

Connah's Quay Low Carbon Power

Environmental Statement Volume II Chapter 3: Location of the Proposed Development

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3. Location of the Proposed Development

3.1 Overview

- 3.1.1 This chapter of the Environmental Statement (ES) provides a description of the existing conditions of the land within which the Proposed Development would be delivered (hereafter referred to as 'the Order limits') (**Figure 3-1: Order Limits (EN010166/APP/6.3)**) and the surrounding areas and key receptors that are assessed within the technical topic chapters of the ES (**Chapters 8 to 24, EN010166/APP/6.2**).
- 3.1.2 The purpose of this chapter is to provide an overview of the land within the Order limits and the surrounding areas. Constraints and opportunities identified through further studies and surveys are described in the relevant technical chapters of the ES (**Chapters 8 to 24, (EN010166/APP/6.2)**).
- 3.1.3 This chapter is supported by the following figures in **ES Volume III (EN010166/APP/6.3)**:
- **Figure 3-1: Order Limits;**
 - **Figure 3-2: Existing areas of the Main Development Area;**
 - **Figure 3-3: Areas Described in the ES;**
 - **Figure 3-4: Aerial Imagery of the Existing Land Use around the Order Limits;**
 - **Figure 3-5: Key Environmental Constraints (Centred on the Main Development Area);**
 - **Figure 3-6: Marine Area (Centred on Water Connection Corridor and Connah's Quay North);**
 - **Figure 3-7: Key Environmental Constraints (Centred on A548 from Port of Mostyn to Greenfield Accommodation Works);**
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 - **Figure 3-9: Key Environmental Constraints (A548 through Flint to Chester Road Roundabout Accommodation Works);**
 - **Figure 3-10: Key Environmental Constraints (Connah's Quay North Accommodation Works);**
 - **Figure 3-11: Key Environmental Constraints (Centred on North Road to the A548 Accommodation Works);** and
 - **Figure 3-12: Key Environmental Constraints (Centred on AIL Access Accommodation Works).**

3.2 The Order Limits

The Order Limits

- 3.2.1 The Proposed Development is located approximately 0.6 kilometres (km) north-west of Connah's Quay in Flintshire, north-east Wales. The Main Development Area is centred at national grid reference 327347, 371374, and the Proposed Development is wholly within the administrative area of Flintshire County Council (FCC).
- 3.2.2 The Order limits, as shown in **Figure 3-1: Order Limits (EN010166/APP/6.3)**, encompass a total area of approximately 105.11 hectares (ha).
- 3.2.3 Around 86.33 ha of the Order limits is focussed on the 'Construction and Operation Area', comprising the Main Development Area, construction areas and connection corridors necessary for the construction and operation of the Proposed Development shown in **Figure 3-1: Order Limits (EN010166/APP/6.3)**. A further 18.78 ha of land included for the 'Accommodation Works Areas', comprising areas of works required to facilitate the movement and temporary storage of Abnormal Indivisible Loads (AIL) during construction of the Proposed Development.

Areas Described in this Environmental Statement

- 3.2.4 For the purposes of this ES, the Order limits are divided into the following areas of permanent and temporary land use (the proposed uses are described in more detail in **Chapter 4: Proposed Development (EN010166/APP/6.2.4)** and **Chapter 5: Construction Programme and Management (EN010166/APP/6.2.5)** and shown on **Figure 3-3: Areas Described in the ES (EN010166/APP/6.3)**:
- Construction and Operation Area, including:
 - Main Development Area;
 - Repurposed Carbon Dioxide (CO₂) Connection Corridor;
 - Proposed CO₂ Connection Corridor;
 - Water Connection Corridor;
 - Electrical Connection Corridor;
 - Surface Water Outfall Area;
 - Construction and Indicative Enhancement Area (C&IEA);
 - Main Development Area Access Works Area;
 - Access to C&IEA;
 - Alternative Access to Main Development Area;
 - Hardstanding Expansion at Connah's Quay North Jetty; and
 - Accommodation Works Areas, including:
 - A548 from Port of Mostyn to Greenfield;
 - Tir Glas Roundabout;

- A548 through Flint to Chester Road Roundabout;
- AIL Access;
- Connah's Quay North; and
- North Road to the A548.

3.3 Construction and Operation Area

Site History of the Main Development Area and C&IEA

- 3.3.1 The Main Development Area and C&IEA were formerly occupied by saltings; areas of coastal land that are regularly covered by the tide. The first land to be developed was the area referred to in this report as the C&IEA (see **Figure 3-3: Areas Described in the ES (EN010166/APP/6.3)**).
- 3.3.2 Reclamation commenced in 1950 and included the dredging and pumping of 800,000 tons of sand from the river to lift the ground level to around 2.5 m Above Ordnance Datum (AOD), thereby creating the development platform for a coal-fired power station on the proposed C&IEA. It was constructed in three 60 MW phases over eight years, with completion in 1958.
- 3.3.3 Embankments were created on land currently occupied by the Main Development Area to provide settlement lagoons and storage for the slurried pulverised fuel ash (PFA) arising from the original coal-fired power station (hereafter referred to as 'the demolished Connah's Quay 'A' Power Station').
- 3.3.4 As well as three cooling towers, the demolished Connah's Quay 'A' Power Station was also served by a dedicated railhead, running from the North Wales coastline to the west of the C&IEA.
- 3.3.5 The demolished Connah's Quay 'A' Power Station ceased operating in 1984. Demolition started in 1992 and the proposed C&IEA was cleared of all standing structures. Subsurface holes and pits were filled in and wastes were disposed of to landfill, with the exception of a sealed (piled boundary and concrete topper) asbestos landfill at the northern boundary of the C&IEA. Since demolition, the C&IEA has remained mainly undeveloped, although annual vegetation clearance does take place.
- 3.3.6 A separate electrical substation was constructed to the north of the proposed C&IEA in the 1970s. This land (between the Main Development Area and the C&IEA), is occupied by the existing National Grid Electricity Transmission (NGET) 400 kV substation, connected to the Main Development Area, and existing Scottish Power Energy Networks (SPEN) 132 kV substation.
- 3.3.7 The existing Connah's Quay Power Station four-unit combined-cycle gas turbine (CCGT) and associated infrastructure (including Gas Treatment Plant) was constructed between 1993 and 1996 in the south-east of the Main Development Area. The existing Connah's Quay Power Station was constructed on the former PFA settlement lagoons which raised the footprint of the existing Connah's Quay Power Station to its current ground level (approximately maximum 7 m AOD). The site of the demolished Connah's Quay 'A' Power Station, within the C&IEA, formed part of the laydown area for the construction of the existing Connah's Quay Power Station. The

station was initially owned by Powergen / E.ON UK and ownership transferred to Uniper in 2015.

- 3.3.8 **Appendix 14-A: Geo-Environmental Assessment (EN010166/APP/6.4)** provides further information on the historical land use at the Main Development Area.

Existing Land Use

- 3.3.9 An aerial image showing existing land-use within the Main Development Area and connection corridors described in this section is shown on **Figure 3-4: Aerial Imagery of the Existing Land Use Around the Order Limits (EN010166/APP/6.3)**.

Main Development Area

- 3.3.10 The Main Development Area is bordered to the north, north-east and north-west by the River Dee, and to the east and south-east by the existing National Grid Electricity Transmission plc (NGET) 400 kilovolt (kV) Substation, and to the south and south-west by the North Wales Main Line railway. The Main Development Area is accessed via Kelsterton Road from the A548 Chester Road leading to internal access roads across the Main Development Area. These internal access roads are comprised of tarmac/asphalt and are located between the structures of the existing Connah's Quay Power Station, between the agricultural fields to the north-west within the Main Development Area, and along the north-east boundary of the Main Development Area to give access to the existing wildlife hides within the Connah's Quay Nature Reserve adjacent to the Order limits.
- 3.3.11 The Main Development Area, which has an indicative area of approximately 56.5 ha, includes operational parts of the Applicant's existing Connah's Quay Power Station site, as shown on **Figure 3-3: Areas Described in the ES (EN010166/APP/6.3)**, to the south-east and agricultural fields to the north-west. Hedge-lined agricultural fields, leased by the Applicant for grazing sheep, are located in the north-west of the Main Development Area. Oakenholt Brook is culverted beneath these fields within the Main Development Area and outfalls via an existing artificial outfall structure within the Dee Estuary north of the Main Development Area. Elements of the Order limits including the Surface Water Outfall Area, but excluding the Main Development Area, extend into the Dee Estuary.
- 3.3.12 According to the Environment Agency Digital Terrain Model (dated 2023), the Main Development Area is generally flat, with an average elevation of 7.3 m AOD.
- 3.3.13 The River Dee and Dee Estuary comprise a number of statutory designated sites for nature conservation associated with its assemblage of diverse marine, coastal, and intertidal habitats, and its importance for passage and wintering waterfowl and intertidal plant species. Further information on these features is provided later in the 'Surrounding Area' Section when discussing ecological receptors.
- 3.3.14 The nearest residential receptors to the Main Development Area are located along Kelsterton Road, with the closest receptor being approximately 20 m from the Main Development Area. Land to the south and south-west is

predominantly rural in nature, with interspersed residential properties and agricultural land.

