APP/6.4**) as 3% across a typical weekday. This level of impact is not considered to be of a magnitude that would dictate further assessment, nor is it associated with a permanent increase in traffic on the local or strategic road network.
2-19	'*Further information is requested on the anticipated volumes of construction worker trips using the SRN, specifically the A550, A494 and M56. Given the specialist nature of the construction activities, WSP requests that the Applicant provide more detailed, site-specific information on the likely residential locations of the construction workforce. This should include consideration of whether a significant proportion of workers may be travelling from areas within England, which could result in greater reliance on the SRN and potentially influence traffic impacts beyond the immediate local network*'	The extent of predicted construction worker trips has been distributed onto the local highway network based on analysis of Census Journey to Work data, which is considered to be an appropriate and typical use methodology. At this stage, further details regarding the specific locations of construction workers are not known, until a contractor is appointed. With regard to construction worker impact on the SRN, the impact assessment of the construction phase indicates that 21% of light vehicle trips could be routed to / from the A548 (East of Main Site) towards the wider SRN. Applied across a

Reference	National Highways Comment	Applicant's Response
		typical weekday, this equates to 290 additional daily two-way trips. Against a future year 2034 baseline two-way flow of 16,251 total vehicles, this would equate to an increase of 2%, which is not considered to be material in terms of traffic impact, and furthermore, would only occur during a temporary period of construction.
3-01	'*Chapter 10 follows a standard approach based on IEMA Guidelines and references much of the same data as the Transport Assessment. The effects considered most likely to be relevant to the SRN are driver delay, road user and pedestrian safety and hazardous loads*'	Thank you for the confirmation, this is acknowledged
3-02	'*WSP agree that the traffic and transport impacts during the operational phase are likely to be minimal. WSP request to be consulted upon the development of the Framework Construction Traffic Management Plan and Construction Worker Management Plan.*'	This is acknowledged and these will form part of the DCO submission to enable consultation. Please also refer to AECOM response to NH Comment (2-12) for more details in relation to **Framework CWTP** (**EN010166/APP/6.7**) and **Framework CTMP** (**EN010166/APP/6.6**) consultation.
3-03	'*Further information is requested on the baseline conditions and expected construction traffic that may use the SRN, both in terms of daily flows and peak hour flows before a conclusion can be drawn on likely driver delay impacts*'	Please refer to AECOM response to NH Comment (2-03), with reference to the chosen study area for assessment, and AECOM response to NH Comment (2-08), with reference to peak hour assessment. The operational (permanent) impacts of the Proposed Development have been acknowledged to be minimal, and therefore it is not considered that an assessment of driver delay impacts would be appropriate. The construction traffic impact will be temporary and will include management measures to ensure impact on the network peak hours and driver delay is not a significant issue.

Reference	National Highways Comment	Applicant's Response
		Temporary construction traffic is typically not assessed in the same way as permanent traffic in terms of capacity assessment and is instead managed and controlled through measures which are agreed with stakeholders.
3-04	'*The study area should be extended to include the Strategic Road Network (SRN), specifically the A550, A494, and M56, to ensure that safety considerations for all users are assessed comprehensively across the full extent of the affected network. This assessment should be based on latest available data, noting CrashMap now includes 2023 data*'	Please refer to detailed AECOM response to NH Comment (2-05).
3-05	'*WSP request to be consulted upon the strategy for the movement of AILs including routes from Ports. Further information is requested on the expected volume, timing and vehicle types required to transport AILs*'	This is acknowledged, please refer to AECOM response to NH Comment (2-10). This sets out when the appropriate time for obtaining and sharing this information may be.
4-01	'*WSP understands that National Highways were not consulted through formal channels in 2024*'	Statutory consultation on the Proposed Development was undertaken between October and November 2024. As part of that consultation, the Applicant issued letters to all relevant statutory consultees, including National Highways, by first-class post on 3 October 2024, ahead of the consultation launch date of 8 October. A copy of this letter has previously been provided to National Highways via email on the 10 June 2025.
4-02	'*The Newsletter does not set out the potential impact on trips associated with the Construction or Operation Phases of changes*'	The newsletter was published to support the non-statutory targeted consultation on the proposed stack height increase. As set out in AECOM response to (2-06), the proposed scheme information and details available have informed us that changes are not forecast to affect the predicted trips generated during the construction, operation or decommissioning of the Proposed Development.

Reference	National Highways Comment	Applicant's Response
4-03	'*Again, the Newsletter does not set out any potential impacts to vehicular movements during the construction and operation phases*'	Please refer to AECOM response to NH Comment (4-02) and (2-06).
5-01	'*WSP request sight of the evidence base behind that assumption*'	Through increasing the stack heights to 150 m the twin absorber variant was removed, meaning the maximum number of stacks was reduced from eight to four. This effectively reduced overall trips expected during construction and thus maintaining the numbers used in the assessment can be considered a worst case scenario The changes to the Proposed Development as described during the targeted consultation would not have a material impact on trips to require further assessment.

Scope of the Assessment

10.2.4 Following the scoping process that has been undertaken, the scope of the assessment considered in this chapter of the ES is as follows:

- *Construction* - The construction phase would give rise to an increase in Heavy Goods Vehicles (HGV) (for deliveries) and light vehicle (construction staff) movements on the highway network. The scope of assessment does not include consideration of impacts arising from the use of water transport (i.e. shipping and navigation). This was agreed to be scoped out of the assessment, however, as is explained in further detail at Section 2.6 of **Chapter 2: Assessment Methodology** (**EN010166/APP/6.2.2**) following engagement with the relevant harbour masters a **Navigational Risk Assessment** ((**EN010166/APP/6.15**) has been prepared. The following impacts are considered within the construction phase assessment:
  - The impacts of a temporary increase in traffic during construction;
  - The impacts on PRoW during construction;
  - The impacts relating to Abnormal Indivisible Loads (AILs) and the associated Accommodation Works Areas; and
  - The in-combination / cumulative effects arising as a result of other committed developments within the vicinity of the Proposed Development, as listed at paragraph 10.4.19.
- *Operation* - Due to the nature of the Proposed Development, there would be minimal impacts attributed to the operational traffic once the Proposed Development is built. This chapter does, however, include an assessment of operational traffic impact, albeit there are no significant effects identified. The assessment includes consideration of in-combination / cumulative effects arising as a result of other committed developments within the vicinity of the Proposed Development, as listed at paragraph 10.4.19; and
- *Decommissioning* - The emerging policy and needed changes to vehicle use in the United Kingdom (UK) could provide a very different landscape for assessment in 30 years' time. At the end of its operating life, the most likely scenario is that the Proposed Development would be shut down and all above ground structures would be removed, and the ground remediated as required to facilitate future re-use. Traffic impacts which could arise during the decommissioning phase of the Proposed Development are likely to be similar or less than impacts during the construction phase, which are considered in Section 10.6.

10.3 Assessment Methodology

Rochdale Envelope

10.3.1 The setting of design parameters using the 'Rochdale Envelope' approach is described in **Chapter 2: Assessment Methodology** (**EN010166/APP/6.2.2**). The maximum parameters for the principal components of the Proposed Development are set out in the **Design Principles Document** (**EN010166/APP/7.8**) and are illustrated on the **Works Plans**

(**EN010166/APP/2.4**) and the **Parameter Plans** (**EN010166/APP/2.5**). These parameters, together with assumptions regarding the future plans for the existing Connah's Quay Power Station set out in **Chapter 2: Assessment Methodology** (**EN010166/APP/6.2.2**) have been used to inform the representative worst-case scenario that has been assessed in this chapter, in order to provide a robust assessment of the impacts and likely significance of environmental effects of the Proposed Development at its current stage of design.

10.3.2 In particular, focused use of the Rochdale Envelope has been adopted with regard to the forecasted levels of construction traffic generation.

10.3.3 Using Rochdale Envelope principles, the assessment of the impact of the temporary construction phase covers the expected construction programme, working hours and days; potential methods of construction, the resulting broad quantities of materials required, and anticipated labour resourcing; a works phasing strategy with a view to understanding what materials would be required and when, and the number of resulting deliveries throughout the temporary construction period, including consideration of:

- type, size, frequency and number of construction vehicles;
- construction workforce transport arrangements – to include assumptions on the number of staff and shift patterns and modes of travel; and
- construction traffic access strategy, in order that routes to the Main Development Area (and other Site elements) can be determined.

10.3.4 Forecasts for construction trip generation have been informed by the expected construction programme. This includes the anticipated average and peak activity daily totals for HGV associated with construction deliveries, as well as average and peak activity daily totals for light vehicles, inclusive of cars / Light Goods Vehicles (LGV), associated with construction workers attending the Main Development Area.

10.3.5 The Proposed Development would include up to two new integrated power generation and carbon capture 'Trains' with a combined net electrical output capacity of up to a likely maximum of 1,380 MWe. Each Train comprises the assets required within the Main Development Area for the CCGT plant with CCP to operate, including supporting buildings, structures, infrastructure, and staff facilities; collectively, these assets form the 'Connah's Quay Low Carbon Power (CQLCP) Abated Generating Station'.

10.3.6 If the trains were to be constructed in a phased construction approach, there is forecast to be a daily maximum of approximately 1,000 construction workers during the peak of construction activity. If a simultaneous construction approach is undertaken, whereby both trains are constructed concurrently, this could result in a daily maximum of approximately 1,600 workers.

10.3.7 **Table 10-7** sets out the estimated peak daily construction vehicle trip generation for each potential type of construction approach (i.e. phased construction or simultaneous construction). As set out in Table 2-1 of **Chapter 2: Assessment Methodology** (**EN010166/APP/6.2.2**), a phased construction approach would comprise construction of Train 1 over a four year duration from 2026. On completion, this would then be followed by

construction of Train 2 from 2031 over four years to 2035. For a simultaneous construction approach, the Applicant may commence construction later than for phased construction, following the grant of a DCO and a financial investment decision. Therefore, the simultaneous construction scenario assumes the latest possible commencement for construction, which could occur a maximum of five years after DCO Consent.

Table 10-7: Estimated Peak Daily Construction Vehicle Trip Generation

Construction Scenario	Construction Duration	Peak Construction Year	Daily HGV Movements (Two-Way)	Daily Light Vehicle Movements (Two-Way)	Total Daily Vehicle Movements (Two-Way)
Phased Construction (Trains 1 & 2 separate)	2026-2030 (Train 1) & 2031-2035 (Train 2)	2027 (month 18)	200	816	1,016
Simultaneous Construction (Trains 1 & 2 concurrent) – 5 Years Post-Consent	2031-2036	2034 (month 36)	240	1,374	1,614

10.3.8 **Table 10-7** indicates that during the peak time of construction (approximately 18 months into the construction programme), if a Phased Construction approach was adopted there could be a typical daily maximum of around 1,016 vehicle movements to / from the Main Development Area including 200 HGV movements and 816 light vehicle movements. If a simultaneous construction approach is adopted there could be a typical daily maximum of around 1,614 vehicle movements to / from the Main Development Areaincluding 240 HGV movements and 1,374 light vehicle movements. HGV movements would be spread over a full working day. It is anticipated that typical core construction working hours (08:00 to 18:00 hrs Monday to Friday (except bank holidays) and 08:00 to 13:00 hrs on Saturdays) are likely to be used to avoid construction workers travelling during the AM and PM peak periods.

10.3.9 In order to ensure a worst-case analysis, the assessment of the construction phase has been undertaken based on a simultaneous construction approach, with construction assumed to commence at the latest possible date, following DCO Consent, this being towards the end of 2031. In this scenario, the peak construction activity of HGVs and light vehicles (i.e. total vehicles) has been forecast to occur in month 36, during 2034. Main Development AreaThis is in line with guidance provided within Section 1.2 of the Transport Analysis Guidance (TAG) "TAG Unit M4 – Forecasting and Uncertainty" (Ref 10-14) published by the DfT.

10.3.10 As set out in Section 10.6 of this chapter, traffic impacts which could arise during the decommissioning phase of the Proposed Development are likely to be similar to or less than the impacts that are forecast to occur during the construction phase, informed by the construction phase assessment.

10.3.11 Operation of the Proposed Development is anticipated to create approximately 56 permanent operational roles for Train 1 and a total of approximately 66 permanent operational roles once both Trains are operational. Temporary and contractor employees associated with maintenance activities would also be employed, as required. Plant operative staff would typically work on a regular shift pattern.The assessment of the operational phase has been based on a scenario where both Trains are built and a higher number of permanent roles are undertaken. Staff would be required on a shift basis to be spread over a 24-hour period.

