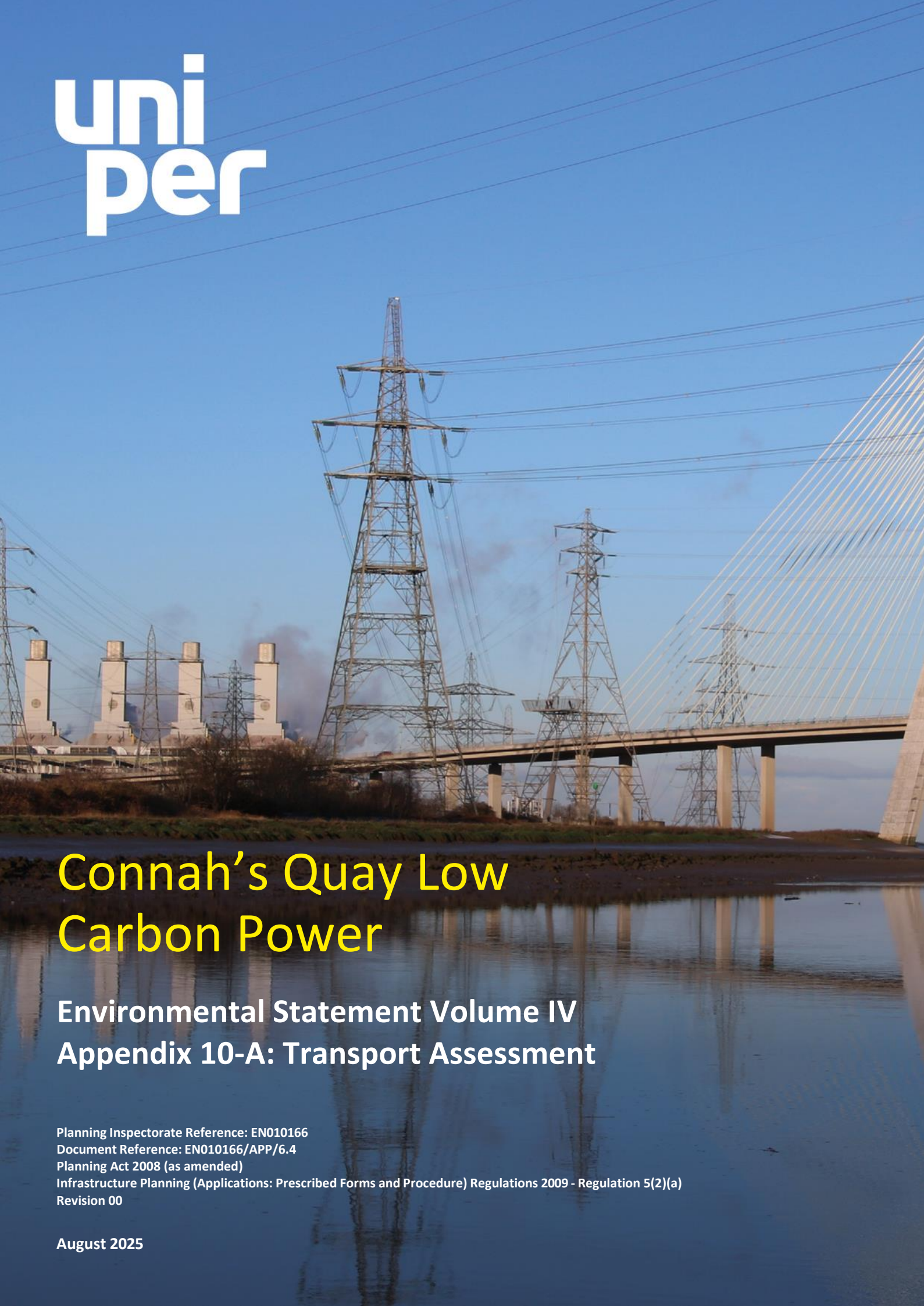


Connah's Quay Low Carbon Power

Environmental Statement Volume IV
Appendix 10-A: Transport Assessment

Planning Inspectorate Reference: EN010166
Document Reference: EN010166/APP/6.4
Planning Act 2008 (as amended)
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)
Revision 00

August 2025

Prepared for:
Uniper UK Limited

Prepared by:
AECOM Limited

Table of Contents

1. Transport Assessment 1
1.1 Introduction 1
1.2 Existing Site and Accessibility 1
1.3 Development Proposals 13
1.4 Legislation and Planning Policy Context 17
1.5 Trip Generation and Distribution 23
1.6 Traffic Impact Assessment 29
1.7 Transport Implementation Strategy 39
1.8 Conclusion 39
References 40

Plates

Plate 1: Traffic Survey Links 5
Plate 2: Transport Accessibility 8
Plate 3: Personal Injury Collisions in the Vicinity of the Construction and Operation Area (between years 2019 to 2023) 12

Tables

Table 1: Summary of Baseline (2024) Traffic Flows 6
Table 2: Summary of Local Bus Services 9
Table 3: Summary of Railway Station Facilities 10
Table 4: Summary of Rail Services at Flint & Shotton 10
Table 5: Estimated Peak Daily Construction Vehicle Trip Generation 24
Table 6: Summary Construction Traffic Distribution (HGV) 25
Table 7: Summary Construction Traffic Distribution (Light Vehicles) 26
Table 8: Summary Operational Traffic Distribution (HGV) 28
Table 9: Summary Operational Traffic Distribution (Light Vehicles) 28
Table 10: TEMPro Growth Factors 29
Table 11: 2034 Baseline + Construction – Percentage Impact Assessment 31
Table 12: 2034 Baseline + Construction (Sensitivity Test) – Percentage Impact Assessment 34
Table 13: 2036 Baseline + Operation – Percentage Impact Assessment 37

Annexes

Annex A Proposed Development Order limits

Annex B Local Highway Network

1. Transport Assessment

1.1 Introduction

1.1.1 This Transport Assessment (TA) has been prepared in respect of the application for development consent for the construction, operation (including maintenance) and decommissioning of a proposed low carbon Combined Cycle Gas Turbine (CCGT) Generating Plant fitted with Carbon Capture Plant (CCP) (hereafter referred to as the Proposed Development) on land at, and in the vicinity of, the existing Connah's Quay Power Station, Flintshire. This TA has been produced as an Appendix to accompany the Environmental Statement (ES).

1.1.2 The components of the Order limits referenced within this appendix are described in **Chapter 3: Location of the Proposed Development** (**EN010166/APP/6.2.3**) and are shown on **Figure 3-3: Areas described in the ES** (**EN010166/APP/6.3**).

Report Structure

1.1.3 The TA is structured as follows:

- **Section 1.2** – Existing Site and Accessibility: Examines the local transport conditions in the vicinity of the Main Development Area and the accessibility of the Main Development Area to non-car modes of travel;
- **Section 1.3** – Development Proposals: Provides a detailed description of the development proposals, including the proposed access strategy for all elements of the Proposed Development;
- **Section 1.4** – Legislation and Planning Policy Context: Considers the Proposed Development in the context of relevant national and local planning and transport policies;
- **Section 1.5** – Trip Generation and Distribution: Sets out the forecast trip generation and method of trip distribution for the construction and operational phases of the Proposed Development;
- **Section 1.6** – Traffic Impact Assessment: Examines the impact of the development proposals on the highway network during both construction and operation of the Proposed Development;
- **Section 1.7** – Transport Implementation Strategy (TIS): Details the key measures to mitigate the impact of the Proposed Development; and
- **Section 1.8** – Conclusions: Summarises the key findings and conclusions of the TA.

1.2 Existing Site and Accessibility

1.2.1 This section of the TA provides a description of the location of the Main Development Area and its existing usage; the local highway network; current safety record and traffic conditions; and accessibility to non-car modes of travel.

Site Location and Existing Use

1.2.2 The Main Development Area is located approximately 0.6 kilometres (km) north-west of Connah's Quay in Flintshire, north-east Wales. The Main Development Area is centered approximately at national grid reference 327347, 371374, and the Proposed Development is wholly within the administrative area of Flintshire County Council (FCC).

1.2.3 The Order limits encompass a total area of approximately 105 hectares (ha). Around 86.2 ha of the Order limits is focussed on the Main Development Area, which includes the existing Connah's Quay Power Station to the south-east and agricultural fields to the north-west. The Main Development Area is bordered to the north, east and north-west by the Dee Estuary, and to the east and south-east by the existing National Grid 400 kV Deeside Substation, and to the south and south-west by the North Wales Main Line railway. The nearest towns are Connah's Quay, located approximately 0.6 km to the south-east, and Flint, located approximately 0.8 km to the north-west (to their respective nearest extents).

1.2.4 Access to the existing Connah's Quay Power Station (and access to the Main Development Area) is provided via Kelsterton Road. Kelsterton Road serves the internal site access road network and also the Strategic Road Network (SRN) in the form of the A548.

Local Highway Network

1.2.5 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 **Annex B.**

1.2.6 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.

1.2.7 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. In addition to providing access to the Main Development Area, Kelsterton Road serves eight private single-dwelling properties situated on the northern side of the A548.

1.2.8 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 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.

1.2.9 The B5129 connects to the A548 via a roundabout connection to the south of the Main Development Area 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.

1.2.10 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 a number of isolated farm properties.

1.2.11 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 a carriageway width of 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 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.

1.2.12 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 C&IEA. Golftyn Lane acts as a key distributor road for the residential areas located to the south-east of the Site in Connah's Quay. It has an average carriageway width between 7 m and 8 m along the length considered 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.

1.2.13 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.

1.2.14 The A5119 can be 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

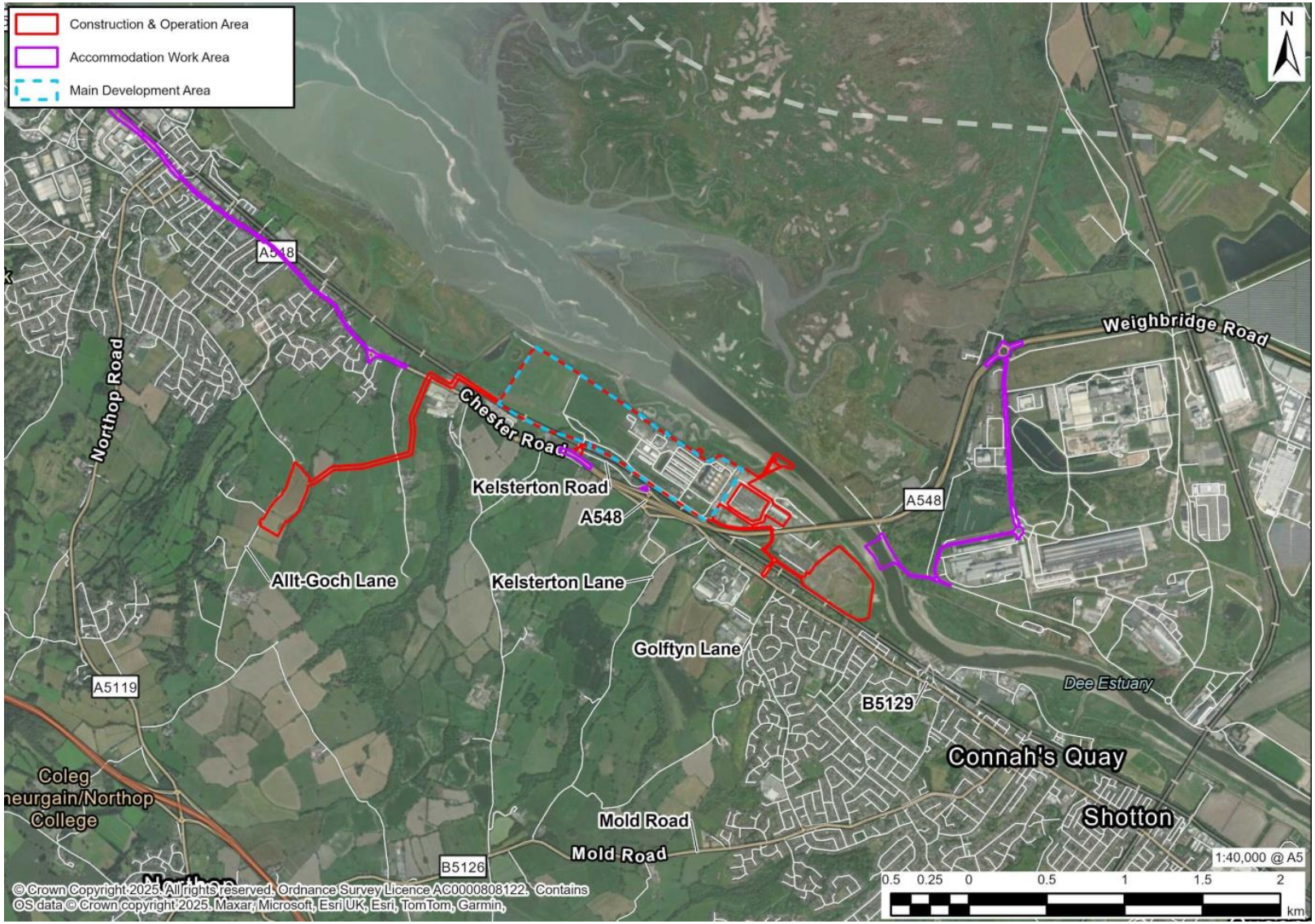
North Wales Expressway serves as a key strategic route, both to areas located further west of the Main Development Area, as well as to the east and beyond into North-West England.