- 3.3.15 The existing Connah's Quay Power Station is accessed from the A548 via Kelsterton Road and includes settlement ponds, Above Ground Installations (AGIs), cooling towers, and water treatment plant, administration and staff welfare, security facilities, internal access roads, and parking. Cooling water abstraction and discharge points for the existing Connah's Quay Power Station are located in the Dee Estuary, within the proposed Water Connection Corridor, adjacent to the Main Development Area.
- 3.3.16 Further infrastructure and hardstanding is located to the west of the existing Connah's Quay Power Station including buildings for storage, workshops, an existing Gas Treatment Plant and a Gas Treatment Plant AGI.
- 3.3.17 Existing 400 kV high-voltage overhead electrical transmission lines run across the Main Development Area, crossing a corridor of open space, scrub and woodland parallel to the south-west border within the Main Development Area as shown on **Figure 3-5: Key Environmental Constraints (Centred on the Main Development Area) (EN010166/APP/6.3)**.
- 3.3.18 Two additional 132 kV high-voltage overhead electrical distribution lines ('distribution overhead lines') cross into the Main Development Area from across the A548. The first crosses the Main Development Area Access Works area and includes a pylon within the Main Development Area and transfers to a buried cable that runs parallel to the south-west border within the Main Development Area, roughly parallel with the high-voltage overhead line. The second is located to the south of the Main Development Area, where it continues to the south-east, and includes a pylon within the Main Development Area. These distribution overhead lines are not shown on **Figure 3-5: Key Environmental Constraints (Centred on the Main Development Area) (EN010166/APP/6.3)**.
- 3.3.19 Old Rockcliffe Brook / Kelsterton Brook is culverted beneath the Main Development Area and to the north-west of the cooling towers of the existing Connah's Quay Power Station. The outfall of the watercourse is via an artificial outfall structure (hereafter referred to as the 'Surface Water Outfall Area') within the Dee Estuary to the north of the Main Development Area. The outfall is shown on **Figure 3-3: Areas Described in the ES (EN010166/APP/6.3)**. An additional watercourse (Oakenholt Brook) is culverted beneath the Main Development Area north-west of the existing Connah's Quay Power Station and outfalls via an existing artificial outfall structure within the Dee Estuary north of the Main Development Area.

Repurposed CO₂ Connection Corridor

- 3.3.20 The Repurposed CO₂ Connection Corridor forms an up to 24.4 m wide corridor along approximately 3 km of an overall 27 km existing pipeline route between the existing Connah's Quay Power Station and Point of Ayr Gas Terminal. The Repurposed CO₂ Connection Corridor is located between the north-west corner of the Main Development Area, adjacent to an existing commercial premises (Bryn Thomas Cranes (SJ265715)), and the north-east corner of the Proposed CO₂ Connection Corridor, south of Pentre Ffwrndan, east of Allt-Goch Lane (SJ253710). An additional strip of the Repurposed CO₂ Connection Corridor, less than 5 m wide, borders the Main

Development Area to the immediate north-west. Between these locations the Repurposed CO₂ Connection Corridor is generally oriented east-west, with the route running adjacent to Chester Road and north of Oakenholt before running south between Oakenholt Paper Mill and Leadbrook Drive and then west, north of Leadbrook Farm.

- 3.3.21 The Repurposed CO₂ Connection Corridor is approximately 4.34 ha and 21.56 m AOD (average), ranging from approximately 5.05 m AOD to 45.38 m AOD.
- 3.3.22 As shown on **Figure 3-1: Order Limits (Sheet 07 of 10) (EN010166/APP/6.3)**, the Repurposed CO₂ Connection Corridor is largely comprised of agricultural fields (largely pastoral, with some arable in the western extents) lined by hedgerows. The Repurposed CO₂ Connection Corridor is crossed by the A548, Leadbrook Drive, a private access road in two locations, and the North Wales Main Line railway. The Repurposed CO₂ Connection Corridor is also crossed by Lead Brook and two unnamed watercourses.
- 3.3.23 As shown on **Figure 3-5: Key Environmental Constraints (Centred on the Main Development Area) (EN010166/APP/6.3)**, there are two existing electrical pylons within the Repurposed CO₂ Connection Corridor and the Corridor crosses beneath the associated 400 kV HV overhead line. There is one residential and one light-industrial property south of the North Wales Main Line railway within the Repurposed CO₂ Connection Corridor.

Proposed CO₂ Connection Corridor

- 3.3.24 The Proposed CO₂ Connection Corridor is located south-west of the Repurposed CO₂ Connection Corridor, east of Allt-Goch Lane and Llwyn Onn, and south of a private access road to a residential property. The northern end of the pipeline is situated at grid reference SJ2533171139 and the southern end is situated at grid reference SJ2511470749.
- 3.3.25 The Proposed CO₂ Connection Corridor is approximately 455 m long, 135 m wide (on average) with an area of 6.21 ha.
- 3.3.26 As shown on **Figure 3-1: Order Limits (Sheet 6 of 8) (EN010166/APP/6.3)**, existing land-use within the Proposed CO₂ Connection Corridor comprises two agricultural (arable) fields separated by a hedgerow and a small section of the single-track Allt Goch Lane.
- 3.3.27 The Proposed CO₂ Connection Corridor includes provision for the area consented for the proposed Liverpool Bay CCS Limited's Flint AGI and Newbuild CO₂ Pipeline works within the HyNet CO₂ Pipeline Project.

Water Connection Corridor

- 3.3.28 The Water Connection Corridor is located north-east of the existing Connah's Quay Power Station, north of the existing NGET 400 kV Substation and extends approximately halfway into the low tide extent of the Dee Estuary; its north-east boundary runs between grid reference SJ28487710161 and SJ2800771038, as illustrated on **Figure 3-6: Marine Area (EN010166/APP/6.3)**.

- 3.3.29 The Water Connection Corridor is approximately 140 m wide, 160 m in length, 1.60 ha in area and 3.97 m AOD (average).
- 3.3.30 As shown on **Figure 3-1: Order Limits (EN010166/APP/6.3) (Sheet 7 of 8)**, the Water Connection Corridor lies adjacent to or within the River Dee Mean High-Tide Water Springs (MHWS) as shown on **Figure 3-6: Marine Area (Centred on Water Connection Corridor and Connah's Quay North) (EN010166/APP/6.3)**.
- 3.3.31 Existing land-uses within the Water Connection Corridor comprise both intertidal habitats (mudflat and saltmarsh) of the Dee Estuary and the River Dee itself and is wholly within the associated Dee Estuary / Aber Dyfrdwy (Wales) Special Area of Conservation (SAC), and the Dee Estuary (Wales) Special Protection Area (SPA) and Ramsar sites and Dee Estuary / Aber Afon Dyfrdwy Site of Special Scientific Interest (SSSI). The Water Connection Corridor contains the existing cooling water intake (including existing eel screens) and outfalls, and existing supporting concrete manifolds within the riverbank, and associated below ground intake and outfall pipelines for the existing Connah's Quay Power Station, as well as an existing protection structure.

Electrical Connection Corridor

- 3.3.32 The Electrical Connection Corridor is located adjacent to the south-east of the Main Development Area and existing Connah's Quay Power Station, south and west of the Dee Estuary and north of the A548. The Electrical Connection Corridor is approximately 210 m wide, 420 m long, 3.40 ha in area and on average, 7.33 m AOD.
- 3.3.33 The Electrical Connection Corridor contains the existing electrical export cables and the existing 400 kV NGET Substation. Outside of these assets, the corridor is comprised entirely of hardstanding within the wider NGET facility. This wider NGET facility also includes overhead lines as well as underground cables that serve the existing substations. A separate 132 kV substation is located approximately 500 m south-east of the existing Connah's Quay Power Station site, south of the A548 Chester Road and is owned and operated by SPEN.

