

**HyNet North West
Hydrogen Pipeline**

Delivering clean growth

Cadent
Your Gas Network

Stage One Non-Statutory Consultation Consultation Feedback Report

July 2022

Revision 1

Volume 0001

Document ref. 0001

Document Information

Document title:	Stage One Non-Statutory Consultation - Consultation Feedback Report
Cadent document number:	807733-WOOD-IA-CE-RP-M5-871632
Originator:	Wood Group UK Limited
Security:	Restricted (medium confidentiality level)
Work package (if applicable):	LCC
File ID:	807733-WOOD-IA-CE-RP-M5-871632
File location:	HyNet North West Hydrogen Pipeline - Multidisciplinary - All Documents (sharepoint.com)

Glossary

Term	Description
BNG	Biodiversity Net Gain
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
EIA	Environmental Impact Assessment
ES	Environmental Statement
HAGI(s)	Hydrogen Above Ground Installation(s)
HRA	Habitat Regulations Assessment
LVIA	Landscape and Visual Impact Assessment
NPPF	National Planning Policy Framework
NSIP	Nationally Significant Infrastructure Project
PEIR	Preliminary Environmental Information Report
PRoW	Public Rights of Way
PRoWMP	Public Rights of Way Management Plan

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1. Introduction

1.1 Purpose of this Report

- 1.1.1 This Consultation Feedback Report (hereafter referred to as 'CFR') presents the results of the Stage One non-statutory pre-application consultation ('the Stage One Consultation') that took place on the HyNet North West Hydrogen Pipeline project (hereafter referred to as 'the Project') between 26 January and 11 March 2022.
- 1.1.2 This CFR sets out details of the consultation undertaken and provides a summary of the feedback received in relation to the Project from prescribed consultees, local communities, and wider/other consultees. It also presents Cadent's responses to the consultation feedback received, explaining how it has had regard to the feedback in preparing its proposals for the Project.
- 1.1.3 This CFR will inform the Consultation Report that is required to accompany the Development Consent Order (DCO) application produced for the Project. The document is provided for information only and we are not seeking views on its content.

1.2 Who is Cadent Gas?

- 1.2.1 Cadent transports gas to 11 million homes and businesses throughout the North West, West Midlands, East Midlands, South Yorkshire, East of England and North London.
- 1.2.2 Cadent owns, operates, and maintains the gas distribution network in these areas and as such 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, Cadent 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.
- 1.2.3 Cadent does not produce gas and does not own the gas that flows through its pipes. It is solely responsible for its transportation and distribution.
- 1.2.4 Cadent is the promoter of the Project and will be responsible for its construction and operation if granted a DCO by the Secretary of State.

1.3 Background to the Project

- 1.3.1 The Project includes the construction, operation and maintenance of around 125 kilometres (approximately 77 miles) of new gas transportation infrastructure in the North West of England. It will be the UK's first 100 percent hydrogen pipeline at scale to deliver hydrogen to industrial users and power generators in the region.
- 1.3.2 Legally binding net-zero carbon dioxide (CO₂) emissions targets have been set by the UK Government in response to the global climate emergency. This means that by 2050, any CO₂ emissions into the atmosphere must be offset by an equivalent removal of emissions. The Project aims to support the challenge of meeting these targets through providing a supply of hydrogen power, supporting businesses in the North West in decarbonising local industry and aiding the transition to net-zero.
- 1.3.3 The Project is part of the HyNet North West low carbon cluster project (**Figure 1.1**) and will deliver hydrogen to multiple industrial users and power generators. It will also take hydrogen to gas blending points for introduction into the existing gas network, along with connecting associated hydrogen storage facilities to help balance the supply and demand on the pipeline.

Figure 1.1 The wider HyNet North West project and its potential future phases



Development of preferred route corridor

- 1.3.4 In developing its proposals for the Project, Cadent has undertaken a detailed routing and siting process. This included identifying constraints and beneficial features that could place limits on the routing of the pipeline and siting of HAGIs, such as protected areas and habitats, flood zones, and geohazards. This was followed by strategic optioneering, where high level layouts for the pipeline route were considered and a preferred option selected.

- 1.3.5 Strategic Option A was identified as the preferred strategic option and was taken forward as part of the Stage One Consultation. Following this, a route corridor study was undertaken to identify broad widths of land within which the new infrastructure could be routed and sited.
- 1.3.6 The study identified four potentially suitable route corridors for the new hydrogen pipeline infrastructure (Corridors A to D). Details of the corridors identified are set out in the Route Corridor Report, which was published as part of the Stage One Consultation. In some areas, 'spurs' (shown in consultation materials as hatched areas) were identified from the preferred route corridor. The spurs would take hydrogen from the main pipeline network to specific industrial users in the region.