Existing Highway Operation

1.2.15 Automatic Traffic Count (ATC) surveys were commissioned by AECOM to collect traffic data for the local highway network. The ATC data provides a classified count of traffic volumes and speeds for a 7-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 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.

Plate 1: Traffic Survey Links



1.2.16 A summary of the average weekday vehicle flows is presented in **Table 1** for each of the surveyed locations. The proportion of Heavy Goods Vehicle (HGV) traffic at each location is also shown within the information.

Table 1: Summary of Baseline (2024) Traffic Flows

Link	Direction	Mean Speed (MPH)	85th%ile Speed (MPH)	2024 Baseline (Average Weekday, 24 hr)		
				Total Vehicles	HGVs	HGV %
1. Kelsterton Road	EB	31.0	38.4	190	46	24%
	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	NB	34.7	41.0	616	65	10%
	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%
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.*

1.2.17 The 2024 surveys indicate that the A548 carries the most daily traffic (circa 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 will 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 Routes

1.2.18 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 metre 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 site 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.

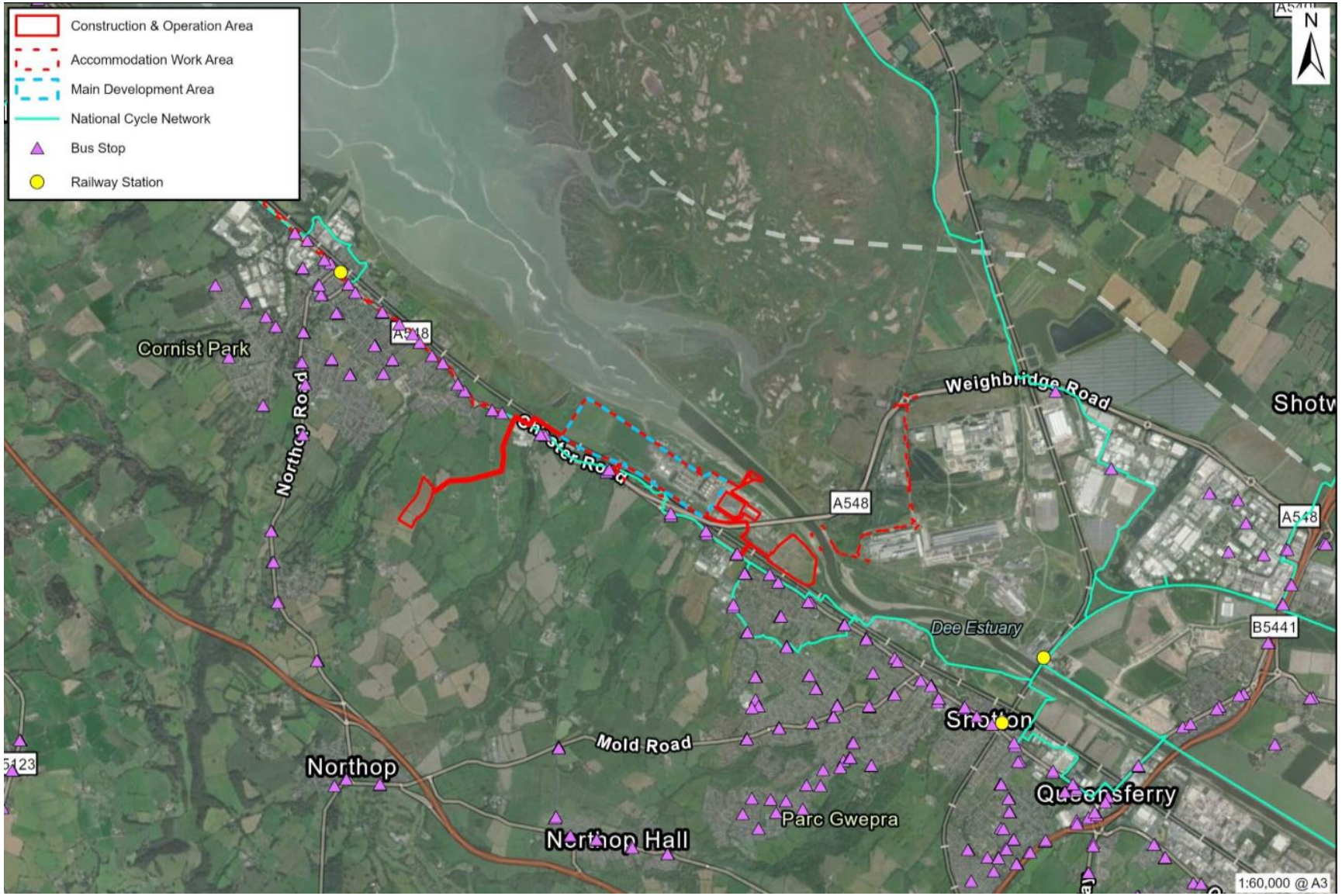
1.2.19 Public Rights of Way (PRoW) in the vicinity of the Main Development Area and the Proposed CO_2 Connection Corridor have been reviewed based on online mapping provided by FCC. The extent of PRoWs in the vicinity of the Main Development Area and Proposed CO_2 Connection Corridor have been included on **Figure 15-5: Public Rights of Way** (**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 Main Development Area. 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.

1.2.20 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 which frames the northern boundary of the field parcel. To the east of Allt-Goch Lane, this footpath connects to two further routes (sections of FCC Footpaths 66 and 67), which both connect to Leadbrook Drive, passing through the Proposed CO_2 Connection Corridor. There is also a designated footpath (FCC Footpath 27; ref. 302/27/10) which lies across the North Wales Main Line, approximately 20 m south of the C&IEA, but does not connect to FCC Footpath 28.

1.2.21 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 NCN routes to the north and north-east of the Main Development Area.

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

Plate 2: Transport Accessibility



Local Facilities

1.2.23 The nearest local facilities to the Main Development Area are located to the south-east in Connah's Quay, with a range of amenities accessible along the B5129. These facilities are located approximately 1-1.5 km from the Main Development Area and include a food convenience store, a day nursery, multiple primary / secondary schools and areas of leisure space. Further to the south-east in Shotton, a railway station, leisure centre, large supermarket and hospital are present. Beyond the areas local to the Main Development Area, Flint lies approximately 4 km to the north-east and contains a wider range of complimentary facilities, some of which may not be available within closer vicinity to the Main Development Area at Connah's Quay.

Public Transport

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

Bus

1.2.25 Public bus services are available in proximity to the Main Development Area, with the nearest stops, 'Rockliffe Lane' (approx. 1.3 km walking distance), 'Cemetery Gates' (approx. 1.8 km walking distance) and 'Kelsterton Lane' (approx. 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 summarised in **Table 2.**

Table 2: 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)

1.2.26 Additional shuttle bus 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 Construction and Operation Area, to the south-east in Connah's Quay.

Rail

1.2.27 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 3** and **Table 4** respectively.

Table 3: Summary of Railway Station Facilities

Facility	Flint	Shotton
Car Parking	65 Spaces	29 spaces
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 4: 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

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

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

1.2.28 Overall, it can be concluded that 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.

Road Safety

1.2.29 Personal Injury Collision (PIC) data has been assessed using the industry standard database, CrashMap for the most recently available 5-year period (2019-2023) in order to assess the road safety along the network in the vicinity of the Main Development Area. **Plate 3** shows the locations of the recorded PICs and their severity.

Plate 3: Personal Injury Collisions in the Vicinity of the Construction and Operation Area (between years 2019 to 2023)

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

1.2.30 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.

1.2.31 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.

1.2.32 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.

1.2.33 One incident resulting in a 'slight' PIC was recorded on Allt-Goch Lane, which will 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.

1.2.34 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.

1.2.35 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.

1.3 Development Proposals

Overview of Proposals

1.3.1 The Proposed Development would comprise up to two CCGT with CCP units (and supporting infrastructure) achieving a net electrical output capacity of more than 350 megawatts (MW; referred to as MWe for electrical output) and up to a likely maximum of 1,380 MWe (with CCP operational) onto the national electricity transmission network.

1.3.2 Through a carbon dioxide (CO_2) pipeline, comprising existing and new elements, the Proposed Development would make use of CO_2 transport and storage networks owned and operated by Liverpool Bay CCS Limited, currently under development as part of the HyNet Carbon Dioxide Pipeline project (referred to as the 'HyNet CO_2 Pipeline Project') that will transport CO_2 captured from existing and new industries in North Wales and North-West England, for offshore storage. The captured CO_2 will be permanently stored in depleted offshore gas reservoirs in Liverpool Bay.

1.3.3 For the purposes of the electrical connection, National Grid Electricity Transmission plc (NGET), which builds and maintains the electricity transmission networks, is responsible for the operation and maintenance of the existing 400 kV NGET Substation.

1.3.4 A description of the Proposed Development, including details of maximum parameters, is set out in **Chapter 4: The Proposed Development** (**EN010166/APP/6.2.4**) of the **ES**. At this stage in the development, the design of the Proposed Development incorporates a necessary degree of flexibility to allow for ongoing design development.

Construction Workers & Heavy Goods Vehicles

1.3.5 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.

1.3.6 Core construction working hours would be 08:00 - 18:00 hrs Monday to Friday (except Bank Holidays) and 08:00 - 13:00 hrs on Saturdays. However, it is likely that some construction activities may need to be undertaken outside of these core working hours. This is partly because certain construction activities cannot be stopped, such as concrete pouring, but also to manage the construction programme. Should on-site works be required to be undertaken outside the core hours, the relevant controls associated with such works are set out in the **Framework CTMP** (**EN010166/APP/6.6**).

