HyNet North West

ENVIRONMENTAL STATEMENT (VOLUME III)

Appendix 17.12 Scoping Note

HyNet Carbon Dioxide Pipeline DCO

Planning Act 2008

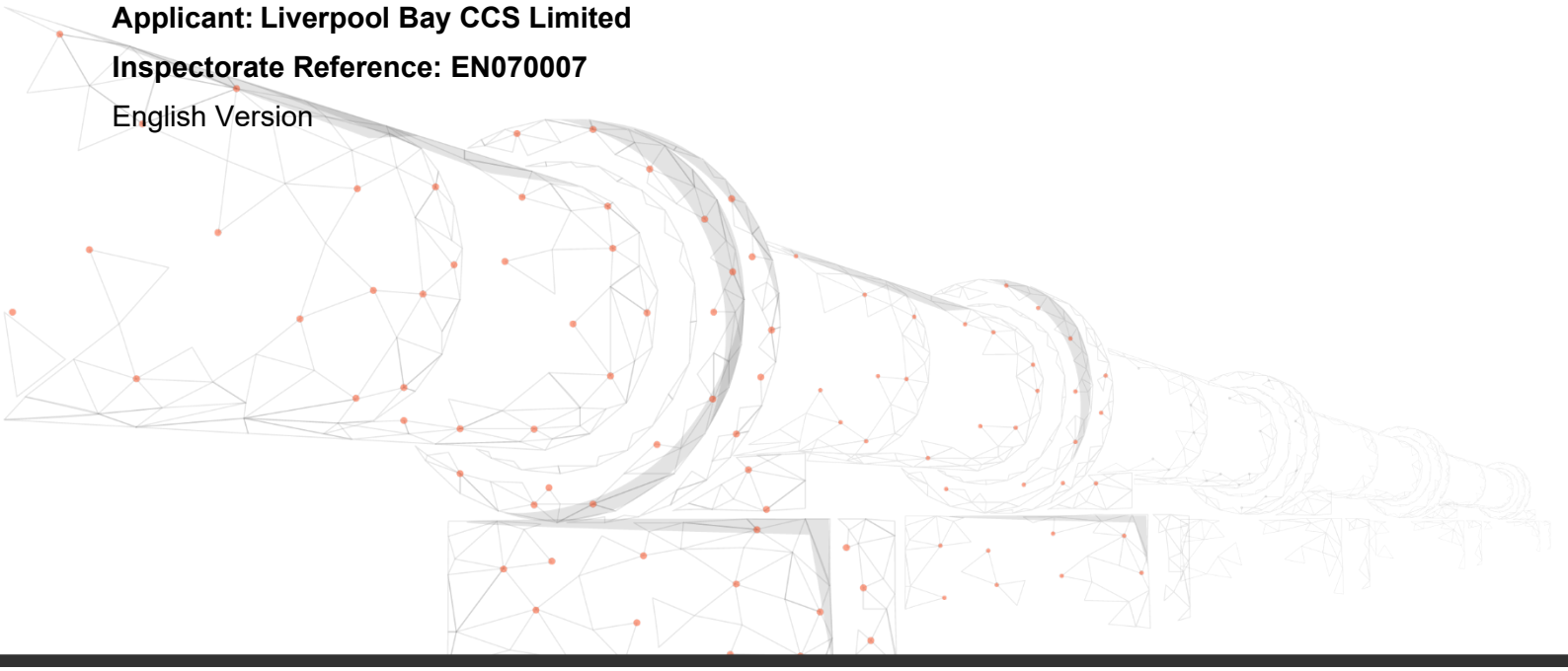
The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulations 5(2)(a)

Document Reference Number D.6.3.17.12

Applicant: Liverpool Bay CCS Limited

Inspectorate Reference: EN070007

English Version



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Document Owner	WSP			

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1. INTRODUCTION

1.1.1. The below Scoping Note was issued to the Flintshire County Council (FCC) Highways Officer and the Cheshire West and Chester (CWCC) Highways Officer to agree the scope of the assessment contained in the **Traffic Assessment (Appendix 17.13, Volume III), Interim Worker Plan (Appendix 17.14, Volume III),** and **Outline Construction Traffic Management Plan** (which forms **Appendix 3** of the **Outline Construction Environmental Management Plan (OCEMP), Document reference: D.6.5.4**). It represents the state of the DCO Proposed Development at the time of writing (June 2022). It should be noted that some of the elements of the design of the DCO Proposed Development and associated terminology has changed since it was circulated.

