

GLOSSARY AND ABBREVIATIONS

Padeswood Carbon Dioxide Spur Pipeline Proposed Development

Town and Country Planning Act 1990

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1. INTRODUCTION

- 1.1.1. This document provides definitions for the terms and abbreviations used throughout the documentation associated with the **Carbon Dioxide Spur Pipeline Proposed Developments (Spur Pipelines Proposed Development)**.
- 1.1.2. The Project consists of three spur pipelines and associated infrastructure of differing scale and complexity:
- Protos Carbon Dioxide Spur Pipeline Proposed Development (Protos Spur Pipeline Proposed Development)
 - Padeswood Carbon Dioxide Spur Pipeline Proposed Development (Padeswood Spur Pipeline Proposed Development)
 - Runcorn Carbon Dioxide Spur Pipeline Proposed Development (Runcorn Spur Pipeline Proposed Development)
- 1.1.3. The CWCC Planning Committee resolved to grant full planning permission to the Protos Spur Pipeline Proposed Development (Reference: 24/00777FUL) on 3rd September 2024. A new planning application was submitted to CWCC on 21st March 2025 with the new Protos AGI location and pipeline routing. References to the original and new Protos Spur Pipeline Proposed Development are as follows:
- Original: Protos Carbon Dioxide Spur Pipeline (East AGI) Proposed Development (Protos (East AGI) Spur Pipeline Proposed Development)
 - New: Protos Carbon Dioxide Spur Pipeline (West AGI) Proposed Development (Protos (West AGI) Spur Pipeline Proposed Development)

2.

GLOSSARY

Table 2.1 - Glossary

Term	Definition
Abnormal Indivisible Load (AIL)	Any load which cannot be broken down into smaller loads for the purposes of transportation, without undue expense or risk of damage.
Above-Ground Heritage Asset	An above ground building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage Assets include Designated Heritage Assets and Non-Designated Heritage Assets .
Above Ground Installation (AGI)	<p>A secure compound above ground level containing equipment relating to the Carbon Dioxide Spur Pipeline Proposed Developments which is necessary for its operation and maintenance. The AGIs provide an interface between Upstream Emitters and the Carbon Dioxide Spur Pipeline Proposed Developments. AGIs also provide an interface between the Carbon Dioxide Spur Pipeline Proposed Developments and the development subject to the HyNet Carbon Dioxide Pipeline DCO. They typically include PIG Launching and Receiving Facilities, an Electrical and Instrumentation Kiosk and ancillary infrastructure (including lighting and parking provisions).</p> <p>In the context of the Carbon Dioxide Spur Pipeline Proposed Developments, the following AGIs are proposed:</p> <ul style="list-style-type: none"> • Protos East AGI/ Protos West AGI; • Padeswood AGI. • Runcorn AGI;
Adaptive Capacity	The capacity of Receptors to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.

Agricultural Land	Land devoted to agriculture particularly rearing livestock and production of crops.
Agricultural Land Classification (ALC)	A framework for determining the physical quality of the land at national, regional, and local levels. This is based on the long-term physical limitations of land for agricultural use. There are a number of factors that affect the grade, mainly, climate, site and soil characteristics, and the interactions between them.
Air Quality Management Area (AQMA)	Air Quality Management Areas (AQMAs) are areas that are likely to exceed the national air quality objective for a specific pollutant. They are determined by Local Authorities .
Ancient Woodland	Ancient Woodland is defined as an area that has been wooded continuously since at least 1600 AD. Ancient Woodland is divided into ancient semi-natural woodland and plantations on Ancient Woodland sites. Both types are classed as ancient woods.
Applicant	The organisation (Liverpool Bay CCS Limited, a member of Eni SpA group) preparing and submitting the TCPA Applications .
Application(s)	<p>The Application for a full planning permission under Town and Country Planning Act 1990 that is submitted by the Applicant to the relevant local planning authority.</p> <p>In the context of the Carbon Dioxide Spur Pipeline Proposed Development, the Applications will be submitted to the following Local Planning Authorities:</p> <ul style="list-style-type: none"> • Protos Carbon Dioxide Spur Pipeline (East AGI)/ Protos Carbon Dioxide Spur Pipeline (West AGI): Cheshire West and Chester Council • Padeswood Carbon Dioxide Spur Pipeline: Flintshire County Council

	<ul style="list-style-type: none"> Runcorn Carbon Dioxide Spur Pipeline: Halton Borough Council and Cheshire West and Chester Council
Aquifer	Underground layer of water-bearing permeable rock, rock fractures or unconsolidated materials (gravel, sand, or silt).
Arboricultural Clerk of Works (ACoW)	Appointed project arboriculturalist, who supervises the Construction Works, and provides arboricultural advice on Site.
Arboricultural Method Statement (AMS)	A methodology for the implementation of any aspect of development which is within the root protection area , or has the capacity to adversely affect, any retained tree.
Archaeological Interest	There will be archaeological interest in a Heritage Asset if it holds, or potentially may hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
As Low As Reasonably Practicable (ALARP)	Reasonably practicable involves weighing a risk against the cost effectiveness needed to control it. Thus, ALARP describes the level to which the Health & Safety Executive (HSE) expect to see workplace risks controlled. For a Risk to be ALARP, the cost, time or effort involved in reducing the Risk further would be grossly disproportionate to the benefit gained.
Barg	The unit for the measurement of pressure above that of atmosphere. Short for bar gauge.
Bed Material	The sediment type located at the bed of the river.
Bedding Material	Granular material laid evenly at the bottom of the pipeline trench upon which the pipeline is installed and supported.
Below-Ground Heritage Asset	Below-ground heritage assets include both known and hitherto unknown buried archaeological remains.
Best and Most Versatile	Defined as Grades 1, 2 and 3a in the Agricultural Land Classification by the revised National

Agricultural Land (BMV)	Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG). This is land, which is determined to be most flexible, productive, and efficient in response to inputs and which can best deliver future crops for food and non-food uses such as biomass, fibres, and pharmaceuticals. Grades 3b, 4, and 5 are used to classify land that is of moderate quality to very poor quality.
Best Available Techniques (BAT)/ Best Practicable Means (BPM)	The available techniques which are the best for preventing or minimising Emissions and Impacts on the environment.
Best Available Technique Reference Documents (BREF) Notes	The European Commission (EC) produces Best Available Technique reference documents or BREF notes. They contain Best Available Techniques (BAT) for installations.
Biodiversity	The biological diversity of the earth’s living resources. The total range of variability among systems and organisms at the following levels of organisation: bioregional, Landscape , ecosystem, Habitats , communities, Species , populations, individuals, genes, and the structural and functional relationships within and between these different levels.
Biodiversity Net Gain (BNG) / Net Benefit for Biodiversity	Biodiversity Net Gain / Net Benefit for Biodiversity is an approach to development that leaves Biodiversity in a better state than before. The process follows the mitigation hierarchy, which sets out that everything possible must be done to firstly avoid, secondly minimise and thirdly compensate for unavoidable impacts on or off site.
BS PD 8010-1	British Standard BS PD 8010 – 1: Pipeline systems – Part 1: Steel pipelines on land – Code of practice.
BS 5837	British Standard BS 5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations’ - This standard ‘gives recommendations and guidance on the relationship between trees and the design, demolition and construction process. It sets out the principles and procedures to be applied to

	achieve a harmonious and sustainable relationship between trees and structures’.
Built Environment Indicators	Receptors located along highway links used to determine affected parties and the sensitivity of highway links. For example, Residential Properties, Schools, and Public Rights of Way (PRoWs) .
Department for Energy Security and Net Zero (DESNZ)	The Department for Energy Security and Net Zero (DESNZ) is focused on the energy portfolio from the former Department for Business, Energy and Industrial Strategy (BEIS). DESNZ’s responsibilities include delivering security of energy supply, ensuring properly functioning energy markets, encouraging greater energy efficiency, and seizing the opportunities of net zero to lead the world in new green industries.
Cadw	Cadw is the historic environment service of the Welsh Government which works to protect the historic buildings and structures, the landscapes and heritage sites of Wales.
Carbon Capture	The capture of carbon dioxide from industrial sources that would otherwise be emitted into the atmosphere.
Carbon Capture and Storage	The combined processes of Carbon Capture , transportation (by pipeline or otherwise), and Carbon Dioxide Storage .
Carbon Dioxide Storage	The locations for or act of providing the long-term sub-sea geological storage of carbon dioxide.
Carbon Dioxide Stream	A fluid comprising in the majority of carbon dioxide that has been captured from industrial sources, which also contains incidental associated substances derived from the source materials and the capture process (impurities), and any substances added to the stream to enable or improve the injection process.
Carbon Dioxide Vent Facility	A means whereby a Carbon Dioxide Stream under pressure may be safely depressurised and vented to atmosphere.
Catchment	The total area which drains to a specific point on a watercourse.