Construction and Indicative Enhancement Area

- 3.3.34 The C&IEA is located north of the A548 (Flintshire Bridge), west and south-west of the Dee Estuary, north-east of the North Wales Main Line railway, and south-east of the NGET 400 kV Substation. The C&IEA is approximately 12.58 ha in area with an average elevation of approximately 6.2 m AOD.
- 3.3.35 Existing land-use within the western and northern extents of the C&IEA comprises derelict hardstanding with scrub / grass vegetation regrowth, while the southern and eastern extents comprise open grassland with scattered shrubs and small trees. The divide between these two areas is partially indicated by a combination of a row of trees and one side of the footprint of the demolished Connah's Quay 'A' Power Station, which is recessed relative to ground level and itself also lined by vegetation. Two existing electrical pylons and a building foundation are located near to the eastern boundary of the C&IEA and a further existing electrical pylon is located on the southern border.

- 3.3.36 The C&IEA will be accessed during construction from the Main Development Area via an existing internal access road labelled as 'Access to C&IEA' on **Figure 3-3: Areas Described in the ES (EN010166/APP/6.3)** as described in **Chapter 5: Construction Management and Programme (EN010166/APP/6.2.5)**.
- 3.3.37 The C&IEA could also be accessed by cars and light goods vehicles (LGV) from the 'Alternative Access to Main Development Area'.

Main Development Area Access Works Area and AIL Access Accommodation Works

- 3.3.38 The existing access to the Main Development Area is located primarily south of the North Wales Main Line railway, west of the residential properties on Kelsterton Road, and immediately north and east of the A548.
- 3.3.39 The Main Development Area Access Works Area comprises the existing Kelsterton Road, including a bridge over the North Wales Main Line railway, and the location of a relic junction bell-mouth between the A548 and Kelsterton Road shown on **Figure 3-1: Order Limits (Sheet 6 of 8) (EN010166/APP/6.3)**. It is comprised of hardstanding with small areas of roadside (within kerbs) trees and roadside grass and is approximately 0.24 ha.
- 3.3.40 Work would be required to the A548 to facilitate the delivery of abnormal indivisible loads during the construction period. These works are with the AIL Access Accommodation Works area and are located in the location of the previous junction utilised during the construction of the existing Connah's Quay Power Station.

Access to C&IEA

- 3.3.41 Access to C&IEA would be provided during construction to and from the Main Development Area via an existing hard standing internal access road as shown on **Figure 3-3: Areas Described in the ES (EN010166/APP/6.3)** as described in **Chapter 5: Construction Management and Programme (EN010166/APP/6.2.5)**.

Alternative Access to Main Development Area

- 3.3.42 The Alternative Access to Main Development Area provides alternative access for cars and light goods vehicles (LGV) during construction to both the Main Development Area and C&IEA. This comprises a hardstanding access road from the B5129 Kelsterton Road (north of Deeside Stadium), north-west across the North Wales Main Line railway, before intersecting with the Access to C&IEA. As described in **Chapter 4: The Proposed Development (EN010166/APP/6.2.4)**, this access would only be used in emergencies.

Surface Water Outfall Area

- 3.3.43 This is the area adjacent to the northern extent of the Main Development Area, including and surrounding the existing artificial outfall for surface water drainage (the 'Existing Surface Water Outfall') from the existing Connah's Quay Power Station into the River Dee.

Hardstanding Expansion at Connah's Quay North Jetty

- 3.3.44 This area comprises an area of hardstanding and low-lying vegetation adjacent to the existing area of hardstanding at Connah's Quay North Jetty. It is located on the northern side of the estuary, directly to the north-east of the C&IEA. This area is as shown on **Figure 3-3: Areas Described in the ES (EN010166/APP/6.3)** as described further in **Chapter 5: Construction Management and Programme (EN010166/APP/6.2.5)**.

Surrounding Area

Overview

- 3.3.45 A number of environmental receptors have been identified within the vicinity of the Construction and Operation Area for each environmental topic assessed, as shown on **Figure 3-5(a&b): Key Environmental Constraints (Centred on the Main Development Area)**. This section, which describes the wider setting for the Construction and Operation Area, is not intended to be exhaustive.
- 3.3.46 For the purposes of this ES, distances are reported (unless otherwise stated) as the shortest distance between the receptor and the closest relevant point of the Proposed Development as described (e.g. Main Development Area or Order limits etc.). For the purposes of this section, the wider setting for the Proposed Development is described in relation to the Construction and Operation Area, capturing the areas of permanent development and the majority of temporary development activities (see **Chapter 5: Construction Programme and Methodologies (EN010166/APP/6.2.5)**). Section 3.4 provides a description of the wider setting of the Accommodation Works Areas.

Surrounding Land-Use

- 3.3.47 The built-up area of Connah's Quay is located to the south-east of the existing Connah's Quay Power Station, immediately beyond the A548 and the North Wales Main Line railway. The area to the west and south-west of the Construction and Operation Area is dominated by land used for agriculture (mostly pastoral with some arable). The HV overhead line and distribution overhead lines extend into the surrounding area.

Residential Receptors

- 3.3.48 Potential effects on residential receptors are considered in **Chapter 8: Air Quality (EN010166/APP/6.2.8)**, **Chapter 9: Noise and Vibration (EN010166/APP/6.2.9)**, **Chapter 10: Traffic and Transport (EN010166/APP/6.2.10)**, **Chapter 15: Landscape and Visual Amenity (EN010166/APP/6.2.15)**, **Chapter 19: Socio-Economics (EN010166/APP/6.2.19)**, **Recreation and Tourism**, **Chapter 21: Human Health (EN010166/APP/6.2.21)**, and **Chapter 22: Major Accidents and Disasters (EN010166/APP/6.2.22)**.
- 3.3.49 Settlements in the vicinity of the Construction and Operation Area are generally concentrated around the Dee Estuary south-east of the Construction and Operation Area or form a chain of semi-continuous development along the A548 north-west of the Construction and Operation

Area. Some lack an obvious centre or include isolated farm properties; others are heavily suburbanised or lack a defined boundary between two named locations.

3.3.50 The nearest main settlement is the town of Connah's Quay. Its approximate centre¹ is located approximately 0.94 km south of the C&IEA at its closest point and approximately 2.1 km south-east of the Main Development Area, though residential areas of the settlement reach to within approximately 25 m from the Order limits and within approximately 90 m of the Main Development Area.

3.3.51 Other nearby settlements to the Construction and Operation Area include:

- the village of Oakenholt, the approximate centre of which is located approximately 375 m east of the Repurposed CO₂ Corridor. The Repurposed CO₂ Connection Corridor passes within the village and there is a residential property approximately 375 m west of the Main Development Area;
- the village of Flint Mountain, the approximate centre of which is approximately 1.1 km south-west of the Proposed CO₂ Connection Corridor;
- the town of Flint, the approximate centre of which is approximately 2 km north-west of the Proposed CO₂ Connection Corridor, though residential areas of the settlement reach to within approximately 75 m of the Repurposed CO₂ Connection Corridor; and
- the village of Northop Hall, the approximate centre of which is approximately 3.1 km south-west of the C&IEA.

3.3.52 Additionally, several scattered residential areas and individual residential properties, including farmsteads, are located within 1 km of the Construction and Operation Area.

3.3.53 The nearest residential receptor is located approximately 20 m from the Main Development Area along Keslerton Road, which also includes a travellers site.

Ecological Receptors

3.3.54 **Figures 3-5: Key Environmental Constraints (Centred on the Main Development Area) (EN010166/APP/6.3)** indicates the location of the Construction and Operation Area within the context of these statutory and non-statutory designations. The potential effects of the Proposed Development on statutory designated ecological sites and other ecological receptors are considered in **Chapter 8: Air Quality (EN010166/APP/6.2.8)**, **Chapter 9: Noise and Vibration (EN010166/APP/6.2.9)**, **Chapter 11: Terrestrial and Aquatic Ecology (EN010166/APP/6.2.11)**, **Chapter 12:**

¹ 'Approximate centre' of the settlements in this instance refers to their approximate geographical centre (i.e. the approximate centroid of an imagined shape drawn around the outside of the settlement). It does not refer to the historical, cultural, commercial, or other perceptible definition of 'town centre' and is not intended to define this for the relevant settlements.