Hynet North West DCO – Transport Assessment Scoping Note

DATE:	24 June 2022	**CONFIDENTIALITY:**	Confidential
SUBJECT:	Hynet North West Development Consent Order - Transport Assessment Scoping Note		
PROJECT:	70070865	**AUTHOR:**	LP
CHECKED:	AL	**APPROVED:**	AL

INTRODUCTION

Hynet North West

The DCO Proposed Development will form part of HyNet North West which is a hydrogen supply and Carbon Capture and Storage (CCS) project. The goal of the Project is to reduce carbon dioxide emissions from industry, homes and transport and support economic growth in the North West of England and North Wales. The Project is based on the production of low carbon hydrogen from natural gas. It includes the development of new hydrogen production plants, distribution pipelines, and the creation of CCS infrastructure. CCS prevents CO_2 entering the atmosphere by capturing it, compressing it, and transporting it for safe, permanent storage.

Hydrogen will be sent via a new distribution network to a range of industrial sites, for injection as a blend into the existing natural gas network and for use as a transport fuel. Resulting CO_2 would be captured and, together with CO_2 from local industry, which is already available, sent by pipeline for storage offshore in the nearby Liverpool Bay gas fields.

The Application for the DCO Proposed Development will seek consent for the construction and operation of the following components which form part of the CCS infrastructure:

- Ince Above Ground Installation (AGI) to Stanlow AGI Pipeline – a section of underground onshore pipeline to transport CO_2.
- Stanlow AGI to Flint AGI Pipeline – a section of underground onshore pipeline to transport CO_2.
- Flint AGI to Flint Connection - a section of underground onshore pipeline to transport CO_2.
- Ince AGI, Stanlow AGI, Northop Hall AGI, and Flint AGI.
- Seven Block Valve Stations (BVSs) located along:
  - The proposed Stanlow AGI to Flint AGI Pipeline (three in total).
  - The existing Flint Connection to Point of Ayr (PoA) Terminal Pipeline (four in total).
- Other above ground infrastructure, including Cathodic Protection (CP) transformer rectifier cabinets and pipeline marker posts.
- Ancillary works integral to the construction of the Carbon Dioxide Pipeline, including Construction Compounds and temporary access tracks.

Transport Assessment

In accordance with Cheshire West & Chester (CW&C) and Flintshire County Council's (FCC's) response to the ES Scoping Report and subsequent discussions with CW&C officers, a Transport Assessment (TA) will be required to consider the impacts of the Proposed Development. This Scoping Note sets out WSP's proposed scope for the TA. In addition to the matters considered within the TA, the TA should be read and considered alongside the following documents which will form part of the Development Consent Order (DCO) submission:

- Outline Construction Traffic Management Plan

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- Interim Worker Travel Plan
- Traffic and Transport Environmental Statement (ES) Chapter

Approach to Scoping and Engagement

This Scoping Note has been prepared based on best available design information at the time of writing.

We are grateful for the productive discussions we have held with CW&C and FCC colleagues to date and wish to continue a collaborative approach to the Traffic & Transport Assessment for the project. We will endeavour to share at the earliest opportunity, where we are able, up to date design and assessment information in preparation of the ES Chapter, Transport Assessment, and other documentation listed in this Scoping Note. We hope that this will minimise delay; allowing agreement of key matters at an early a stage of the process as possible. As this information is shared we are happy to respond to any specific questions and discuss via calls/email exchanges, and virtual and/or in-person meetings should CW&C and FCC wish to do so. In any case we propose that regular scheduled sessions be held up to the point of submission of the Draft DCO, held between both LHAs and WSP.

TRAFFIC AND TRANSPORT IMPACTS

This section provides a brief overview of the traffic movements anticipated to occur during the construction phase of the Proposed Development. It should be noted that the construction traffic volumes report at this time are high level, and likely to change to reflect the specifics of each work site.

Construction activity for the Proposed Development will be focused around ‘Centralised compounds’. These are locations where materials will be delivered to and from, where workers will arrive on site, where plant and equipment will be stored, and where possible, the points at which access to the construction corridor will be taken.