1.3.7 For a phased construction approach, initial estimates suggest that the peak daily HGV movements during the construction period are to be around 200

two-way movements (100 inbound and 100 outbound). For a simultaneous construction approach, peak daily HGV movements are estimated to be around 240 two-way movements (120 inbound and 120 outbound).

1.3.8 These forecasted HGV peaks would not necessarily coincide with the total vehicle peak - this is set out in more detail in Section 1.5 of this TA.

Access Strategy

Construction (Temporary)

Main Development Area

1.3.9 The temporary construction phase of the Proposed Development would result in a greater impact than the permanent operational phase. Both traffic impacts are set out in appropriate detail in this report, although the primary focus is construction based traffic.

1.3.10 Access to the Main Development Area for both construction workers and HGV (HGV) traffic is forecast to be via the existing site access from Kelsterton Road from the A548 Chester Road. The access from the A548 Chester Road into Main Development Area includes two grade separated roundabouts linking to the on and off slips of the A548 Chester Road. An under bridge beneath the A548 Chester Road links the two roundabouts. When travelling north-west along the B5129 Kelsterton Road towards the Construction and Operation Area, the road approaches a roundabout and from this, access to the Main Development Area is gained via an existing Network Rail bridge (Rock Hall Railway Tunnel - North Wales Main Line railway).

1.3.11 The access road then extends north to a roundabout and along the Applicant's private road network which provides a number of access locations into the Main Development Area. This purpose built road serves the existing Connah's Quay Power Station site and is considered wide enough to allow access by construction traffic, without the need for alteration.

1.3.12 An emergency access/egress is available from the B5129 Kelsterton Road via the National Grid 400 kV Connah's Quay Substation site (the 'Alternative Access to the Main Development Area. The access crosses over the North Wales Main Line railway and under the A548 Chester Road which then connects to the existing Connah's Quay Power Station internal road network (Access to the C&IEA), which would provide access towards the Construction and Operation Area. This alternative access has not been assigned any construction traffic as part of the Traffic and Transport assessment because it is to only be used for emergency access/egress.

1.3.13 Construction personnel arriving by car would use on-site parking, within the Construction Laydown Areas provided. Where the C&IEA is used, it is anticipated that a shuttle system would be used to transport workers to the Construction and Operation Area via Access to the C&IEA. Additionally, contractors may establish a park and ride system from location(s) outside of the Order limits to the Main Development Area, such as temporary accommodation or existing parking locations, subject to agreement with the relevant authorities and third-parties as noted in the **Framework Construction Workers' Travel Plan** (**CWTP**) (**EN010166/APP/6.7**).

1.3.14 The internal layout arrangements that are proposed for the construction period includes numerous compound areas for laydown and storage of plant and materials, vehicle maneuvering, car parking and site welfare. The access arrangements and construction vehicle routing arrangements are set out in a **Framework Construction Traffic Management Plan (CTMP)** (**EN010166/APP/6.6**).

1.3.15 Construction vehicle parking for plant, deliveries and for staff parking would be accommodated within the Main Development Area, without the requirement to impact upon the local highway network.

Access to Connah's Quay Power Station Nature Reserve

1.3.16 The undertaker would provide alternative temporary access to the Connah's Quay Power Station Nature Reserve for the Deeside Naturalists' Society (the DNS) during the construction phase of the Proposed Development. The current access to the Connah's Quay Power Station Nature Reserve including bird hides as described in **Chapter 3: Location of the Proposed Development** (**EN010166/APP/6.2.3**).

1.3.17 It is anticipated that access would continue from the Access to Main Development Area , with a designated access road following the southern and western boundary fence of the ecological safeguard zone shown on **Figure 5-4** (**EN010166/APP/6.3**), which would minimise health and safety risks associated with the construction works.

Proposed CO_2 Connection Corridor

1.3.18 Within the Proposed CO_2 Connection Corridor, a contractor compound and laydown area would be located in proximity to Liverpool Bay CCS Limited's Flint AGI. Full use of approximately 0.4 ha of the Proposed CO_2 Connection corridor would be required for material laydown, storage, fabrication and contractor parking for approximately nine months. Access is to be undertaken via a combination of existing field accesses and/or the access to be constructed for the Liverpool Bay CCS Limited's Flint AGI itself.

1.3.19 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. Temporary disruption to users of these footpaths will occur during construction. A temporary diversion of FCC PRoW No.66 will be required in order to facilitate construction of the Proposed CO_2 Connection. It is anticipated that the diversion would follow a route within the same field, with the original routing reinstated following construction. No permanent change to this PRoW is proposed.

Abnormal Indivisible Loads

1.3.20 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.

1.3.21 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.

1.3.22 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 and Rights of Way Plans** (**EN010166/APP/2.6**) and extent of traffic provisions are shown on the **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.

1.3.23 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.

1.3.24 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.

1.3.25 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.

1.3.26 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 highways authority.

Operation (Permanent)

1.3.27 As detailed earlier in this section, the permanent operational phase traffic impacts would be lower than that associated with the temporary construction phase.

1.3.28 Permanent access to the Main Development Area for workers and deliveries during operation would be via the existing access to the Connah's Quay Power Station site along Uniper Way from Kelsterton Road via the A548. Access from Kelsterton Road is via two roundabouts and crosses the North Wales Main Line railway (an operational rail line located within a tunnel section beneath the access road). A new security gatehouse and parking would be provided at the entrance to the Main Development Area for staff and visitors.

1.3.29 An existing dedicated access road to the wildlife hides for Deeside Naturalists' Society (DNS) members is currently provided by the Applicant and would be re-routed within the Main Development Area. It is anticipated that this permanent dedicated access road would be installed during or following the disestablishment of the Main Development Area Laydown Areas as a single-track tarmac road approximately 10 m to the west / south-west of the perimeter road of the CQLCP Abated Generating Station as shown on **Figure 4-1: Indicative Site Layout – Single Absorbers** and the **Streets, Rights of Way and Access Plans** (**EN010166/APP/2.5**). Suitable security fencing would be installed and landscaping would be undertaken within the space between the DNS access road and perimeter road. However, the routing design is subject to considering the existing ground conditions and the relative ground levels of link roads.

1.3.30 A number of potential emergency access points have been identified for the Proposed Development.

1.3.31 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 6 in and 6 out per day based on a typical 6-day week for deliveries).

1.4 Legislation and Planning Policy Context

Legislation

Infrastructure Planning (Environmental Impact Assessment (EIA)) Regulations 2017 (Ref 1)

1.4.1 The Infrastructure Planning (EIA) Regulations 2017 set out the EIA process, which must identify, describe and assess potential significant effects of the Proposed Development on a number of factors, including traffic and transport.

Well-being of Future Generations (Wales) Act 2015 (Ref 2)

1.4.2 The Wellbeing of Future Generations (Wales) Act 2015 has resulted in Welsh Government outlining seven goals in a 'Wellbeing Statement' (published in 2017) that contribute to sustainable development and details the aims to improve economic, social, environmental and cultural wellbeing of Wales for future generations. The Wellbeing of Future Generations (Wales) Act 2015

places a duty on local authorities to set wellbeing objectives and contribute to achieving the seven well-being goals, which are:

- A prosperous Wales;
- A resilient Wales;
- A healthier Wales;
- A more equal Wales;
- A Wales of cohesive communities;
- A Wales of vibrant culture and thriving Welsh language; and
- A globally responsible Wales.

1.4.3 The seven goals form the basis for 12 objectives, also detailed in the Wellbeing Statement. Several of these are directly relevant to Transport:

- drive sustainable growth and combat climate change;
- promote good health and well-being for everyone;
- build healthier communities and better environments; and
- deliver modern and connected infrastructure.

Active Travel (Wales) Act 2013 (Ref 3)

1.4.4 The Active Travel (Wales) Act became law in Wales in November 2013. The Act makes it a legal requirement for Local Authorities in Wales to map and plan for suitable routes for active travel, and to build and improve their infrastructure for walking and cycling every year. It also requires both the Welsh Government and local authorities to promote walking and cycling as a mode of transport.

1.4.5 The Act is accompanied by a statutory design guidance document, published in December 2014, which provides advice on the planning, design, construction and maintenance of active travel networks and infrastructure, and is to be used at all stages of the process.

National Planning Policy

Planning Policy Wales – Edition 12 (February 2024) (Ref 4)

1.4.6 Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government and aims to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation. The PPW sets out how the planning system at a national, regional and local level can assist in delivering these requirements through Strategic Development Plans (SDPs) and Local Development Plans (LDPs).

1.4.7 Paragraph 4.1.11 states: "*Development proposals must seek to maximise accessibility by walking, cycling and public transport, by prioritising the provision of appropriate on-site infrastructure and, where necessary, mitigating transport impacts through the provision of off-site measures, such*

as the development of active travel routes, bus priority infrastructure and financial support for public transport services."

1.4.8 Paragraphs 4.1.56 to 4.1.57 identify the requirements for development proposals to be accompanied by an appropriate level of transport assessment. It directs professionals to the Technical Advice Note (TAN) 18 for guidance on the preparation and content of assessments.

Wales Transport Strategy (2021) (Ref 5)

1.4.9 The Wales Transport Strategy 2021 (WTS) was published in March 2021 and provides a long-term vision for transport over the next 20 years. The vision of the WTS is *"an accessible, sustainable and efficient transport system."* In order to deliver its vision, the WTS sets out three priorities:

- Priority 1 – Bring services to people in order to reduce the need to travel;
- Priority 2 – Allows people and goods to move easily from door to door by accessible, sustainable transport; and
- Priority 3 – Encourage people to make the change to more sustainable transport.

Technical Advice Note 18: Transport, Welsh Government (2007) (Ref 5)

1.4.10 TAN 18 was published in March 2007. It describes how to integrate land use and transport planning and explains how transport impacts should be assessed and mitigated. It supports and should be read in conjunction with PPW.

1.4.11 The integration of land use and transport planning forms part of an overall sustainable development approach by the Welsh Government towards strategy and policy objectives. This is predominantly through maximising the accessibility of developments by sustainable modes of transport. This also includes reducing the need to travel and encouraging multi-purpose trips. Accessibility is defined in TAN 18 as *"the relative ability to take up services, markets or facilities"*.

1.4.12 Section 5 requires all new development to be designed in a way that is inclusive for all. The design of the development also plays an important role in providing genuine alternatives to car travel.

1.4.13 Section 6 highlights the ability for walking and cycling to replace shorter car journeys, as well as the ways in which developments can encourage this. This includes the creation and protection of safe and legible pedestrian and cycle routes along key desire lines, and provision of cycle parking and facilities.

1.4.14 Paragraph 9.2 states that "*developers should be required by local authorities to submit transport assessments to accompany planning applications for developments that are likely to result in significant trip generation."* This TA demonstrates that the development proposals are suitable in terms of travel demand and impact.