Marine Ecology (EN010166/APP/6.2.12), and Chapter 13: Water Environment and Flood Risk (EN010166/APP/6.2.13).

- 3.3.55 There are 39 Statutory Ecological Designations within 15 km of the Construction and Operation Area. Further details are presented in **Chapter 11: Terrestrial and Aquatic Ecology (EN010166/APP/6.2.11)** and **Chapter 12: Marine Ecology (EN010166/APP/6.2.12)**. **Figures 3-5 (EN010166/APP/6.3)** indicate the locations of these sites.
- 3.3.56 There are six statutory designated ecology sites within 2 km of the Construction and Operation Area and comprise:
- The Dee Estuary / Aber Dyfrdwy (Wales) SAC, which is located adjacent to the Main Development Area and within the Water Connection Corridor and Surface Water Outfall Area;
 - The Dee Estuary (Wales) SPA, which is which is located adjacent to the Main Development Area and within the Water Connection Corridor and Surface Water Outfall Area;
 - The Dee Estuary (Wales) Ramsar, which is located adjacent to the Main Development Area and within the Water Connection Corridor and Surface Water Outfall Area;
 - Dee Estuary / Aber Afon Dyfrdwy (Wales) SSSI, which is located adjacent to the Main Development Area and within the Water Connection Corridor and Surface Water Outfall Area;
 - The River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid SAC, which is located approximately 520 m from the Main Development Area; and
 - Deeside and Buckley Newt sites SAC, which is located approximately 1.5 km from the C&IEA and 2 km from the Main Development Area.
- 3.3.57 There are 13 local non-statutory nature conservation designations (11 Local Wildlife Sites (LWS) and two Wild Ground Reserves) located within 2 km of the Construction and Operation Area. Further details are presented in **Chapter 11: Terrestrial and Aquatic Ecology (EN010166/APP/6.2.11)** and **Chapter 12: Marine Ecology (EN010166/APP/6.2.12)** and shown in **Figure 3-5a: Key Environmental Constraints (Centred on the Main Development Area) (EN010166/APP/6.3)**.
- 3.3.58 There are four non-statutory designated ecological sites within 500 m of the Construction and Operation Area and comprise:
- Dee Estuary, Royal Society for the Protection of Birds (RSPB) Reserve, which is located within the Water Connection Corridor and adjacent to the Main Development Area;
 - Leadbrook Wood Local Wildlife Site (LWS), which is located approximately 145 m east of the Repurposed CO₂ Connection Corridor and 350 m from the Main Development Area;
 - Top-y-fron Dingle and Kelserton Brook LWS, which is located approximately 350 m south-west of the Main Development Area; and

- Llwyn-onn LWS, which is located approximately 460 m west of the Proposed CO₂ Connection Corridor and 1.86 km from the Main Development Area.

Transport Receptors

- 3.3.59 Potential effects on transport receptors are considered in **Chapter 10: Traffic and Transport (EN010166/APP/6.2.10)** and on users of these routes in **Chapter 19: Socio-economics, recreation and Tourism (EN010166/APP/6.2.19)**.

Local Highway Network

- 3.3.60 The local highway network is shown on **Figure 3-1: Order Limits (EN010166/APP/6.3)**.
- 3.3.61 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, that serve the internal site access road network and also the A548 Chester Road with wider connections to the Strategic Road Network (SRN).
- 3.3.62 The A548 is a dual carriageway located south of the Main Development Area. Beyond the locality of the Order limits, the A548 provides a strategic link along the alignment of the North Wales Main Line railway, extending as far west as Pensarn. The A548 crosses (via Flintshire Bridge crossing the Dee Estuary) the south-eastern part of the Order limits (across the Alternative Access to the Main Development Area and Access to C&IEA). The A548 connects to the SRN including M56 and M53 to the north-east of the Order limits.
- 3.3.63 The B5129 connects to the A548 via a roundabout connection to the south of the Main Development Area and provides access to the nearby urban settlements of Connah's Quay and Shotton. The B5129 provides alternative access to the south-east of the Main Development Area (Alternative Access to Main Development Area), via a priority T-Junction with an unnamed access road, located north of Deeside Stadium.
- 3.3.64 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.
- 3.3.65 Allt-Goch Lane / Coed Onn Road is a single carriageway road that lies approximately 1.36 km to the south-west of the Main Development Area. The Proposed CO₂ 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 B5129 in Flint. At its southern extent, Allt-Goch Lane connects to Starkey Lane, which in turn provides access to the A5119 to the south.
- 3.3.66 Golftyn Lane connects to the B5129 via a priority T-Junction, located opposite the entrance of the Alternative Access to the Main Development Area. Golftyn Lane acts as a key distributor road for the residential areas located to the south-east of the Construction and Operation Area in

Connah's Quay. 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.

Public Rights of Way and Other Recreational Resources

- 3.3.67 There are varying levels of provision for walking and cycling on Kelsterton Road between the A548 and the Main Development Area Access Works Area. This includes a 3 m-wide shared cycleway connecting to the roundabout junction with the A548, as well as a segregated footway on the northern side of Kelsterton Road. A more substantial walking and cycling provision is available on local roads surrounding the Order limits, such as the B5129 through Connah's Quay.
- 3.3.68 Public Rights of Way (PRoW) in the vicinity of the Main Development Area include a designated footpath (FCC Footpath 28) that lies in close proximity (within 5 m) to the south-eastern extent of the C&IEA. The footpath continues in a south-east direction, adjoining FCC Footpath 42, before terminating at Quay Lane. There is also a designated footpath (FCC Footpath 27) which lies across the North Wales Main Line, approximately 20 m south of the C&IEA, but does not connect to FCC Footpath 28.
- 3.3.69 A designated footpath (FCC Footpath 66) also intersects the field parcel containing the Proposed CO₂ Connection Corridor, forming a link between Allt-Goch Lane and the farm access road forming the northern boundary of the field parcel, and further extends into the Repurposed CO₂ Connection Corridor to the north-east, where it connects to an additional designated footpath (FCC Footpath 67) which partially crosses the Repurposed CO₂ Connection Corridor.
- 3.3.70 National Cycle Network (NCN) Route 5 is located in close proximity to the Main Development Area, routing along the A548 to the west of the Main Development Area, before connecting to Kelsterton Road and, subsequently, the B5129. NCN 5 is conveniently situated to accommodate cycle travel to / from the Main Development Area and connects to a wider network of routes to the north and north-east of the Main Development Area.
- 3.3.71 The PRoW and NCN are shown on **Figure 3-5b: Key Environmental Constraints (Centered on the Main Development Area) (EN010166/APP/6.3)**.

Air Quality Management Areas

- 3.3.72 There are no Air Quality Management Areas (AQMAs) designated within the administrative boundary of FCC, or in the neighbouring areas of Denbighshire, Wrexham and Wirral and therefore none within the Order limits. The nearest AQMAs are located within Cheshire West and Chester (CWaC) Council; one in Chester approximately 11.5 km east from the Construction and Operation Area and two in Ellesmere Port, approximately 12.5 km north-east and 14.1 km east from the Construction and Operation Area.

Geological and Hydrogeological Receptors

- 3.3.73 The geology within the study area and underlying the Construction and Operation Area is complex and heavily faulted. The Construction and

Operation Area is underlain by superficial deposits mainly consisting of Tidal Flat Deposits (Clay, Silt and Sand) or Till (Diamicton). Beneath this is bedrock of mainly Pennine Lower Coal Measures Formation, with some Gwespyr Sandstone and Etruria Formation. Made ground has been recorded across the majority of the Main Development Area, including fly-ash, a by-product of coal-burning for power generation related to the former uses of the nearby C&IEA.

- 3.3.74 According to published sources and as described in **Chapter 13: Water Environment and Flood Risk (EN010166/APP/6.2.13)**, the underlying superficial Tidal Flat Deposits are classified as a Secondary Undifferentiated Aquifer and the Glaciofluvial Deposits are classified as a Secondary A aquifer, with bedrock of the Pennine Lower Coal Measures Formation - mudstone, siltstone and sandstone classified as a Secondary A aquifer. The Construction and Operation Area does not contain or lie within or in close proximity (<1km) to any groundwater Source Protection Zones (SPZ).
- 3.3.75 Further information on groundwater at the Construction and Operation Area is provided in **Chapter 13: Water Environment and Flood Risk (EN010166/APP/6.2.13)**. Potential effects on geological and hydrogeological receptors are considered in **Chapter 14: Geology and Ground Conditions (EN010166/APP/6.2.14)**.