10.3.12 It is anticipated that during the operational phase of the Proposed Development, total HGV movements would be up to 35 in and 35 out per week (i.e. an average of up to six in and six out per day based on a typical six-day week for deliveries).

10.3.13 During planned maintenance outages, which are likely to occur approximately once every four years (per Train), it is envisaged that there could be approximately 300 additional temporary contractors / maintenance workers within the CQLCP Abated Generating Station and/or Maintenance Laydown Area, for a period of approximately two months. It is anticipated that similar or equivalent practices to reduce traffic associated with staff during construction would also be applied for maintenance workers during operation and specified in a worker travel plan for operation or similar management plan. With such practices in place, it is anticipated that this

could equate to up to an additional 498 vehicle movements (i.e. 249 vehicles in/ out accessing the CQLCP Abated Generating Station and/or Maintenance Laydown Area) per day for approximately two months every four years (per Train).

10.3.14 The above scenario has been assessed as part of a sensitivity test, included within Section 10.6 of this chapter.

Assessment Criteria

10.3.15 The assessment of traffic impacts has been carried out in accordance with the IEMA Guidelines (Traffic) (Ref 10-1).

10.3.16 The IEMA Guidelines (Traffic) identify a number of environmental effects, including:

- severance;
- pedestrian amenity;
- fear and intimidation;
- road user and pedestrian safety;
- hazardous loads; and
- driver delay.

10.3.17 The IEMA Guidelines (Traffic) suggests two rules which can be used to identify the appropriate extent of the assessment area, as follows:

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

10.3.18 Effects are classified by the interaction of the sensitivity of receptor and the magnitude of change.

10.3.19 Paragraph 1.30 of the IEMA Guidelines (Traffic) defines sensitive locations as receptors that are sensitive to traffic, which could include, but are not limited to: schools, hospitals, places of worship and historical buildings. **Table 10-8** shows the types of receptors which fall into the different categories of sensitivity based on the potential impact of increases in traffic flows, as set out in the IEMA Guidelines (Traffic).

Table 10-8: Sensitivity of Receptors

Sensitivity	Definition
High	Receptors of greatest sensitivity to traffic flow: schools, colleges, playgrounds, accident blackspots, retirement homes, urban/residential roads without footways that are used by pedestrians.
Medium	Traffic flow sensitive receptors including: congested junctions, doctor's surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, un-segregated cycleways, community centres, parks, recreation facilities.

Sensitivity	Definition
Low	Receptors with some sensitivity to traffic flow: places of worship, public open space, nature conservation areas, listed buildings, tourist attractions and residential areas with adequate footway provision.
Negligible	Receptors with low sensitivity to traffic flows and those sufficiently distanced from affected roads and junctions.

10.3.20 Potential traffic impacts are considered to be of high, medium, low or very low magnitude. The magnitude of traffic impacts is defined in **Table 10-9**, and the criteria for fear and intimidation has been amended to reflect the use of the IEMA Guidelines (Traffic) (Ref 10-1).

Table 10-9: Magnitude of Impact

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 61% to 90%	Change in total traffic flow of >90%
Pedestrian amenity	Changes in traffic flow (or HGV component) less than 50%	Changes in traffic flow (or HGV componen t) of 50% to 100%	Changes in traffic flow (or HGV component) of 101% to 150%	Change in traffic flow (or HGV component) of >150%
Fear and intimidation	No change in step changes	One step change in level, with <400 vehicle increase in average 18hr all vehicle (AV) two-way all vehicle flow; and/or <500 heavy vehicle (HV) increase in	One step change in 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 level	Two step changes in level

Type of Impact	Magnitude of Impact			
	Very Low	Low	Medium	High
		total 18hr HV flow		
Highway safety	Magnitude of impact derived using professional judgment informed by the frequency and severity of recorded collisions within the study area and the forecast increase in traffic.			
Hazardous / Large Loads	Magnitude of impact derived using professional judgment informed by the frequency and routeing of hazardous loads within the study area and the forecast increase in traffic.			
Driver delay	Magnitude of impact derived using professional judgment informed by the increase in vehicle delay and whether a junction is at, or close to capacity.			

10.3.21 The magnitude of change and the sensitivity of the receptor has been compared to determine the classification of the effect as per IEMA Guidelines (Traffic). This has been conducted in line with the classification of effects matrix provided below in **Table 10-10.**

Table 10-10: Classification of Effects Matrix

Sensitivity of Receptor	Magnitude of Impact			
	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

10.3.22 Following the classification of effects, a clear statement is made as to whether any effects are likely to be 'significant' or 'not significant'.

Assessment Assumptions and Limitations

10.3.23 For the purposes of the assessment, the construction phase includes the enabling and demolition works required to facilitate the Proposed Development outlined in **Chapter 4: The Proposed Development** (**EN010166/APP/6.2.4**).

10.3.24 At this stage, available information regarding the construction and operational phases of the Proposed Development are commensurate with the application status. As is typical practice, a series of assumptions have been made in order to be able to conduct a robust and realistic worst-case assessment of the likely impacts of the Proposed Development on traffic and transport.

10.3.25 The assumptions used to inform the assessment are based on professional industry practice, site-specific evidence and data (where possible), and professional judgement and experience. Assumptions have been made in regard to the following:

- identification of estimated construction and operational trip generation and distribution. The assessment of the construction phase has been undertaken based on a Simultaneous Construction approach (worst-case scenario), with construction assumed to commence at the latest possible date, following DCO Consent, this being towards the end of 2031;
- derivation of future year traffic flow scenarios, as set out in paragraph 10.4.18; and
- at the end of its operating life, the most likely scenario is that the Proposed Development would be shut down and all above ground structures would be removed from site, and the ground remediated as required to facilitate future re-use . Traffic impacts which could arise during the decommissioning phase of the Proposed Development are likely to be similar or less than impacts during the construction phase. The traffic assessment presented for the construction phase would therefore be considered representative (or an overestimate) of the decommissioning phase.

10.4 Baseline Conditions and Study Area

Study Area

10.4.1 The study area has been defined to include Traffic and Transport features likely to be at risk from possible direct and indirect impacts that might arise from the Proposed Development. The study area is considered to comprise of the main highway links set out in this section (and shown on **Figure 10-1** (**EN010166/APP/6.3**)) and the public transport, cycle and walking provision within the immediate vicinity of these of these links. These relate to the Main Development Area and its surroundings, shown on **Figure 3-3: Areas Described in the ES** (**EN010166/APP/6.3**). A desk-based baseline assessment has been undertaken to gather information on existing transport infrastructure, construction routes and restrictions to provide an overview of the study area; further information in relation to this is provided in the TA (**Appendix 10-A** (**EN010166/APP/6.4**)).

Existing Baseline

Local Highway Network

10.4.2 The following section provides a description of the characteristics of the local highway network within the study area. The roads described are labelled and shown on **Figure 10-1** (**EN010166/APP/6.3**).

10.4.3 Access to the existing Connah's Quay Power Station (and access to the Main Development Area) is provided via Kelsterton Road. Kelsterton Road comprises a single carriageway, which provides a link between two

roundabout junctions, which serve the internal site access road network and also the SRN in the form of the A548.

10.4.4 Kelsterton Road has an average total carriageway width of between 7 m and 7.5 m, with some localised widening on bends. It is well lit and subject to a speed limit of 20 mph. As well as providing access to the Main Development Area, Kelsterton Road serves eight private single-dwelling properties situated on the northern side of the A548.

10.4.5 The A548 routes directly to the south of the Main Development Area and comprises the nearest connection to the SRN. The A548 is a dual carriageway in the vicinity of the Main Development Area and subject to a speed limit of 70 mph. Beyond the locality of the Main Development Area, the A548 provides a strategic link along the alignment of the North Wales Main Line railway, extending as far west as Pensarn. The A548 bisects (via a bridge) the south-eastern part of the Main Development Area (across the Alternative Access to the Site and Access to Construction and Indicative Enhancement Area (C&IEA)), crossing the River Dee via Flintshire Bridge. The A548 connects to the M56 and M53 to the north-east of the Main Development Area.

10.4.6 The B5129 connects to the A548 via a roundabout connection to the south of the Site and delivers access to the nearby urban settlements of Connah's Quay and Shotton. The B5129 provides secondary access to the south-east of the Main Development Area (entering the Alternative Access to the Main Development Area and Access to C&IEA), via a priority T-Junction with an unnamed access road, located opposite Coleg Cambria. The B5129 is subject to a 20 mph speed limit, has a carriageway width ranging between 7 m and 10 m, and forms a public transport bus route for services to Hollywell and Flint.

10.4.7 Kelsterton Lane is a north-south route that lies between the B5129 and Mold Road. Kelsterton Lane has a 7.5-tonne weight restriction and is signed as being unsuitable for wide vehicles, due to its narrow single carriageway. Kelsterton Lane appears typical of the types of routes that could be used for a rat-run for journeys between the Main Development Area and the A55 to the south. Kelsterton Lane is subject to a 60 mph speed limit and primarily serves isolated farm properties.

10.4.8 Allt-Goch Lane / Coed Onn Road is a single carriageway road that lies approximately 2.5 km to the west of the Main Development Area. The Proposed CO_2 Connection Corridor is situated on a parcel of land that lies directly to the east of Allt-Goch Lane, between Llwyn Onn and Coed Onn Road. Coed Onn Road comprises a continuation of Allt-Goch Lane (to the north), connecting to the A5119 in Flint. At its southern extent, Allt-Goch Lane connects to Starkey Lane, which in turn provides access to the A5119 to the south. At its northern extent, Coed Onn Road provides access to residential areas, has an average carriageway width between 6 m and 7 m and is subject to a 20 mph speed limit. Approximately 500 m to the south-east of St Mary's Catholic Primary School, Coed Onn Road narrows significantly to a carriageway width of approximately 3 m to 4 m, is a single track in nature and has an associated speed limit of 60 mph within the vicinity of the Proposed CO_2 Connection Corridor.

10.4.9 Golftyn Lane connects to the B5129 via a priority T-Junction, located opposite the entrance of the Alternative Access to the Main Development Area and Access to the C&IEA. Golftyn Lane acts as a key distributor road for the residential areas located to the south-east of the Main Development Area in Connah's Quay. It has an average carriageway width between 7 m and 8 m and is subject to a speed limit of 20 mph. Golftyn Lane also serves as a bus route and provides access to Deeside Sixth Form and Connah's Quay High School.

10.4.10 Mold Road performs a similar distributor function to Golftyn Lane and is accessed from the B5129, approximately 2.5 km south-east of the Main Development Area. Mold Road functions as one-way only for approximately 120 m in the southbound direction, between the B5129 and Pennant Street. Beyond this point, Mold Road reverts to two-way operation and is limited to 20 mph speeds. It primarily serves residential areas; however, it also provides a longer-distance route south-west towards Northop and the A55 North Wales Expressway.

10.4.11 The A5119 is accessed in Flint, approximately 4.5 km to the north-west of the Main Development Area. The A5119 provides a strategic connection to the A55 North Wales Expressway, which runs in a parallel alignment to the A548 and lies approximately 4 km to the south of Connah's Quay. The A55 North Wales Expressway serves as a key strategic route, both to areas located further west of the Main Development Area, as well as to the east and beyond into North-West England.

AIL Routes

Port of Mostyn

10.4.12 On exit from the Port of Mostyn, the A548 would be used to convey AILs to the Main Development Area. The route of the A548 between the Port of Mostyn and the Main Development Area comprises 15.5 km of carriageway and passes through Greenfield, Bagillt, Flint and Oakenholt.

Connah's Quay North

10.4.13 Following offloading at Connah's Quay North using a Ro-Ro and temporary link span, special purpose modularised transporter units (SPMTs) or similar would use the existing private road network (River Road, North Road and roundabout), where AILs would use the first exit onto British Steel Road (partly private road/partly adopted road) heading north, directly to the A548 roundabout/ Weighbridge Road junction.

10.4.14 From the A548 / Weighbridge Road roundabout, the AILs would use the A548, passing over Flintshire Bridge on approach to the Main Development Area.

Ellesmere Port

10.4.15 The route length from Ellesmere Port to the Main Development Area is 22 km via the A5032 Merseyton Road to the M53 junction 8 Rossmore Road Interchange north-westbound (Option 1) or south-eastbound (Option 2), as shown on Sheet 1 of **Figure 5-5** (**EN010166/APP/6.3**).