Cathodic Protection (CP)	A technique used to control the corrosion of a metal surface by making it the cathode of an electrochemical cell.
Cathodic Protection (CP) Transformer	Power supply for the CP System.
CF Fertiliser Plant	The CF Fertilisers UK Ltd manufacturing plant located at Ince, Cheshire.
Circular Economy	Maximising the sustainable use and value of resources, eliminating waste from all stages of the resource lifecycle, whilst benefiting both the economy and the environment.
Climate Change	Large scale, long term shift in the Earth's weather patterns or average temperature.
Cluster	For the purposes of the Project , a cluster is a Consortium of businesses and institutions working in unison to create new decarbonisation and hydrogen networks.
Combined Effects	The interaction and combination of different residual (post-mitigation) environmental effects of the Carbon Dioxide Spur Pipeline Proposed Developments affecting the same Receptor . For example, visual and noise effects during construction affecting the same residential dwelling.
Community Council	Local authority areas, which form part of County Councils (Principal Areas) in Wales. Established under the Local Government Act 1972. Equivalent to the Parish Council in England.
Competent Authority	The Local Planning Authority is the Competent Authority for the purposes of the Habitats Directive and the Habitats Regulations in relation to Town and Country Planning (TCPA) Applications .
Confluence	The point at which two watercourses meet.
Consortium	The delivery consortium for the Project . The Consortium partners include (but not limited to) Cadent, Eni, Essar, Heidelberg Materials UK, Inovyn, Viridor, Encyclis, Progressive Energy and the University of Chester.

Construction Exclusion Zone (CEZ)	An area within which all site clearance and construction activities, access and storage of materials are prohibited.
Construction Stage	The stage during which construction works for the Carbon Dioxide Spur Pipeline Proposed Developments will take place.
Construction Compound	<p>A temporary compound which would be used to facilitate the construction of the Carbon Dioxide Spur Pipeline Proposed Developments. There are two types of Compounds i.e. Centralised and Localised Compounds.</p> <p>The Centralised Compounds would serve as points for accepting deliveries and storage of pipe and other materials/equipment. Each of the Compounds would provide temporary material yards, secure plant storage areas, offices, staff welfare facilities, workshops, and a vehicle parking area. The Localised Compounds (including trenchless crossing compounds) would be small temporary compounds which would be used to facilitate the construction of the Carbon Dioxide Spur Pipeline Proposed Developments. They would be linked to a Centralised Compound.</p>
Construction Contractor	The person or organisation appointed by the Applicant to undertake the construction of the Carbon Dioxide Spur Pipeline Proposed Developments , including the management of the construction process and health and safety on Site .
Consultation Zone	The Health & Safety Executive (HSE) sets a Consultation Distance (CD) around major hazard sites and major accident hazard pipelines after assessing the risks and likely effects of major accidents site/pipeline. The area enclosed within the CD is referred to as the consultation zone. The Local Planning Authority is notified of this CD and has a statutory duty to consult HSE on certain proposed developments within the zone the CD forms.
Contaminated Land	Land where (prior to commencement of and during the Construction Stage) substances are causing or have a significant possibility to cause significant harm to people, property or

	protected species; or, where significant pollution is being caused or has a significant possibility of being caused to controlled waters.
Cumulative Effects	The effects of the Carbon Dioxide Spur Pipeline Proposed Developments in cumulation with other existing development and/or approved developments.
Decommissioning	The process of shutting down, and where relevant, removing the Carbon Dioxide Spur Pipeline Proposed Developments when they are no longer required once they have reached end of life. Note: not to be confused with Disinvestment .
Design Life	Design life is the time period for which an asset (including the Carbon Dioxide Spur Pipeline Proposed Developments , the AGIs and BVSs for the Carbon Dioxide Spur Pipeline Proposed Developments) is to be used for its intended purpose with planned integrity management.
Design Parameters	The boundary which defines the maximum or minimum height/width/length/depth parameters of infrastructure, which will be shown on parameter plans and secured through the planning permission under separate TCPA applications .
Development Consent Order (DCO)	A Development Consent Order (DCO) is a Statutory Instrument (SI) made by the Secretary of State (SoS) pursuant to the Planning Act 2008 (as amended) (PA2008) .
Dewatering	The removal of surface or ground water to dry and/or solidify a location to enable construction activity during the Construction Stage .
Dewpoint	The temperature at any given pressure, or the pressure at any given temperature, at which liquid initially condenses from a gas or vapour.
Direct Effect	An effect that is directly attributable to the Carbon Dioxide Spur Pipeline Proposed Developments .

Direct Employment	An increase in local employment arising from further economic activity (jobs, expenditure, or income) associated with additional local income and local supplier purchases.
Disaster	In the context of the Carbon Dioxide Spur Pipeline Proposed Developments , a naturally occurring phenomenon such as an extreme weather event (e.g. storm, flood, temperature) or ground-related hazard events (e.g. subsidence, landslide, earthquake) with the potential to cause an event or situation that meets the definition of a Major Accident .
Disinvestment	The process of removing and disposing of existing infrastructure and/or equipment for the purposes of installing the Carbon Dioxide Spur Pipeline Proposed Developments .
District Level Licensing (DLL)	District Level Licencing is categorised into three different zones, Red, Amber and Green to correspond to the likelihood of Great Crested Newt (GCN) presence. Red is the highest risk zone where populations here are considered too important to affect and are excluded from any DLL application.
District Network Operator (DNO)	A transmission licence holder responsible for local electrical supply cables and infrastructure.
Easement	An easement is a legal, propriety agreement that confers a right to cross/use a third party's land for a particular purpose e.g. installing a pipeline along with access rights to enter the land to undertake routine inspections or repairs. An easement is registered with the Land Registry and binds future successors in title.
Electrical and Instrumentation (E&I) Kiosk	A cabinet type container housing electrical equipment necessary to monitor and operate the facilities within the AGIs and BVSSs .

Emission	A material that is expelled or released to the environment. Usually applied to gaseous or odorous discharges to the atmosphere.
Emission Rate	The quantity of a pollutant released from a source over a given period of time.
Enhancement	Measures to improve the environment, such as landscape resource and the Visual Amenity of the Carbon Dioxide Spur Pipeline Proposed Developments and its wider setting, over and above its Baseline condition.
Environmental Impact Assessment (EIA)	In relation to the Carbon Dioxide Spur Pipeline Proposed Developments , this is a systematic means of assessing the significance of effects from Carbon Dioxide Spur Pipeline Proposed Developments , undertaken in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations).
Environment Impact Assessment (EIA) Directive	The initial European Union (EU) Directive of 1985 and its three amendments were codified by Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment on 13 December 2011. Directive 2011/92/EU was amended in 2014 by Directive 2014/52/EU.
EIA Regulations	For the purpose of the TCPA Applications for Carbon Dioxide Spur Pipeline Proposed Developments , the EIA Regulations are the Town and Country Planning (Environmental Impact Assessment) Regulations 2017.
Environmental Statement (ES)	A statement prepared in accordance with the EIA Regulations that includes the information that is reasonably required to assess the likely effects of a development and which the Applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile.

European Designated Site	An area of land subject to protection through European legislation, including Special Area of Conservation (SAC) and Special Protection Area (SPA) .
Exceedance	A period of time where the concentration of a pollutant is greater than the appropriate quality standard.
Expansive Study Area	The Expansive Study Area extends to the availability of construction materials and the capacity of waste management facilities within the UK and the regions where the Carbon Dioxide Spur Pipeline Proposed Developments is located.
External Influencing Factor	A factor which occurs beyond the limits of the Carbon Dioxide Spur Pipeline Proposed Developments that may present a risk to the Carbon Dioxide Spur Pipeline Proposed Developments , e.g. if an external disaster occurred (e.g. earthquake, COMAH site major accident) it would increase the risk of serious damage to an environmental receptor associated with the Carbon Dioxide Spur Pipeline Proposed Developments .
Flood Consequence Assessment (FCA)	An assessment of the risk of flooding in Wales. A document that reviews a development in its proposal form to assess it against the risk of flooding, whether that be from groundwater, river (fluvial), surface water (pluvial), estuary/coastal (tidal), or from sewer sources.
Flood Map for Planning	Defines Flood Zones based on annual probability of flooding from Fluvial and tidal sources to inform development planning and flood risk assessment. Nationally consistent delineation of 'high', 'medium' and 'low' flood risk updated by the Environment Agency as deemed appropriate, typically on a quarterly basis.