1.4.15 TAN 18 requires a Transport Implementation Strategy to be included within a TA. This should seek to:

- *"Identify what policy objectives and requirements are set by the development plan in terms of access to the development and movements in and around the site;*
- *Identify what access arrangements are required for successful development (meeting the needs of the developer, end user, addressing impacts on neighbours and existing movements surrounding the site); and*
- *Specify the package of physical, management and promotional measures needed to accommodate the requirements identified above, such as physical infrastructure, the design and location of buildings, parking management, financial incentives and dedicated travel plan coordinators."*

1.4.16 The TIS is set out in **Section 1.7**.

Overarching National Policy Statement for Energy (EN-1) (2024) (Ref 6)

1.4.17 The NPS EN-1 was designated in January 2024. The most relevant paragraphs for the TA are paragraphs 5.14.2 to 5.14.4 which state:

- *"If a project is likely to have significant transport implications, the applicant's ES (see Section 4.3) should include a transport appraisal."*
- *"The applicant should prepare a travel plan including demand management and monitoring measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by active, public and shared transport to:*
  - *reduce the need for parking associated with the proposal;*
  - *contribute to decarbonisation of the transport network;*
  - *reduce the need to travel; and*
  - *secure behavioural change and modal shift through an offer of genuine modal choice and to mitigate transport impacts."*
- *"The Secretary of State should only consider refusing development on highways grounds if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show how consideration has been given to the provision of adequate active public or shared transport access and provision."*

NPS for Natural Gas Electricity Generating Infrastructure (EN-2) (Ref 7)

1.4.18 EN-2 sets out planning policy specific to onshore natural gas-fired electricity generating infrastructure. In relation to transport, EN-2 states that new natural gas electricity generating stations need to be accessible for the delivery and removal of construction materials. These stations should also be located in the vicinity of existing transport routes wherever possible and be suitably accessed from the main highway network.

1.4.19 The Main Development Area is located in good proximity to local transport networks and can be accessed directly via the SRN. This access will be maintained as part of the Proposed Development.

National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) (2024) (Ref 8)

1.4.20 NPS 4 EN-4 should be read in conjunction with EN-1 and provides the primary basis for the decisions made regarding gas and oil infrastructure. There is no specific mention of the Traffic and Transport impact beyond a reference back to EN-1 and an acknowledgment in Section 2.21 of increased HGV traffic resulting in a noise and vibration impact.

National Policy Statement for Electricity Networks (EN-5) (2024) (Ref 9)

1.4.21 NPS should be read in conjunction with EN-1 and sets out how applications for electricity networks are assessed, with no specific reference to Traffic and Transportation.

Local Planning Policy

Flintshire Local Development Plan (LDP) 2015-2030 (Ref 10)

1.4.22 The Flintshire LDP was adopted in 2023 and covers the period 2015 to 2030, providing a planning framework to address issues and opportunities within Flintshire, and enable the delivery of sustainable development. The area of Connah's Quay is outlined as a 'Main Service Centre' within the Plan Strategy for the LDP.

1.4.23 The LDP sets out the following vision: "*The LDP is about people and places. It seeks to achieve a sustainable and lasting balance between the economic, social, and environmental needs of Flintshire and its residents, through realising its unique position as a regional gateway and area for economic investment, whilst protecting its strong historic cultural heritage and natural environment.*"

1.4.24 In order to achieve this vision, the LDP sets out a number of strategic objectives, the following of which are relevant to transport:

- *"Promote a sustainable and safe transport system that reduces reliance on the car;*
- *Facilitate the provision of necessary transport, utility and social / community infrastructure;*
- *Create places that are safe, accessible and encourage and support good health, well-being and equality; and*
- *Minimise the causes and impacts of climate change and pollution."*

1.4.25 Policy STR5 'Transport and Accessibility' sets out the following requirements for new development and associated transport infrastructure, in order to ensure sustainable economic growth and development can be delivered:

- *"Facilitate accessibility to employment, homes, services, and facilities by locating development in places with access to integrated transport infrastructure, thereby reducing the need to travel;*
- *Promote the implementation of an integrated transport solution in Flintshire, involving road, rail, bus, park and ride / share and active travel improvements;*

- *Promote road and rail improvements to support Flintshire's sub-regional role as a strategic gateway and hub;*
- *Ensure that the local highway network either has, or can be upgraded to provide capacity to accommodate sustainable levels of development;*
- *Facilitate improvements to the quality, attractiveness and availability of public transport options;*
- *Provide walking and cycling routes, linking in with active travel networks and green infrastructure networks;*
- *Adopt a sustainable approach to the design, function and layout of new development, including providing appropriate levels of parking; and*
- *Support the movement of freight by rail or water."*

1.4.26 Policy PC5 'Transport and Accessibility' sets out similar requirements to that of Policy STR5, in relation to proposals for new development. Policy PC5 highlights the need for new developments to be supported by appropriate levels of transport infrastructure, including ensuring good access to more sustainable modes of travel.

1.4.27 Policy PC6 'Active Travel' sets out the requirement for proposals to ensure people have access to employment, education, healthcare and other essential services and facilities, through the provision of appropriate walking and cycling routes, as well as incorporation of existing routes, such as the Public Rights of Way network.

North Wales Joint Local Transport Plan (LTP) 2015 (Ref 11)

1.4.28 The LTP was published in January 2015. It sets out the vision and objectives for transport in North Wales area and provides a short and long term programme of interventions to work towards achieving these goals. The short-term programme documents those schemes that are priorities for the next five years up to 2020. The longer-term programme identifies aspirations up to 2030.

1.4.29 The vision of the LTP is "*The North Wales Local Authorities aim to remove barriers to economic growth, prosperity and wellbeing by delivering safe, sustainable, affordable and effective transport networks."*

Guidance

IEMA Guidelines on Environmental Assessment of Traffic and Movement, July 2023 (Ref 12)

1.4.30 The Institute of Environmental Management and Assessment (IEMA[1]) published the Guidelines on: Environmental Assessment of Traffic and Movement in July 2023 (Ref 12) which details two broad rules of thumb are applied as criteria which can be used to assist in defining the scale and extent of environmental impacts:

[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).

- include highway links where traffic flows will increase by more than 30% (or the number of HGVs would increase by more than 30%); and
- include highway links of high sensitivity where traffic flows have increased by 10% or more.

Department for Transport, 2023; Transport Analysis Guidance (TAG) Unit M4 – Forecasting and Uncertainty (Ref 13)

1.4.31 TAG Unit M4 – Forecasting and Uncertainty has been produced by the Department for Transport (DfT) with the purpose of providing practical guidance for forecasting the impact of transport projects including option testing and appraisal.

1.4.32 The DfT guidance includes considerations regarding the production of forecast years, which sets out that forecast years should generally be chosen as far into the future as possible.

1.4.33 The DfT guidance also references the use of TEMPRO for the purpose of analysing traffic growth, to feed into future year assessments. Guidance is provided in relation to applying alternative assumptions, to exclude development sites which have been considered separately as committed development. This TA discusses use of TEMPRO, with reference to TAG Unit M4.

1.5 Trip Generation and Distribution

1.5.1 This section of the TA sets out the adopted method for calculating the trip generation of the Proposed Development. The information which has been set out in the following paragraphs considers the temporary construction phase and also the permanent operational phase of the development proposals.

Construction Traffic Generation

1.5.2 The approach to assessment of the construction phase has been based on the use of Rochdale Envelope principles. This approach is employed where the nature of the proposals means that some details have not yet been confirmed when the application is submitted, and flexibility is sought to address this. Such approaches are used under consenting regimes such as the Town and Country Planning Act 1990 (Ref 14) and the Electricity Act 1989 (Ref 15) and the need for flexibility is identified in a number of National Policy Statements, which suggest its use. This approach is also precedented in a number of DCOs for similar schemes.

1.5.3 Using Rochdale Envelope principles, the assessment of the impact of the temporary construction phase covers the anticipated construction programme. This includes 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 will 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 can be determined.

1.5.4 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 cars / LGV, associated with construction workers attending the Main Development Area.

1.5.5 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.

1.5.6 **Table 5** sets out the estimated peak daily construction vehicle trip generation for each potential type of construction approach (i.e. phased or simultaneous). 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 DCO and 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 5: 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

1.5.7 **Table 5** 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 comprising 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 Area comprising 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 (excluding bank holidays) and 08:00 to 13:00 hrs on Saturdays) are likely to be used to avoid construction workers travelling during the network weekday AM and PM peak periods.

1.5.8 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. This is in line with guidance provided within Section 1.2 of the Transport Analysis Guidance (TAG) "TAG Unit M4 – Forecasting and Uncertainty" (Ref 13) published by the DfT. The focus of the traffic impact assessment is on the changes in link flows with the addition of the traffic associated with the Proposed Development to the baseline.

Distribution of Construction Traffic

Heavy Vehicles

1.5.9 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 will be routed to avoid more sensitive residential locations and for the purposes of assessment, assumed to travel to and from the Main Development Area via the A548. The anticipated assignment of peak two-way daily HGV traffic generated onto the local highway network is shown in **Table 6**.

Table 6: 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

Link	Proportion of Trips Routed onto Link	Daily Two-Way Traffic
5. Kelsterton Lane	0%	0
6. Allt Goch Lane	0%	0
7. Golftyn Lane	0%	0
8. Mold Road	0%	0

1.5.10 As detailed in the above table, all HGV traffic will 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 subsequent impact assessment.

Light Vehicles

1.5.11 The distribution of development traffic associated with the construction staff has been based on analysis of the 2021 Census Journey to Work data. 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' Middle Super Output Areas (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 7.**

Table 7: 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

Link	Proportion of Trips Routed onto Link	Daily Two-Way Traffic
8. Mold Road	0%	0

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

1.5.12 All (100%) of light vehicle traffic has been assigned to Kelsterton Road as the final link between the Main Development Area 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.

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

Operational Traffic Generation

1.5.14 The earliest year of operation for the Proposed Development is anticipated to be 2031, 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 2031 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.

1.5.15 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

1.5.16 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

1.5.17 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 8.**

Table 8: 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

1.5.18 As detailed in the above table, all HGV traffic will 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 subsequent impact assessment.

Light Vehicles

1.5.19 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, as per the construction traffic. The assignment of forecast two-way daily (24 hour period) Light Vehicle traffic across the local highway network is shown in **Table 9.**

Table 9: 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 Area Access)	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

1.5.20 All (100%) of light vehicle traffic has been assigned to Kelsterton Road as the final link between the Main Development Area 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.

1.6 Traffic Impact Assessment

1.6.1 This section of the TA provides an assessment of the traffic impacts relating to the construction and operational phases of the Proposed Development.

1.6.2 Due to the nature of the Proposed Development, there would be minimal impacts attributed to the operational traffic once the Proposed Development is built, as set out in Section 1.5. The temporary construction traffic is considered to have a larger impact on the local highway network than the operational traffic. However, this TA includes an assessment of operational traffic impact, albeit it is shown to be minimal in its effect.

Assessment Scenarios

1.6.3 The assessment of impact during construction and operation of the Proposed Development is based on a comparison of 'Base' and 'Base + Development' scenarios for a single future assessment year, which corresponds with the peak year of a simultaneous construction approach (2034) and also the opening year of operation (2036), assuming construction were to begin five years after DCO 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.

Traffic Growth

TEMPro

1.6.4 The 2024 baseline traffic flows for the local highway network, presented in **Table** 1, 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 13) published by the DfT. Growth factors have been derived using an average of the 'Flintshire 004' and '007' MSOAs. The average growth factors are presented in **Table 10**.

Table 10: TEMPro Growth Factors

Growth Period	AM Peak	PM Peak	Average Weekday
2024-2034	1.0865	1.0860	1.0882

Growth Period	AM Peak	PM Peak	Average Weekday
2024-2036	1.1005	1.0995	1.1019

Committed Development

1.6.5 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 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.

1.6.6 The remaining 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.

Construction Traffic Impact

1.6.7 A quantitative assessment of the construction traffic impacts has been undertaken. This includes the identification of the likely percentage changes in traffic flows on the local highway network (for surveyed locations, as presented on **Plate 1**). This is considered appropriate given the effects will be temporary during construction.

1.6.8 **Table 11** presents a percentage impact assessment for the 2034 'Baseline + Committed Development + Construction Traffic' scenario, which corresponds with the peak period of construction.