A period of site mobilisation will be required where equipment and bulk civils will be delivered to the site to, for example, create temporary access tracks, erect lighting and CCTV, import and export excavated material, and deliver plant and equipment.

Once the site is established construction traffic movements will primarily focus on the movement of civils material and material associated with excavation and backfilling at Above Ground Installation (AGI) and Block Valve Station (BVS) locations, and the delivery and movement of pipeline sections. Where possible, pipeline sections will be moved along the pipeline corridor, and would not require the use of the Local Road Network (LRN). There will, however, be some locations where it will be necessary to travel along the LRN to deliver pipeline sections to deliver to work fronts; meaning pipeline sections would be transported from centralised compounds to access locations on the LRN.

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Peak construction traffic is expected to occur during the phase where the pipelining works and heavy civils movements at AGI and BVS overlap. This is currently anticipated to occur in Spring 2025 however this is subject to changes in the draft programme.

Table 1 summarises the anticipated daily and hourly HGV volumes (one-way) for a 'Peak Month' across the overall programme, and for an average month during the peak year (12 month period) for comparison. It is anticipated that this peak would last for a period of around 2 months at each site. Actual volumes at each site will reflect the length of pipeline constructed from that locations, the extent to which pipeline sections can be delivered along the corridor without the use of the LRN, and the volumes of excavated / backfill material required in each location.

Work activity will take place over one 12 hour shift pattern (anticipated at this time to be 0700-1900. The profile of HGV movements will be broadly consistent across each hour of the day. The hourly volumes presented in Table 1 assume an even split of HGV traffic across this 12 hour period.

Table 1: Indicative HGV Volumes

Location	**Daily HGVS (Peak Month)**	**Hourly HGVS (Peak Month)**	**Daily HGVs (Average Month in Peak Year)**	**Hourly HGVs (Average Month in Peak Year)**
Centralised Compound	42	4	38	3
AGI/ BVS	6	1	5	1
Deliveries to LRN Access Points	25	2	18	2

Volumes of LGVs in each location are subject to further refinement and will be shared with CW&C and FCC at the earliest opportunity.

LGV movements will be comprised of smaller deliveries, staff movements, and other engineering/ environmental activity. Workers will travel to centralised compounds in advance of the shift start (between 0600-0700) and depart after 1900. A significant proportion of LGV numbers will relate to the workforce. It is therefore anticipated that the impacts during the traditional peak hours (0800-0900 and 1700-1800) will be limited.

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PROPOSED SCOPE

Transport Assessment

A TA will be prepared to consider the existing highways and transport infrastructure within the 'Zone of Influence' and to assess, in detail, the highways and transport movements associated with construction traffic that would be generated by the Proposed Development, and the effect these movements would have on transport infrastructure. The ZoI was defined in the Preliminary Environment Information Report (PEIR) and includes all parts of the Local Road Network (LRN) i.e Non-Trunk Road Network) and transport infrastructure impacted by the proposed development. The ZoI submitted as part of the PEIR is presented in **Appendix A**. This Figure also presents ATC locations across the ZoI undertaken in 2021. Since that time a second phase of ATC surveys were commissioned in March 2022. A second phase An updated ZoI will be presented in the TA.

As outlined in the ES Scoping chapter, no assessment will be undertaken for the operational and decommissioning phases of the proposed development, as the traffic impact is likely to be negligible.

This TA will include the identification of construction traffic access and routeing strategies, capacity assessment at local junctions (scope TBC), and a road safety review of links and junctions within the Traffic & Transport Zone of Influence (ZoI).

This assessment will be used to identify management and mitigation measures to be set out in the Outline Construction Traffic Management Plan (OCTMP) and informs the residual effects to be reported in the Traffic and Transport chapter in the ES. The TA will serve as an Appendix to the ES chapter.

The structure and content of the TA is proposed as follows:

1. **Introduction**
   The introduction will set out the required background, scope and methodology, as well as the document purpose.
2. **Proposed Development**
   This section will describe the Proposed Development with specific reference to Traffic and Transport impacts. In particular it will set out how the Proposed Development is expected to be phased across the construction programme, the nature and duration of construction works, and the types of vehicles associated with specific activities. This will also include reference to Abnormal Load (AIL) numbers and routing.
3. **Existing Conditions**
   This section will describe existing conditions for active travel, public transport and the highway network across the ZoI as defined in the ES scoping report and appended to this document (**Appendix A**). This will include a road safety section, which will review local accident records within the local area over the

previous five years and identify of any trends. In particular it will include the identification of any PIA 'Clusters' and/or Fatal PIAs on proposed construction traffic routes. Given the timescales for submission, WSP will utilise alternative sources for accident data i.e. CrashMap.