Flood Risk Assessment (FRA)	An assessment of the risk of flooding in England. A document that reviews a development in its proposal form to assess it against the risk of flooding, whether that be from groundwater, river (fluvial), surface water (pluvial), estuary/coastal (tidal), or from sewer sources.
Flood Zones	Zones based on the annual probability of flooding from Fluvial and tidal sources, as defined in the Flood Map for Planning . Areas are categorised into one of the following: Flood Zone 1, Flood Zone 2, Flood Zone 3a or Flood Zone 3b .
Flood Zone 1	This zone comprises land assessed as having less than a 1 in 1,000 (0.1%) annual probability of flooding from rivers or the sea in any year.
Flood Zone 2	This zone comprises land assessed as having between a 1 in 100 (1%) and 1 in 1000 (0.1%) annual probability of flooding from rivers, or between a 1 in 200 (0.5%) and 1 in 1,000 (0.1%) annual probability of flooding from the sea in any year.
Flood Zone 3a	This zone comprises land assessed as having a 1 in 100 (1%) or greater annual probability of flooding from rivers or a 1 in 200 (0.5%) or greater annual probability of flooding from the sea in any year.
Flood Zone 3b	This zone comprises land where water has to flow or be stored in times of flood.
Flume Pipe	A type of culvert pipe that is used to carry or transport water under an obstacle.
Fluvial	Processes associated with rivers and streams and the deposits and landforms created by them.
Fugitive Emissions	The unintentional and undesirable emission, minor leakage, or discharge of gases or vapours

	from pressure-containing equipment or facilities, including pipelines.
Future Baseline	The likely evolution of the baseline without implementation of the Carbon Dioxide Spur Pipeline Proposed Developments .
Geo-Environmental Surveys	An investigation to determine the chemical/asbestos content of soils and groundwater in order to understand if they post a risk to human health and/or controlled waters for the purpose of design and construction.
Geographical Information System (GIS)	A system that captures, stores, analyses, manages, and presents data linked to location. It links spatial information to a digital database.
Geomorphology	Study of landforms, their processes, form, and sediments at the surface of the Earth.
Geophysical Survey	Making and interpreting measurements of physical properties of the earth to determine subsurface conditions.
Geotechnical Survey	An investigation to determine the nature and engineering properties of the soil and other materials and to determine soil profiles and property assignments for the purpose of design and construction.
Greenfield Runoff Rate	The peak rate of runoff of surface water for a specific return period due to rainfall falling on a given area of vegetated land (pre-development).
Greenhouse Gas (GHG)	Gases that absorb and emit reflected solar radiation which result in the warming of the Earth's atmosphere. It is absorbed and emitted at specific wavelengths within the spectrum of infrared radiation emitted by the earth's surface, the atmosphere, and clouds. The six main GHGs whose emissions are human caused are: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbon, and sulphur hexafluoride. In combination, these

	GHG emissions are commonly expressed in terms of 'carbon dioxide equivalents' (CO ₂ e) according to their relative global warming potential. For this reason, the shorthand 'carbon' may be used to refer to GHGs.
Ground Investigation (GI)	The physical investigation which can include a Geotechnical Survey, Geophysical Surveys and Geo-Environmental Surveys . Comprised of targeted investigations including both intrusive and non-intrusive techniques to prove ground conditions, determine soil / rock parameters, chemical/asbestos concentrations and identify hazards associated with the ground conditions to inform a proposed development.
Ground Investigation Contractor	The contractor tasked with undertaking the Ground Investigation , including all associated activities and consents.
Groundwater	Groundwater is the store of water present beneath Earth's surface in rock and soil pore spaces and in the fractures of rock formations.
Groundwater Dependent Terrestrial Ecosystems	Wetlands such as springs, flushes and fens which are fed by groundwater rather than rainfall or surface runoff. They are particularly sensitive to hydrological and ecological changes caused by development.
Groundwater Source Protection Zone (SPZ)	Also, Source Protection Zone (SPZ) , defined for 2,000 groundwater sources such as wells, boreholes and springs used for public drinking water supply, show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk. The SPZ maps show three main zones (inner, outer, and total catchment) and a fourth zone of special interest, which the Environment Agency occasionally apply to a groundwater source.
Guided Auger Bore	A Trenchless Installation Technique which is used over relatively short distances and usually

	at shallow depths, and where space is limited. It accurately tunnels between two points in order to install the pipeline without disturbing the obstacles on the surface.
Habitat	The environment in which populations or individual species live or grow.
Habitats Directive	Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna.
Habitats Regulations	The Conservation of Habitats and Species Regulations 2017 which covers the terrestrial environment.
Habitats Regulations Assessment (HRA)	The stages of assessment carried out by the competent authority in accordance with Habitats Regulations and the Conservation of Offshore Marine Habitats and Species Regulations 2017 to determine if a project may affect the protected features of a European site and European offshore marine site, before deciding whether to undertake, permit or authorise it.
Habitats Site	Any site which would be included within the definition at Regulation 8 of the Conservation of Habitats and Species Regulations 2017 for the purpose of those regulations, including candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation, Special Protection Areas and any relevant Marine Sites.
Hazard	Anything with the potential to cause harm, including ill-health and injury, damage to property or the environment; or a combination of these.
Hazardous Waste	Waste that by legal definition may cause particular harm to human health or the environment.

Heritage	The historic environment and especially valued assets and qualities such as historic buildings and cultural traditions.
Heritage Asset	A building, monument, site, place, area, or Landscape identified as having a degree of significance meriting consideration in planning decisions, because of its Heritage interest. Heritage Assets include Designated Heritage Assets and Non-Designated Heritage Assets .
High Integrity Pressure Protection System (HIPPS)	A series of components, specifically engineered to isolate the source of high pressure in the case of an overpressure event.
Horizontal Directional Drilling (HDD)	A Trenchless Installation Technique used to install pipes underground without disturbing the ground surface above. The drill is launched from one HDD Compound and retrieved from the HDD Compound at the other end, and except for the launch and retrieving spaces above ground, the entire process takes place underground.
Hydrostatic Test	A test which involves filling pipelines with water which is then pressurised to test the line for leaks.
HyNet Carbon Dioxide Pipeline Development Consent Order (DCO) (also known as the Main Onshore Pipeline)	<p>The development for which a Development Consent Order (DCO) (Planning Inspectorate reference number EN070007) is sought.</p> <p>The HyNet Carbon Dioxide Pipeline DCO Proposed Development includes the construction of a carbon dioxide pipeline from Ince AGI to Flint AGI and the repurposing of the Flint Connection to the Point of Ayre Terminal Pipeline, which is a section of the existing Connah's Quay to Point of Ayre Pipeline.</p> <p>The DCO Proposed Development also includes the construction of four AGIs and six Block Valve Stations located along the carbon dioxide pipeline; other infrastructure such as Cathodic</p>

	Protection (CP) transformer rectifier cabinets and ancillary works integral to the construction of the DCO Proposed Development, including Construction Compounds and temporary access tracks.
HyNet North West (also known as HyNet)	HyNet North West is being developed by a multi-partner consortium the goal of which is to reduce carbon dioxide emissions from industry, homes and transport and support economic growth in the North West of England and North Wales. This includes, but is not limited to the HyNet Carbon Dioxide Pipeline DCO, Carbon Capture, Carbon Dioxide Storage, Hydrogen Plant, Hydrogen Pipeline and associated AGIs, and the Hydrogen Storage.
Carbon Dioxide Spur Pipeline Proposed Developments (Spur Pipelines Proposed Development)	The collective term for the carbon dioxide pipelines for Carbon Dioxide Spur Pipeline Proposed Developments, which includes: <ul style="list-style-type: none"> • Protos Carbon Dioxide Spur Pipeline (East AGI) / Protos Carbon Dioxide Spur Pipeline (West AGI) (Protos East AGI/ Protos West AGI to Ince AGI) and associated temporary and permanent infrastructure; • Padeswood Carbon Dioxide Spur Pipeline (Padeswood AGI to Northop Hall AGI) and associated temporary and permanent infrastructure. • Runcorn Carbon Dioxide Spur Pipeline (Runcorn AGI to Ince AGI) and associated temporary and permanent infrastructure.
Carbon Dioxide Spur Pipeline Route Options	Potential routes for the Carbon Dioxide Spur Pipeline Proposed Developments, identified during the options appraisal.
Impact	A physical or measurable change to the environment attributable to the Carbon Dioxide Spur Pipeline Proposed Developments.
Ince AGI	The AGI located at Ince as part of the HyNet Carbon Dioxide Pipeline DCO.
Incidental Extraction	Extraction of Mineral Resources as a necessity to enable the construction to be accomplished.

