HyNet North West Hydrogen Pipeline

Delivering clean growth

Cadent

Your Gas Network

HyNet North West Hydrogen Pipeline Project

Cadent Ltd

Draft Environmental Statement

Chapter 1: Introduction

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Contents

1. Introduction

1.1 Introduction to the Draft Environmental Statement

1.1.1 This Draft Environmental Statement (ES) is the written output of the Environmental Impact Assessment (EIA) undertaken to date for the HyNet North West Hydrogen Pipeline Project (hereafter referred to as 'the Project') which is a proposal by Cadent Gas Ltd (Cadent) (hereafter 'the Applicant'). A Final ES will be provided as part of the of DCO application submission.

1.1.2 This Draft ES builds on the Preliminary Environmental Information Report (PEIR) relating to the Project which was published in September 2022 for the purposes of Statutory Consultation under Section 42, 47 and 48 of the Planning Act 2008 in line with the requirements of Regulation 12 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as the 'EIA Regulations 2017'). The EIA Regulations 2017 require the Applicant to consult on 'preliminary environmental information' (where the proposed development is 'EIA development'), which is information that is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development). The PEIR therefore set out the preliminary environmental information and assessment findings of the EIA based on the available information at the time of publication.

1.1.3 Feedback received from the Statutory Consultation process, as well as information gathered from further engineering and environmental studies undertaken, have resulted in changes to the design of the Project since publication of the PEIR. This Draft ES presents the potential environmental effects arising from the Project as currently defined (as described in **Chapter 2: The Project**) and informs a second round of Statutory Consultation ('Stage Three Statutory Consultation') to be undertaken in Autumn 2024.

1.1.4 The iterative environmental design process adopted for the Project is a fundamental element of the EIA and pre-application stage, as promoted by Guidance[1], and has allowed opportunities for stakeholders to provide feedback and to understand and influence the design as it progresses. As such, the design of the Project has had regard to the consultation responses from the first Statutory Consultation period in 2022 and further information generated following the publication of the PEIR. Each request for design change has been analysed from an inter-disciplinary perspective to evaluate the benefit of introducing an iteration to the original designs, as set out in the **Design Evolution Report 2024**[2] which accompanies this Draft ES. This process has resulted in the Preliminary Order

[1] Department for Levelling Up, Housing and Communities (April 2024). Planning Act 2008: Pre-application stage for Nationally Significant Infrastructure Projects. (online) Available at: https://www.gov.uk/guidance/planning-act-2008-pre-application-stage-for-nationally-significant-infrastructure-projects (para 004, ref ID 02-004-20240430) (Accessed May 2024).

[2] WSP UK Ltd (2024). Design Evolution Report 2024.

Limits being updated, with modifications identified for consultation and assessment and presented within this Draft ES as 'Draft Order Limits'. From the outset, the environment has been central to the design of the Project, and this is demonstrated further through the development of embedded environmental measures, as identified within the technical chapters (**5-18**) of the PEIR and this Draft ES. These measures represent commitments that have been made and embedded into the project design.

1.1.5 This Draft ES therefore is provided to inform feedback from stakeholders on the design of the Project. This feedback will enable final refinements to be made to the design of the Project to achieve a final design. The refined Development Consent Order (DCO) Limits, including a final set of associated accesses and temporary construction compounds will be presented as the final plans in the application for development consent and accompanying ES.

1.2 Overview of the Project

1.2.1 The Project is a proposal to construct and operate the UK's first 100 percent hydrogen pipeline network at scale. It will deliver hydrogen – a low carbon energy source – to multiple industrial users and power generators, plus potential blending points to accommodate the use of a mix of hydrogen and natural gas into the existing gas network.

1.2.2 The Project is part of the wider 'HyNet North West' programme that will produce, store and distribute hydrogen as well as capture and store carbon from industry in the North West of England and North Wales. This concept has the potential to reduce carbon dioxide emissions by millions of tonnes every year by 2030 – the equivalent of taking millions of cars off the road. By enabling a fuel transition to hydrogen, HyNet North West will create and maintain thousands of local jobs, enabling long-term sustainability for businesses and supporting financial security for communities across the region.