The Strategic Road Network (SRN) and Local Road Network (LRN) within the study area will be described. Descriptions of LRN links impacted by the Proposed Development will be provided including the phases of construction that are proposed to utilise the link and the type of construction traffic i.e. HGV/LGV or LGV only.

Data relating to the baseline conditions i.e. link flow data will be presented. If required, baseline turning count data will be included within the appendices.

The TA will also outline the existing public transport services, specifically any bus routes that share proposed construction routes. Consideration will also be given to rail services within the study area, although there is not anticipated to be any disruption to rail services as a consequence of the construction of the Proposed Development.

Given the nature of the Proposed Development, and the restriction on access to site working areas on foot or by bicycle, cycling and walking opportunities will be considered in terms of Public Rights of Way and the national /local cycling network that will be located either on, adjacent to or are intersected by or potentially impacted by construction traffic routes or the Proposed Development itself.

4 Policy Review

This section with consider the Proposed Development in terms of National, regional and local policy compliance.

5 Construction Taffic Access

There are approximately 90no. accesses across the Proposed Development within the jurisdiction of Flintshire County Council and Cheshire West and Chester Council. These are comprised of access to Centralised Compounds – where plant and materials are delivered to and stored - (Primary Accesses) and Secondary Accesses, which serve the pipeline corridor and local working areas. This section of the TA will describe how each access will be used and its design parameters. The arrangement of each access will be summarised in a 'Temporary Access Principles' Technical Note which has been submitted to each LHA alongside this Scoping Note. This note includes, information on swept path analysis, geometric layout, and visibility; in accordance with appropriate guidance such as the Design Manual for Roads and Bridges (DMRB), TAN 18, Manual for Streets and Manual for Streets 2.

6 Construction Traffic Route Strategy

This section will present the proposed construction traffic routes for the project. Each route will be assigned to access locations and work fronts[1]. As set out in the ES scoping chapter, construction traffic routes will commence from the Strategic Road Network (i.e. A55, M53, and M56). The selection of

[1] Work Fronts are sections of the Proposed Development; each served by a specified centralised compound.

construction routes will be discussed in detail within the Outline Construction Traffic Management Plan (OCTMP) and summarised in this section of the TA. This section will also consider the impact of any road closures and diversion routes. Draft construction traffic routes to Centralised Compounds, Block Valve Stations, and Above Ground Installations (AGIs) are presented in **Appendix C**. These routes are subject to change depending on the Traffic and Transport assessment and in preparation of the OCTMP.

7 **Junction Assessment Methodology**

Construction traffic will be assigned along each construction traffic route from the SRN to access points. We proposed to use the threshold from the DfT's 'Guidance on Transport Assessment'[2] of 30 two-way trips in either of the peak hours to determine the need for junction modelling. Notwithstanding that, there may be junctions in rural locations with negligible baseline traffic flows. Where construction traffic flows exceed this threshold, we intend to, in agreement with CW&C, scope these out of the modelling exercise. All modelling would take the form of individual junction modelling using Junctions 11 (ARCADY/PICADY) and LinSig, if necessary.

8 **Junction Assessment Results**

Should junction modelling be required, this section will consider the outcomes of the junction modelling exercise and the significance of forecast impacts on queue lengths, delay, and capacity. Results will be presented in summary tables within the body of the report with more detailed model outputs appended to the TA.

9 **Highways Safety**

Using the baseline review completed in the evaluation of 'Existing Conditions', the TA will provbide a qualitative assessment of the likely impacts of additional construction traffic on any clusters identified along the routes.

10 **Mitigation**

This section will describe any mitigation proposed to faciliate the proposed development. This will be defined as one of three categories of mitigation, set out below :

- Embedded Mitigation
- Risk-based Mitigation; and
- Assessment-based Mitigation.

Embedded mitigation refers to those measures incorporated into the design of the Proposed Development, including for example the siting of access locations and selection of construction traffic routes. Risk-based mitigation will include highways interventions or road safety meausures proposed to address, for example, geometric constraints, or risks related to the outcomes of PIA analysis. Assessment-based mitigation will include measures proposed to mitigate capacity constraints identified

[2] Now withdrawn

from the junction modelling exercise. This might include, if necessary, restrictions on HGV/ delivery timings.