10.4.16 Option 1 follows the M53 for approximately 4 km to junction 5 New Chester Road interchange, before following the A41 for approximately 0.5 km, before

following the A550 for approximately 8 km until joining the A548. Option 2 follows the M53 for approximately 4 km to junction 10 Stanlow Halt Interchange, before following the A5117 for approximately 6 km, before following the A494 for approximately 3 km until joining the A548. Both options meet the A548 at the same junction and follow this for approximately 8 km until accessing the Main Development Area via Kelsterton Road.

10.4.17 The M53 for both options is bordered to the east by the industrial areas of the Mersey Estuary and to the west by the settlement of Ellesmere Port. For Option 1, the A41 and A550 largely pass through agricultural fields lined with hedgerows, interspersed with the settlements of Hooton, Childer Thornton, and the edge of Ellesmere Port. For Option 2, the A5117 is initially bordered by the suburbs of Ellesmere Port to the north and agricultural fields to the south, before passing fully intro agricultural surroundings as it reaches and continues onto the A494. For both options, the A548 is bordered by agricultural fields and a solar farm to the north and the Deeside Industrial Estate to the south.

Existing Highway Operation

10.4.18 Automatic Traffic Count (ATC) surveys have been undertaken to collect traffic data for the local highway network. The ATC data provides a classified count of traffic volumes and speeds for a seven day period per survey, the majority of these surveys were undertaken between Thursday 14th March 2024 and Wednesday 20th March 2024 and a further survey period was added from Thursday 18th April 2024 to Wednesday 24th April 2024 to accommodate locations which required resurvey due to equipment damage. Data collection avoided the Easter festive school break period. Data has been obtained for the following locations, as shown on **Plate 10-1.**

- Kelsterton Road;
- The A548 (east of the Main Development Area access);
- The A548 (west of the Main Development Area access);
- The B5129 (in the vicinity of the Main Development Area);
- Kelsterton Lane;
- Allt-Goch Lane (in relation to the Proposed CO_2 Connection Corridor);
- Golftyn Lane; and
- Mold Road.

10.4.19 A summary of the average weekday vehicle flows is presented in **Table 10-11** for each of the surveyed locations. The proportion of HGV traffic at each location is also shown within the information.

Plate 10-1: Traffic Survey Links

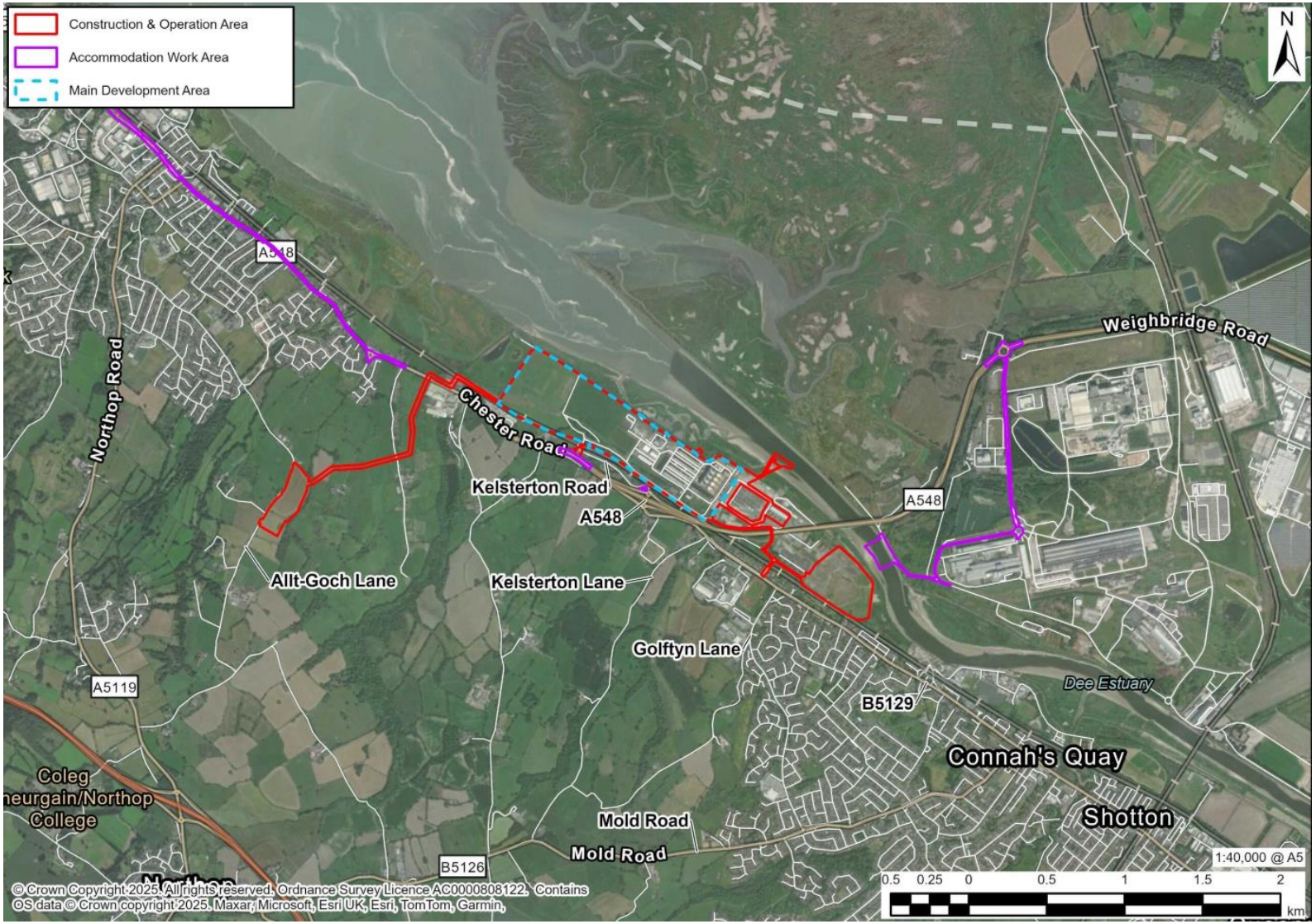


Table 10-11: Summary of Baseline (2024) Traffic Flows

Link	Direction	Mean Speed	85th %ile Speed	2024 Baseline (Average Weekday, 24hr)		
				Total Vehicles	HGVs	HGV %
1. Kelsterton Road	East Bound (EB)	31.0	38.4	190	46	24%
	West Bound (WB)	29.5	35.8	187	29	15%
	Two-Way	30.3	37.2	377	75	20%
2. A548 (West of Main Development Area Access)	EB	53.6	64.0	7,686	580	8%
	WB	54.0	65.2	7,441	683	9%
	Two-Way	53.8	64.0	15,127	1,263	8%
3. A548 (East of Main Development Area Access)*	EB	70.0	70.0	7,075	485	7%
	WB	70.0	70.0	7,311	468	6%
	Two-Way	70.0	70.0	14,386	953	7%
4. B5129	EB	24.2	28.4	4,785	624	13%
	WB	24.0	28.0	5,113	646	13%
	Two-Way	24.1	28.2	9,897	1,270	13%
5. Kelsterton Lane	North Bound (NB)	34.7	41.0	616	65	10%
	South Bound (SB)	35.2	41.4	752	85	11%
	Two-Way	35.0	41.3	1,368	149	11%
6. Allt-Goch Lane	NB	19.0	24.7	72	14	19%
	SB	22.0	25.2	68	8	12%
	Two-Way	22.2	25.0	140	22	16%

Link	Direction	Mean Speed	85th %ile Speed	2024 Baseline (Average Weekday, 24hr)		
				Total Vehicles	HGVs	HGV %
7. Golftyn Lane	NB	20.5	25.0	3,537	282	8%
	SB	19.8	24.0	3,747	300	8%
	Two-Way	20.2	24.5	7,284	581	8%
8. Mold Road	EB	23.9	29.1	3,866	294	8%
	WB	27.1	32.9	4,012	362	9%
	Two-Way	25.6	31.4	7,878	656	8%

**Link 3 surveyed by CCTV, therefore no speed data available. Speed shown is the current speed limit.*

10.4.20 The 2024 surveys indicate that the A548 carries the most daily traffic (around 15,000 two-way vehicles), whilst Kelsterton Road, which provides access to the Main Development Area carries the highest proportion of two-way HGVs (20%). The B5129 experiences the highest volume of HGVs, with an average of 1,270 daily two-way HGVs. Allt-Goch Lane, which would provide vehicular access to the Proposed CO_2 Connection Corridor works, carries the lowest amount of average weekday traffic across each of the surveyed links.

Walking and Cycling

10.4.21 There are varying levels of provision for walking and cycling on Kelsterton Road between the A548 and the access to the Main Development Area. This includes a 3 m wide shared cycleway connecting to the roundabout junction with the A548, as well as a segregated footway on the northern side of Kelsterton Road. To the east of the internal roundabout junction, a narrow footway is present on the south side of the carriageway, leading up to the Main Development Area access junction. A more substantial walking and cycling provision is available on local roads surrounding the Main Development Area, such as the B5129 through Connah's Quay.

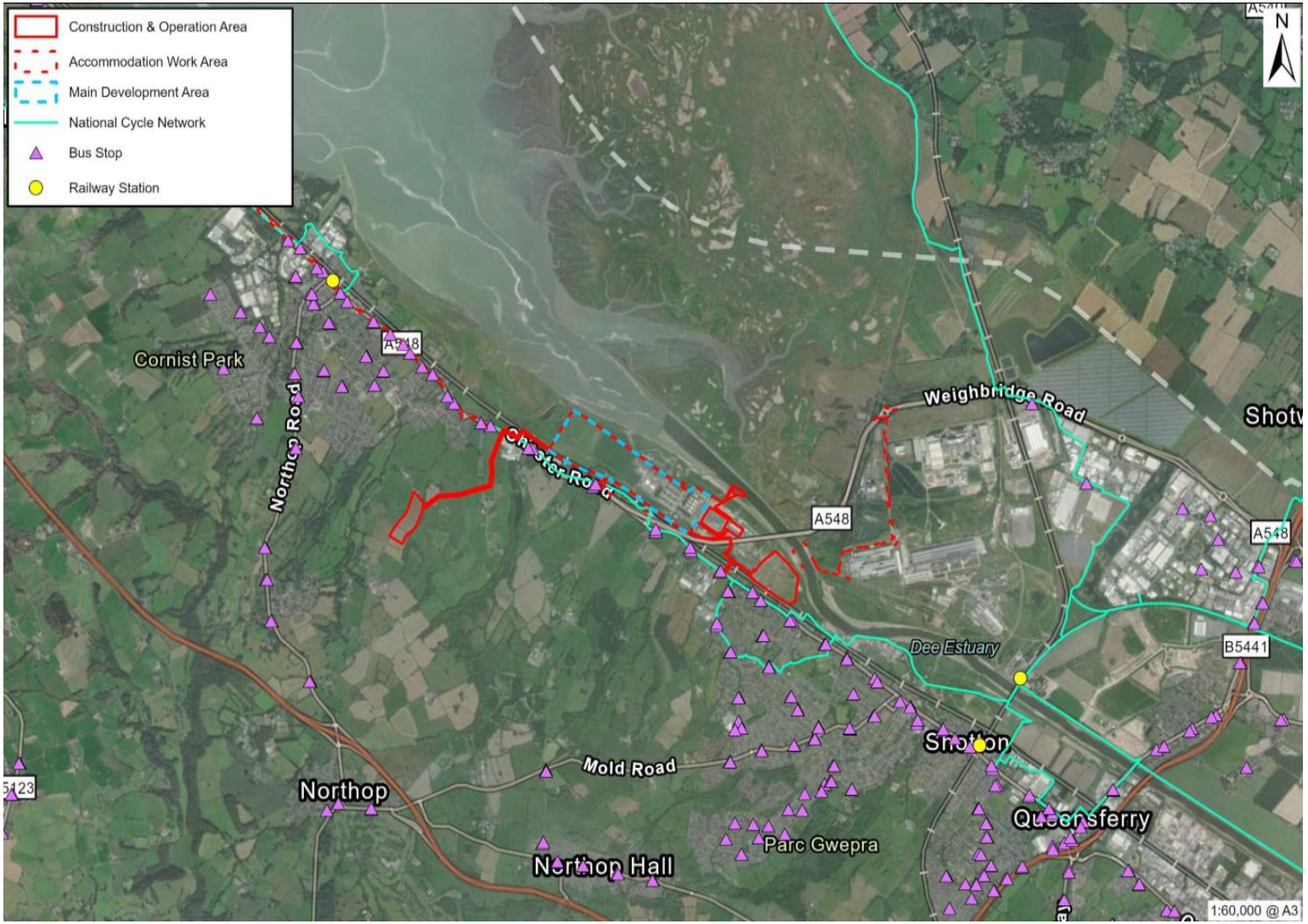
10.4.22 Public Rights of Way (PRoW) in the vicinity of the Main Development Area and the Proposed CO_2 Connection Corridor have been reviewed based on online mapping provided by FCC. The extent of PRoWs in the vicinity of the Main Development Area and Proposed CO_2 Connection Corridor have been included on **Figure 15-5** (**EN010166/APP/6.3**), included within **Chapter 15: Landscape and Visual Amenity** (**EN010166/APP/6.2.15**). There is a designated footpath (comprised of sections of FCC Footpaths 27, 28, and 42) that lies in close proximity to the south-eastern extent of the C&IEA boundary. The footpath connects to the B5129, approximately 90 m to the east of its junction with Golftyn Lane and continues in a south-east direction, before terminating at Quay Business Park.