1.2.3 The Project includes the construction, operation and maintenance (grouped under the term 'operation' in this Draft ES) of approximately 100km of new pipeline to distribute hydrogen to industry and for blending with the gas network in the North West, and a number of Hydrogen Above Ground Installations (HAGIs), including Block Valve Installations (BVIs) (as described in **Chapter 2: The Project**) required to control the flow and pressure of hydrogen at key points along the proposed pipeline.

1.2.4 The Project would connect to the Hydrogen Production Plant at the Stanlow site as the source of hydrogen for onward distribution to the network. The pipeline would continue to the Central Hub at the centre of the network, which serves as the connection and onward distribution point to the North, East and South corridors, which would extend to locations near St. Helens, Partington and southeast of Northwich respectively. The Project will also link to underground hydrogen storage facilities in Cheshire used to balance supply and demand through the network. The location of the Project is illustrated by the Draft Order Limits in **Figure 1.1**.

1.2.5 The proposed key components of the Project are shown in **Figure 1.2** and can be summarised as follows:

- Hydrogen Pipeline Network (HPN) across the North West region:
  - West Corridor: Stanlow Hydrogen Production Plant (HPP) to Central Hub HAGI, incorporating Rocksavage HAGI; spur to customers at Intergen, Rocksavage and Runcorn HAGI.
  - North Corridor: Central Hub HAGI to St Helens, incorporating HAGIs at Higher Walton and Clock Face; spurs to customers at Ingevity, Warrington; Novelis, Warrington; NGF Europe Ltd., Clock Face; NSG Pilkington Greengate Works, St Helens; and Glass Futures, St Helens.
  - East Corridor: Central Hub HAGI to Partington HAGI, incorporating a HAGI at Warburton and BVI near Sworton Heath; spurs to Cadent AGI, Warburton; and customers at Partington Cadent AGI; and Basell Polyolefins, Partington. Work is ongoing with other potential customers in Partington who would construct their own pipelines to the HAGI.
  - South Corridor: Central Hub HAGI to Hydrogen Storage Facility (HSF) at salt caverns located north of Middlewich, incorporating a HAGI at the HSF and a BVI near the A556 (Chester Road).

1.2.6 A full description of the Project is provided in **Chapter 2: The Project**.

2. The Need for an Environmental Impact Assessment

2.1.1 Environmental Impact Assessment (EIA) is a process required by UK law which brings together information about the likely significant effects of a development. The legal basis for EIA arises from the EIA Regulations which were made to implement European Community Directive 85/337/EEC[3] (the 'EIA Directive') prior to the UK leaving the European Union (EU). The EIA Regulations, which set out the procedures to be followed in relation to EIAs undertaken for NSIPs in England and Wales, continue to have effect notwithstanding the UK's departure from the EU.

2.1.2 EIA is mandatory for development projects defined under Schedule 1. Those development projects defined in Schedule 2 only require EIA if they are likely to have significant effects on the environment by virtue of their nature, size or location.

2.1.3 The Project falls within the provisions of Schedule 1 (para. (16)(a)) as the pipeline for transporting hydrogen gas has a diameter of more than 800 millimetres and a length of more than 40km. As set out in paragraph 1.3.4 of the Scoping Report, the Applicant gave notice in line with Regulation 8(1)(b) of the EIA Regulations that an EIA will be prepared and that the application for a DCO will be accompanied by an ES.

2.1.4 This Draft ES has been prepared for the purpose of meeting the requirements of the EIA Regulations that pertain to the Draft ES. The Draft ES provides part of the information that will ultimately be used by the Planning Inspectorate and others to inform the process of determining the DCO application for the Project.

2.1.5 This Draft ES includes an assessment of the likely environmental effects of the Project that could be significant. This reflects the requirements of the EIA Regulations for an ES to discuss in any depth only those effects that are likely to be significant. The Regulations do not define significance; the overall approach that has been taken to defining significance, as well as further information about the approach to preparing the Draft ES, are outlined in **Chapter 3: Approach to preparing the Draft ES**.