Index of Multiple Deprivation (IMD)	The indices of deprivation measure relative deprivation in local authorities across England and Wales (WIMD). It is the most widely used of these indices.
Indicative Alignment (for assessment)	The indicative alignment of the Carbon Dioxide Spur Pipeline Proposed Developments which has informed the basis of assessment for some environmental topic assessments in the Environmental Statement . The alignment has only been used for assessment purposes and is not representative of the Detailed Design.
Indirect Effect	An effect that results indirectly from the Carbon Dioxide Spur Pipeline Proposed Developments , as a consequence of a 'Direct Effect', often occurring away from the Site , or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the Source of the Effect .
Indirect Employment	Employment growth arising locally through manufacturing services and suppliers to the construction process (indirect or supply linkage multipliers).
Induced Employment	Employment associated with local expenditure as a result of those who derive incomes from the direct and supply linkage impacts of the relevant Carbon Dioxide Spur Pipeline Proposed Developments .
Inerting	Introducing an inert gas into a confined space to displace an already-present gas that poses some sort of hazard.
The Planning Inspectorate ('the Inspectorate')	The Government agency responsible for administering applications for development consent under the Planning Act 2008 (as amended) (PA2008) on behalf of the Secretary of State (SoS).
Internal Drainage Board (IDB)	A public body that manages water levels in an area, known as an internal drainage district, where there is a special need for drainage. They undertake works to reduce flood risk to people and property and manage water levels for agricultural and environmental needs within their district.

Internal Influencing Factor	A factor which occurs within the limits of the Carbon Dioxide Spur Pipeline Proposed Developments that may present a risk to the Carbon Dioxide Spur Pipeline Proposed Developments .
Isolation Joint (IJ)	An isolation joint is designed to act as electrical isolation component that is installed on the pipeline to connect two independent sections of pipeline.
LA90	The A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T, measured using time fast time-weighting (F). Generally used to describe the 'background' sound conditions
LAeq	Equivalent Continuous Level. When a noise varies over time, the LAeq is the equivalent continuous sound which would contain the same sound energy as the time varying sound.
Land Cover	The surface cover of the land usually expressed in terms of vegetation cover or lack of it. Related to, but not the same as, Land Use .
Land Drainage	The disposal of rainwater, achieved by a combination of watercourses of various types.
Land Use	The purpose for which land is used, based on broad categories of functional land cover, such as urban and infrastructure use and the different types of agricultural and forestry.
Landscape and Visual Impact Assessment (LVIA)	A tool used to identify and assess the likely significant effect of change resulting from development both on the landscape as an environmental resource in its own right and on people's views and Visual Amenity .
Landscape Character	A distinct, recognisable and consistent pattern of element in the landscape that makes one Landscape different from another.

LAm_{max}	LAm _{max} is the maximum A - weighted sound pressure level recorded over the period stated. LAm _{max} is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the overall L_{Aeq,T} noise level but will still affect the noise environment.
Laydown Area	An area used for the receipt, temporary storage, and sometimes for the assembly of construction equipment and other supplies.
Lead Local Flood Authority (LLFA)	The local authority responsible for taking the lead on local flood risk management as defined within the Flood and Water Management Act 2010.
Leak Detection System	A system which provides early warning and remote identification of leakages in the carbon dioxide transport and storage system.
Likely Significant Effect	<p>The significance of an environmental effect is typically a function of the 'value' or 'sensitivity' of the Receptor and the 'magnitude' or 'scale' of the Impact. Combining the environmental value of the resource or receptor with the magnitude of change produces a significance of effect category.</p> <p>The definition of a significant effect for each environmental topic will be contained within their respective chapters of the Environmental Statement.</p>
Liverpool Bay CCS Limited	The Applicant submitting the TCPA Applications (also referred to as the Applicant).
Local Development Plan (LDP)	The set of documents and plans that sets out the Local Planning Authority's policies and proposals for the development and use of land in their area.
Local Nature Reserve (LNR)	A site of importance for wildlife, geology, education or public enjoyment. Some are also nationally important Site of Special Scientific Interest (SSSI) . Local Nature Reserves must be controlled by the Local Planning Authority through ownership, lease, or agreement with the owner.

Local Planning Authority (LPA)	The function of a local authority that is empowered by law to exercise statutory town planning functions for a particular area of the UK.
Lower Layer Super Output Area (LSOA)	A geographic area with an average population of 1500 residents, identified for the purpose of reporting census data by the Office for National Statistics (ONS).
Lowest Observed Adverse Effect Level (LOAEL)	The level above which adverse effects on health and quality of life can be detected as a result of noise or vibration.
Main River	A watercourse shown as such on the Flood Map for Planning and can include any structure or appliance for controlling or regulating the flow of water in, into or out of a main river. Main Rivers are usually larger streams and rivers, but also include smaller watercourses of strategic drainage importance. Main Rivers are under the jurisdiction of the Environment Agency who have powers to carry out flood defence works to Main Rivers.
Major Accident	In the context of the Carbon Dioxide Spur Pipeline Proposed Developments , an event that threatens immediate or delayed serious damage to human health, welfare and/or the environment and requires the use of resources beyond those of the Applicant or its contractors to respond to the event. Serious damage includes the loss of life or permanent injury and/or permanent or long-lasting damage to an environmental receptor that cannot be restored through minor clean-up and restoration efforts. The significance of this effect will take into account the extent, severity and duration of harm and the sensitivity of the receptor. Major accidents are defined as low likelihood, high consequence events.
Magnitude	A combination of the scale, extent and duration of an effect.
Marker Post	A distinctive marker at road, rail, river, canal and other crossings, to identify and notify of changes in pipeline direction, and boundaries.

Mean High Water Mark (MHWM)	The average throughout the year, of two successive high waters, during a 24-hour period in each month when the range of the tide is at its greatest.
Mean Low Water Springs (MLWS)	The average height of lower low water at spring tides at a location.
Micro Tunnelling	<p>A Trenchless Installation Technique which uses a micro-tunnel boring machine to drill between two pits or shafts, installing segments of concrete pipe as it progresses.</p> <p>The effect is to leave a hollow concrete tunnel between two points, which allows for a steel pipeline to be threaded between them without disrupting infrastructure above the path of installation.</p>
Mineral Resources	Geological deposits of economic interest.
Mineral Safeguarding Area	An area designated by a Mineral Planning Authority which covers known deposits of minerals which are desired to be kept safeguarded from unnecessary sterilisation by non-mineral development.
Mitigation Hierarchy	The Mitigation Hierarchy is to first try to avoid, then prevent and then reduce likely significant adverse effects on the environment and, if possible, offset any residual likely significant adverse effects on the environment.
Mitigation Measures	Actions proposed to prevent, reduce and where possible, offset significant adverse effects arising from the whole or specific elements of the Carbon Dioxide Spur Pipeline Proposed Developments .
Mud Slurry	<p>Mud Slurry is a fluid suspension of small particles in liquid. In trenchless construction, the use of slurry allows for the rapid movement of solid particles during the excavation process, and it is useful in applying pressure to stabilize a borehole. Bentonite is one of the more commonly used components of a slurry mixture.</p> <p>Mud Slurry is also referred to as drilling mud or drilling fluid.</p>

National Nature Reserve (NNR)	Established to protect sensitive features and to provide 'outdoor laboratories' for research.
National Planning Policy Framework (NPPF)	The document that sets out Government's planning policies for England and how these are expected to be applied. The NPPF was last revised in December 2023.
National Policy Statement (NPS)	Policy designated under the Planning Act 2008 (as amended) (PA 2008) concerning the planning and consenting of Nationally Significant Infrastructure Projects (NSIPs) in the UK. Where applicable, they form the primary policy framework for the consenting of NSIPs.
National Trail	Designated long-distance paths.
Nationally Significant Infrastructure Project (NSIP)	Projects which fall under one of the categories in Part 3 of the Planning Act 2008 (as amended) (PA2008).
Nationally Designated Site	Areas of land subject to project through UK legislation, including Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR).
Net-Zero	Net zero refers to a state in which the greenhouse gases going into the atmosphere are balanced by removal out of the atmosphere.
Noise Action Plan Priority Area (NAPPA)	Areas where people's homes are exposed to a day-evening-night noise level exceeding 73 dB, or where people live alongside concrete trunk roads. These areas are identified as priority areas for intervention in the Noise Action Plan produced by the Welsh Government.
Noise Important Area (NIA)	Noise 'hotspots' as defined by the Noise Action Plan produced by DEFRA in England. Important Areas are defined as the areas where the 1% of the population that are affected by the highest noise levels are located according to the results of the strategic noise mapping undertaken by DEFRA.
Noise Sensitive Receptor	Any identified Receptor likely to be affected by noise. These are generally human Receptors, and may include residential dwellings, work places, schools, hospitals, community facilities,