11 **Operation and Maintenance**
This section will set out the operation and maintenance requirements of the Proposed Development, noting that an assessment of the environmental impacts of the development have been scoped out of the ES chapter. Nonethelesss this section will set out permanent access locations, maintenance and access requirements, parking, and any measures required to deliver safe access to these locations once the Proposed Development has been constructed and is fully operational.

12 **Summary and Conclusions**
This final chapter will summarise the key findings of the TA.

Outline Construction Traffic Management Plan

Alongside the TA, WSP will prepare an Outline Construction Traffic Management Plan (OCTMP), to be appended to the Construction Environmental Management Plan (CEMP). The OCTMP will be a document that will be included within the tender package that will be provided to prospective contractors and will help:

- Ensure that movements of people, plant, and materials are achieved in a safe, efficient, and timely manner;
- Ensure that any impact to the local communities is reduced so far as reasonably practicable;
- Ensure construction traffic levels do not exceed an acceptable level during network peak periods.;
- Reduce and control construction vehicle trips where practicable;
- Ensure strategies and mitigation measures are implemented and adhered to through continued monitoring, review, and improvement of the OCTMP; and
- Limit the effects of construction traffic on the Local Road Network.

1 **Introduction**
Will set out the required background, scope and methodology information, as well as the document purpose.

2 **The Proposed Development**
This section will describe the Proposed Development with specific reference to Traffic and Transport impacts. In particular it will set out how the Proposed Development is expected to be phased across the construction programme, the nature and of construction works, and the types of vehicles associated with each activity. This will also include reference to Abnormal Load (AIL) numbers and routing.

3 **Construction Traffic Access**
This section of the OCTMP will describe in detail how each access will be used and its design. The arrangement of each access will be summarised in a 'Temporary Access Principle' Technical Note,

annexed to the TA. This note will include, for example, informaton on swept path analysis, geometric layout, and visibility; in accordance with appropriate guidance such as the Design Manual for Roads and Bridges (DMRB), Manual for Streets and Manual for Streets 2. The OCTMP will include an 'Access Risk Register'; identifying local constraints and proposed ways of working to ensure safe access is amintained to working locations and the adjacent highway network. This register will for example include reference to traffic flows, nearby PIAs, traffic speeds, environmental constraints, and proposed traffic management methods.

4 **Construction Traffic Route Strategy**

This section will present the proposed construction traffic routes for the project. Each route will be assigned to access locations and work fronts. As set out in the ES scoping chapter, construction traffic routes will commence from the Strategic Road Network (i.e. A55, M53, and M56). The selection of construction routes will be discussed in detail within the Outline Construction Traffic Management Plan (OCTMP) and summarised in this section of the TA. This section will also consider the impact of road closure and diversions, their impact on the availability of construction traffic routes, and proposed alternative routes. Draft construction traffic routes to Centralised Compounds, Block Valve Stations, and Above Ground Installations (AGIs) are presented in **Appendix C**.

5 **Plant and Construction Materials**

This section will set out the materials required for construction across the Proposed Development and the vehicles associated with the delivery of each. It will provide an explanation of the working methods and assumptions relating to the delivery and transportation of materials that inform the OCTMP and TA.

6 **Traffic Management**

Traffic management methods would be used on roads where physical mitigation measures prove to be not reasonably practicable or cannot be accommodated during the construction period of the Proposed Development. This section will set out locations where traffic management may be required to faciliate safe construction of the proposed development. This will include temporary signage, temporary access traffic management, as well as the locations of road closures and proposed diversions, including anticipated scheduling and durations of closures.

7 **Public Rights of Way**

In order to construct the various elements of the Proposed Development a number of existing PRoW would be affected. At this time it is understood that all diversions required to faciliatte the development will be temporary. We have submitted proposed temporary diversions to the CW&C and FCC PRoW officers and seek to agree methods of PRoW management and diversion routes.