Table 11: 2034 Baseline + Construction – Percentage Impact Assessment

Link	Direction	2034 Baseline (24 hr AADT, 5-Day)			2034 Baseline + Construction (24 hr 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 (24 hr AADT, 5-Day)			2034 Baseline + Construction (24 hr 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%

1.6.9 The impact assessment has considered the potential temporary impact, resulting from the worst-case assessment of peak construction traffic. The impact assessment demonstrates the largest amount of 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 Area for all construction traffic.

1.6.10 The majority of remaining links do not experience an increase of greater than 10% traffic flows, both in terms of total vehicle numbers and HGVs. The exception to this is the A548 (East of the Main Development Area access), 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 on this link.

1.6.11 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.

Impact Assessment – Sensitivity Test

1.6.12 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.

1.6.13 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.

1.6.14 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 11**). 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).

1.6.15 **Table 12** 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 12: 2034 Baseline + Construction (Sensitivity Test) – Percentage Impact Assessment

Link	Direction	2034 Baseline (24 hr Average Annual Daily Traffic (AADT), 5-Day)			2034 Baseline + Construction -Sensitivity Test (24 hr 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)	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 (24 hr Average Annual Daily Traffic (AADT), 5-Day)			2034 Baseline + Construction -Sensitivity Test (24 hr 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%

1.6.16 **Table 12** 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.

1.6.17 In the event that a major outage of the existing CCPS were to coincide with the peak of construction, there would be a greater percentage increase in terms of total vehicles, with no additional impacts experienced in relation to heavy vehicles. The Final CTMP that would be secured by the **Draft DCO** (**EN010166/APP/3.1**), and produced by the appointed contractor, will 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 the **Framework CTMP** (**EN010166/APP/6.6**) that accompanies the Application.

Operational Traffic Impact

1.6.18 **Table 13** presents a percentage impact assessment for the 2036 'Baseline + Committed Development + Operational Traffic' scenario, which corresponds with the opening year of operation.

Table 13: 2036 Baseline + Operation – Percentage Impact Assessment

Link	Direction	2036 Baseline (24 hr AADT, 5-Day)			2036 Baseline + Operation (24 hr 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 Area Access)*	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%
	Northbound	80	15	19%	80	15	19%	0	0	0%	0%

Link	Direction	2036 Baseline (24 hr AADT, 5-Day)			2036 Baseline + Operation (24 hr 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
6.Allt Goch Lane	Southbound	75	9	12%	75	9	12%	0	0	0%	0%
	Two-Way	155	24	16%	155	24	16%	0	0	0%	0%
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%

1.6.19 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.

1.7 Transport Implementation Strategy

1.7.1 As set out at **Section 1.4**, TAN 18 requires TAs to include a TIS. The TIS should:

- identify the access arrangements required for a successful development. These are set out in **Section 1.3**;
- identify the policy objectives and requirements set by the Development Plan in terms of access to the development and movements in and around the Main Development Area. These are documented in **Section 1.4**; and
- specify the package of physical, management and promotion measures needed to accommodate these requirements. These are presented in the **Framework CTMP** (**EN010166/APP/6.6**) and **Framework Construction Workers Management Plan (CWMP)** (**EN010166/APP/6.7**).

1.7.2 The development proposals are considered to align with the national and local policies.

1.8 Conclusion

1.8.1 The impact assessment demonstrates the greatest amount of construction traffic impact would be experienced on Kelsterton Road, which is forecast to generate a two-way HGV increase of 295%. In absolute terms, this equates to a daily increase of 240 two-way HGVs. This temporary increase would be expected given Kelsterton Road will 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.

1.8.2 The largest permanent operational traffic impact will be seen on Kelsterton Road, as a result of all operational traffic using the northern access. 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. In all other cases the forecast impact is between 2% and 3%, which would not likely be perceivable against daily fluctuations in background traffic.

References

Ref 1. The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017/572). Available at: https://www.legislation.gov.uk/uksi/2017/572/contents. London: HMSO (Accessed 06/02/2025)

Ref 2. Well-being of Future Generations (Wales) Act 2015. Available at: https://www.gov.wales/well-being-future-generations-act-essentials-html . (Accessed 06/02/2025)

Ref 3. Welsh Government, 2013; Active Travel (Wales) Act 2013. Available online: Active Travel (Wales) Act 2013 (legislation.gov.uk) (Accessed 06/02/2025)

Ref 4. Welsh Government, 2021; Planning Policy Wales: Edition 11 [online]. Available at: https://www.gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf (Accessed 06/02/2025)

Ref 5. Welsh Government, 2021; The Welsh Transport Strategy. Available at: Llwybr Newydd: the Wales transport strategy 2021 | GOV.WALES (Accessed 06/02/25)Technical Advice Note 18: Transport, Welsh Government (2007). Available online: Technical advice note (TAN) 18: transport | GOV.WALES (Accessed 06/02/2025)

Ref 6. DESNZ, 2023; Overarching National Policy Statement for Energy (EN-1) [online]. Available at: https://assets.publishing.service.gov.uk/media/65a7864e96a5ec0013731a93/overarching-nps-for-energy-en1.pdf (Accessed 06/02/2025)

Ref 7. DESNZ, 2023; National Policy Statement for Natural Gas Electricity Generating Infrastructure (EN-2) [online]. Available at: https://assets.publishing.service.gov.uk/media/64252f4b3d885d000cdade9c/NPS_EN-2.pdf (Accessed 06/02/2025)

Ref 8. DESNZ, 2023; National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) [online]. Available at: https://assets.publishing.service.gov.uk/media/655dc2d4046ed4000d8b9dd9/nps-natural-gas-supply-infrastructurepipelines-en4.pdf (Accessed 06/02/2025)

Ref 9. DESNZ, 2023; National Policy Statement for Electricity Networks Infrastructure (EN-5) [online]. Available at: https://assets.publishing.service.gov.uk/media/655dc25e046ed400148b9dca/nps-electricity-networks-infrastructure-en5.pdf (Accessed 06/02/2025)

Ref 10. FCC, 2023; Flintshire Local Development Plan 2015 – 2030. Adopted Plan 24th January 2023. [Online] Available at: https://flintshire.gov.uk/en/PDFFiles/Planning/Examination-Library-Documents/FINAL-LDP-Written-Statement-English.pdf (Accessed 06/02/2025)

Ref 11. Flintshire County Council, 2015; North Wales Joint Local Transport Plan. North Wales Joint Local Transport Plan 2015 (flintshire.gov.uk) (Accessed 06/02/2025)

Ref 12. Institute of Environmental Management and Assessment (IEMA) Guidelines on: Environmental Assessment of Traffic and Movement, July 2023. Available at: https://www.iema.net/media/5mrmquib/iema-report-environmental-assessment-of-traffic-and-movement-rev07-july-2023.pdf (Accessed 06/02/2025)

Ref 13. Department for Transport, 2023; Transport Analysis Guidance (TAG) Unit M4 – Forecasting and Uncertainty [Online]. Available at: https://assets.publishing.service.gov.uk/media/65a6bdbf64060200143cb7b0/tag-unit-m4-forecasting-and-uncertainty.pdf (Accessed 06/02/2025)

Ref 14. Town and Country Planning Act, 1990. Available at: https://www.legislation.gov.uk/ukpga/1990/8/contents (Accessed 06/02/2025)

Ref 15. Electricity Act, 1989. Available at: https://www.legislation.gov.uk/ukpga/1989/29/contents (Accessed 06/02/2025)

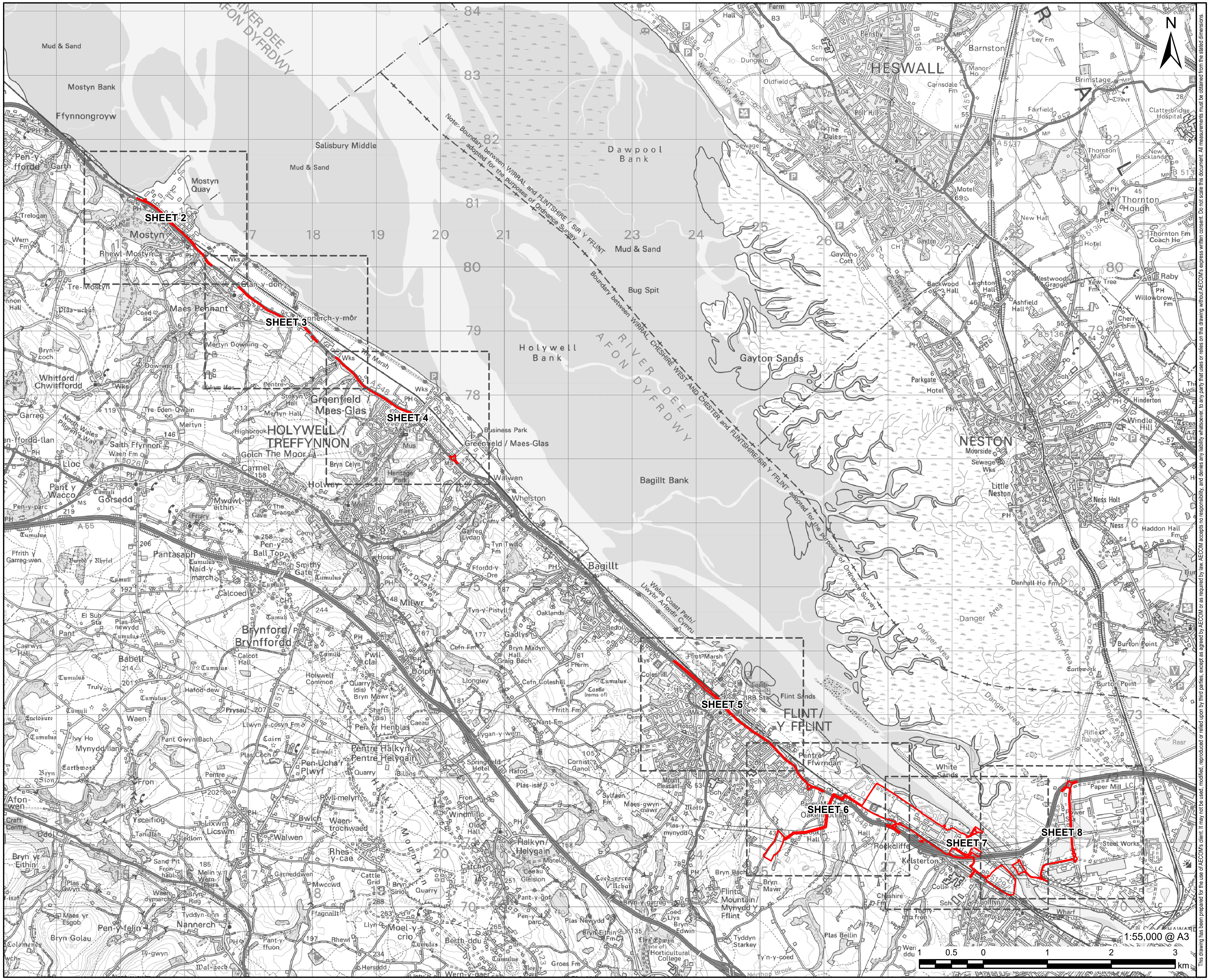
Ref 16. PINS, 2024; HyNet Carbon Dioxide Pipeline. Project Information. Available at: HyNet Carbon Dioxide Pipeline - Project information (Accessed 08/04/2025)

Ref 17. The HyNet Carbon Dioxide Pipeline Order 2024 (SI 2024/436). Available at: The HyNet Carbon Dioxide Pipeline Order 2024. (Accessed 08/04/2025).