	places of worship, recreational spaces and ecological Receptors.
Nomis	Nomis is a service hosted by the Office for National Statistics (ONS) which provides access to the most detailed and up-to-date UK labour market statistics from official sources.
Non-Destructive Testing	An array of inspection methods that allow inspectors to evaluate and collect data about a material, system, or component without permanently altering it.
No Observed Effect Level (NOEL)	The level below which no effect from noise or vibration can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.
Northop Hall AGI	The AGI located adjacent to Northop Hall as part of the HyNet Carbon Dioxide Pipeline DCO .
Non-Statutory Consultation	Consultation with stakeholders on the Carbon Dioxide Spur Pipeline Proposed Developments which occurs in addition to the Statutory Consultation .
Open Cut	Open Cut is a method of installing a length of pipeline by clearing the ground, excavating a trench and installing a length of pipe. Following pipeline installation, the trench is backfilled and the ground returned to its previous condition.
Operational Stage	The stage after which the Carbon Dioxide Spur Pipeline Proposed Developments is handed over by the relevant construction contractors and approved for operation. It will remain in its Operational Stage until operations cease.
Ordinary Watercourse	Any river, stream, ditch, drain, cut, dyke, sluice, sewer (other than a public sewer) and passage through which water flows that does not form part of a Main River . The Lead Local Flood Authority (LLFA) or Internal Drainage Board (IDB) where relevant, has powers for Ordinary Watercourses that are similar to those held by the Environment Agency for Main Rivers .
Outline Environmental Management Plan (EMP)	Control Plan setting out the indicative methods to avoid, minimise and mitigate likely environmental effects as a result of the design, construction, operation and decommissioning

	of the Carbon Dioxide Spur Pipeline Proposed Developments . It includes the protocols to be followed in implementing these measures in accordance with environmental commitments. Detailed plans will be developed post consent by the Construction Contractor and / or relevant parties.
Overburden	The material overlying the Mineral Resource , which may be of little or no economic value.
Padeswood Carbon Capture and Storage (CCS) Project	Castle Cement Limited's (trading name of Heidelberg Materials UK) Padeswood Carbon Capture and Storage Project. It will consist of the construction of a Carbon Capture and Storage Plant and supporting infrastructure including access roadways, construction and laydown compound areas.
Padeswood Cement Works	The Heidelberg Materials UK Cement Works located at Padeswood, Flintshire.
Padeswood Carbon Dioxide Spur Pipeline Proposed Development (Padeswood Spur Pipeline Proposed Development)	<p>The Padeswood Carbon Dioxide Spur Pipeline Proposed Development includes:</p> <p>The operational elements:</p> <ul style="list-style-type: none"> • Padeswood AGI • Padeswood Carbon Dioxide Spur Pipeline (from Padeswood AGI to Northop Hall AGI) • Additional equipment at Northop Hall AGI <p>The construction elements:</p> <p>Temporary Construction Compound(s) and temporary accesses</p>
Padeswood Carbon Dioxide Spur Pipeline (Padeswood Spur Pipeline)	The carbon dioxide pipeline to transport carbon dioxide from Padeswood AGI to Northop Hall AGI .
Parish Council	A type of council forming the lowest tier in local government. The councils are elected bodies and are responsible for areas known as civil parishes.
Phase 1 Habitat Survey	An ecological survey technique that provides a standardised system to record vegetation and

	wildlife Habitat . It enables a basic assessment of Habitat type and its potential importance for nature conservation.
Polymerase Chain Reaction (PCR)	A method of amplifying DNA within a sample, to allow for DNA to be detected and measured for identification.
Pipeline Inspection Gauge (PIG)	A device used for internal maintenance, cleaning, and monitoring of a pipeline.
PIG Launching and Receiving Facility	Used to launch the PIG into the pipeline, and to receive the PIG after they have made a successful run.
Pigging	Use of a PIG .
Pipeline Construction Activities	Construction Activities specific to the Carbon Dioxide Spur Pipeline Proposed Developments , to include methods such as Horizontal Directional Drilling and Guided Auger Boring .
Pipe Jacking	Pipe jacking is a Trenchless Installation Technique used to form small diameter tunnels without disturbing the ground surface above by pushing prefabricated pipes through the ground from a starting shaft to an exit shaft as controlled excavation is undertaken at the face. Except for the shafts at either end, the entire process takes place underground.
Planform	The shape or outline of a watercourse when viewed from above.
Planning Policy Wales (PPW)	The document that sets out Government's planning policies for Wales and how these are expected to be applied.
Planning Practice Guidance (PPG)	The Planning Practice Guidance (PPG) provides context and guidance to the National Planning Policy Framework (NPPF) in England. The PPG is web-based and is updated regularly section by section.
Point of Ayr (PoA) Terminal	The existing terminal facility at Point of Ayr which is currently used to process natural gas and will be repurposed as part of the HyNet North West project.
Pollution	The introduction of harmful materials into an environment.

Preliminary Design	For the purposes of the Carbon Dioxide Spur Pipeline Proposed Developments , this term refers to the design of the respective Proposed Developments to inform the Environmental Statements which support the TCPA Applications .
Preliminary Ecological Appraisal (PEA)	Preliminary ecological surveys have a range of purposes; one key use is to gather data on existing conditions, often with the intention of conducting a preliminary assessment of likely impacts of proposed developments or establishing the baseline for future monitoring. As a precursor to a proposed project, some evaluation is usually made within these appraisals of the ecological features present, as well as scoping for notable Species or Habitats , identification of potential constraints to the Carbon Dioxide Spur Pipeline Proposed Developments and recommendations for Mitigation Measures .
Primary Access Locations	Primary access locations are those which will serve the following: Centralised Compounds ; Above Ground Installations (AGIs) ; or Block Valve Stations .
Primary Mitigation	Modifications to the location or design of the Carbon Dioxide Spur Pipeline Proposed Developments made during the pre-application phase that are an inherent part of the Carbon Dioxide Spur Pipeline Proposed Developments , and do not require additional action to be taken.
Principal Area	County and county borough in Wales. These are further split into Community Councils .
Principal Aquifer	Layers of rock or drift deposits that have high intergranular and / or fracture permeability (provide a high level of water storage). They may support water supply and/or river base flow on a strategic scale. In most cases, Principal Aquifers are aquifers previously designated as major aquifers.
Prior Extraction	The recovery of a mineral resource before development commences if the development

	could cause the Mineral Resource to be sterilised .
Priority Area	Areas where people's homes are exposed to a day-evening-night noise level exceeding 73 dB, or where people live alongside concrete trunk roads. These areas are identified as priority areas for intervention in the Noise Action Plan produced by the Welsh Government.
Priority Habitat Inventory	A spatial dataset that describes the geographic extent and location of Natural Environment and Rural Communities Act (2006) Section 41 Habitats of Principal Importance (HPI).
Protos Carbon Dioxide Spur Pipeline (East AGI) Proposed Development (Protos (East AGI) Spur Pipeline Proposed Development)	<p>The original Protos Spur Pipeline Proposed Development under planning application reference 24/00777/FUL.</p> <p>The Protos Carbon Dioxide Spur Pipeline (East AGI) Proposed Development includes:</p> <ul style="list-style-type: none"> • Protos East AGI; • Protos Carbon Dioxide Spur Pipeline (East AGI) (from Protos East AGI to Ince AGI); <p>Temporary Construction Compound(s)</p>
Protos Carbon Dioxide Spur Pipeline (West AGI) Proposed Development (Protos (West AGI) Spur Pipeline Proposed Development)	<p>The new Protos Spur Pipeline Proposed Development with the new Protos AGI location and pipeline routing.</p> <p>The Protos Carbon Dioxide Spur Pipeline (West AGI) Proposed Development includes:</p> <ul style="list-style-type: none"> • Protos West AGI; • Protos Carbon Dioxide Spur Pipeline (West AGI) (from Protos West AGI to Ince AGI); <p>Temporary Construction Compound(s)</p>
Protos Carbon Dioxide Spur Pipeline (East AGI) (Protos (East AGI) Spur Pipeline)	The carbon dioxide pipeline to transport carbon dioxide from the Protos East AGI to the Ince AGI .
Protos Carbon Dioxide Spur Pipeline (West AGI) (Protos (West AGI) Spur Pipeline)	The carbon dioxide pipeline to transport carbon dioxide from the Protos West AGI to the Ince AGI .