10.4.1 A designated footpath (FCC Footpath 66) intersects the field parcel containing the Proposed CO_2 Connection Corridor, forming a link between Allt-Goch Lane and the farm access road forming the northern boundary of the field parcel. To the east of Allt-Goch Lane, this footpath connects to two further routes (comprised of sections of FCC Footpaths 66 and 67), which both connect to Leadbrook Drive, passing through the Proposed CO_2 Connection Corridor. An assessment of the impact of the Proposed Development on these routes is provided in Section 10.6 of this Chapter.

10.4.2 National Cycle Network (NCN) Route 5 (NCN 5) is located in close proximity to the Main Development Area, routeing along the A548 to the west of the Main Development Area, before connecting to Kelsterton Road and, subsequently, the B5129. NCN 5 is conveniently situated to accommodate cycle travel to / from the Main Development Area and connects to a wider network of routes to the north and north-east of the Main Development Area.

10.4.3 Walking and cycling routes in proximity of the Main Development Area are shown on **Plate 10-2**.

Plate 10-2: Transport Accessibility



Public Transport

10.4.4 Existing public transport services operating in the vicinity of the Main Development Area have been identified with reference to current timetable and routeing information. The locations of bus stops and rail stations in proximity to the Main Development Area are shown on **Plate 10-2**.

Bus

10.4.5 Public bus services are available in proximity to the Main Development Area, with the nearest stops, 'Rockliffe Lane' (approximately 1.3 km walking distance), 'Cemetery Gates' (approximately 1.8 km walking distance) and 'Kelsterton Lane' (approximately 1.6 km walking distance) located on the A548 and B5129. Services 10A and 11 are available from these stops and provide for journeys between Flint, Chester and Rhyl. These services run at a high frequency throughout the core hours of the weekday, providing a realistic and convenient public transport option between the Main Development Area and the local area. These services are in **Table 10-12**.

Table 10-12: Summary of Local Bus Services

Service Number	Bus Stop	Route	First Service	Last Service	Approx. Frequency
10A	Rockliffe Lane / Cemetery Gates / Kelsterton Lane	Chester – Flint	07:56	18:58	30 minutes
		Flint - Chester	07:19	18:22	30 minutes
11	Rockliffe Lane / Kelsterton Lane	Rhyl - Chester	07:37	22:36	30 minutes
		Chester - Rhyl	05:49	20:53	30 minutes

Source: Bustimes.org (January 2025)

10.4.6 Additional shuttle services D1, D2 and D3 operate between Flint, Connah's Quay and Deeside Industrial Park, providing an hourly service from stops further away from the Main Development Area, to the southeast in Connah's Quay.

Rail

10.4.7 The nearest railway stations to the Main Development Area are located to the north-west in Flint (approximately 4.3 km walking distance via the A548 / NCN 5) and to the south-east in Shotton (approximately 4.1 km walking distance via the B5129). Facilities provided at Flint and Shotton, and services to / from these stations are summarised in **Table 10-13** and **Table 10-14** respectively.

Table 10-13: Summary of Railway Station Facilities

Facility	Flint	Shotton
Car Parking	65 Spaces	29 spaces

Facility	Flint	Shotton
Disabled Car Parking	6 Spaces	3 spaces
Taxi Rank	No	Yes
Cycle Storage	8 spaces	20 spaces
Staffing / Ticket Office	Yes	Yes
Self Service Ticket Machines	Yes	Yes
Step Free Access Coverage	Yes	No

Source: National Rail (January 2025).

Table 10-14: Summary of Rail Services at Flint & Shotton

Station	Direction	Days	First Service	Last Service	Approximate Frequency
Flint	Towards Holyhead	Mon-Fri	07:00	23:12	Hourly
		Sat	07:00	21:41	Hourly
		Sun	No direct services		
	Towards Manchester	Mon-Fri	06:25	19:31	Hourly
		Sat	07:31	20:31	Hourly
		Sun	No direct services		
	Towards Llandudno	Mon-Fri	07:00	23:12	45-60 minutes
		Sat	07:00	23:55	
		Sun	06:34	23:18	
	Towards Birmingham	Mon-Fri	09:10	17:16	120 minutes
		Sat	07:01	17:09	
		Sun	20:03	20:03	1 direct service
Shotton	Towards Wrexham	Mon-Fri	06:51	23:23	45-60 minutes
		Sat	06:51	23:22	
		Sun	10:25	22:52	
	Towards Bidston	Mon-Fri	06:52	22:26	45-60 minutes

Station	Direction	Days	First Service	Last Service	Approximate Frequency
		Sat	06:52	22:27	
		Sun	09:13	21:36	

Source: National Rail (January 2025). All services listed are direct.

10.4.8 Overall, there is a good provision of rail services from both stations to key destinations, both locally and regionally. Services begin early in the morning and finish late at night, ensuring a provision to suit a wide range of travel times. Direct connections to Cardiff Central and Manchester Piccadilly provide opportunities to board services covering a number of national destinations. When the options are considered, these suggest a high availability of rail services to / from the Main Development Area and surrounding area.

Highway Safety

10.4.9 Personal Injury Collision (PIC) data has been assessed using the industry standard database, CrashMap for the most recently available five year period (2019 to 2023) in order to assess the road safety along the network in the vicinity of the Main Development Area. **Plate 10-3** shows the locations of the recorded PICs and their severity.

Plate 10-3: Personal Injury Collisions in the Vicinity of the Main Development Area

Source: CrashMap, Department for Transport data published by www.crashmap.co.uk. Map Data Copyright Google (January 2025).

10.4.10 The majority of PICs were recorded on the B5129 to the southeast of the Main Development Area, including the section between Mold Road and Brook Road, on which two 'serious' PICs occurred. Another 'serious' PIC was recorded on the B5129, in the vicinity of the entrance to Connah's Quay Central Park.

10.4.11 The majority of PICs that occurred on the A548 are located to the northwest of the Main Development Area towards Flint, including two incidents which resulted in 'serious' PICs.

10.4.12 One incident resulting in a 'slight' PIC occurred on Kelsterton Road, which provides access to the Main Development Area. This occurred in 2020 and involved two vehicles. A further 'slight' PIC was recorded in 2023 on the roundabout junction between the A548 and Kelsterton Road, involving a single vehicle.

10.4.13 One incident resulting in a 'slight' PIC was recorded on Allt-Goch Lane, which would provide access for works to the Proposed CO_2 Connection Corridor. The PIC occurred in 2020 and involved two vehicles. This can be interpreted as an isolated incident with no other PICs recorded in the vicinity, over the five year period.

10.4.14 One incident resulting in a fatal PIC occurred within the study area on Mold Road, approximately 2.3 km to the south of the Main Development Area access point on the A548. The PIC took place at the priority T-Junction with Kelsterton Lane in 2019 and involved two vehicles.

10.4.15 Overall, the study area within the vicinity of the Main Development Area is not considered to have experienced an excessive number of PICs over the course of the five year period and would not suggest there to be existing highways issues on these routes. The vast majority of PICs have been classified as 'slight' or 'serious', with the exception of one fatal incident on Mold Road. Further investigation into the causation factors of the above identified clusters may be required, through obtaining Police accident data records. However, the initial details obtained do not suggest that these are linked or indicate that there is any existing specific issue with the highway network.

Summary of Sensitive Receptors

10.4.16 **Table 10-15** identifies the links that form part of the study area, the assigned sensitivity rating and the justification.

Table 10-15: Sensitive Receptors within the Existing Baseline

Link	Sensitivity	Rationale
Kelsterton Road	Low	• Provides access to a small number of residential properties. • Designated active travel route with segregated walking / cycling provision.
A548 (West of Main Development Area Access)	Low	• Positioned away from sensitive receptors. • Minimal to no pedestrian demand, intermittent footway provision.

Link	Sensitivity	Rationale
A548 (East of Main Development Area Access)	Low	• Positioned away from sensitive receptors. • Minimal to no pedestrian demand, very little footway provision.
B5129	High	• Provides access to a college, shopping areas and residential areas with frontage. • Designated active travel route with continuous footway provision and on-road cycle lanes. • PIC clusters present along this link, based on previous five years' safety record.
Kelsterton Lane	Low	• Provides access to a small number of residential properties. • Positioned away from sensitive receptors. • Minimal to no pedestrian demand, very little footway provision.
Allt Goch Lane	Low	• Positioned away from sensitive receptors. • Minimal to no pedestrian demand, very little footway provision.
Golftyn Lane	Medium	• Designated active travel route with both segregated and roadside walking / cycling provision. • Provides access to a school, college and shopping area.
Mold Road	Medium	• Provides access to a school and leisure facilities. • Direct access to areas of residential frontage.

Future Baseline

10.4.17 The future baseline scenarios are set out in **Chapter 2: Assessment Methodology** (**EN010166/APP/6.2.2**).

TEMPro

10.4.18 The 2024 baseline traffic flows for the local highway network, presented in **Table 10-11** of this chapter, have been 'growthed' up to 2034 (peak construction year) and 2036 (opening year of operation) using TEMPro (Version 7.2). TEMPro is an industry standard tool that provides forecasts for growth in background traffic, based on planning projections for growth in housing, employment and car ownership. This is in line with guidance provided within Section 1.2 of the Transport Analysis Guidance (TAG) "TAG Unit M4 – Forecasting and Uncertainty" (Ref 10-14) published by the DfT. Growth factors have been derived using an average of the 'Flintshire 004' and '007' Middle Super Output Areas (MSOAs). The average growth factors are presented in **Table 10-16**.

Table 10-16: TEMPro Growth Factors

Growth Period	AM Peak	PM Peak	Average Weekday
2024-2034	1.0865	1.0860	1.0882
2024-2036	1.1005	1.0995	1.1019

Committed Development

10.4.19 An analysis of committed developments has been undertaken as part of the development of the future year assessments traffic flows to accurately forecast future growth and traffic. As detailed in **Chapter 24: Cumulative and Combined Effects** (**EN010166/APP/6.2.24**), a review has been caried out to determine what committed developments are present within or near the study area that are forecast to increase traffic on the links contained within the study area. Following a review of development traffic information, committed development traffic flows for the following proposed schemes have been extracted and incorporated into the future baseline assessments of 2034 and 2036:

- ID 9: FUL/000372/24 – Construction of 130 affordable homes, Land at Quarry Farm and Leadbrook Drive, Oakenholt, Flint;
- ID 22: FUL/000195/24 – Residential development up to 300 dwellings, Ash Lane, Mancot, Flintshire;
- ID 55: DNS/3279559 - Shotton Paper Mill (Combined Heat & Power Facility); and
- ID 113: FUL/000034/22 – Residential development up to 141 dwellings, Land off Highmere Drive, Connah's Quay.

10.4.20 The remaining proposed schemes identified in **Chapter 24: Cumulative and Combined Effects** (**EN010166/APP/6.2.24**) have not been included as the forecasted development traffic either does not intercept the transport study area for assessment or does not coincide with the chosen future years for construction and operation. As set out at the start of this section, calculations in growth factors take account of local uplift in housing. Therefore, through analysis of committed developments outlined above, some element of growth and the factors or uplifts applied are in effect double counting, and it is therefore considered a robust approach.

10.5 Development Design and Embedded Mitigation

10.5.1 The Proposed Development has been designed, as far as possible, to avoid or minimise impacts and effects on Traffic and Transport through the process of design development, and by embedding measures into the design of the Proposed Development.