Hydrological Receptors

- 3.3.76 Potential effects on hydrological receptors are considered in **Chapter 13: Water Environmental and Flood Risk (EN010166/APP/6.2.13)**.
- 3.3.77 As described in **Chapter 13: Water Environment and Flood Risk (EN010166/APP/6.2.13)**, the Construction and Operation Area and the study area is contained within the Dee Estuary Water Framework Directive (WFD) Operational Catchment, within the Dee Management Catchment. In total, the study area includes four WFD waterbodies, including two surface WFD waterbodies, one transitional WFD water body and one groundwater body.
- 3.3.78 The River Dee is a designated Main River and flows south-east to north-west of the Main Development Area. The Water Connection Corridor is within the River Dee. The river is defined as part of the Dee Estuary at this location. Online OS mapping also indicates the following surface watercourses intersect with or are in proximity to the Construction and Operation Area:
- Kelsterton Brook – an ordinary watercourse that rises south of the study area at Mole Road and flows in a northerly direction towards the Main Development Area where it is culverted to the Existing Surface Water Outfall within the Dee Estuary.
 - Oakenholt Brook – an ordinary watercourse that originates south of the Main Development Area in the vicinity of Plas Bellin Farm and flows in a northerly direction towards the Main Development Area where it is culverted to the Dee Estuary.
 - Old Rockliffe Brook/ Drain – an ordinary watercourse that originates to the south of the Main Development Area. It joins Kelsterton Brook immediately upstream of the existing Connah's Quay Power Station.

- Lead Brook / Northop Brook – The Lead Brook is an ordinary watercourse that flows south to north through the study area. The brook arises as Northop Brook to the south of Northop and flows in a northerly direction to become Lead Brook. The watercourse discharging to a wide-open channel that extends along the full length of the western boundary of the Main Development Area, before eventually discharging to the River Dee through a tidal reach. The Repurposed CO₂ Connection Corridor intersects the Lead Brook in the culverted section.

3.3.79 **Figure 3-5: Key Environmental Constraints (Centred on the Main Development Area) (EN010166/APP/6.3)** illustrates the surface watercourses that intersect the Main Development Area and surrounding areas described above.

Flood Risk

3.3.80 Full details of the flood risk baseline are provided in **Chapter 13: Water Environment and Flood Risk (EN010166/APP/6.3.13)** which includes consideration of the Development Advice Map and Flood Map for Planning (Ref 3-1). The Flood Map for Planning identifies the majority of the Construction and Operation is located within Flood Zone 3:

- the majority of the Main Development Area is located within Flood Zone 3, with small areas at the center located in Flood Zone 2;
- the majority of the Repurposed CO₂ Connection Corridor is located outside of areas of Flood Zone 2 and 3, with the northern extent (north of, and including, Chester Road) located in Flood Zone 3 and partially within Flood Zone 2;
- the Proposed CO₂ Connection Corridor is entirely located outside of areas of Flood Zone 2 and 3;
- the Water Connection Corridor is located entirely within Flood Zone 3;
- the Electrical Connection Corridor is entirely located within Flood Zone 3;
- the majority of the C&IEA is located within Flood Zone 3, with small areas at the center located in Flood Zone 2;
- the Main Development Area Access Works Area is located entirely outside of areas of Flood Zone 2 and 3;
- the majority of the Alternative Access to Main Development Area and Access to C&IEA is situated within Flood Zone 3, with the south-eastern extent located outside of areas of Flood Zone 2 and 3 from; and
- the majority of the Surface Water Outfall Area is located within Flood Zone 3, with a small section of the southern extent located in Flood Zone 2.

Terrestrial Heritage Receptors

3.3.81 Potential effects on heritage receptors are considered in **Chapter 17: Terrestrial Heritage (EN010166/APP/6.2.17)** and **Chapter 18: Marine Heritage (EN010166/APP/6.2.18)**.

3.3.82 **Figure 3-4: Key Environmental Constraints (Centred on the Main Development Area) (EN010166/APP/6.3)** illustrates that there are no World

Heritage Sites, scheduled monuments, grade I or II* listed buildings, conservation areas, registered parks and gardens, registered battlefields or protected wreck sites within the Construction and Operation Area.

- 3.3.83 There are 10 scheduled monuments, 77 listed buildings, and four conservation areas located within 3 km of the Construction and Operation Area. The closest of which (within 500 m) are:
- Kelsterton Hall (Cadw: 1), Grade II Listed Building, which is located approximately 120 m south-west of the Main Development Area;
 - Croes Atti Roman Site (FL213), Scheduled Monument, which is located approximately 140 m west of the Repurposed CO₂ Corridor;
 - Leadbrook Hall (Cadw: 16409), Grade II Listed Building, which is located approximately 180 m south of the Repurposed CO₂ Corridor;
 - Kelsterton Brewery (FL180), Scheduled Monument which is located approximately 280 m south-east of the Main Development Area; and
 - Church of St Mark (Cadw: 85254), Grade II Listed Building, which is located approximately 320 m south-east of the C&IEA.
- 3.3.84 There are also three registered historic parks and gardens within 3 km of the Construction and Operation Area. The closest of which is Shotton Steelworks Garden (PGW(C)77(FLT)), Grade II registered park and garden, which is located approximately 2.2 km south-east of the C&IEA.
- 3.3.85 Further details can be found in **Chapter 17: Terrestrial Heritage (EN010166/APP/6.2.17)** and **Chapter 18: Marine Heritage (EN010166/APP/6.2.18)**.
- 3.3.86 Desktop research has identified 454 non-designated historic assets recorded by Clwyd-Powys Archaeological Trust (CPAT) Historic Environment Records (HER) within 1 km of the Construction and Operation Area. In addition, 12 non-designated historic assets have been identified within the Construction and Operation Area. Further details can be found in **Chapter 17: Terrestrial Heritage (EN010166/APP/6.2.17)** and **Chapter 18: Marine Heritage (EN010166/APP/6.2.18)**.
- 3.3.87 The non-designated historic assets located within the 1 km study area from the Construction and Operation Area comprise archaeological sites, findspots and non-designated buildings dating to the prehistoric, Roman, medieval, post-medieval and modern periods.
- 3.3.88 Historic boreholes have been undertaken within the Construction and Operation Area as recorded on the BGS online resource. The potential for palaeoenvironmental remains to be present is unknown although it is possible peat deposits will be present within the terrestrial environment alongside the estuary.
- 3.3.89 There is potential for archaeological features above the MHWS, such as preserved wooden structures, to remain present along the waterfront.

Landscape and Visual Receptors

- 3.3.90 Potential effects on landscape and visual amenity receptors are assessed in **Chapter 15: Landscape and Visual Amenity (EN010166/APP/6.2.15)**.

- 3.3.91 The Construction and Operation Area is located approximately 7.8 km north-east of the Clwydian Range and Dee Valley National Landscape and is located within National Landscape Character Area 13: Glannau Dyfrdwy a Wrecsam /Deeside and Wrexham (NLCA13), defined by Natural Resources Wales (NRW). 'Character areas' are defined by the relevant authority based on their distinct, recognisable character and natural boundaries. The lowland around the mouth of the River Dee was reclaimed from the sea in the 18th century and the area has since become heavily industrialised.
- 3.3.92 There are several PRoWs within close proximity to the Construction and Operation Area identified in the Transport Receptors section above that are relevant in terms of visual amenity, including FCC Footpaths 27, 28, 66, and 67. In addition, from a visual amenity perspective, the following PRoWs are also relevant:
- a cluster of PRoWs are located to the south of the Main Development Area, within 1 km of the Construction and Operation Area. These include FCC Footpaths 1, 2, 3, and 72; and
 - in addition to FCC Footpaths 66 and 67, FCC Footpath 69 is located approximately 75 m south of the Repurposed CO₂ Connection Corridor.
- 3.3.93 The Construction and Operation Area forms part of the Flintshire Local Development Plan 2015 – 2030 (LDP) and is situated along the southern shore of the Dee Estuary and is located within Marine Character Area 01: Dee Estuary (MCA01).
- 3.3.94 The open countryside to the north of the Main Development Area, which overlooks the Dee Estuary, has been designated as an Area of Special County Value by the CWaC, for its distinctiveness, landscape character, and scenic views over the estuary.
- 3.3.95 There are several internationally designated ecological sites within the vicinity of the Construction and Operation Area, including the Dee Estuary which is designated as a Ramsar site, SAC, SPA, and SSSI.
- 3.3.96 There are no Landscape Character Designations covering the industrial complexes along the banks of the Dee Estuary, however, nationally important industries continue to dominate, including the existing Connah's Quay Power Station.
- 3.3.97 The Dee Estuary has been evaluated as high overall scenic quality, integrity, character, and rarity by the NRW LANDMAP landscape baseline. There is an expanse of the Dee Estuary to the east of the Main Development Area that has been designated as outstanding habitat and historic value, while the surrounding area and the Order limits have been designated as moderate to low.
- 3.3.98 The expansive intertidal sand, mudflats, and saltmarsh of the Dee Estuary to the north and north-west of the Construction and Operation Area contain inland views and urban/industrial influence, creating a contrasting maritime character with expansive views along the coast and out to the Irish Sea.