Proximity Area	Priority areas which highlight situations such as those where noise levels at all the highly exposed residential properties have effectively been calculated within 7.5 metres of the noise source. These are typically areas where residents might say they have the traffic going right past their window. In such areas, engineering solutions such as noise barriers are not an option.
Proximity Principle	Managing waste as near as possible to the location where it is produced.
Public Right of Way (PRoW)	A public right of way is a right by which the public can pass along linear routes over land at all times. Although the land may be owned by a private individual, the public have a legal right across that land along a specific route.
Q95	The flow in cubic metres per second which is equalled or exceeded for 95% of the time. The Q95 flow is a significant low flow parameter particularly relevant in the assessment of river water quality consent conditions.
Quiet Area	Identified in the Noise and Soundscape Action Plan 2018 – 2023 as tranquil urban green spaces
Ramsar Site	Wetlands of international importance designated under the Ramsar Convention 1971.
Red Line Boundary	The Red Line Boundary (RLB) illustrates the area for which planning permission will be sought under separate TCPA Applications for the Carbon Dioxide Spur Pipeline Proposed Developments . This includes areas permanently and temporarily required for the construction and operation of the Carbon Dioxide Spur Pipeline Proposed Developments . The development within the RLB will be assessed as part of the Environmental Statement .
Receptor	A component of the natural, created or built environment such as a human being, water, air, a building, or a plant that has the potential to be affected by the Carbon Dioxide Spur Pipeline Proposed Developments .
Recovery	Processing waste to prevent it being disposed of to landfill. Recovery processes include incineration with energy recovery, advanced

	thermal treatment, anaerobic digestion, and composting.
Recycle	Any recovery operation where waste is reprocessed into products, materials or substances whether for its original or other purposes. Recycling includes the reprocessing of organic material but excludes energy recovery and the reprocessing of waste into materials to be used as fuels or for backfilling operations.
Register of Environmental Actions and Commitments (REAC)	The Register of Environmental Actions and Commitments (REAC) identifies the design, construction and operational commitments included within the Technical Chapters of the Environmental Statement (ES) to address the potential environmental effects of the Carbon Dioxide Spur Pipeline Proposed Developments .
Remediation	The removal of pollution or contaminants from the environment (usually soil, groundwater, sediment, or surface water).
Residual Effects	Effects arising from the Carbon Dioxide Spur Pipeline Proposed Developments that cannot be mitigated following implementation of Mitigation Measures .
Resilience (climate change)	The vulnerability of the Carbon Dioxide Spur Pipeline Proposed Developments to climate change.
Reuse	Any operation by which products or components that are not waste are used again for the same purpose for which they were conceived; reuse presumes that significant reprocessing is not required.
Right of Way	In pipeline terminology, the route through which land has been cleared to enable pipeline construction.
Riparian	Relating to or living or located on the bank of a natural watercourse (such as a river) or sometimes of a lake or a tidewater.
Risk	The likelihood of an impact occurring, combined with the effect or consequence(s) of the impact on a Receptor if it does occur.

Risk Event	An identified, unplanned event, which is considered relevant to the Carbon Dioxide Spur Pipeline Proposed Developments and has the potential to be a Major Accident and/or Disaster subject to assessment of its potential to result in a significant adverse effect on an environmental Receptor .
River LEAFPACS2	The standard methodology for the assessment of macrophytes in rivers.
Root Protection Area (RPA)	Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's vitality.
Routing	The use of a particular path or direction for something to travel or be placed.
Runcorn Carbon Dioxide Spur Pipeline Proposed Development (Runcorn Spur Pipeline Proposed Development)	<p>The Runcorn Carbon Dioxide Spur Pipeline Proposed Development includes:</p> <p>The operational elements:</p> <ul style="list-style-type: none"> • Runcorn AGI • Runcorn Carbon Dioxide Spur Pipeline (from Runcorn AGI to Ince AGI Pipeline) • Additional equipment at Ince AGI <p>The construction elements:</p> <p>Temporary Construction Compound(s) and temporary accesses</p>
Runcorn Carbon Dioxide Spur Pipeline (Runcorn Spur Pipeline)	The carbon dioxide pipeline to transport carbon dioxide from the Runcorn AGI to the Ince AGI .
Runcorn AGI	The AGI that will be located at Runcorn.
Salmonid Water	A directive which defines freshwaters as being waters capable of supporting Salmon (<i>Salmo Salar</i>), Trout (<i>Salmo trutta</i>), Char (<i>Salvelinus</i>) and whitefish (<i>Coregonus</i>) and are hereby designated as Salmonid waters.
Scoping	An exercise undertaken pursuant to the EIA Regulations , to determine the topics to be addressed within the Environmental Statement (ES) .

Scoping Boundary	The boundary considered to be the limits of the Carbon Dioxide Spur Pipeline Proposed Developments , as studied as part of the Scoping Reports .
Scoping Opinion	For the TCPA Applications , the Scoping Opinion is the Local Planning Authority's written opinion as to the scope, and level of detail, of the information to be provided in the Environmental Statement .
Scoping Report	For the TCPA Applications , the Scoping Report is a report prepared by an applicant to provide the information required under the EIA Regulations to request a Scoping Opinion from the Local Planning Authority .
Screening Opinion	For the TCPA Applications , the Screening Opinion is the Local Planning Authority's written opinion as to whether a statutory Environmental Impact Assessment is required in accordance with the EIA Regulations .
Screening Request	For TCPA Applications , the Screening Request is a report prepared by an applicant to provide the information required under the EIA Regulations to request a Screening Opinion from the Local Planning Authority .
Secondary Access Locations	Access locations where access for construction traffic will take place over a number of days or weeks, and outside of these activities the associated traffic volumes would be negligible.
Secondary Aquifer	<p>These include a wide range of rock layers or drift deposits with an equally wide range of water permeability and storage. Secondary Aquifers are subdivided into two types:</p> <ul style="list-style-type: none"> • Secondary A - permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers. • Secondary B - predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin

	<p>permeable horizons, and weathering. These are generally the water-bearing parts of the former non-aquifers.</p> <p>The term ‘Secondary Undifferentiated’ is also used in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.</p>
Secondary Mitigation	<p>Actions that will require further activity in order to achieve the anticipated outcome. These may be imposed as part of the planning consent, or through inclusion in the Environmental Statement.</p>
Secretary of State (SoS)	<p>In case of the HyNet North West, the Secretary of State for Energy Security and Net Zero (ESNZ).</p>
Sensitivity	<p>The sensitivity of a Receptor is a function of its value, and capacity to accommodate change reflecting its ability to recover if it is affected. It is typically defined by the following factors:</p> <ul style="list-style-type: none"> • Adaptability – the degree to which a receptor can avoid, adapt to or recover from an effect. • Tolerance – the ability of a receptor to accommodate temporary or permanent change. <p>Recoverability – the temporal scale over and extent to which a receptor will recover following an effect.</p>
Sheet Piling	<p>The process of installing sheet piles. Sheet piles are sections of sheet materials with interlocking edges that are driven into the ground to provide earth retention and excavation support. Sheet piles are most commonly made of steel, but can also be formed of timber or reinforced concrete.</p>

Shut Down Valve	A valve designed to stop the flow of fluid or gas upon the detection of an emergency event, for safety protection.
Significance	A measure of the importance or gravity of the effect defined by significance criteria specific to the environmental topic.
Significant Observed Adverse Effect Level (SOAEL)	The level above which significant adverse effects on health and quality of life occur as a result of noise or vibration. (see also: Significance).
Site of Importance for Nature Conservation (SINC)	Sites of Importance for Nature Conservation are usually selected within a local authority area and support both locally and nationally threatened Habitats and Species that are priorities under the county or UK Biodiversity Action Plan (BAP).
Site of Special Scientific Interest (SSSI)	A site statutorily notified under the Wildlife and Countryside Act 1981 (as amended) as being of special nature conservation or geological interest. Site of Special Scientific Interest (SSSIs) include Habitats , geological features, and Landforms .
Source Protection Zone (SPZ)	Areas which show the level of risk to the source of groundwater from contamination. SPZ 1 (Inner zone) is based on a 50-day travel time of pollutant to source with a 50 m default minimum radius. SPZ2 (outer zone) is based on a 400-day travel time of pollutant to source with 250 or 500 m minimum radius around the source depending on the amount of water abstracted. SPZ 3 (total catchment) area around a source within which all the groundwater ends up at the abstraction point.
Special Area of Conservation (SAC)	Areas of protected habitats and species as defined in the Habitats Directive .
Special Protection Area (SPA)	Sites classified in accordance with Article 4 of the EC Birds Directive (79/409/EEC) which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex 1 of the Directive), and for regularly occurring migratory Species .