10.5.2 The following embedded mitigation measures have been incorporated into the Proposed Development:

- **Framework Construction Traffic Management Plan (CTMP)** (**EN010166/APP/6.6**); and

- **Framework Construction Worker Management Plan (CWMP)** (**EN010166/APP/6.7**).

10.5.3 The **Framework CTMP** (**EN010166/APP/6.6**) and **Framework CWMP** (**EN010166/APP/6.7**) documents have been submitted as part of the Application.

10.5.4 The **Framework CTMP** (**EN010166/APP/6.6**) sets out measures to control construction HGV traffic, including the following:

- construction working hours;
- detailed construction routes for all HGVs;
- restrictions on HGVs during certain times of the day such as at school drop off and pick up times;
- application of the waste hierarchy (as illustrated in **Chapter 23: Materials and Waste** (**EN010166/APP/6.2.23**)) which seeks to reduce the quantity of materials required to be transported off-site onto the local highway network through prioritising reuse and recycling;
- measures to reduce impacts on the local community during construction, including communications such as letter and notices to residents and businesses that lie in close proximity to the Main Development Area and surrounding construction routes; and
- procedures for AILs and Hazardous Loads.

10.5.5 The **Framework CWTP** (**EN010166/APP/6.7**) would be aimed at construction workers and would set out measures to reduce the impact of workers travelling to and from Main Development Area, including the following:

- targets for achieving a minimum level of car sharing amongst workers;
- minibuses which would pick up workers from key local accommodation centres;
- measures to manage the level of car parking on site; and
- measures to encourage workers to travel by more sustainable mode of travel, wherever possible.

10.5.6 This would provide a framework of measures and principles to be taken forward and developed further into the final versions of each document by the appointed contractor, and approved by the Local Planning Authority, prior to commencement of construction.

10.5.7 Additionally, the following embedded mitigation would be applied:

- prior to construction of the Proposed Development, the undertaker would, as required by the **Appendix 20-E: Greenhouse Gas Reduction Strategy** (**EN010166/APP/6.4**), consider opportunities for zero / low emission construction / plant vehicles. This would include investigation of potential opportunities for alternative fuels in the required vehicles to reduce the impact of road haulage during the construction phase;
- the undertaker would provide a diverted access to the nature reserve and Site of Specific Scientific Interest (SSSI) for users during the construction phase of the Proposed Development, see **Figure 5-1: Key Plan - Construction Work Areas** (**EN010166/APP/6.3**). The current

access to the nature reserve is described in **Chapter 3: Location of the Proposed Development** (**EN010166/APP/6.2.3**) and both the current and diverted access are shown on the **Streets, Rights of Way and Access Plans** (**EN010166/APP/2.5**); and

- a temporary diversion of FCC PRoW No.66, in order to facilitate construction of the Proposed CO_2 Connection pipeline where they intersect. This would be required to be in place prior to the temporary closure of the PRoW.

10.5.8 There are no embedded mitigation measures proposed during the operational phase of the Proposed Development.

10.5.9 A Decommissioning Environmental Management Plan (DEMP)) would be produced at the time of decommissioning, pursuant to a Requirement of the **Draft DCO** (**EN010166/APP/3.1**). This would provide details of the relevant controls in relation to decommissioning traffic and decommissioning worker travel for this phase of works.

10.6 Assessment of Likely Impacts and Effects

10.6.1 Taking into account the embedded mitigation measures as detailed in Section 10.5, the potential impacts and effects of the Proposed Development have been assessed using the methodology as detailed in Section 10.3 of this chapter and **Chapter 2: Assessment Methodology** (**EN010166/APP/6.2.2**).

10.6.2 The assessment of impact during construction and operation (including maintenance) of the Proposed Development is based on a comparison of 'Base' and 'Base + Development' scenarios for a single future assessment year, which, in order to ensure a worst-case assessment, corresponds with the peak year of a Simultaneous Construction (2034) and also the opening year of operation (2036), assuming construction were to begin five years after the grant of development consent. The scenarios include traffic growth derived from analysis of TEMPro, specifically for the 'Flintshire 004' and '007' MSOAs, within which the Main Development Area is located.

10.6.3 With regard to the decommissioning phase, at the end of its operating life, the most likely scenario is that the Proposed Development would be shut down and all above ground structures would be removed, and the ground remediated as required to facilitate future re-use. Traffic impacts which could arise during the decommissioning phase of the Proposed Development are likely to be similar or less than impacts during the construction phase. The traffic assessment presented for the construction phase is therefore considered representative (or an overestimate) of the decommissioning phase.

Construction Phase

10.6.4 Construction of the Proposed Development would require deliveries of materials and products by a range of vehicle types including HGVs, and waste material would be removed from the Main Development Area in HGVs.

10.6.5 A quantitative assessment of the construction traffic impacts has been undertaken, in line with the 'Rochdale Envelope' approach, as set out in Section 10.3 and the quantities of traffic outlined in **Table 10-7**, associated with a Simultaneous Construction approach. This includes the identification of the likely percentage changes in traffic flows on the local highway network (for surveyed locations, as set out in Section 10.4) during construction of the Proposed Development. This is considered appropriate given the effects would be temporary during construction.

Distribution of Construction Traffic

Heavy Vehicles

The distribution of HGV construction traffic onto the local highway network has been informed by likely routing arrangements to / from the SRN. As the exact location of the construction raw materials is currently unknown at this time, HGVs would be routed to avoid more sensitive residential locations and would be assumed, for the purposes of assessment, to travel to and from the Main Development Area via the A548 and Kelsterton Road. The anticipated assignment of peak year (2034) two-way daily HGV traffic generated onto the local highway network is shown in **Table 10-17**.

Table 10-17: Summary Construction Traffic Distribution (HGV)

Link	Proportion of Trips Routed onto Link	Daily Two-Way Traffic
1. Kelsterton Road	100%	240
2. A548 (West of Main Development Area Access)	0%	0
3. A548 (East of Main Development Area Access)	100%	240
4. B5129	0%	0
5. Kelsterton Lane	0%	0
6. Allt Goch Lane	0%	0
7. Golftyn Lane	0%	0
8. Mold Road	0%	0

10.6.6 As detailed in **Table 10-17**, all HGV traffic would be routed to and from the Main Development Area via the A548 (East of Main Development Area Access), before accessing the Main Development Area via Kelsterton Road. As a result, all (100%) HGV traffic has been assigned onto these links for the purpose of this impact assessment.

Light Vehicles

10.6.7 The distribution of development traffic associated with the construction staff has been based on analysis of the 2021 Census Journey to Work data (Ref 10-15). Data relating to respondents who answered 'Working from home' during the Census survey period, which occurred during the COVID-19

Pandemic, has been removed to ensure the analysis only considers those of working age, who travel regularly between their home address and place of work. The analysis has been undertaken for both the 'Flintshire 004' and '007' MSOAs, which include the extent of the highway network, local to the Proposed Development. Light vehicle trips have been distributed across the local network taking account of the 2021 Census origin / destination MSOA and route choice, as determined from online journey planner tools. The assignment of peak two-way daily light vehicle traffic across the local highway network is shown in **Table 10-18**.

Table 10-18: Summary Construction Traffic Distribution (Light Vehicles)

Link	Proportion of Trips Routed onto Link	Daily Two-Way Traffic
1. Kelsterton Road	100%	1,374
2. A548 (West of Main Development Area Access)	35%	478
3. A548 (East of Main Development Area Access)	21%	290
4. B5129	44%	607
5. Kelsterton Lane	34%	472
6. Allt Goch Lane*	Trips manually assigned	8
7. Golftyn Lane	0%	0
8. Mold Road	0%	0

*eight two-way vehicle trips allocated to Allt Goch Lane associated with construction of the Proposed CO_2 Connection Corridor.

10.6.8 All (100%) of light vehicle traffic has been assigned to Kelsterton Road as the final link between the Main Development and the wider highway network. Prior to reaching Kelsterton Road, 56% of light vehicle traffic is forecast to arrive from the A548 (35% from the west and 21% from the east), with the remaining 44% anticipated to route directly onto Kelsterton Road from the B5129, to the east of the Main Development Area. Of this remaining 44%, 34% of light vehicle trips are anticipated to use Kelsterton Lane, prior to reaching the B5129. The remaining 10% of light vehicle trips are forecast to originate from the B5129 only, attributed to local commuting trips from Connah's Quay, Shotton and beyond to the east of the Main Development Area.

10.6.9 Aside from the construction worker traffic associated with the Main Development, an additional eight two-way trips have been assigned to Allt Goch Lane, from which access would be taken for construction of the Proposed CO_2 Connection Corridor.

Impact Assessment

10.6.10 **Table 10-19** presents a percentage impact assessment for the 2034 'Baseline + Committed Development + Construction Traffic' scenario, which corresponds with the peak period of construction. In determining the magnitude of impact (presented in **Table 10-20**), consideration has been given to the thresholds identified in **Table 10-19** as well as the use of professional judgement to consider the effectiveness of embedded mitigation detailed within the **Framework CTMP** (**EN010166/APP/6.6**) and **Framework CWTP** (**EN010166/APP/6.7**). Where professional judgement has been used to reduce the impact magnitude, this is noted with an asterisk (*) in the relevant tables within this assessment.

Table 10-19: 2034 Baseline + Construction – Percentage Impact Assessment

Link	Direction	2034 Baseline (24hr AADT, 5-Day)			2034 Baseline + Construction (24hr AADT, 5-Day)			Difference		2034 Baseline + Construction - % Change (Relative to 2034 Baseline)	
		Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	Total Vehicles	HGVs
1. Kelsterton Road	Eastbound	206	50	24%	1,013	170	17%	807	120	391%	241%
	Westbound	204	32	15%	1,011	152	15%	807	120	396%	380%
	Two-Way	410	81	20%	2,024	321	16%	1,614	240	393%	295%
2. A548 (West of Main Development Area Access)	Eastbound	8,404	632	8%	8,643	632	7%	239	0	3%	0%
	Westbound	8,130	743	9%	8,369	743	9%	239	0	3%	0%
	Two-Way	16,535	1,375	8%	17,012	1,375	8%	478	0	3%	0%
3. A548 (East of Main Development Area Access)*	Eastbound	7,997	528	7%	8,262	648	8%	265	120	3%	23%
	Westbound	8,254	509	6%	8,519	629	7%	265	120	3%	24%
	Two-Way	16,251	1,037	6%	16,781	1,277	8%	530	240	3%	23%
4. B5129	Eastbound	5,243	679	13%	5,546	679	12%	303	0	6%	0%
	Westbound	5,612	703	13%	5,915	703	12%	303	0	5%	0%
	Two-Way	10,854	1,382	13%	11,461	1,382	12%	607	0	6%	0%
5. Kelsterton Lane	Northbound	670	70	10%	906	70	8%	236	0	35%	0%
	Southbound	818	92	11%	1,054	92	9%	236	0	29%	0%
	Two-Way	1,489	162	11%	1,960	162	8%	472	0	32%	0%

Link	Direction	2034 Baseline (24hr AADT, 5-Day)			2034 Baseline + Construction (24hr AADT, 5-Day)			Difference		2034 Baseline + Construction - % Change (Relative to 2034 Baseline)	
		Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	Total Vehicles	HGVs
6. Allt Goch Lane	Northbound	79	15	19%	83	15	18%	4	0	5%	0%
	Southbound	74	9	12%	78	9	12%	4	0	5%	0%
	Two-Way	153	24	16%	161	24	15%	8	0	5%	0%
7. Golftyn Lane	Northbound	3,920	306	8%	3,920	306	8%	0	0	0%	0%
	Southbound	4,149	326	8%	4,149	326	8%	0	0	0%	0%
	Two-Way	8,068	632	8%	8,068	632	8%	0	0	0%	0%
8. Mold Road	Eastbound	4,244	319	8%	4,244	319	8%	0	0	0%	0%
	Westbound	4,403	394	9%	4,403	394	9%	0	0	0%	0%
	Two-Way	8,648	713	8%	8,648	713	8%	0	0	0%	0%

Table 10-20: 2034 Baseline + Construction – Magnitude of Impact

Link	Direction	2034 Baseline + Construction - % Change		Link Sensitivity	Magnitude of Impact					
		Total Vehicles	HGVs		Severance	Pedestrian Amenity	Fear & Intimidation	Highway Safety	Hazardous / Large Loads	Driver Delay
	Eastbound	391%	241%	Low	Medium*	Medium*	Medium	Very low	Very low	Very low