8 **Mitigation Measures**

The need for specific mitigation measures would be discussed in ongoing consultation with CW&C once traffic volumes, access locations, and construction traffic routes are confirmed. Within the OCTMP the identification of mitigation will primarily relate to 'embedded' and 'risk-based' mitigation discussed within

the TA scope. Where required the OCTMP will present details - in the form of drawings and figures - of any proposed highway schemes and/or traffic management arrangements

9 **Monitoring, Review, and Improvement**

The project will continue to engage with CW&C throughout construction. This section will set out how this is proposed be carried out and communicated to CW&C to ensure that the full CTMP is developed and adhered to throughout the life of the project.

Interim Travel Plan

This document, appended to the TA, is intended to demonstrate the consideration given to sustainable transport and to identify the necessary measures that would be undertaken to meet the sustainable transport ambitions set out in National and Local planning policy documents.

An Interim Travel Plan (ITP) should encourage people to choose alternative transport modes over single occupancy car use and, where possible, reduce the need to travel at all. Such a plan would include a range of measures designed to achieve this goal.

In preparation of the proposed scope WSP has referred to Cheshire West and Chester Council's Travel Planning Supplementary Planning Document (SPD) (2015). It is intended that an Interim Travel Plan be prepared to accompany the DCO submission as the ultimate end user (i.e. Contractor) is not yet known. This ITP will therefore form the basis of a Full Travel Plan to be prepared by the appointed contractor. The ITP would be the first step in preparing a 'living document', to be monitored and updated as the project progresses.

Travel to work sites along the Proposed Development during construction traffic will be comprised of HGV and LGV movements. LGV movements are primarily comprised of contractor and other staff travel to work sites. Work sites will be access from a variety of road categories in urban and rural areas. For site security and safety reasons, the scope for staff to travel to site by walking, cycling, and public transport measures is very limited. However, the ITP will set out other measures to minimise the number of single occupancy car trips to working locations.

The ITP will follow the broad structure of Table 4.2 of the CW&C Travel Planning SPD (2015) however will be tailored to suit the nature of the Proposed Development. The ITP will be a document that will be included within the tender package that will be provided to prospective contractors and the contents will incorporate suggested measures that will reduce the need for workers to travel to working areas in single occupancy vehicles.

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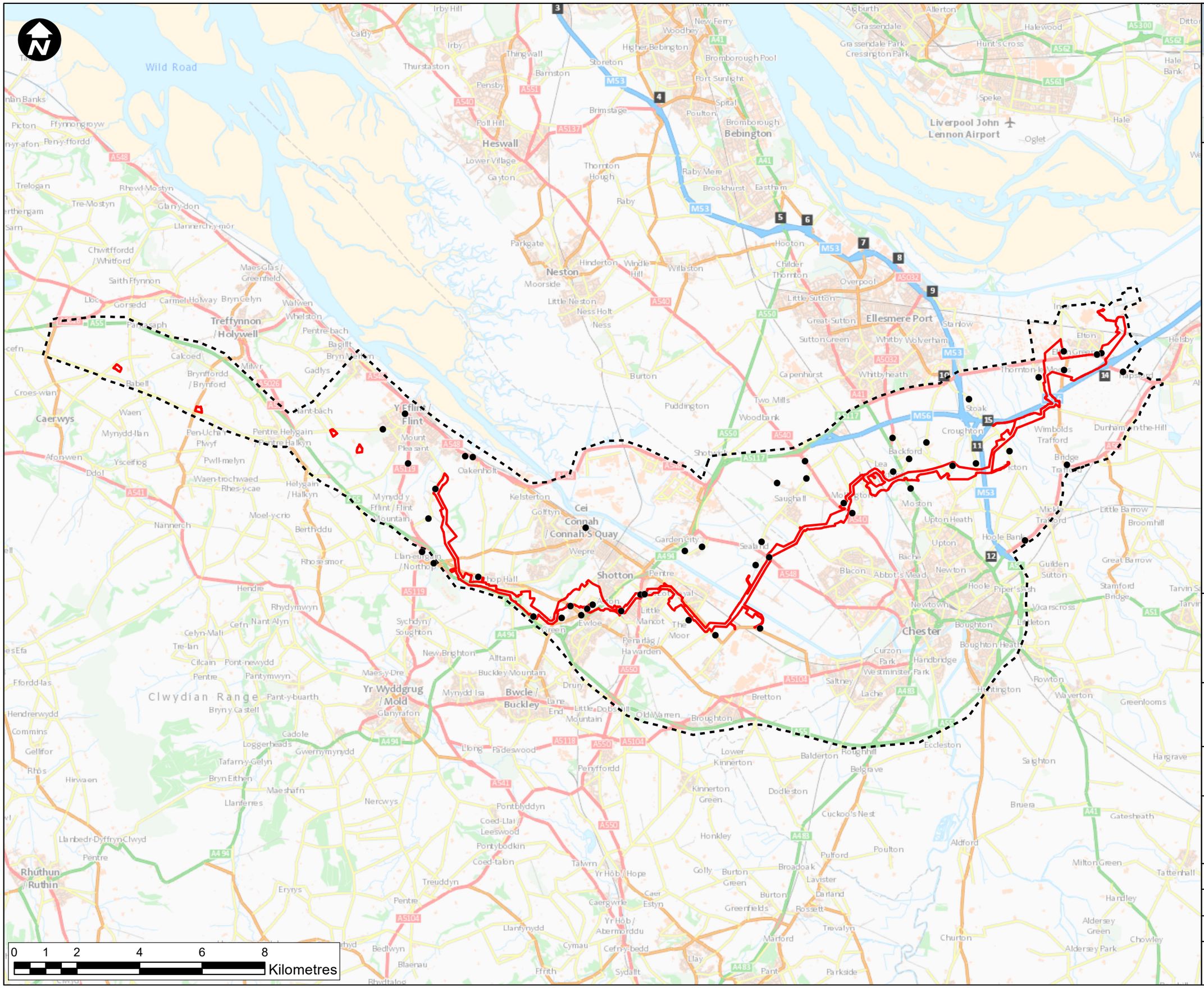
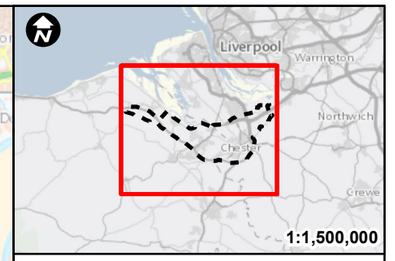
APPENDIX A: ZONE OF INFLUENCE (PEIR)