Agricultural Land Classification

- 3.3.99 An Agricultural Land Classification (ALC) survey was undertaken in November 2024 of the agricultural fields within the Main Development Area in accordance with the Agricultural Land Classification of England and Wales – Revised Guidelines and Criteria for Grading the Quality of Agricultural Land (Ref 3-2). All agricultural land was classified as Subgrade 3b with a limitation due to droughtiness for wheat crop.
- 3.3.100 Further information can be found in **Appendix 14-D: ALC Report (EN010166/APP/6.4)**.
- 3.3.101 Predictive mapping identified the Repurposed or Proposed CO₂ connection corridors as Grade 3a.

3.4 Accommodation Works Areas

Overview

- 3.4.1 This section provides an overview of the Accommodation Works Areas, including environmental receptors, and is not intended to be exhaustive.
- 3.4.2 A study area of 50 m from the Order limits has been used to identify potential receptors for the Accommodation Works Areas.
- 3.4.3 The accommodation works are typically located on the highway and immediately adjacent areas and would not result in the permanent loss of agricultural land.
- 3.4.4 The accommodation works are located to the north-west and south-east of the Main Development Area and are allocated within NCLA 13: Glannau Dyfrdwy a Wrecsam / Deeside and Wrexham. At a local level, the Accommodation Work Areas are covered by the following Landscape Character Areas (LCA) within the LANDMAP Wales and are classified as:
- Built Land;
 - Lowland; and
 - Mosaic Rolling Lowland.
- 3.4.5 As with the Main Development Area, all accommodation works are not located within an AQMA.

A548 from Port of Mostyn to Greenfield Accommodation Works

Existing Land Use

- 3.4.6 This area comprises the route of the existing highway along the A548 between the entrance to the Port of Mostyn and the village of Greenfield and the immediate entrance of the existing Port of Mostyn, an existing operational commercial deep-water port that lies adjacent to the existing Mostyn navigational channel with access to the Irish Sea. The entrance gate and North Wales Main Line included within the Order limits are limited to areas of hard standing.

- 3.4.7 Roadside vegetation varies throughout this section and includes overhanging trees and grass verges. In some locations trees line both sides of the A548. Various industrial and residential properties are passed on this route, but no private property is included within the Order limits.

Surrounding Area

- 3.4.8 **Figure 3-7(a&b): Key Environmental Constraints (Centred on A548 from Port of Mostyn to Greenfield Accommodation Works)** (EN010166/APP/6.3) provides an overview of the environmental constraints associated with the accommodation works on the A548 from Port of Mostyn to Greenfield.

Residential Receptors

- 3.4.9 A large number of residential properties are within 50 m of the Order limits on the A548 from Port of Mostyn to Greenfield Accommodation Works. This includes those on the A548 itself as well as adjoining local roads

Ecological Receptors

- 3.4.10 The majority of the route comprises hard standing associated with the highway, however there are areas of verge and in some areas overhanging trees. A Tree Constraints Plan is included within **Appendix 5-A: Environmental Screening of Accommodation Works** (EN010166/APP/6.4).
- 3.4.11 There are six statutory designated sites within 2 km and seven non-statutory designated sites within 500 m of these accommodation works.

Transport Receptors

- 3.4.12 This area comprises the route of the existing highway along the A548 between the entrance to the Port of Mostyn and the village of Greenfield.
- 3.4.13 There are nine PRoW adjoining the A548 from Port of Mostyn to Greenfield Accommodation Works. These comprise:
- 'Whitford 102', PRoW, which adjoins the north-western extent of the A548 from Port of Mostyn to Greenfield Accommodation Works;
 - 'Whitford 106', PRoW, which adjoins the north-western extent of the A548 from Port of Mostyn to Greenfield Accommodation Works;
 - 'Holywell 102A', PRoW, which adjoins the north-western extent of the A548 from Port of Mostyn to Greenfield Accommodation Works;
 - 'Whitford 67B', PRoW, which adjoins the central extent of the A548 from Port of Mostyn to Greenfield Accommodation Works;
 - 'Whitford 68B', PRoW, which adjoins the central extent of the A548 from Port of Mostyn to Greenfield Accommodation Works;
 - 'Whitford 68A', PRoW, which adjoins the central extent of the A548 from Port of Mostyn to Greenfield Accommodation Works;
 - 'Whitford 76', PRoW, which adjoins the central extent of the A548 from Port of Mostyn to Greenfield Accommodation Works;

- 'Flint 42', PRow, which adjoins the central extent of the A548 from Port of Mostyn to Greenfield Accommodation Works; and
- 'Holywell 37', PRow, which adjoins the south-eastern extent of the A548 from Port of Mostyn to Greenfield Accommodation Works.

Geological, Hydrogeological and Hydrological Receptors

- 3.4.14 The superficial geology recorded beneath the majority of the A548 from Port of Mostyn to Greenfield Accommodation Works is Tidal Flat Deposits (Clay, Silt, and Sand). The other superficial geology recorded beneath this area, at the south-eastern extent and other small areas, spread intermittently, is Till, Devensian (Clay, sandy, gravelly, cobbly).
- 3.4.15 The bedrock geology recorded beneath the majority of the A548 from Port of Mostyn to Greenfield Accommodation Works is Pennine Lower Coal Measures Formation (Mudstone, Siltstone and Sandstone). Pennine Middle Coal Measures Formation (Mudstone, Siltstone and Sandstone), has been recorded beneath parts of the north-western extent of this area, as has Pennine Middle Coal Measures Formation (Sandstone).
- 3.4.16 There are a large number notable surface waterbodies within 500 m of the A548 from Port of Mostyn to Greenfield Accommodation Works Area, two of which cross this area and comprise:
- A surface waterbody located adjacent to the A548 from Port of Mostyn to Greenfield Accommodation Works, at its north-western extent, approximately 25 m north-west of the Hafod-Y-Ddol Road / A548 road junction; and
 - A surface waterbody located adjacent to the A548 from Port of Mostyn to Greenfield Accommodation Works, at its central extent, where Isglan Road and the A548 intersect. The surface waterbody passes under the road.
- 3.4.17 The River Dee is designated as a main river and runs adjacent to the north-east of the A548 from the Port of Mostyn to Greenfield Accommodation Works, and is located approximately 175 m north of this area, at its closest point.

Flood Risk

- 3.4.18 As shown on **Figure 3-7b: Key Environmental Constraints (Centred on A548 from Port of Mostyn to Greenfield Accommodation Works) (EN010166/APP/6.3)**, the Flood Map for Planning identifies the majority of this area is located within Flood Zone 3.

Terrestrial Heritage Receptors

- 3.4.19 There are 44 listed buildings within 1 km of the A548 from the Port of Mostyn to Greenfield Accommodation Works Area. Of note, the Grade II listed Mostyn No. 1 Signal Box is located at the entrance of the port of Mostyn and the Grade II listed Minffordd Cottage is located adjacent to the carriageway of the A548 in Greenfield.
- 3.4.20 The A548 from the Port of Mostyn to Greenfield Accommodation Works Area is not located within a Conservation Area.

- 3.4.21 There is one Historic Registered Park or Garden within 250 m of the Port of Mostyn to Greenfield Accommodation Works Area, comprising the Mostyn Hall Registered Park or Garden which is adjacent to the Port of Mostyn to Greenfield Accommodation Works Area.
- 3.4.22 There are two Scheduled Monuments within 250 m of the Port of Mostyn to Greenfield Accommodation Works Area, comprising:
- Llanerch-y-mor Lead Smelting Chimney, Scheduled Monument, which is approximately 25 m south-west of the Port of Mostyn to Greenfield Accommodation Works Area; and
 - Basingwerk Abbey, Scheduled Monument, which is approximately 170 m south-east of the Port of Mostyn to Greenfield Accommodation Works Area.