Species	A group of interbreeding organisms that seldom or never interbreed with individuals in other such groups, under natural conditions; most species are made up of subspecies or populations.
Stanlow AGI	The AGI located within the Stanlow Manufacturing Complex as part of the HyNet Carbon Dioxide Pipeline DCO .
Stringing	Placing joints of pipe end to end along a pipeline Right of Way in preparation for laying, i.e., welding the joints together to form the pipeline.
Study Area	The area around the Red Line Boundary within which specialist assessment is undertaken. Each technical topic uses individual Study Areas, details of which can be found in Technical Chapters 6-19 (Volume II) of the Environmental Statement .
Statutory Consultation	The Town and Country Planning (Environmental Impact Assessment Regulations) Act 2017 requires an applicant to undertake public consultation in advance of submitting a Planning Application(s) to the relevant Local Planning Authority for the relevant Carbon Dioxide Spur Pipeline Proposed Developments . Statutory consultation must occur with ' Statutory Consultees ' and the formal consultation period will normally last for 21 days.
Statutory Undertaker	The various companies and agencies who are given general licence to carry out certain development and highways works. Generally, these are utilities and telecoms companies or nationalised companies.
Survey Area	The area within which environmental surveys (including intrusive and non-intrusive surveys) are undertaken.
Survey Buffer	An area additional to the core Survey Area within which surveys may be required.
Sustainable Drainage System	A collection of water management practices that aim to align modern drainage systems with natural water processes.

Telemetry	The in-situ collection of measurements or other data at remote points and their automatic transmission to receiving equipment (telecommunication) for monitoring.
Temporary Works	Those parts of the works that allow or enable construction of the Carbon Dioxide Spur Pipeline Proposed Developments and which do not remain in place at the completion of the works.
Tertiary Mitigation	Actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental Effects .
Town and Country Planning Act	The Town and Country Planning Act 1990 (as amended) gives Local Planning Authorities in England and Wales the power to regulate and grant permission for local development. It is used to permit development for the Carbon Dioxide Spur Pipeline Proposed Developments .
Town and Country Planning (TCPA) Applications (TCPA Planning Applications)	The planning applications submitted by the Applicant to the respective Local Planning Authority for the Carbon Dioxide Spur Pipeline Proposed Developments .
Townscape	The character and composition of the built environment including the buildings and the relationships between them, the different types of open urban space, including green spaces, and the relationship between buildings and open spaces.
Towns Water	The water distribution system operated by the Town that is supplied with Bulk Water (i.e. Municipal drinking quality water - tap water).
Transect	Survey technique for surveying birds, wintering birds and breeding birds, with surveyors walking pre-defined routes.
Transformer	A static piece of apparatus with two or more windings which, by electromagnetic induction, transforms a system of alternating voltage and

	current into another system of voltage and current usually of different values and at the same frequency for the purpose of transmitting electrical power.
Tree Preservation Orders (TPO)	An order made by the Local Planning Authority to protect specific trees, groups of trees or woodlands in the interests of amenity.
Trenchless	Trenchless technology is the science and engineering of installing underground pipes using techniques which minimise the amount of excavation and associated environmental disturbance associated with Open Cut techniques.
Trenchless Installation Technique	Trenchless installation techniques use a machine to drill or 'bore' a hole through the ground from one side of specific feature (for example, major roads) to the other. Typically, a pit is dug at either end of the trenchless section where the machinery can be located. Trenchless installation techniques can include Horizontal Directional Drilling (HDD) , Guided Auger Boring (GAB) , Unguided Auger Boring (UAB) and Micro-tunnelling .
Trenchless Crossing	The location of where Trenchless Installation Technique are used to cross a feature.
Tributaries	Smaller watercourses which drain to a large watercourse
Unguided Auger Bore (UAB)	A Trenchless Installation Technique which is used over relatively short distances and usually at shallow depths.
Upstream Emitters / Emitters	Facilities which have partnered with the HyNet North West to have their Carbon Dioxide emissions captured.
Vent Stack	Elevated vertical termination of a disposal system that discharges vapours into the atmosphere without combustion or conversion of the relieved fluid.
Vibroacoustic Monitoring System	A type of pipeline leak detection technology. Includes a network of passive multi-channel vibroacoustic stations mounted on pipelines, which allow for real time detection, localisation

	and classification of leaks or pipeline deformations.
Visual Amenity	Overall enjoyment of a particular area, surroundings, or views in terms of people's activities - living, recreating, travelling through, visiting, or working.
Visual Effect	An effect on specific views and on the general visual amenity experienced by people.
Visual Receptor	Individuals and / or defined groups of people who have the potential to be affected by the Carbon Dioxide Spur Pipeline Proposed Developments .
Vulnerability	In the context of the 2014 EU Directive, the term refers to the 'exposure and resilience' of Carbon Dioxide Spur Pipeline Proposed Developments to the risk of a major accident and/or disaster. Vulnerability is influenced by sensitivity, adaptive capacity, and magnitude of impact.
Waste	Any substance or object which the holder discards or intends or is required to discard.
Waste Hierarchy	<p>A guiding theme for waste policy at all levels. Establishes an order of preference for the management of waste, to maximise the prevention of waste, whilst minimising disposal. The Waste (Management) Hierarchy is established in the Waste Framework Directive (Directive 2008/98/EC), and prescribes the following:</p> <ul style="list-style-type: none"> • Prevention (Most preferred option) • Preparing for reuse • Recycling • Recovery <p>Disposal (Least preferred option)</p>
Water abstractions	The process of taking water from any source, either temporarily or permanently, for flood control or to obtain water for, for example, irrigation.
Water Framework Directive (WFD)	European directive which commits member states to achieve good qualitative status of all water bodies.

Water Body	A discrete body of water forming a physical Feature.
Water Quality	The chemical, physical, and biological characteristics of water based on the standards of its usage.
Weaver Crossing	The trenchless crossing that will go under the River Weaver and the Weaver Navigation as part of the Runcorn Spur Pipeline Proposed Development .
Wetlands	Areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.
Whalley, Hawkes, Paisley and Trigg (WHPT) metric	A metric based on the tolerance of different aquatic macroinvertebrates to organic pollution, where each family is assigned a score from -1.6 to 13 depending on their tolerance to pollution.
Wildlife and Countryside Act 1981 (as amended)	The principal piece of UK legislation relating to the protection of wildlife.
Working Width	The temporary boundary within which Pipeline Construction Activities are expected to take place.
Zone of Influence (ZOI)	The areas / resources that may be affected by the changes caused by activities associated with a project.
Zone of Theoretical Visibility (ZTV)	A map, digitally produced, showing areas of land within which, the Carbon Dioxide Spur Pipeline Proposed Developments is theoretically visible.

3. ABBREVIATIONS

Table 3.1 – Abbreviations

Abbreviation	Definition
AADT	Annual Average Daily Traffic
ACoW	Arboricultural Clerk of Works
AC	Alternative Current
AD	Anno Domini
AEGLs	Acute Exposure Guideline Levels
AGI	Above Ground Installation
AIA	Arboricultural Impact Assessment
AIL	Abnormal Indivisible Load
ALARP	As Low as Reasonably Practicable
ALC	Agricultural Land Classification
ALS	Agricultural Land Survey
AMS	Arboricultural Method Statement
AOC	Accidentally Oil Contaminated
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
ARS	Active Roost Site
ASSI	Area of Special Scientific Interest
ASPT	Average Score Per Taxon
ATC	Automatic Traffic Count
AWI	Ancient Woodland Inventory

BAT	Best Available Techniques
BEI	Built Environment Indicators
BEIS	Department for Business, Energy, and Industrial Strategy
BES	Building Research Establishment Environmental Sustainability Standard
BCS	British Geological Society
BMV	Best and Most Versatile agricultural land
BNL	Basic Noise Level
BOAT	Byways Open to All Traffic
BoCC	Birds of Conservation Concern
BPM	Best Practicable Means
BSI	British Standards Institution
BTO	British Trust for Ornithology
BVS	Block Valve Station
CA	Conservation Area
CAPAS	Chester Archaeological Planning Advisory Service
CBRN	Chemical, Biological, Radiological and Nuclear
CCC	Committee on Climate Change
CCR	Centralised Control Room
CCS	Carbon Capture and Storage
CCI	Community Conservation Index
CD	Consultation Distance
CDE	Construction, Demolition and Excavation
CDM	Construction, Design, Management
CEMP	Construction Environmental Management Plan
CEZ	Construction Exclusion Zone