Annex A: Order limits (Figure 3-1: Order Limits (EN010166/APP/6.3))

Revision: 0 Drawn: LP Checked: JG Approved: NS Date: 2025-07-11

Filename: C:\Users\CoxW1\AECOM\Uniper Connah's Quay LCDP DCO - 900_CAD_GIS\920_GIS\02_Maps\Environmental Statement\CQ_ES_CH03_Site_Description\CQ_ES_CH03_Site_and_Description_20250205_01.aprx



AECOM uniper

PROJECT

Connah's Quay Low Carbon Power

CONSULTANT

AECOM Limited
The Colmore Building
Colmore Circus, Queensway
Birmingham, B4 6AT
www.aecom.com

LEGEND

Order limits

NOTES

ISSUE PURPOSE

Environmental Statement

DATE

July 2025

PROJECT NUMBER

60717119

FIGURE TITLE

Order limits
Sheet 1 of 8

FIGURE NUMBER

Figure 3-1

Revision: 0 Drawn: LP Checked: JG Approved: NS Date: 2025-08-04

AECOM uniper

PROJECT

Connah's Quay Low Carbon Power

CONSULTANT

AECOM Limited
The Colmore Building
Colmore Circus, Queensway
Birmingham, B4 6AT
www.aecom.com

LEGEND

Order limits

Sxx Accommodation Work Area

NOTES

ISSUE PURPOSE

Environmental Statement

DATE

July 2025

PROJECT NUMBER

60717119

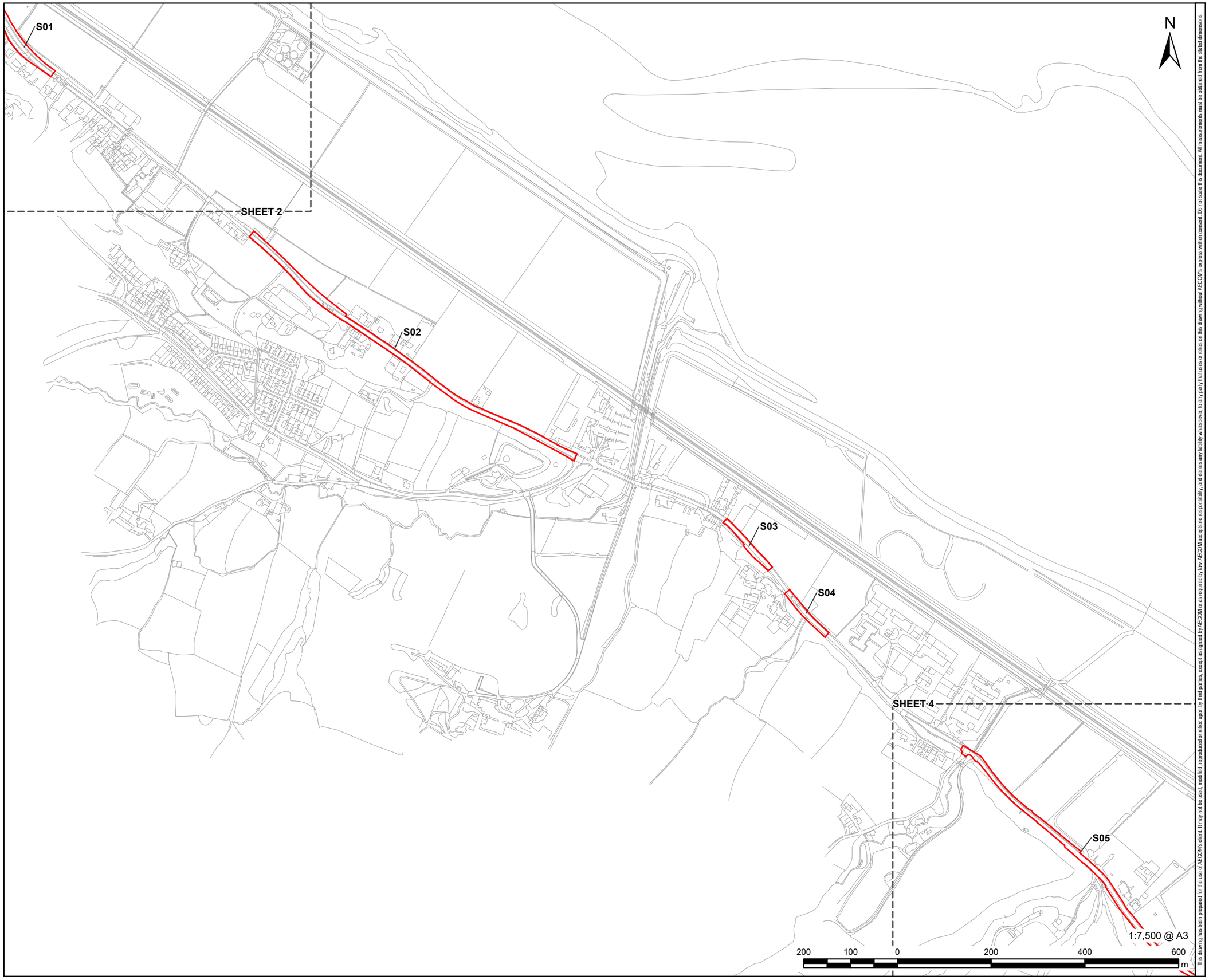
FIGURE TITLE

Order limits
Sheet 2 of 8

FIGURE NUMBER

Figure 3-1

Filename: C:\Users\Pringl\OneDrive - AECOM\General - Uniper Connah's Quay LCDP DCO\900_CAD_GIS\920_GIS\02_Maps\Environmental Statement\CQ_ES_CH03_Site_and_Description\CQ_ES_CH03_Site_Description_20250724_01.aprx



Revision: 0 Drawn: LP Checked: JG Approved: NS Date: 2025-08-04

Filename: C:\Users\Pringl\OneDrive - AECOM\General - Unper Connah's Quay LCDP DCO\900_CAD_GIS\920_GIS\02_Maps\Environmental Statement\CQ_ES_CH03_Site_Description\CQ_ES_CH03_Site_Description_20250724_01.aprx

AECOM uniper

PROJECT

Connah's Quay Low Carbon Power

CONSULTANT

AECOM Limited
The Colmore Building
Colmore Circus, Queensway
Birmingham, B4 6AT
www.aecom.com

LEGEND

Order limits

Sxx Accommodation Work Area

NOTES

ISSUE PURPOSE

Environmental Statement

DATE

July 2025

PROJECT NUMBER

60717119

FIGURE TITLE

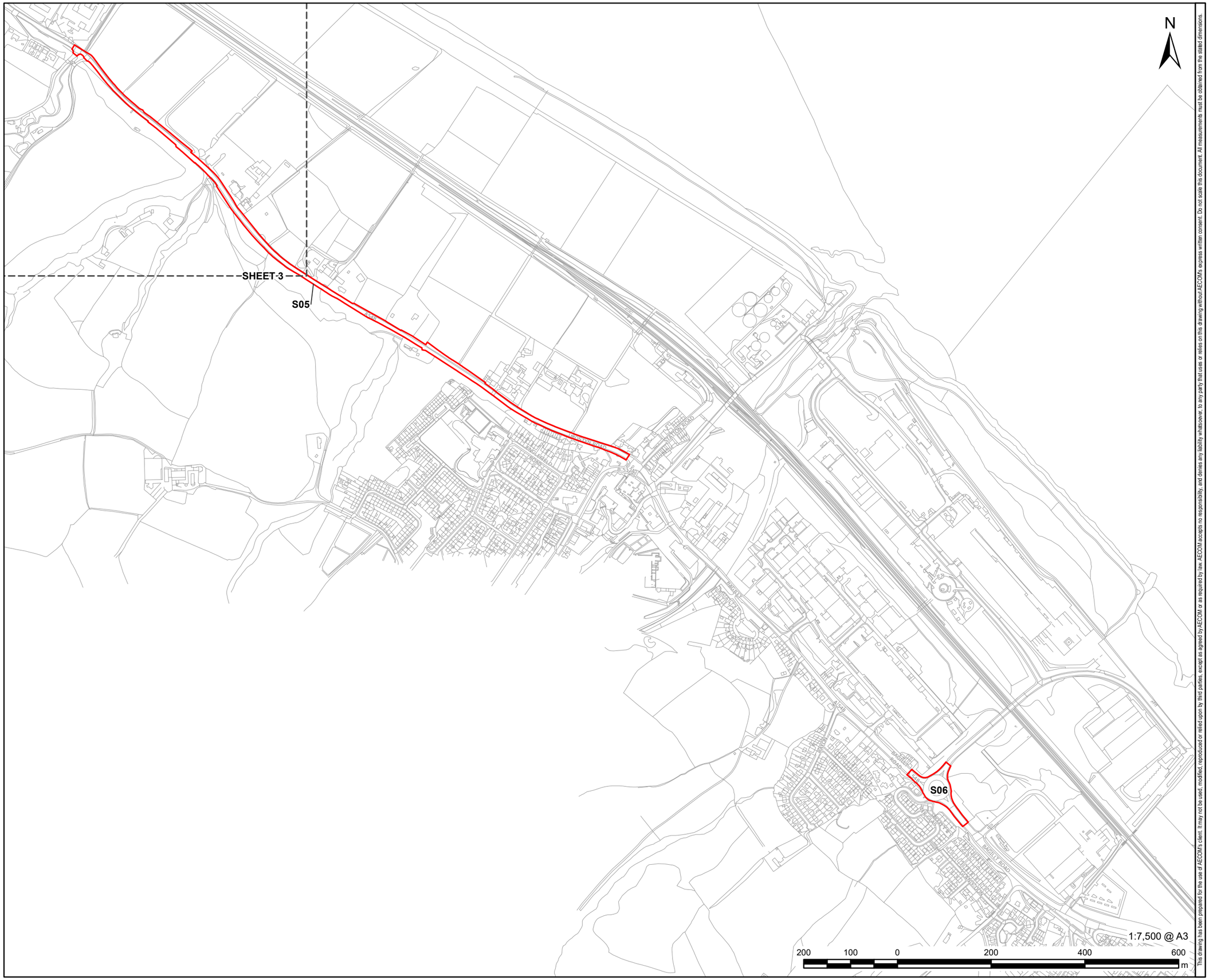
Order limits
Sheet 3 of 8

FIGURE NUMBER

Figure 3-1

Revision: 0 Drawn: LP Checked: JG Approved: NS Date: 2025-08-04

Filename: C:\Users\PringL\OneDrive - AECOM\General - Uniper Connah's Quay LCDP DCO\900_CAD_GIS\920_GIS\02_Maps\Environmental Statement\CQ_ES_CH03_Site_Description\CQ_ES_CH03_Site_and_Description_20250724_01.aprx



AECOM uniper

PROJECT

Connah's Quay Low Carbon Power

CONSULTANT

AECOM Limited
The Colmore Building
Colmore Circus, Queensway
Birmingham, B4 6AT
www.aecom.com