Tir Glas Roundabout Accommodation Works

Existing Land Use

- 3.4.23 This area is limited to Tir Glas roundabout on the A548 between Greenfield and Whelston. The island of the roundabout comprises grassland and flowers with larger vegetation, including trees, on the verges on the edge of the roundabout. Pavements are included around the edge of the roundabout.

Surrounding Area

- 3.4.24 **Figure 3-8(a&b): Key Environmental Constraints (Centred on Tir Glas Roundabout Accommodation Works) (EN010166/APP/6.3)** provides an overview of the environmental constraints associated with the accommodation works at the Tir Glas roundabout.

Residential Receptors

- 3.4.25 There are residential properties along Tir Glas and Baglit Road located within 50 m of the Order limits at the Tir Glas Roundabout Accommodation Works.

Ecological Receptors

- 3.4.26 The majority of the area comprises hard standing associated with the roundabout and its approaches. There are verges and a number of trees present, including two with Tree Preservation Orders. A Tree Constraints Plan is included within **Appendix 5-A: Environmental Screening of Accommodation Works (EN010166/APP/6.4)**.
- 3.4.27 There are six statutory designated sites within 2 km and two non-statutory designated sites within 500 m of these accommodation works.

Transport Receptors

- 3.4.28 This area is limited to Tir Glas roundabout on the A548 between Greenfield and Whelston. This serves residential properties, along Tir Glas, and industrial properties, north-east of this area. There are no PRowS within the Tir Glas Roundabout Accommodation Works.

Geological, Hydrogeological and Hydrological Receptors

- 3.4.29 The superficial geology recorded beneath the majority of the Tir Glas Roundabout Accommodation Works is Tidal Flat Deposits (Clay, Silt, and Sand). The other superficial geology recorded beneath this area, at the south-western extent and other small areas is Till, Devensian (Clay, sandy, gravelly, cobbly).
- 3.4.30 The bedrock geology recorded beneath the Tir Glas Roundabout Accommodation Works is Pennine Lower Coal Measures Formation (Mudstone, Siltstone and Sandstone).
- 3.4.31 There are a number of notable surface waterbodies within 500 m of the Tir Glas Roundabout Accommodation Works, none of which cross beneath this area.

The River Dee is designated as a main river and is located approximately 600 m north-east of the A548 from the Tir Glas Roundabout Accommodation Works, at its closest point.

Flood Risk

- 3.4.32 As shown on **Figure 3-8b: Key Environmental Constraints (Centred on Tir Glas Roundabout Accommodation Works) (EN010166/APP/6.3)**, the Flood Map for Planning identifies this area is located entirely within Flood Zone 3.

Terrestrial Heritage Receptors

- 3.4.33 There are 11 listed buildings within 250 m of the Tir Glas Roundabout Accommodation Work Area.
- 3.4.34 The Tir Glas Roundabout Accommodation Work Area is not located within a Conservation Area.
- 3.4.35 There are no Registered Parks and Garden or Scheduled Monuments within 1 km of the Tir Glas Roundabout Accommodation Work Area.

A548 through Flint to Chester Road Roundabout Accommodation Works

Existing Land Use

- 3.4.36 This area comprises the route of the existing highway along the A548 through Flint and includes the Chester Road roundabout. On approach to Flint from the north, the A548 is lined with overhanging trees on both sides of the highway, through Flint itself there is limited vegetation, but there are some areas of grass verge and a number of street trees. Chester Road roundabout has a raised grassed island with ornamental planting. The roundabout has grass verges and a number of hedges present.

Surrounding Area

- 3.4.37 **Figure 3-9(a&b): Key Environmental Constraints (Centred on A548 through Flint to Chester Road Roundabout Accommodation Works) (EN010166/APP/6.3)** provides an overview of the environmental constraints associated with the accommodation works on the A548 through Flint to Chester Road roundabout.

Residential Receptors

- 3.4.38 A large number of residential properties within 50 m of the Order limits at the A548 through Flint to Chester Road Roundabout Accommodation Works. This includes those on the A548 itself as well as adjoining local roads, including Llys Cadfan and Llys Collen.

Ecological Receptors

- 3.4.39 The majority of the route comprises hard standing associated with the highway, however there are areas of verge and in some areas overhanging trees. At Chester Round Roundabout there are a number of hedges present and planting within the centre of the roundabout. A Tree Constraints Plan is included within **Appendix 5-A: Environmental Screening of Accommodation Works (EN010166/APP/6.4)**.
- 3.4.40 There are five statutory designated sites within 2 km and three non-statutory designated sites within 500 m of the A548 through Flint and Chester Road Roundabout Accommodation Works Area.

Transport Receptors

- 3.4.41 This area comprises the route of the existing highway along the A548 through Flint and includes the Chester Road roundabout.
- 3.4.42 There are three PRowS adjoining the A548 through Flint and Chester Road Roundabout Accommodation Works Area. These comprise:
- 'Flint 80', PRow, which adjoins the south-eastern extent of the A548 through Flint and Chester Road Roundabout Accommodation Works;
 - 'Flint 48', PRow, which adjoins the south-eastern extent of A548 through Flint and Chester Road Roundabout Accommodation Works; and
 - 'Flint 56', which adjoins the south-eastern extent of the A548 through Flint and Chester Road Roundabout Accommodation Works.

Geological, Hydrogeological and Hydrological Receptors

- 3.4.43 The superficial geology recorded beneath the majority of the A548 through Flint to Chester Road Roundabout Accommodation Works is Till, Devensian (Clay, sandy, gravelly, cobbly). The other superficial geology recorded beneath this area, at the north-western extent and other small areas is Tidal Flat Deposits (Clay, Silt, and Sand) and Alluvium (Clay, Silt, Sand, and Gravel).
- 3.4.44 The bedrock geology recorded beneath the majority of the A548 through Flint to Chester Road Roundabout Accommodation Works is Pennine Lower Coal Measures Formation (Mudstone, Siltstone and Sandstone). Eutria Formation (Mudstone, Sandstone, and Conglomerate) has been recorded beneath parts of the north-western extent of this area, as has Pennine Middle Coal Measures Formation (Mudstone, Siltstone, and Sandstone). Pennine Lower Coal Measures Formation (Sandstone) has also been recorded at the central extent of this area.
- 3.4.45 There are a large number of notable surface waterbodies within 500 m of the A548 through Flint to Chester Road Roundabout Accommodation Works Area, one of which cross beneath the area at two different points at the

south-eastern extent of this area, south-east of the Croes Atti Lane / A548 road junction, and north-west of the Chester Road Roundabout by Bennetts Row.

- 3.4.46 The River Dee is designated as a main river and runs to the north-east of the A548 through Flint to Chester Road Roundabout Accommodation Works and is located approximately 515 m north-east of the A548 through Flint and Chester Road Roundabout Accommodation Works Area, at its closest point.

Flood Risk

- 3.4.47 As shown on **Figure 3-9b: Key Environmental Constraints (Centred on A548 through Flint to Chester Road Roundabout Accommodation Works) (EN010166/APP/6.3)**, the Flood Map for Planning identifies the majority of the A548 through Flint and Chester Road Roundabout Accommodation Works Area is located outside of areas of Flood Zone 2 and 3. On approach to Flint from the north, there is a large area of Flood Zone 3. In addition, an isolated area on approach to the Chester Road roundabout from the north is located within Flood Zone 3.

Terrestrial Heritage Receptors

- 3.4.48 There are 11 listed buildings within 1 km of the A548 through Flint and Chester Road Roundabout Accommodation Work Area. Of note is the Grade II listed Town Hall located adjacent to the carriageway of the A548 through Flint.
- 3.4.49 The A548 through Flint to Chester Road Roundabout Accommodation Works Area is located within Flint Conservation Area, at its central extent.
- 3.4.50 There are no Registered Parks or Gardens within 1 km of the A548 through Flint to Chester Road Roundabout Accommodation Works Area.
- 3.4.51 There are three Scheduled Monuments within 250 m of the A548 through Flint to Chester Road Roundabout Accommodation Works Area, comprising:
- Pentre Bridge Roman Site, Scheduled Monument, which is adjacent to the A548 through Flint to Chester Road Roundabout Accommodation Works;
 - Croes Atti Roman Site, Scheduled Monument, which is approximately 50 m south of the A548 through Flint to Chester Road Roundabout Accommodation Works, at its closest point; and
 - Castell y Fflint, Scheduled Monument, which is approximately 200 m north-east of the A548 through Flint to Chester Road Roundabout Accommodation Works, at its closest point.