Key:

- ATC location
- Newbuild Infrastructure Boundary
- Traffic and Transport Zone of Influence

Glossary:

ATC = Automatic Traffic Count

HyNet North West

PROJECT TITLE

HYNET CARBON DIOXIDE PIPELINE

DRAWING TITLE

Figure 17.1 – Traffic and Transport: ZOI and ATC Locations

DRAWING STATUS

FOR INFORMATION

DRAWN	CHECKED	APPROVED	AUTHORISED
NC	JH	DP	LP

SCALE @ A3 SIZE	DATE	REVISION
1:110,000	21/01/2022	P01

DRAWING NUMBER

EN70007-PA-PEI-17.1-Sheet1

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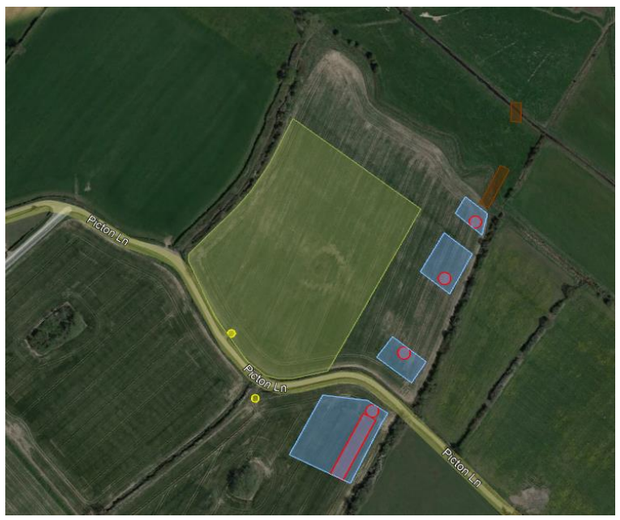
APPENDIX B: CENTRALISED COMPOUND LOCATIONS

Centralised Compound	Location	LHA	Image
Stanlow	Cryers Lane B5132	CW&C	
Picton Lane	Picton Lane	CW&C	

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Centralised Compound	Location	LHA	Image
Chorlton Lane	Chorlton Lane	CW&C	
Sealand Road	A548 Sealand Road	FCC	