LEGEND

Order limits

Sxx Accommodation Work Area

NOTES

ISSUE PURPOSE

Environmental Statement

DATE

July 2025

PROJECT NUMBER

60717119

FIGURE TITLE

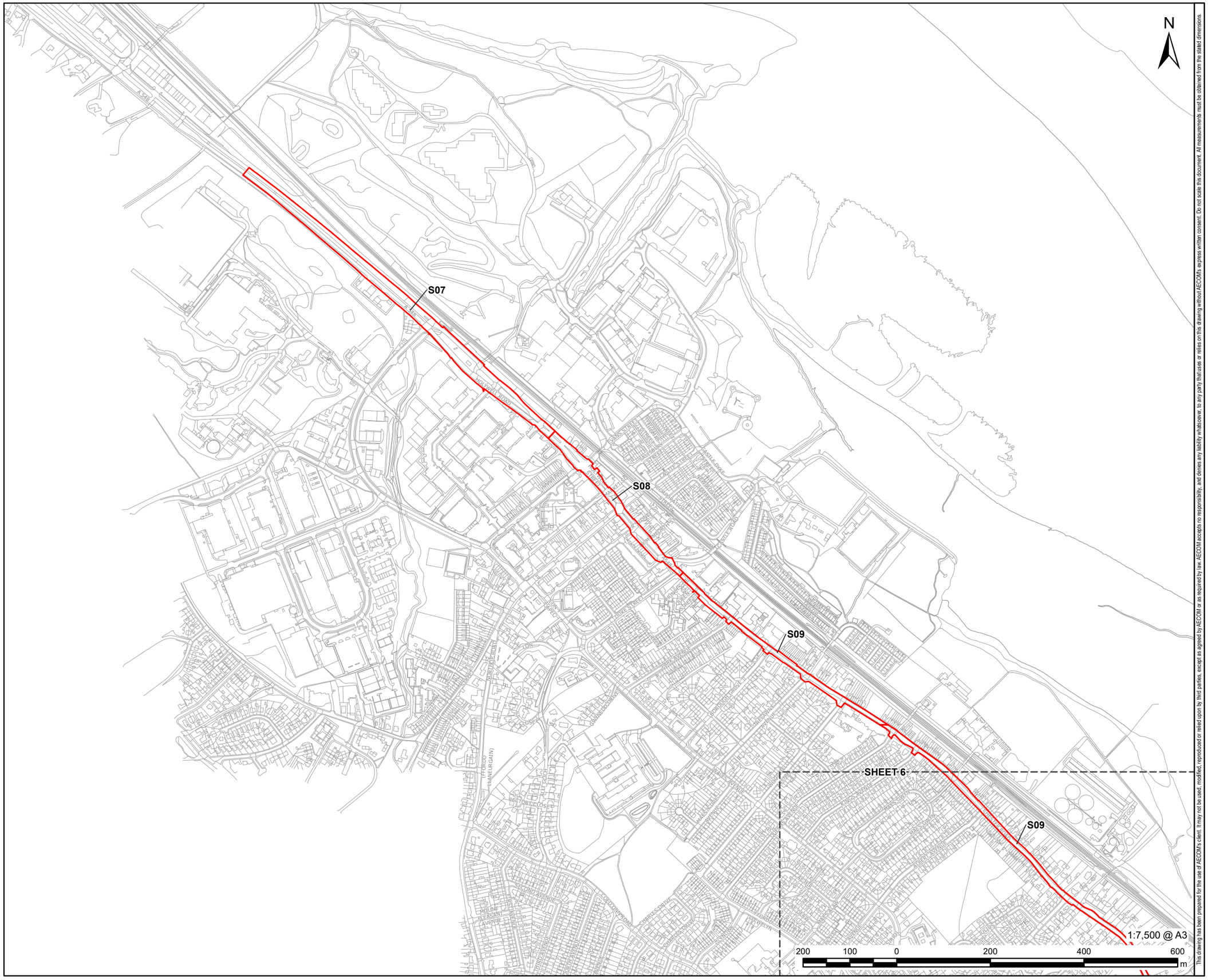
Order limits
Sheet 4 of 8

FIGURE NUMBER

Figure 3-1

Revision: 0 Drawn: LP Checked: JG Approved: NS Date: 2025-08-04

Filename: C:\Users\PringL\OneDrive - AECOM\General - Uniper Connah's Quay LCDP DCO\900_CAD_GIS\920_GIS\02_Maps\Environmental Statement\CQ_ES_CH\03_Site_Description\CQ_ES_CH03_Site_and_Description_20250724_01.aprx



AECOM uniper

PROJECT

Connah's Quay Low Carbon Power

CONSULTANT

AECOM Limited
The Colmore Building
Colmore Circus, Queensway
Birmingham, B4 6AT
www.aecom.com

LEGEND

Order limits

Sxx Accommodation Work Area

NOTES

ISSUE PURPOSE

Environmental Statement

DATE

July 2025

PROJECT NUMBER

60717119

FIGURE TITLE

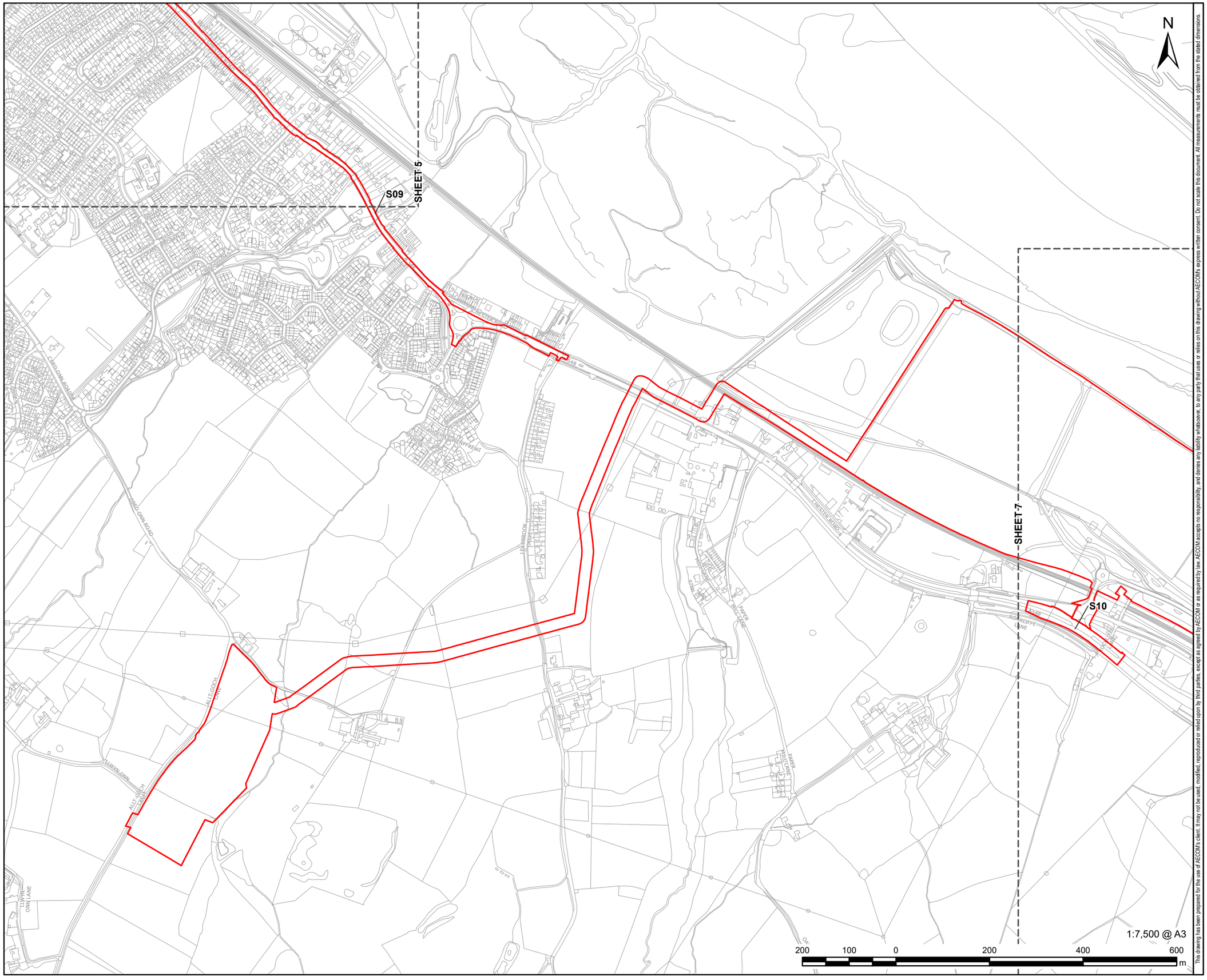
Order limits
Sheet 5 of 8

FIGURE NUMBER

Figure 3-1

Revision: 0 Drawn: LP Checked: JG Approved: NS Date: 2025-08-04

Filename: C:\Users\PringJ\OneDrive - AECOM\General - Uniper Connah's Quay LCDP DCO\900_CAD_GIS\920_GIS\02_Maps\Environmental Statement\CQ_ES_CH03_Site_Description\CQ_ES_CH03_Site_Description_20250724_01.aprx



AECOM uniper

PROJECT

Connah's Quay Low Carbon Power

CONSULTANT

AECOM Limited
The Colmore Building
Colmore Circus, Queensway
Birmingham, B4 6AT
www.aecom.com

LEGEND

Order limits

Sxx Accommodation Work Area

NOTES

ISSUE PURPOSE

Environmental Statement

DATE

July 2025

PROJECT NUMBER

60717119

FIGURE TITLE

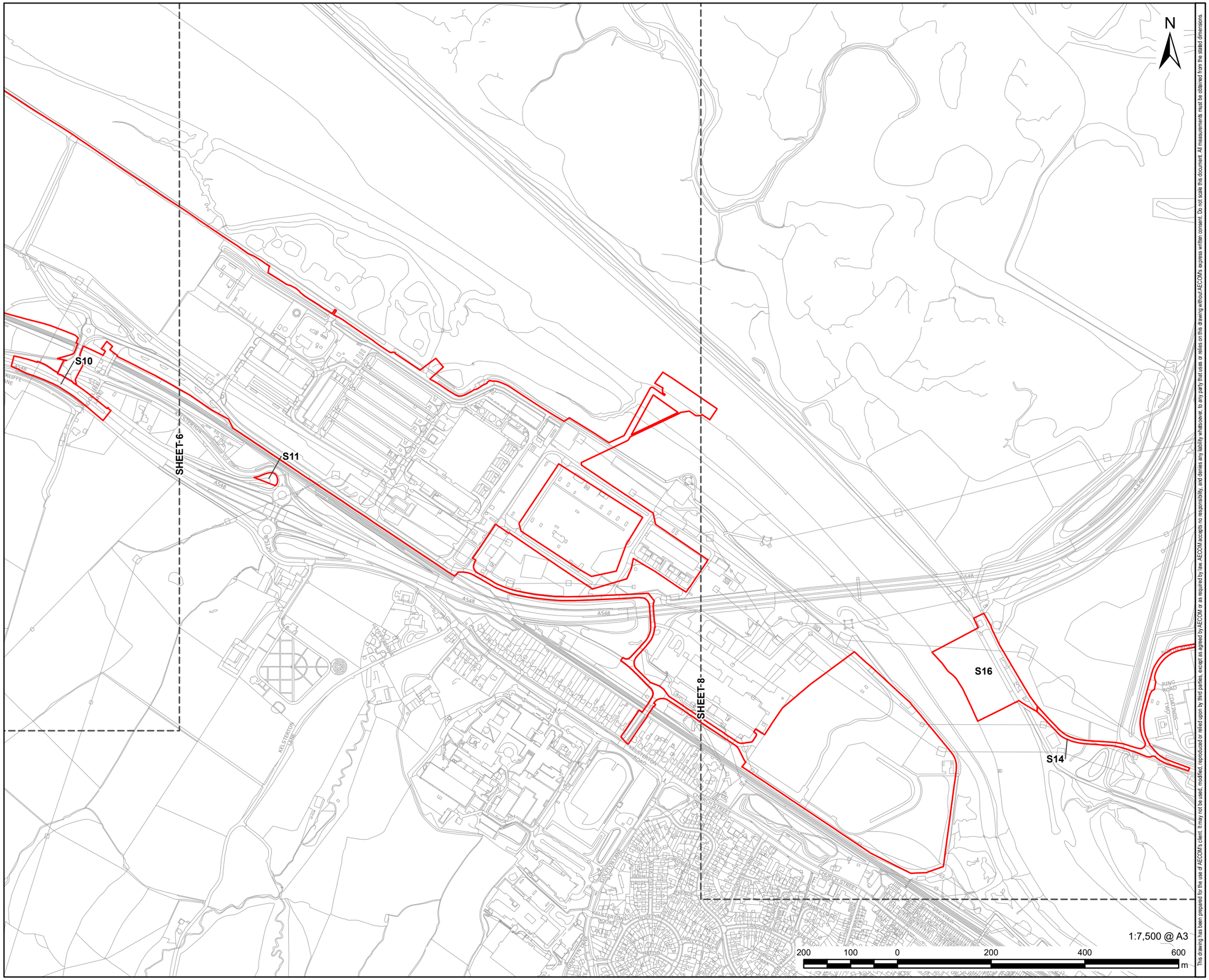
Order limits
Sheet 6 of 8

FIGURE NUMBER

Figure 3-1

Revision: 0 Drawn: LP Checked: JG Approved: NS Date: 2025-08-04

Filename: C:\Users\PringL\OneDrive - AECOM\General - Uniper Connah's Quay LCDP DCO\900_CAD_GIS\920_GIS\02_Maps\Environmental Statement\CQ_ES_CH03_Site_Description\CQ_ES_CH03_Site_and_Description_20250724_01.aprx