CHER	Cheshire Historic Environment Record
CIEEM	Chartered Institute of Ecology and Environmental Management
CIfA	Chartered Institute for Archaeologists
CIRIA	Construction Industry Research and Information Association
CL:AIRE	Contaminated Land: Applications in Real Environments
CME	Coronal mass ejections
CO ₂	Carbon dioxide
COMAH	Control of Major Accidents and Hazards
CoSHH	Control of Substances Hazardous to Health
CPAT	Clwyd-Powys Archaeological Trust
CP	Cathodic Protection
CTRN	Calculation of Road Traffic Noise
CWCC	Cheshire West and Chester Council
CWT	Cheshire Wildlife Trust
CWTP	Construction Workers Travel Plan
CZ	Consultation Zone
dB	Decibel
DC	Direct Current
DCO	Development Consent Order
Defra	Department for Environment, Food and Rural Affairs
DEMP	Decommissioning Environmental Management Plan
DEPZ	Detailed Emergency Planning Zone
DESNZ	Department for Energy Security and Net Zero
DfT	Department for Transport

DHRA	Development in a High Risk Area (Coal Mining)
DLL	District Level Licensing
DMP	Dust Management Plan
DMRB	Design Manual for Roads and Bridges
DNO	District Network Operator
DSEAR	Dangerous Substances and Explosive Atmospheres
DTM	Digital Terrain Model
EA	Environment Agency
EC	European Commission
EcIA	Ecological Impact Assessment
eDNA	Environmental DNA
EfW	Energy from Waste
EIA	Environmental Impact Assessment
END	Environmental Noise Directive
EMS	Environmental Management System
EPC	Engineering, Procurement and Construction
EPD	Environmental Product Declarations
EPUK	Environmental Protection UK
EPS	European Protected Species
EPSL	European Protected Species Licence
ES	Environmental Statement
ESG	Environmental, Social and Governance
EU	European Union
EQR	Ecological Quality Ratio
ExA	Examining Authority

FCA	Flood Consequence Assessment
FCC	Flintshire County Council
FEED	Front End Engineering Design
FEP	Farm Environment Plan
FOC	Fibre Optic Cable
FRA	Flood Risk Assessment
FTE	Full time equivalent
GAB	Guided Auger Bore
GCN	Great Crested Newt
GCR	Geological Conservation Review
GGBS	Ground Granulated Blast-furnace Slag
GIS	Geographic Information Systems
GHG	Greenhouse Gas
GSMR	Gas Safety (Management) Regulations 1996
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GPS	Global Positioning System
GWDTE	Ground Water Dependent Terrestrial Ecosystem
H&S	Health and Safety
H ₂ S	Hydrogen Sulphide
ha	Hectare
HASWA	Health and Safety at Work Act
HAZID	Hazard Identification Studies
HDD	Horizontal Directional Drill / Drilling
HEDBA	Heritage Environmental Desk Based Assessment
HER	Historic Environment Record

HGV	Heavy Goods Vehicle
HIA	Health Impact Assessment
HIPPS	High Integrity Pressure Protection System
HM	His Majesty's
HMG	His Majesty's Government
HMWB	Heavily Modified Waterbody
HPI	Habitats of Principle Importance
HSE	Health and Safety Executive
HVAC	Heating, Ventilation and Air Conditioning
IA	Noise Important Areas
IAQM	Institute of Air Quality Management
ICE	Inventory of Carbon and Energy
ICSS	Integrated Control and Safety Systems
IDA	Industrial Denatured Alcohol
IEMA	Institute of Environmental Management and Assessment
IJ	Isolation Joint
IMD	Index of Multiple Deprivation
INNS	Invasive Non-Native Species
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
JSNA	Joint Strategic Needs Assessment
ktCO ₂	Total greenhouse gas emissions
LA90 dB	Background Sound
LAeq, T dB	Equivalent Continuous Sound Level
LAQM	Local Air Quality Management

LCRM	Land Contamination: Risk Management
LDP	Local Development Plan
LGV	Light Goods Vehicle
LI	Landscape Institute
LiDAR	Light Detection and Ranging
LIFE	Lotic-invertebrate Index for Flow Evaluation
LLFA	Lead Local Flood Authority
Lmax	Highest Measured Sound Pressure Level
LNR	Local Nature Reserve
LOAEL	Lowest Observed Adverse Effect Level
LPA	Local Planning Authority
LRN	Local Road Network
LSOA	Lower Layer Super Output Area
LT	Long Term
LVIA	Landscape and Visual Impact Assessment
LWS	Local Wildlife Site
MA&D	Major Accidents and Disasters
MAGIC	Multi Agency Geographic Information for the Countryside
MAH	Major Accident Hazard
MCZ	Marine Conservation Zone
MMP	Materials Management Plan
MRA	Mineral Resource Assessment
MSA	Mineral Safeguarding Area
MtCO _{2e}	Millions of tonnes of carbon dioxide equivalent
Mtpa	Million tonnes per annum

MS	Method Statement
N/A	Not Applicable
NAPPA	Noise Action Plan Priority Areas
NBN	National Biodiversity Network Atlas Wales
NCA	National Character Area
NCN	National Cycle Network
NE	Natural England
NERC	Natural Environment Research Council
NFG	Number of functional groups
NGR	National Grid Reference
NH	National Highways
NMWTRA	North and Mid Wales Trunk Road Agent
NNR	National Nature Reserve
NO ₂	Nitrogen dioxide
NOEL	No Observed Effect Level
NOx	Nitrogen oxides
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance
NPS	National Policy Statement
NPSE	Noise Policy Statement for England
NRW	Natural Resources Wales
NSIP	Nationally Significant Infrastructure Project
NTS	Non-Technical Summary
NTAXA	Number of Scoring Taxa
NTAXA	Number of macrophyte taxa
NVC	National Vegetation Classification

NVQ	National Vocatioanl Qualification
NWWT	North Wales Wildlife Trust
OBS	Occupied Breeding Site
OCZ	Outer Consultation Zone
OEMP	Outline Environmental Management Plan
ONR	Office for Nuclear Regulation
ONS	Office for National Statistics
PAS 2080	Publicly Available Specifications: 2080 Carbon management in Infrastructure
PBRA	Preliminary Bat Roost Assessment
PCR	Polymerase Chain Reaction
PEA	Preliminary Ecological Appraisal
PEI	Preliminary Environmental Information
PEIR	Preliminary Environmental Information Report
PHE	Public Health England
PIA	Personal injury accident data
PIG	Pipeline Inspection Gauge
PINS	Planning Inspectorate
PM	Particulate Matter
PM10	Particulate Matter with an aerodynamic diameter of less than 10 micrometres
PM2.5	Particulate Matter with an aerodynamic diameter of less than 2.5 micrometres
PNS	Potential Nest Site
PoA	Point of Ayr
PPE	Personal Protective Equipment
PPG	Planning Practice Guidance
PPV	Peak Particle Velocity

PPW	Planning Policy Wales
PRoW	Public Right of Way
PRF	Potential Roost Feature
PSI	Proportion of Sediment-sensitive Invertebrates metric
PSYM	Predictive System for Multimetrics
RBMP	River Basin Management Plan
RCN	Regional Cycle Network
RCP	Representative Concentration Pathway
REAC	Register of Environmental Actions and Commitments
RICS	Royal Institute of Chartered Surveyors
RICT	River Invertebrate Classification Tool
RIGS	Regionally Important Geological Site
RLB	Red Line Boundary
RMNI	River Macrophyte Nutrient Index
RPA	Root Protection Area
RSPB	Royal Society for the Protection of Birds
SAB	SuDS Approving Body
SAC	Special Area of Conservation
SDV	Shut Down Valve
SFRA	Strategic Flood Risk Assessment
SINC	Site of Importance for Nature Conservation
SOAEL	Significant Observed Adverse Effect Level
SoCC	Statement of Community Consultation
SoS	Secretary of State
SPA	Special Protection Area

SPZ	Source Protection Zone
SRN	Strategic Road Network
SSSI	Site of Special Scientific Interest
ST	Short Term
SWMP	Site Waste Management Plan
SuDS	Sustainable Drainage System
T&S	Transport and Storage
TAN	Technical Advice Note
TCPA	Town and Country Planning Act 1990 (as amended)
TGN	Technical Guidance Note
TMP	Traffic Management Plan
TPO	Tree Preservation Order
TN	Target Note
TRS	Temporary Rest Site
TRS	Trenchless
UAG	Unguided Auger Bore
UK	United Kingdom
UKCP	UK Climate Projections
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UXO	Unexploded Ordnance
WCA	Wildlife and Countryside Act 1981
WCH	Walkers, Cyclists and Horse Riders
WEL	Workplace Exposure Limit
WFD	Water Framework Directive
WFDa	Water Framework Directive Assessment

WFDUKTAG	Water Framework Directive – United Kingdom Technical Advisory Group
WHO	World Health Organisation
WHPT	Whalley, Hawkes, Paisley and Trigg metric
WIMD	Welsh Index of Multiple Deprivation
ZOI	Zone of Influence
ZTV	Zone of Theoretical Visibility