Link	Direction	2034 Baseline + Construction - % Change		Link Sensitivity	Magnitude of Impact					
		Total Vehicles	HGVs		Severance	Pedestrian Amenity	Fear & Intimidation	Highway Safety	Hazardous / Large Loads	Driver Delay
1. Kelsterton Road	Westbound	396%	380%							
	Two-Way	393%	295%							
2. A548 (West of Main Development Area Access)	Eastbound	3%	0%	Low	Very low	Very low	Very low	Very low	Very low	Very low
	Westbound	3%	0%							
	Two-Way	3%	0%							
3. A548 (East of Main Development Area Access)	Eastbound	3%	23%	Low	Very low	Very low	Very low	Very low	Very low	Very low
	Westbound	3%	24%							
	Two-Way	3%	23%							
4. B5129	Eastbound	6%	0%	High	Very low	Very low	Very low	Very low	Very low	Very low
	Westbound	5%	0%							
	Two-Way	6%	0%							
5. Kelsterton Lane	Northbound	35%	0%	Low	Low	Very low	Medium	Very low	Very low	Very low
	Southbound	29%	0%							
	Two-Way	32%	0%							
6. Allt Goch Lane	Northbound	5%	0%	Low	Very low	Very low	Very low	Very low	Very low	Very low
	Southbound	5%	0%							
	Two-Way	5%	0%							
	Northbound	0%	0%	Medium	Very low	Very low	Very low	Very low	Very low	Very low

Link	Direction	2034 Baseline + Construction - % Change		Link Sensitivity	Magnitude of Impact					
		Total Vehicles	HGVs		Severance	Pedestrian Amenity	Fear & Intimidation	Highway Safety	Hazardous / Large Loads	Driver Delay
7. Golftyn Lane	Southbound	0%	0%							
	Two-Way	0%	0%							
8. Mold Road	Eastbound	0%	0%	Medium	Very low	Very low	Very low	Very low	Very low	Very low
	Westbound	0%	0%							
	Two-Way	0%	0%							

*N.B: * denotes where professional judgement has been used to reduce the magnitude of the impact following the consideration of embedded mitigation measures.*

10.6.11 The impact assessment has considered the potential temporary impact, resulting from the worst-case assessment of peak construction traffic following the consideration of embedded mitigation. The impact assessment demonstrates the largest amount of temporary impact would be experienced on Kelsterton Road, which is forecasted to generate a two-way HGV increase of 295%. In absolute terms, this equates to a daily increase of 240 two-way HGVs. In terms of total vehicles, there is a 393% increase in two-way movements, equating to a daily increase of 1,614 vehicles. This temporary increase would be expected given Kelsterton Road would provide access to / from the Main Development Areafor all construction traffic.

10.6.12 The majority of remaining links do not experience an increase of greater than 10% traffic flows, both in terms of total vehicles and HGVs. The exception to this is the A548 (East of the Main Development Area), which is forecast to experience a temporary increase of 23% in relation to two-way HGVs. Kelsterton Lane is also forecast to experience a temporary increase in terms of total vehicles, equating to 32% (472 vehicles in absolute terms) in both directions. There are no forecast increases in HGV usage of this link.

10.6.13 The ability for HGV construction traffic to route to / from the Main Development Area directly from the SRN removes the possibility of a material traffic impact on the surrounding local roads, instead containing the HGV traffic to the SRN, which has the greatest resilience to increases in traffic of this magnitude.

10.6.14 The magnitude of change and the sensitivity of the receptor have been compared for each type of impact, to determine the classification of the effect as per IEMA Guidelines (Traffic). This is summarised in **Table 10-21.**

Table 10-21: 2034 Baseline + Construction– Classification of Effect

Link	Link Sensitivity	Severance		Pedestrian Amenity		Fear & Intimidation		Highway Safety		Hazardous / Large Loads		Driver Delay	
		Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect
1. Kelsterton Road	Low	Medium*	Minor adverse (not significant)	Medium*	Minor adverse (not significant)	Medium	Minor adverse (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)
2. A548 (West of Main Development Area Access)	Low	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)
3. A548 (East of Main Development Area M Access)	Low	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)
4. B5129	High	Very low	Minor adverse (not significant)	Very low	Minor adverse (not significant)	Very low	Minor adverse (not significant)	Very low	Minor adverse (not significant)	Very low	Minor adverse (not significant)	Very low	Minor adverse (not significant)
5. Kelsterton Lane	Low	Low	Negligible (not significant)	Very low	Negligible (not significant)	Medium	Minor adverse (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)
6. Allt Goch Lane	Low	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)
7. Golftyn Lane	Medium	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)
8. Mold Road	Medium	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)

*N.B: * denotes where professional judgement has been used to reduce the magnitude of the impact following the consideration of embedded mitigation measures.*

Severance - Road Links

10.6.15 In relation to severance, the impact assessment demonstrates that all of links would experience either minor adverse (not significant) or negligible (not significant) effects during the construction phase of the Proposed Development.

10.6.16 The predicted worst-case daily increase in traffic on Kelsterton Road, during the temporary construction phase is 1,614 vehicles, including 240 two-way HGVs. Assuming a 12-hour working day[2], this could equate to an hourly increase of approximately 135 vehicles, including 20 HGVs. This is the equivalent of an additional two to three vehicles every minute and one HGV every three minutes. Based on professional judgement, these quantities are not considered to have a perceivable difference when compared to the baseline traffic on Kelsterton Road. Therefore, considering the embedded mitigation measures outlined in the **Framework CTMP** (**EN010166/APP/6.6**), the impact on Kelsterton Road has been identified to be 'Medium', resulting in a **minor adverse** effect, which is **not significant**.

Severance - PRoW

10.6.17 The impact assessment, in relation to severance, has considered the effect of potential temporary diversions to PRoWs during the construction phase. The PRoWs identified to intersect the Proposed Development are identified in Section 10.4. Two PRoW (sections of FCC Footpaths 66 and 67) form part of the network around Little Leadbrook Farm linking Leadbrook Drive to Allt Goch Lane. A temporary diversion of FCC PRoW No.66 would be required in order to facilitate construction of the Proposed CO_2 Connection pipeline where they intersect. It is anticipated that the diversion would be required for up to nine months and would follow a route within the same field. The anticipated duration of temporary version may be subject to the proposed works to be undertaken as part of the HyNet Carbon Dioxide Pipeline (Ref 10-16), which is noted to propose a temporary diversion of the same PRoW No.66, during construction. No permanent change to this PRoW is proposed and the original access would be reinstated following construction.

10.6.18 Given that there is a large network of PRoWs within the study area that could be used as substitutes in the case of PRoW closure, effects on PRoW are assessed to have low sensitivity. While the scale of impact may not be extensive, factors such as potential disruptions to access, usage patterns, or environmental considerations are still considered, therefore magnitude is assessed to be medium, which results in a temporary **minor adverse** effect. This is considered to be **not significant**.

Pedestrian Amenity

10.6.19 In relation to pedestrian amenity, the impact assessment demonstrates that majority of links would experience either a **minor adverse** (**not significant**) or **negligible** (**not significant**) effect during the construction phase of the Proposed Development. Kelsterton Road would provide access to the Main

[2] 12-hour working day is inclusive of core working hours (08:00-18:00), whilst also accounting for one hour's travel either side of these times.

Development Area for all construction traffic, considering the embedded mitigation measures outlined in the **Framework CTMP** (**EN010166/APP/6.6**), the impact on Kelsterton Road has been identified to be 'Medium', resulting in a **minor adverse** effect, which is **not significant**

Fear and Intimidation

10.6.20 In relation to Fear and Intimidation, the impact assessment demonstrates that all of the links would experience either **minor adverse** or **negligible** effect during the construction phase of the Proposed Development, which are **not significant**.

Highway Safety

10.6.21 PIC data for the most recent five years has been acquired for the study area and is summarised in Section 10.4. The statistics provide information on the location and severity of each PIC. The level of increase in traffic flows resulting from the construction of the Proposed Development is either **negligible** or **minor adverse** (**not significant**). Over the most recent five year period, only one PIC was recorded on Kelsterton Road, and this was classified as 'slight'. This temporary impact as a result of increased levels of construction traffic on Kelsterton Road is not considered likely to materially impact PIC records on this link, and as such the effect on highway safety is also considered to be **negligible** or **minor adverse**, which is **not significant**.

Hazardous / Large Loads

10.6.22 Some larger components required for the construction of the Proposed Development would be delivered to the Main Development Area using Abnormal Indivisible Loads (AILs). As described in **Chapter 5: Construction Programme and Management** (**EN010166/APP/6.2.5**), the primary AIL routes options would be from three land side delivery points:

- Port of Mostyn;
- Connah's Quay North; and
- Ellesmere Port

10.6.23 The Port of Mostyn and Connah's Quay North delivery points are located within the Flintshire County Council administrative area and Ellesmere Port (Manchester Ship Canal) is located within the Cheshire West and Chester Council administrative area.

10.6.24 For each entry port and AIL route option, the extents of accommodation works to facilitate transport/passage of AIL via the alternative routes have been included within the Order limits. The extents of any potential accommodation works are shown on the **Streets Access Rights of Way plans** (**EN010166/APP/2.6**) and extent of traffic provisions are shown on the **Temporary Traffic Regulation Measures Plans** (**EN010166/APP/2.7**). These potential accommodation works are also described in **Chapter 5: Construction Programme and Management** (**EN010166/APP/6.2.5**). The majority of the AIL routes would use the strategic road network, thereby limiting impacts on local roads. Details of proposed accommodation works would be submitted to the relevant highway authority and approved prior to the commencement of any works on site.

10.6.25 A temporary AIL access would be provided directly from the A548 for the duration of the construction period. This access point would be sited at the former junction on the A548 and would connect to the western end of Kelsterton Road. The indicative design of this access is shown on the Highway Plan, included as an appendix in the **Framework CTMP** (**EN010166/APP/6.6**). This access would be reserved for sole use by AIL delivery vehicles. This AIL access would remove AIL deliveries from the residential section of Kelsterton Road, thus reducing disruption to the nearby properties.

10.6.26 It is anticipated that up to 30 two-way (60 in total) AIL movements would be required during the construction period for each train of the Proposed Development. However, the exact number and size / weight of AILs would be determined at detailed design stage and would be based on specific construction methodologies that will be confirmed during this stage. Further technical assessments by specialist AIL transport contractors is required at this stage. The specialist AIL transport contractors would undertake a swept path assessment along the AIL delivery routes to establish the extent of any accommodation works or Traffic Regulation Measures.

10.6.27 In accordance with the **Framework CTMP** (**EN010166/APP/6.6**),the relevant highway authority must be notified in advance of all individual AIL movements and require a special order. The AIL movements must be planned and authorised in accordance with highway authority's system, forms and requirements.

10.6.28 Following completion of all AIL deliveries, the temporary AIL access off the A548 would be removed and reinstated to their current condition and any accommodation works will be reinstated in accordance with the agreed proposals to the satisfaction of the relevant highway authority.

10.6.29 Given the low number of anticipated AIL deliveries during the construction phase of the Proposed Development and the established process to plan and authorize the AIL movements, it is considered this would result in temporary **minor adverse** effects. This is considered to be **not significant**.

Driver Delay

10.6.30 In relation to driver delay, the increases in traffic during the peak construction period are considered to represent a temporary worst-case scenario. As all links were assessed to have a very low impact, no further detailed assessment of driver delay, in the form of junction capacity modelling, has been undertaken. The effect is considered to be **negligible** or **minor adverse**, which is **not significant**.

Impact Assessment – Sensitivity Test

10.6.31 An additional 'Sensitivity Test' scenario has been taken into consideration and assessed during the peak construction phase, in response to feedback received during statutory consultation. The feedback requested a scenario be assessed which reflects a planned maintenance outage (of the existing Connah's Quay Power Station), occurring during construction of the Proposed Development.

10.6.32 During planned maintenance outages, which are likely to occur approximately once every four years (per unit), it is envisaged that there

could be approximately 300 additional temporary contractors / maintenance workers within the CQLCP Abated Generating Station and/or Maintenance Laydown Area, for approximately two months.

10.6.33 On the basis of the above information, the sensitivity test comprises the addition of approximately 498 two-way light vehicles to the peak construction phase traffic (as assessed in **Table 10-19**). The 498 additional two-way light vehicles accounts for an additional 300 temporary contractors / maintenance workers travelling to / from site on a daily basis. A driver mode share of 83% (based on those who currently work in 'Flintshire 004' & 'Flintshire 007') has been applied to derive the additional 498 two-way vehicle movements (249 arrivals and 249 departures, per day).