AECOM uniper

PROJECT

Connah's Quay Low Carbon Power

CONSULTANT

AECOM Limited
The Colmore Building
Colmore Circus, Queensway
Birmingham, B4 6AT
www.aecom.com

LEGEND

Order limits

Sxx Accommodation Work Area

NOTES

ISSUE PURPOSE

Environmental Statement

DATE

July 2025

PROJECT NUMBER

60717119

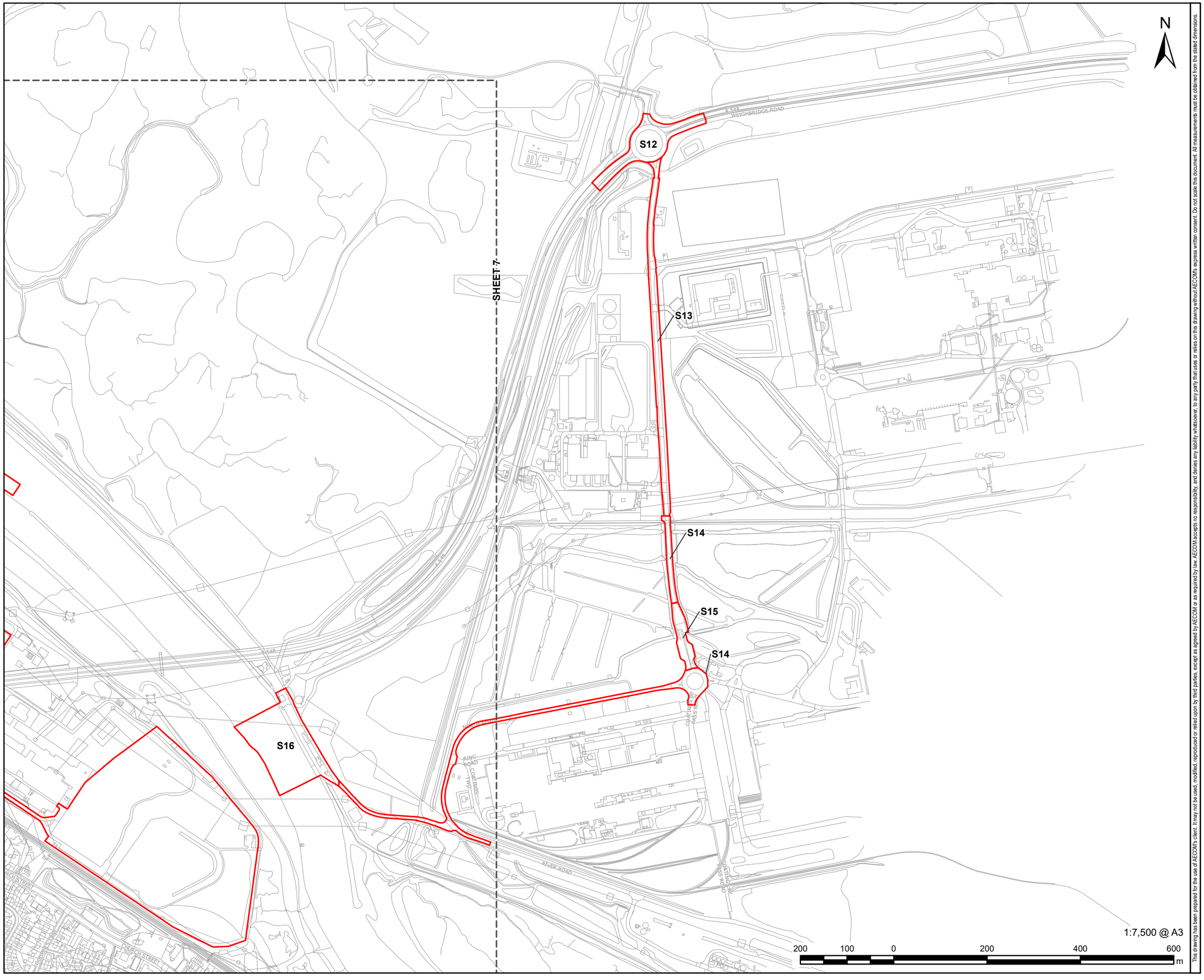
FIGURE TITLE

Order limits
Sheet 7 of 8

FIGURE NUMBER

Figure 3-1

Revision: 0 Drawn: LP Checked: JG Approved: NS Date: 2025-08-04



Filename: C:\Users\PregL\OneDrive - AECOM\General - Uniper Connah's Quay LCDP DCO\900_CAD_GIS\920_GIS\02_Maps\Environmental Statement\CQ_ES_CH03_Site_Description\CQ_ES_CH03_Site_and_Description_20250724_01.aprx

AECOM uniper

PROJECT

Connah's Quay Low Carbon Power

CONSULTANT

AECOM Limited
The Colmore Building
Colmore Circus, Queensway
Birmingham, B4 6AT
www.aecom.com

LEGEND

Order limits

Sxx Accommodation Work Area

NOTES

ISSUE PURPOSE

Environmental Statement

DATE

July 2025

PROJECT NUMBER

60717119

FIGURE TITLE

Order limits
Sheet 8 of 8

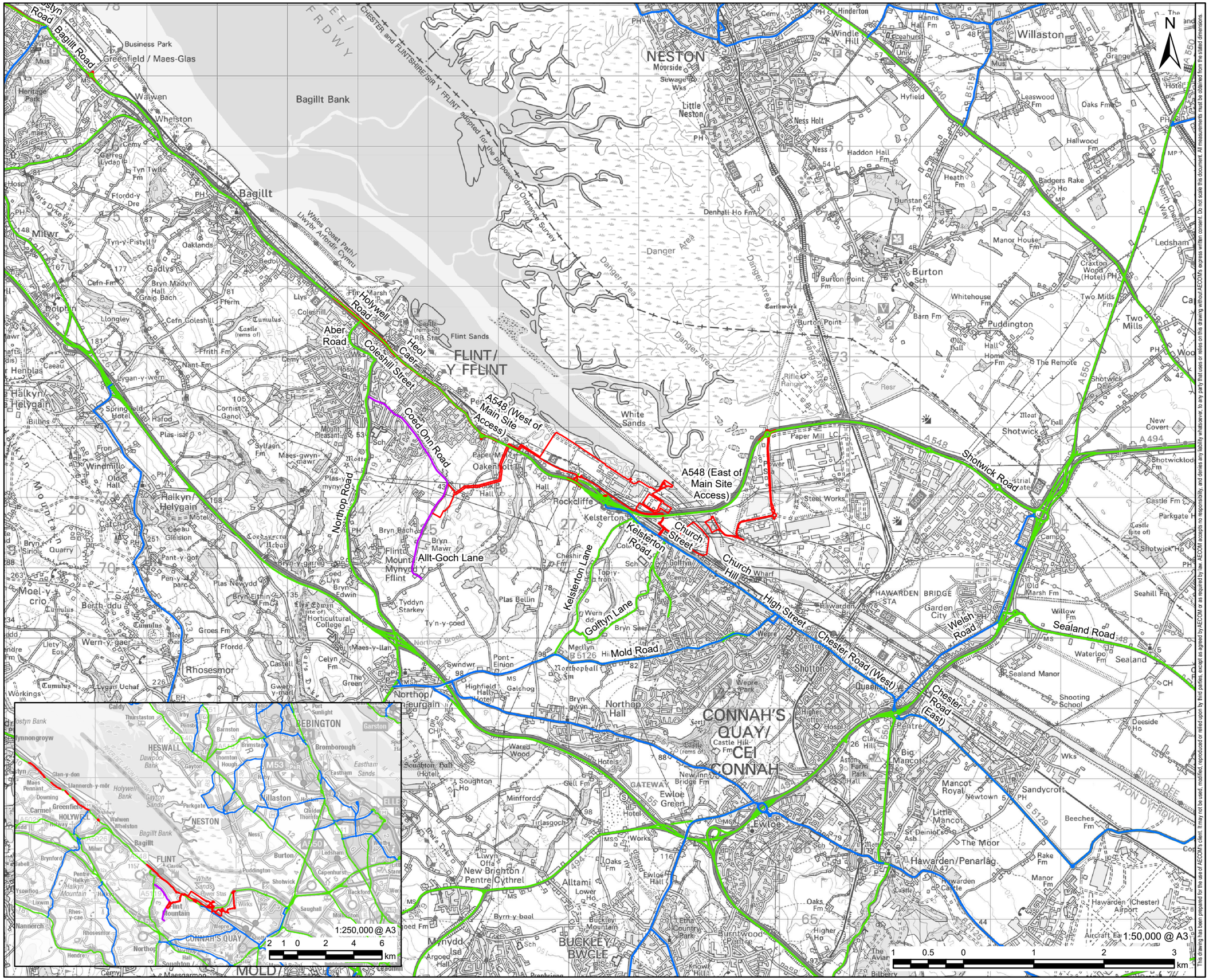
FIGURE NUMBER

Figure 3-1

Annex B: Local Highway Network (Figure 10-1: Local Highway Network (EN010166/APP/6.3))

Revision: 0 Drawn: LP Checked: JG Approved: BB Date: 2025-06-11

Filename: C:\Users\PringJ\OneDrive - AECOM\General - Uniper Connah's Quay LCDP DCO\900_CAD_GIS\02_Maps\Environmental Statement\CQ_ES_CH10_Traffic_and_Transport\CQ_ES_CH10_Fig01_Local_Highway_Network_20250611_01.aprx



AECOM uniper

PROJECT

Connah's Quay Low Carbon Power

CONSULTANT

AECOM Limited
The Colmore Building
Colmore Circus, Queensway
Birmingham, B4 6AT
www.aecom.com

LEGEND

- Order limits
- A Road
- B Road
- Allt-Goch Lane / Coed Onn Road (Unclassified)

NOTES

ISSUE PURPOSE

Environmental Statement

DATE

July 2025

PROJECT NUMBER

60717119

FIGURE TITLE

Local Highway Network

FIGURE NUMBER

Figure 10-1