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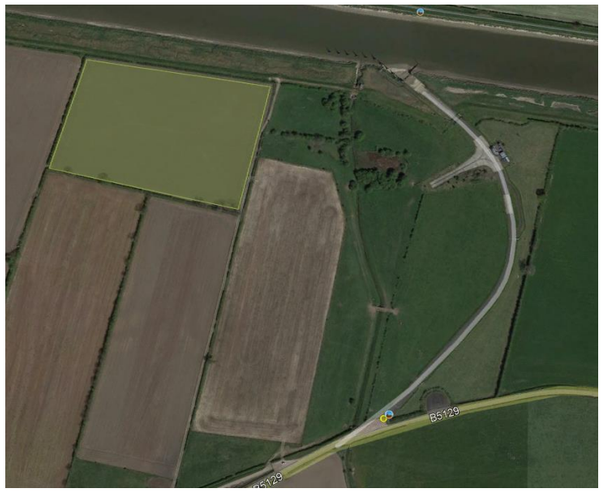
Centralised Compound	Location	LHA	Image
Wood Farm	A548 Sealand Road	FCC	
River Dee	B5129 Chester Road	FCC	

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Centralised Compound	Location	LHA	Image
Shotton Lane	B5125	FCC	
Northop Hall	B5125	FCC	

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APPENDIX C: DRAFT CONSTRUCTION TRAFFIC ROUTES

CTR Information					Links			
Route No.	**Type**	**Location**	**Access Location**	**SRN Junction**	**1**	**2**	**3**	**4**
CC CTR 1	Two-Way	Stanlow	7E	J14 M56	A5117	B5132 Cryers Lane		
CC CTR 2	Two-Way	Picton Lane	16E	J10 M53	A5117	Little Stanney Lane	Picton Lane	
CC CTR 3a	Inbound	Chorlton Lane	23E	A5117/ M56 Dunkirk	A5117	A41	Rake Lane	Chorlton Lane
CC CTR 3b	Outbound	Chorlton Lane	23E	A5117/ M56 Dunkirk	Chorlton Lane	Rake Lane	A41*	A5117
CC CTR 4	Two-Way	Sealand Central	3N	A5117/ M56 Dunkirk	A5117	A494	A548 Sealand Road	
CC CTR 5	Two-Way	Wood Farm	40E	A5117/ M56 Dunkirk	A5117	A494	A548 Sealand Road	
CC CTR 6	Two-Way	Sandycroft	43E	J34 A55	A494	B5129		
CC CTR 7	Two-Way	Shotton Lane	66E	J34 A55	A494	B5125		
CC CTR 8a	Inbound	Northop Hall	76E	J34 A55	A494	B5125		
CC CTR 8b	Outbound	Northop Hall	76E	J33 A55	B5125	B5126	A5119	
AGI CTR 1	Two-Way	Grinsome Road AGI	1E	J14 M56	A5117	Ince Lane	Ash Road	
AGI CTR 2	Two-Way	Stanlow AGI	91E	J14 M56	A5117	Pool Lane		
AGI CTR 3a	Inbound	Northop Hall AGI	76E	J34 A55	A494	B5125		
AGI CTR 3b	Outbound	Northop Hall AGI	76E	J33 A55	B5125	B5126	A5119	
AGI CTR 4	Two-Way	Flint AGI	6N	J33 A55	A5119	Starkey Lane	Alt Goch Lane	
BVS CTR 1a	Inbound	Rock Bank	24E	A5117/ M56 Dunkirk	A5117	A41	Rake Lane	Chorlton Lane
BVS CTR 1b	Outbound	Rock Bank	24E	A5117/ M56 Dunkirk	Chorlton Lane	Rake Lane	A41	A5117
BVS CTR 2	Two-Way	Mollington	7N	Overwood Lane	A540	A494	M56	
BVS CTR 3	Two-Way	Aston Hall	55E	J34 A55	A494	B5125	Upper Aston Hall Lane	Lower Aston Hall Lane
BVS CTR 4	Two-Way	Cornist Lane	88E	J32a A55	B5123	Bryntyrion Road	Lleprog Lane	
BVS CTR 5	Two-Way	Pentre Halkyn	89E	J32a A55	B5123	Bryn Emlyn	Ffordd Groes	B5121
BVS CTR 6	Two-Way	Babell	90E	J31 A55	B5122			

*U-turn at Chester Zoo Roundabout