10.6.34 **Table 10-22** presents a percentage impact assessment for the 2034 'Baseline + Committed Development + Construction Traffic' sensitivity test scenario, which considers the potential impact of a maintenance outage occurring during the peak construction period, anticipated to be during 2034.

Table 10-22: 2034 Baseline + Construction (Sensitivity Test) – Percentage Impact Assessment

Link	Direction	2034 Baseline (24hr Average Annual Daily Traffic (AADT), 5-Day)			2034 Baseline + Construction -Sensitivity Test (24hr AADT, 5-Day)			Difference		2034 Baseline + Construction – Sensitivity Test: % Change (Relative to 2034 Baseline)	
		Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	Total Vehicles	HGVs
1. Kelsterton Road	Eastbound	206	50	24%	1,262	170	13%	1,056	120	512%	241%
	Westbound	204	32	15%	1,260	152	12%	1,056	120	518%	380%
	Two-Way	410	81	20%	2,522	321	13%	2,112	240	515%	295%
2. A548 (West of Main Development Area Access Access)	Eastbound	8,404	632	8%	8,730	632	7%	325	0	4%	0%
	Westbound	8,130	743	9%	8,456	743	9%	325	0	4%	0%
	Two-Way	16,535	1,375	8%	17,185	1,375	8%	651	0	4%	0%
3. A548 (East of Main Development Area Access)	Eastbound	7,997	528	7%	8,314	648	8%	318	120	4%	23%
	Westbound	8,254	509	6%	8,571	629	7%	318	120	4%	24%
	Two-Way	16,251	1,037	6%	16,886	1,277	8%	635	240	4%	23%
4. B5129	Eastbound	5,243	679	13%	5,656	679	12%	413	0	8%	0%
	Westbound	5,612	703	13%	6,025	703	12%	413	0	7%	0%
	Two-Way	10,854	1,382	13%	11,681	1,382	12%	826	0	8%	0%
5. Kelsterton Lane	Northbound	670	70	10%	992	70	7%	321	0	48%	0%
	Southbound	818	92	11%	1,140	92	8%	321	0	39%	0%
	Two-Way	1,489	162	11%	2,131	162	8%	643	0	43%	0%

Link	Direction	2034 Baseline (24hr Average Annual Daily Traffic (AADT), 5-Day)			2034 Baseline + Construction -Sensitivity Test (24hr AADT, 5-Day)			Difference		2034 Baseline + Construction – Sensitivity Test: % Change (Relative to 2034 Baseline)	
		Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	Total Vehicles	HGVs
6. Allt Goch Lane	Northbound	79	15	19%	83	15	18%	4	0	5%	0%
	Southbound	74	9	12%	78	9	12%	4	0	5%	0%
	Two-Way	153	24	16%	161	24	15%	8	0	5%	0%
7. Golftyn Lane	Northbound	3,920	306	8%	3,920	306	8%	0	0	0%	0%
	Southbound	4,149	326	8%	4,149	326	8%	0	0	0%	0%
	Two-Way	8,068	632	8%	8,068	632	8%	0	0	0%	0%
8. Mold Road	Eastbound	4,244	319	8%	4,244	319	8%	0	0	0%	0%
	Westbound	4,403	394	9%	4,403	394	9%	0	0	0%	0%
	Two-Way	8,648	713	8%	8,648	713	8%	0	0	0%	0%

10.6.35 **Table 10-22** indicates that there would be a greater increase in daily two-way vehicles on all links during a scenario whereby a maintenance outage occurred. There would not be an increase in HGVs above that forecast for the peak construction traffic scenario, as all additional vehicle trips associated with the sensitivity test for a maintenance outage would be associated with workers, the majority of which are assumed to drive light goods vehicles, with the remainder forecast to travel on foot, by bike or by public transport.

10.6.36 In the event that a major outage of the existing Connah's Quay Power Station were to coincide with the peak of construction, the magnitude of impact would remain as reported in **Table 10-20** and **Table 10-21**, resulting in no new likely significant effects, in line with the traffic assessment criteria set out in **Table 10-9**. The Final CTMP that would be secured by the **Draft DCO** (**EN010166/APP/3.1**), and produced by the appointed contractor, would work to control effects of construction traffic on Kelsterton Road. Outline measures, to be developed more precisely at a later stage, are set out in a **Framework CTMP** (**EN010166/APP/6.6**) that accompanies the Application.

Operational Phase

10.6.37 The earliest year of operation for the Proposed Development is anticipated to be 2030, under a Simultaneous Construction approach beginning in 2026 for a period of five years. If construction was to be undertaken in a Phased Construction approach, the earliest year of operation is anticipated for Train 1 to be 2030 and for Train 2 to be 2035. If a Simultaneous Construction approach was undertaken at the latest possible time, five years after DCO Consent, operation would be anticipated to occur in late 2036.

10.6.38 Once operational, it is anticipated that 66 permanent Full Time Equivalent (FTE) roles would be created once Trains 1 and 2 are operating. Staff would be required on a shift basis to be spread over a 24-hour period. Applying a Census car driver mode share of 83% (based on those who currently work in 'Flintshire 004' & 'Flintshire 007'), this could equate to around 55 additional cars per day (110 two-way vehicle movements in a 24 hour period). Approximately 12 two-way HGV movements are estimated each day, associated with chemical supply and removal of process wastewater. The above has been assessed based on a future operational year of 2036.

Distribution of Operational Traffic

10.6.39 For the purposes of assessment, operational traffic has been distributed as per the methodology used for the assessment of construction impact, for both heavy and light vehicles.

Heavy Vehicles

10.6.40 HGV traffic associated with the operation of the Proposed Development has been distributed as per the HGV construction traffic. The assignment of predicted two-way daily HGV traffic is shown in **Table 10-23**.

Table 10-23: Summary Operational Traffic Distribution (HGV)

Link	Proportion of Trips Routed onto Link	Daily Two-Way Traffic
1. Kelsterton Road	100%	12
2. A548 (West of Main Development Area Access)	0%	0
3. A548 (East of Main Development Area Access)	100%	12
4. B5129	0%	0
5. Kelsterton Lane	0%	0
6. Allt Goch Lane	0%	0
7. Golftyn Lane	0%	0
8. Mold Road	0%	0

10.6.41 As detailed in the above table, all HGV traffic would be routed to and from the CQLCP Abated Generating Station via the A548 (East), before accessing via Kelsterton Road. As a result, all (100%) HGV traffic has been assigned onto these links for the subsequent impact assessment.

Light Vehicles

10.6.42 The distribution of light vehicle development traffic associated with the operation of the Proposed Development has been based on analysis of the 2021 Census Journey to Work data (Ref 10-15), as per the construction traffic. The assignment of forecast two-way daily light vehicle traffic across the local highway network is shown in **Table 10-24**.

Table 10-24: Summary Operational Traffic Distribution (Light Vehicles)

Link	Proportion of Trips Routed onto Link	Daily Two-Way Traffic
1. Kelsterton Road	100%	110
2. A548 (West of Main Development AreaAccess)	35%	38
3. A548 (East of Main Development Area Access)	21%	23
4. B5129	44%	48
5. Kelsterton Lane	34%	38
6. Allt Goch Lane	0%	0
7. Golftyn Lane	0%	0
8. Mold Road	0%	0

10.6.43 All (100%) of light vehicle traffic has been assigned to Kelsterton Road as the final link between the CQLCP Abated Generation Station and the wider highway network. Prior to reaching Kelsterton Road, 56% of light vehicle traffic is forecast to arrive from the A548 (35% from the west and 21% from the east), with the remaining 44% anticipated to route directly onto Kelsterton Road from the B5129. Of these 44%, 34% of light vehicle trips are anticipated to use Kelsterton Lane, prior to reaching the B5129. The remaining 10% of light vehicle trips are forecast to originate from the B5129 only, attributed to local commuting trips from Connah's Quay, Shotton and beyond to the east of the Main Development Area.

Impact Assessment

10.6.44 **Table 10-25** presents a percentage impact assessment for the 2036 'Baseline + Committed Development + Operational Traffic' scenario, which corresponds with the opening year of operation.

Table 10-25: 2036 Baseline + Operation – Percentage Impact Assessment

Link	Direction	2036 Baseline (24hr AADT, 5-Day)			2036 Baseline + Operation (24hr AADT, 5-Day)			Difference		2036 Baseline + Operation: % Change (Relative to 2036 Baseline)	
		Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	Total Vehicles	HGVs
1. Kelsterton Road	Eastbound	209	50	24%	270	56	21%	61	6	29%	12%
	Westbound	206	32	15%	267	38	14%	61	6	29%	18%
	Two-Way	415	82	20%	537	94	18%	121	12	29%	14%
2. A548 (West of Main Development Area Access)	Eastbound	8,509	640	8%	8,528	640	7%	19	0	0%	0%
	Westbound	8,232	752	9%	8,251	752	9%	19	0	0%	0%
	Two-Way	16,741	1,392	8%	16,779	1,392	8%	38	0	0%	0%
3. A548 (East of Main Development AreaAccess)	Eastbound	8,093	534	7%	8,111	540	7%	17	6	0%	1%
	Westbound	8,354	515	6%	8,371	521	6%	17	6	0%	1%
	Two-Way	16,447	1,050	6%	16,482	1,061	6%	35	12	0%	1%
4. B5129	Eastbound	5,308	688	13%	5,332	688	13%	24	0	0%	0%
	Westbound	5,682	712	13%	5,706	712	12%	24	0	0%	0%
	Two-Way	10,989	1,399	13%	11,038	1,399	13%	48	0	0%	0%
5. Kelsterton Lane	Northbound	679	71	10%	698	71	10%	19	0	3%	0%
	Southbound	829	93	11%	847	93	11%	19	0	2%	0%
	Two-Way	1,507	164	11%	1,545	164	11%	38	0	2%	0%
6. Allt Goch Lane	Northbound	80	15	19%	80	15	19%	0	0	0%	0%
	Southbound	75	9	12%	75	9	12%	0	0	0%	0%
	Two-Way	155	24	16%	155	24	16%	0	0	0%	0%

Link	Direction	2036 Baseline (24hr AADT, 5-Day)			2036 Baseline + Operation (24hr AADT, 5-Day)			Difference		2036 Baseline + Operation: % Change (Relative to 2036 Baseline)	
		Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	HGV %	Total Vehicles	HGVs	Total Vehicles	HGVs
7. Golftyn Lane	Northbound	3,968	310	8%	3,968	310	8%	0	0	0%	0%
	Southbound	4,200	330	8%	4,200	330	8%	0	0	0%	0%
	Two-Way	8,168	640	8%	8,168	640	8%	0	0	0%	0%
8. Mold Road	Eastbound	4,297	324	8%	4,297	324	8%	0	0	0%	0%
	Westbound	4,458	399	9%	4,458	399	9%	0	0	0%	0%
	Two-Way	8,755	722	8%	8,755	722	8%	0	0	0%	0%

Table 10-26: 2036 Baseline + Operation – Magnitude of Impact

Link	Direction	2036 Baseline + Operation - % Change		Link Sensitivity	Magnitude of Impact					
		Total Vehicles	HGVs		Severance	Pedestrian Amenity	Fear & Intimidation	Highway Safety	Hazardous / Large Loads	Driver Delay
1. Kelsterton Road	Eastbound	29%	12%	Low	Very low	Very low	Very low	Very low	Very low	Very low
	Westbound	29%	18%							
	Two-Way	29%	14%							
2. A548 (West of Main Development Area Access)	Eastbound	0%	0%	Low	Very low	Very low	Very low	Very low	Very low	Very low
	Westbound	0%	0%							
	Two-Way	0%	0%							
	Eastbound	0%	1%	Low	Very low	Very low	Very low	Very low	Very low	

Link	Direction	2036 Baseline + Operation - % Change		Link Sensitivity	Magnitude of Impact					
		Total Vehicles	HGVs		Severance	Pedestrian Amenity	Fear & Intimidation	Highway Safety	Hazardous / Large Loads	Driver Delay
3. A548 (East of Main Development Area Access)	Westbound	0%	1%							Very low
	Two-Way	0%	1%							
4. B5129	Eastbound	0%	0%	High	Very low	Very low	Very low	Very low	Very low	Very low
	Westbound	0%	0%							
	Two-Way	0%	0%							
5. Kelsterton Lane	Northbound	3%	0%	Low	Very low	Very low	Very low	Very low	Very low	Very low
	Southbound	2%	0%							
	Two-Way	2%	0%							
6. Allt Goch Lane	Northbound	0%	0%	Low	Very low	Very low	Very low	Very low	Very low	Very low
	Southbound	0%	0%							
	Two-Way	0%	0%							
7. Golftyn Lane	Northbound	0%	0%	Medium	Very low	Very low	Very low	Very low	Very low	Very low
	Southbound	0%	0%							
	Two-Way	0%	0%							
8. Mold Road	Eastbound	0%	0%	Medium	Very low	Very low	Very low	Very low	Very low	Very low
	Westbound	0%	0%							
	Two-Way	0%	0%							

10.6.45 The impact assessment demonstrates that the largest permanent traffic impact would be seen on Kelsterton Road. In terms of total vehicles, there is an impact of 29% (equating to an absolute increase of 121 two-way vehicles per day). In terms of HGVs, the impact is 14%, equating to an absolute increase of 12 vehicles daily. Although this represents a permanent increase in the percentage of HGVs of the total traffic, this is not considered to represent a perceptible change on Kelsterton Road, which due to its proximity to the CQLCP Abated Generating Station and existing access function between the CQLCP Abated Generating Station and the SRN, is not considered to be sensitive to this magnitude of increase.