AIL Access

Existing Land Use

- 3.4.52 This area comprises a section of the A548 Chester Road adjacent to the Main Development Area Access Works Area and a wooded verge on Kelsterton Road adjacent to the Kelsterton Road / A548 Chester Road.

Surrounding Area

- 3.4.53 **Figure 3-12(a&b): Key Environmental Constraints (Centred on AIL Access Accommodation Works) (EN010166/APP/6.3)** provides an overview of the environmental constraints associated with the accommodation works at the AIL Access.

Residential Receptors

- 3.4.54 Residential properties, including a traveller's site along Kelsterton Road and residential properties on Rockcliffe Lane are within 50 m of the Order limits at the AIL Access Accommodation Works Area.

Ecological Receptors

- 3.4.55 The majority of this area comprises hard standing with adjacent verge and tree belt. A Tree Constraints Plan is included within **Appendix 15-G: Arboricultural Impact Assessment (EN010166/APP/6.4)**.
- 3.4.56 There are four statutory designated sites within 2 km and no non-statutory designated sites within 500 m of the AIL Access Accommodation Works Area.

Transport Receptors

- 3.4.57 This area comprises the existing highway along the A548 Chester Road and Kelsterton Road.

Geological, Hydrogeological and Hydrological Receptors

- 3.4.58 The superficial geology recorded beneath the AIL Access Accommodation Works Area includes Till, Devensian - Diamicton and Tidal Flat Deposits (Clay, Silt, and Sand) (Clay, Silt, and Sand).
- 3.4.59 The bedrock geology recorded beneath the AIL Access Accommodation Works Area is Gwespys Sandstone and Etruria Formation (Mustone, sandstone and conglomerate).
- 3.4.60 There are approximately a number of notable surface waterbodies within 500 m of the AIL Access Accommodation Works Area. These include Oakenholt Brook, Old Rockcliffe Brook and Top-y-fron Dingle.

Flood Risk

- 3.4.61 As shown on **Figure 3-12b: Key Environmental Constraints (Centred on AIL Access Accommodation Works) (EN010166/APP/6.3)**, the Flood Map for Planning identifies the AIL Access Accommodation Works Area are wholly located outside of areas of Flood Zone 2 and 3.

Terrestrial Heritage Receptors

- 3.4.62 There are four listed buildings within 1 km of the AIL Access Accommodation Work Area, none of these are located within 250 m.
- 3.4.63 The AIL Access Accommodation Works Area is not located within a Conservation Area.
- 3.4.64 There are no Registered Parks and Gardens or Scheduled Monuments within 1 km of the AIL Access Accommodation Works Area.

Connah's Quay North Accommodation Works

Existing Land Use

- 3.4.65 This area comprises the existing jetty at Connah's Quay North, including marine and terrestrial components, and the access road from North Road/River Road.

Surrounding Area

- 3.4.66 **Figure 3-10(a&b): Key Environmental Constraints (Centred on Connah's Quay North Accommodation Works) (EN010166/APP/6.3)** provides an overview of the environmental constraints associated with the accommodation works at Connah's Quay North.

Residential Receptors

- 3.4.67 There are no residential properties within 250 m of the Connah's Quay North Accommodation Works Area.

Ecological Receptors

- 3.4.68 The majority of the area comprises hard standing associated with the Connah's Quay North terminal.
- 3.4.69 Verges are typically present adjacent to the highway with some low lying grassland present within the terminal itself.
- 3.4.70 There are ten statutory designated sites within 2 km and no non-statutory designated sites within 500 m of the Connah's Quay North Accommodation Works Area.

Transport Receptors

- 3.4.71 An unclassified road connects the jetty and associated area to North Road. There are no PRow's within the Connah's Quay North Accommodation Works Area.

Geological, Hydrogeological and Hydrological Receptors

- 3.4.72 The superficial geology recorded beneath the Connah's Quay North Accommodation Works Area is Tidal Flat Deposits (Clay, Silt, and Sand).
- 3.4.73 The bedrock geology recorded beneath the Connah's Quay North Accommodation Works Area is Pennine Lower Coal Measures Formation (Mudstone, Siltstone and Sandstone).
- 3.4.74 There are a large number of notable surface waterbodies within 500 m of the Connah's Quay North Accommodation Works Area, one of which is the River Dee, which is designated as a main river, where the Site is located at its western extent.

Flood Risk

- 3.4.75 As shown on **Figure 3-10b: Key Environmental Constraints (Centred on Connah's Quay North Accommodation Works) (EN010166/APP/6.3)**, the Flood Map for Planning identifies the terrestrial component of Connah's Quay North Accommodation Works Area is located entirely within in Flood Zone 3.

Terrestrial Heritage Receptors

- 3.4.76 There are seven listed buildings within 1 km of the Connah's Quay North Accommodation Works Area, all of which are located on the south side of the River Dee, and are over 500 m away.
- 3.4.77 The Connah's Quay North Accommodation Works Area is not located within a Conservation Area.
- 3.4.78 There are no Registered Parks and Gardens or Scheduled Monuments within 250 m of the Connah's Quay North Accommodation Works Area.

North Road to the A548 Accommodation Works

Existing Land Use

- 3.4.79 This area comprises North Road from the entrance to Connah's Quay North to the A548 Weighbridge Road roundabout. The highway is typically bound by a grass verge with some areas of overhang trees.

Surrounding Area

- 3.4.80 **Figure 3-11(a&b): Key Environmental Constraints (Centred on North Road to the A548 Accommodation Works) (EN010166/APP/6.3)** provides an overview of the environmental constraints associated with the accommodation works on North Road to the A548.

Residential Receptors

- 3.4.81 There are no residential properties within 250 m of the North Road to A548 Accommodation Works Area.

Ecological Receptors

- 3.4.82 The majority of the route comprises hard standing associated with the highway, however there are areas of verge and in some areas overhanging trees.
- 3.4.83 There are eleven statutory designated sites within 2 km and two non-statutory designated sites within 500 m of the North Road to A548 Accommodation Works Area.

Transport Receptors

- 3.4.84 North Road, an unclassified road, connects to Weighbridge Road and the A548. There are no PRoWs within or adjoining the North Road to the A548 Accommodation Works Area.

Geological, Hydrogeological and Hydrological Receptors

- 3.4.85 The superficial geology recorded beneath the majority of the North Road to the A548 Accommodation Works Area is Tidal Flat Deposits (Clay, Silt, and Sand). The other superficial geology recorded beneath this area, at the central extent of this area is Blown Sand (Sand).
- 3.4.86 The bedrock geology recorded beneath the North Road to the A548 Accommodation Works Area is Pennine Lower Coal Measures Formation (Mudstone, Siltstone and Sandstone). The other bedrock geology recorded

beneath this area is Gwespys Sandstone (Sandstone and argillaceous rocks, interbedded).

- 3.4.87 There are a large number of notable surface waterbodies within 500 m of the North Road to the A548 Accommodation Works Area, one of which crosses beneath the area at its central extent, approximately 230 m north of the North Road roundabout.

Flood Risk

- 3.4.88 As shown on **Figure 3-11b: Key Environmental Constraints (Centred on North Road to the A548 Accommodation Works) (EN010166/APP/6.3)**, the Flood Map for Planning identifies that the majority of the North Road to A548 Accommodation Works Area is located outside of areas of Flood Zone 2 and 3, however there are a number of isolated areas of Flood Zone 3 at the A548 Weighbridge Road roundabout.

Terrestrial Heritage Receptors

- 3.4.89 There are eight listed buildings within 1 km of the North Road to the A548 Accommodation Works Area, all of which are located on the south side of the River Dee, and are over 500 m away.
- 3.4.90 The North Road to A548 Accommodation Works Area is not located within a Conservation Area.
- 3.4.91 There are no Registered Parks and Gardens or Scheduled Monuments within 1 km of the North Road to A548 Accommodation Works Area.

References

- Ref 3-1 Natural Resources Wales (n.d). Flood Map for Planning [online]. Available at: <https://flood-map-for-planning.naturalresources.wales> (Accessed 07/02/2025).
- Ref 3-2 Ministry of Agriculture Fisheries and Food (MAFF), 1988, Agricultural Land Classification of England and Wales – Revised Guidelines and Criteria for Grading the Quality of Agricultural Land.