[3] European Commission (1985). Council directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment. (Online) Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31985L0337&from=EN (Accessed June 2024).

3. The Applicant and the EIA Team

3.1 The Applicant

3.1.1 Cadent Gas Limited (Cadent) owns, operates, and maintains the gas distribution network serving 11 million homes and businesses throughout the North West, West Midlands, East Midlands, South Yorkshire, East of England and North London. In line with this role, the Applicant is responsible for the following activities:

- Looking after the main gas pipe that supplies larger areas, as well as the smaller pipes branching off from it that takes gas to homes and businesses.
- Maintaining, repairing, and replacing gas pipes to ensure the safe and reliable flow of gas now and long into the future.
- Managing the National Gas Emergency Service for all gas customers in the UK. If something goes wrong, the Applicant is the first point of call to make sure it is dealt with calmly, quickly and safely.
- Connecting homes and renewable gas suppliers to its network.
- Working with local businesses to expand and develop its network.
- Providing extra care for those who might need it in a gas emergency.

3.1.2 The Applicant does not produce gas and does not own the gas that flows through its pipes. It is solely responsible for its transportation and distribution.

3.2 The EIA Team

3.2.1 Regulation 14(4) of the EIA Regulations requires that an ES (or in this case Draft ES) should be prepared by ‘competent experts’ and that the ES is accompanied by a statement outlining the relevant expertise or qualifications of such experts.

3.2.2 This report and the EIA for the Project are being undertaken by suitably qualified and experienced specialists (competent experts). This report has been produced and co-ordinated by environmental consultants who are members of the Institute of Environmental Management and Assessment’s (IEMA) EIA Quality Mark scheme. The Quality Mark requires its members to provide evidence of their EIA activities and adhere to certain commitments set out by IEMA. IEMA carry out an independent audit of those commitments each year by reviewing the ESs produced by Quality Mark members.

3.2.3 Competent experts have also been responsible for preparing aspect specific chapters of this report and further details of their expertise and qualifications are provided in **Appendix 1A**.

4. Structure of This Draft ES

4.1.1 This Draft ES comprises four volumes:

- **Volume 1** is a Non-Technical Summary (NTS), which is also available as a standalone document.
- **Volume 2** (i.e. this volume) is sub-divided into the following chapters:
  - **Chapter 1** provides an introduction to the Draft ES.
  - **Chapter 2** provides a detailed description of the Project and alternatives.
  - **Chapter 3** details the approach and methodology that has been adopted in preparing the Draft ES.
  - **Chapter 4** provides an overview of the legislation and policies that are relevant to the Draft ES as well as an overview of the consultation and engagement undertaken.
  - **Chapters 5 to 18** sets out the technical assessments for the environmental topics that need to be considered in this Draft ES. These comprise:
    - **Chapter 5: Biodiversity;**
    - **Chapter 6: Historic Environment;**
    - **Chapter 7: Water Environment;**
    - **Chapter 8: Landscape and Visual;**
    - **Chapter 9: Air Quality;**
    - **Chapter 10: Noise and Vibration;**
    - **Chapter 11: Traffic and Transport;**
    - **Chapter 12: Ground Conditions;**
    - **Chapter 13: Agriculture and Soils;**
    - **Chapter 14: Land Use;**
    - **Chapter 15: People and Communities;**
    - **Chapter 16: Major Accidents and Disasters;**
    - **Chapter 17: Greenhouse Gas assessment;** and
    - **Chapter 18: Climate Change Resilience.**
  - **Chapter 19** then discusses the intra-project cumulative effects of the Project, and **Chapter 20** provides a summary of the effects arising from the Project.
- **Volume 3** contains the appendices referred to in the Draft ES.
- **Volume 4** contains the figures referred to in the aforementioned volumes.

4.1.2 A glossary of technical terms and abbreviations list are provided as **Appendix 1B** and **Appendix 1C** of the Draft ES in **Volume 3**.

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