10.6.46 The magnitude of change and the sensitivity of the receptor have been compared for each type of impact, to determine the classification of the effect as per IEMA Guidelines (Traffic). This is summarised in **Table 10-27**.

Table 10-27: 2036 Baseline + Operation – Significance of Effect

Link	Link Sensitivity	Severance		Pedestrian Amenity		Fear & Intimidation		Highway Safety		Hazardous / Large Loads		Driver Delay	
		Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect
1. Kelsterton Road	Low	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)
2. A548 (West of Main Development Area Access)	Low	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)
3. A548 (East of Main Development Area Access)	Low	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)
4. B5129	High	Very low	Minor adverse (not significant)	Very low	Minor adverse (not significant)	Very low	Minor adverse (not significant)	Very low	Minor adverse (not significant)	Very low	Minor adverse (not significant)	Very low	Minor adverse (not significant)

Link	Link Sensitivity	Severance		Pedestrian Amenity		Fear & Intimidation		Highway Safety		Hazardous / Large Loads		Driver Delay	
		Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect	Magnitude of Impact	Classification of Effect
5. Kelsterton Lane	Low	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)
6. Allt Goch Lane	Low	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)	Very low	Negligible (not significant)
7. Golftyn Lane	Medium	Very Low	Negligible (not significant)	Very Low	Negligible (not significant)	Very Low	Negligible (not significant)	Very Low	Negligible (not significant)	Very Low	Negligible (not significant)	Very Low	Negligible (not significant)
8. Mold Road	Medium	Very Low	Negligible (not significant)	Very Low	Negligible (not significant)	Very Low	Negligible (not significant)	Very Low	Negligible (not significant)	Very Low	Negligible (not significant)	Very Low	Negligible (not significant)

Severance – Road Links

10.6.47 In relation to severance, the impact assessment demonstrates that all of the links would experience either **minor adverse** or **negligible effects** during the operational phase of the Proposed Development, which are **not significant**.

Severance - PRoW

10.6.48 In relation to severance of existing PRoW, there would be **no material effects** during the operational phase of the Proposed Development, this is therefore **not significant**.

Pedestrian Amenity

10.6.49 In relation to pedestrian amenity, the impact assessment demonstrates that all of the links would experience either **minor adverse** or a **negligible** effect during the operational phase of the Proposed Development, which are **not significant**.

Fear and Intimidation

10.6.50 In relation to fear and intimidation, the impact assessment demonstrates that all of the links would experience either **minor adverse** or **negligible** effect during the operational phase of the Proposed Development, which are **not significant**.

Highway Safety

10.6.51 PIC data for the most recent five years has been acquired for the study area and is summarised in Section 10.4. The statistics provide information on the location and severity of each PIA. Given that the level of increase in traffic flows resulting from the operation of the Proposed Development on road links is minor or negligible, the effect on highway safety is also considered to be **minor adverse** or **negligible**, which are **not significant**.

Hazardous / Large Loads

10.6.52 Information in relation to likely hazardous loads during the operation of the Proposed Development are set out in **Chapter 23: Materials and Waste** (**EN010166/APP/6.2.23**).

10.6.53 There is unlikely to be a requirement for scheduled AIL deliveries once the Proposed Development is operational. Should the need arise for an AIL delivery to take place during operation, a similar methodology would be undertaken to that which is proposed during construction of the Proposed Development. This would consider the ability for a shipborne delivery to take place in order to limit any impacts on the local highway network. The effect is therefore considered to be **minor adverse** or **negligible**, which is **not significant**.

Driver Delay

10.6.54 In relation to driver delay, the increases in traffic during the operational phase of the Proposed Development are shown to be **minor adverse** or **negligible**, which are **not significant**.

Decommissioning Phase

10.6.55 At the end of its operating life, the most likely scenario is that the Proposed Development would be shut down and all above ground structures would be removed, and the ground remediated as required to facilitate future re-use. As set out in this chapter, traffic impacts which could arise during the decommissioning phase of the Proposed Development are likely to be similar or less than impacts during the construction phase. An assessment of potential environmental impacts during the Simultaneous Construction scenario demonstrates the greatest amount of construction traffic impact would be experienced on Kelsterton Road, which is forecasted to generate a two-way HGV increase of 221%. In absolute terms, this equates to a daily increase of 180 two-way HGVs. This temporary increase would be expected given Kelsterton Road would provide access to / from the Main Development Area for all construction traffic. The majority of remaining links do not experience an increase of greater than 10%, both in terms of total vehicles and HGVs.

10.6.56 Therefore, decommissioning is not anticipated to present any significant environmental effects beyond those assessed for the construction phase of the Proposed Development.

10.7 Additional Mitigation and Enhancement Measures

Construction Phase

10.7.1 As set out in this chapter, there are no significant transport effects arising from the construction phase of the Proposed Development. Therefore, no additional mitigation in the construction phase is needed.

Operational Phase

10.7.2 As set out in this chapter, there are no significant transport effects arising from the operational phase of the Proposed Development. Therefore, no additional mitigation in is needed, once the Proposed Development is complete and operational.

Decommissioning Phase

10.7.3 As set out in this chapter, traffic impacts which could arise during the decommissioning phase of the Proposed Development are likely to be similar or less than impacts during the construction phase. Therefore, no additional mitigation in the decommissioning phase is needed.

10.8 Summary of Residual Effects

10.8.1 **Table 10-28** and **Table 10-29** summarise the residual effects of the Proposed Development in relation to Traffic and Transport. In summary there are no likely significant residual effects on the Traffic and Transport receptors during the construction, operation (including maintenance) or decommissioning of the Proposed Development.

10.8.2 As described in paragraphs 10.6.55 and 10.6.56, decommissioning is not anticipated to present any significant environmental effects beyond those assessed for the construction phase of the Proposed Development and a separate table is not provided.

10.8.3 As described in Section 10.4 the traffic and transport assessment considered cumulative effects through the use of the future baseline. A separate assessment of cumulative effects is therefore not provided in **Chapter 24: Cumulative and Combined Effects** (**EN010166/APP/6.2.24**).

Table 10-28: Summary of Residual Effects (Construction)

Link	Sensitivity (value)	Description of Impact	Magnitude of Impact prior to Additional Mitigation	Classification of Effect (prior to Additional Mitigation)	Additional Mitigation / Enhancement Measure	Magnitude of Impact after Additional Mitigation	Residual Effect after Additional Mitigation
1. Kelsterton Road	Low	Severance, pedestrian amenity and Fear and intimidation	Medium	Minor adverse (not significant)	N/A	Medium	Minor adverse (not significant)
		Highway safety, hazardous /large loads and driver delay	Very low	Negligible (not significant)	N/A	Very low	Negligible (not significant)
2. A548 (West of Main Development Area Access)	Low	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous /large loads and driver delay	Very low	Negligible (not significant)	N/A	Very low	Negligible (not significant)
3. A548 (East of Main Development Area Access)	Low	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous /large loads and driver delay	Very low	Negligible (not significant)	N/A	Very low	Negligible (not significant)
4. B5129	High	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous /large loads and driver delay	Very low	Minor adverse (not significant)	N/A	Very low	Minor adverse (not significant)

Link	Sensitivity (value)	Description of Impact	Magnitude of Impact prior to Additional Mitigation	Classification of Effect (prior to Additional Mitigation)	Additional Mitigation / Enhancement Measure	Magnitude of Impact after Additional Mitigation	Residual Effect after Additional Mitigation
5. Kelsterton Lane	Low	Pedestrian amenity, highway safety, hazardous /large loads and driver delay	Very low	Negligible (not significant)	N/A	Very low	Negligible (not significant)
		Severance	Low	Negligible (not significant)	N/A	Low	Negligible (not significant)
		Fear and intimidation	Medium	Minor adverse (not significant)	N/A	Medium	Minor adverse (not significant)
6. Allt Goch Lane	Low	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous /large loads and driver delay	Very Low	Negligible (not significant)	N/A	Very Low	Negligible (not significant)
7. Golftyn Lane	Medium	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous /large loads and driver delay	Very Low	Negligible (not significant)	N/A	Very Low	Negligible (not significant)

Link	Sensitivity (value)	Description of Impact	Magnitude of Impact prior to Additional Mitigation	Classification of Effect (prior to Additional Mitigation)	Additional Mitigation / Enhancement Measure	Magnitude of Impact after Additional Mitigation	Residual Effect after Additional Mitigation
8. Mold Road	Medium	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous /large loads and driver delay	Very Low	Negligible (not significant)	N/A	Very Low	Negligible (not significant)
Footpaths 66 and 67	Low	Severance	Medium	Minor adverse (not significant)	N/A	Medium	Minor adverse (not significant)

Table 10-29: Summary of Residual Effects (Operation)

Link	Sensitivity (value)	Description of Impact	Magnitude of Impact prior to Additional Mitigation	Classification of Effect (prior to Additional Mitigation)	Additional Mitigation / Enhancement Measure	Magnitude of Impact after Additional Mitigation	Residual Effect after Additional Mitigation
1. Kelsterton Road	Low	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous	Very low	Negligible (not significant)	N/A	Very low	Negligible (not significant)

Link	Sensitivity (value)	Description of Impact	Magnitude of Impact prior to Additional Mitigation	Classification of Effect (prior to Additional Mitigation)	Additional Mitigation / Enhancement Measure	Magnitude of Impact after Additional Mitigation	Residual Effect after Additional Mitigation
		/large loads and driver delay					
2. A548 (West of Main Development Area Access)	Low	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous /large loads and driver delay	Very low	Negligible (not significant)	N/A	Very low	Negligible (not significant)
3. A548 (East of Main Development Area Access)	Low	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous /large loads and driver delay	Very low	Negligible (not significant)	N/A	Very low	Negligible (not significant)

Link	Sensitivity (value)	Description of Impact	Magnitude of Impact prior to Additional Mitigation	Classification of Effect (prior to Additional Mitigation)	Additional Mitigation / Enhancement Measure	Magnitude of Impact after Additional Mitigation	Residual Effect after Additional Mitigation
4. B5129	High	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous /large loads and driver delay	Very low	Minor adverse (not significant	N/A	Very low	Minor adverse (not significant)
5. Kelsterton Lane	Low	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous /large loads and driver delay	Very low	Negligible (not significant)	N/A	Very low	Negligible (not significant)
6. Allt Goch Lane	Low	Severance, pedestrian amenity, fear	Very low	Negligible (not significant)	N/A	Very low	Negligible (not significant)

Link	Sensitivity (value)	Description of Impact	Magnitude of Impact prior to Additional Mitigation	Classification of Effect (prior to Additional Mitigation)	Additional Mitigation / Enhancement Measure	Magnitude of Impact after Additional Mitigation	Residual Effect after Additional Mitigation
		and intimidation, highway safety, hazardous /large loads and driver delay					
7. Golftyn Lane	Medium	Severance, pedestrian amenity, fear and intimidation, highway safety, hazardous /large loads and driver delay	Very low	Negligible (not significant)	N/A	Very low	Negligible (not significant)
8. Mold Road	Medium	Severance, pedestrian amenity, fear and intimidation, highway	Very low	Negligible (not significant)	N/A	Very Low	Negligible (not significant)

Link	Sensitivity (value)	Description of Impact	Magnitude of Impact prior to Additional Mitigation	Classification of Effect (prior to Additional Mitigation)	Additional Mitigation / Enhancement Measure	Magnitude of Impact after Additional Mitigation	Residual Effect after Additional Mitigation
		safety, hazardous /large loads and driver delay					

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