Hydrogen above ground installations

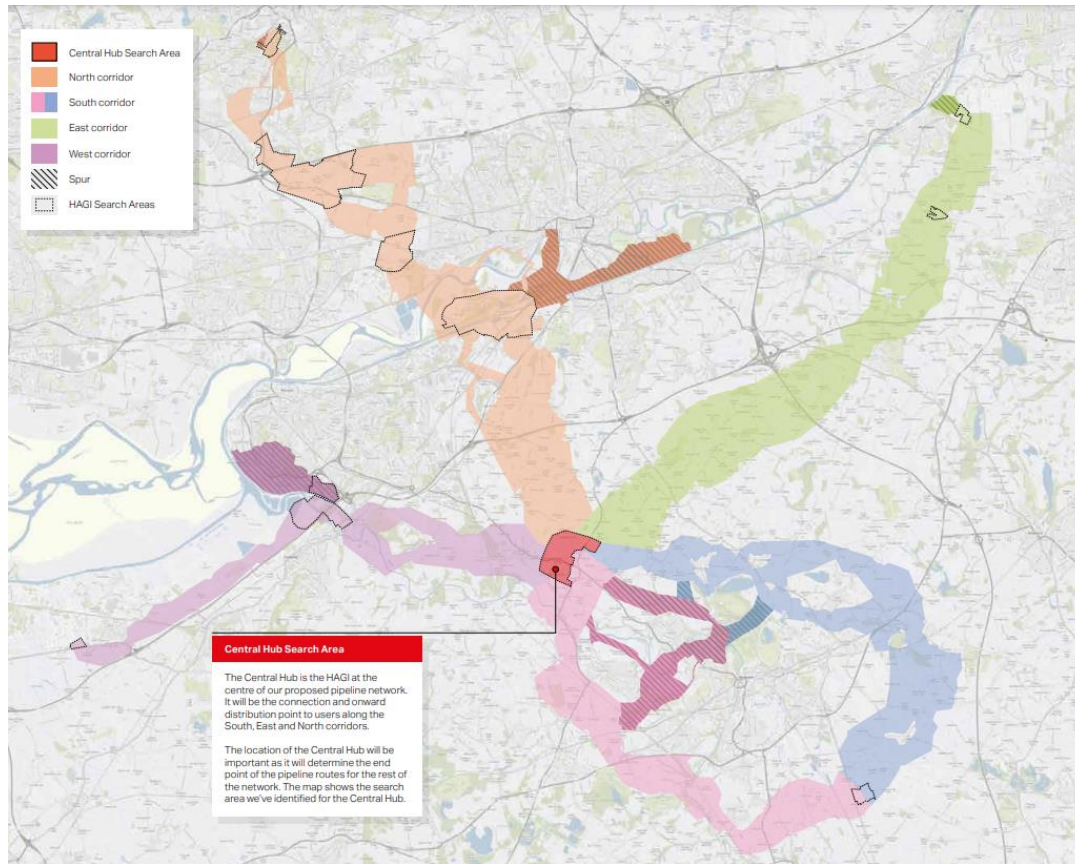
- 1.3.7 While most of the proposed infrastructure will be underground, at certain points along the pipeline, some above ground equipment will be required. These are referred to as Hydrogen Above Ground Installations (HAGIs). HAGIs help maintain the correct pressure in the pipeline, as well as ensuring security of supply. The typical components at an Above Ground Installation is presented in **Figure 1.2**.

Figure 1.2 Typical components at an Above Ground Installation



- 1.3.8 As part of the routeing and siting process, search areas for HAGIs were identified at key points along the preferred route corridor. Their locations have been informed by the points along the pipeline network where it is anticipated that connections or block valves will be required, as well as planning and environmental considerations.
- 1.3.9 **Figure 1.3** presents the preferred route corridor (strategic option A), separated into North, South, East and West Corridors. Also presented are spurs from these corridors for the onward distribution to industrial users, and search areas for HAGIs.

Figure 1.3 The preferred route corridor selected (Strategic Option A)



1.4 Structure of the Report

1.4.1 The remainder of this CFR is structured as follows:

- **Approach to public consultation** – sets out who was consulted and the methods used during the consultation.
- **Feedback mechanisms** – details the ways consultees could provide feedback and describes how the analysis of feedback was managed.
- **Feedback received from Prescribed Consultees** – presents a summary of the feedback received from local authorities and statutory bodies, broken down by topic theme.
- **Feedback received from Local Communities and Businesses** – presents a summary of the feedback received from local businesses, community groups and members of the public, broken down by topic theme.
- **Response to feedback received** – provides Cadent's response to the matters raised in the consultation.
- **Identification of a Preferred Pipeline Route** - outlines the identification of a preferred pipeline route, and sites for associated HAGIs, following the consideration of consultation feedback and ongoing engagement.

- **Summary and next steps** – sets out the next steps in the consultation and engagement process.

2. Approach to Public Consultation

This section outlines Cadent's approach to the Non-Statutory Stage One Consultation, including its strategy, aims, and the details of the method and approach taken to consultation and engagement.

2.1 Consultation Strategy

- 2.1.1 Cadent is committed to delivering projects that are as inclusive as possible and places equality, diversity, and inclusion at the heart of business planning and decision-making. Consultation activities were therefore planned to be accessible and inclusive, to ensure that Cadent engages with as wide a demographic as possible.
- 2.1.2 Cadent sought to achieve this through a variety of methods. These included raising awareness of the Project across the North West region, clearly explaining the Project and its role in the context of the wider HyNet project and providing easy access to the consultation with materials written in plain English.
- 2.1.3 To provide a framework for accessible and inclusive consultation, an Engagement and Consultation Strategy was produced. This set out details of the proposed approach to non-statutory and statutory consultation and considered the requirements of the Planning Act 2008, guidance from the Department for Communities and Local Government (DCLG), guidance provided by the Government's Consultation principles (2018), and the Gunning Principles. The Gunning principles are that:
- Consultation must take place when the proposal is still at a formative stage.
 - Sufficient reasons must be put forward for the proposal to allow for intelligent consideration and response.
 - Adequate time must be given for consideration and response.
 - The product of consultation must be conscientiously taken into account.

Digital-first approach

- 2.1.4 To provide broad reach and maximise accessibility for those living and working in the area, and to safeguard the consultation against COVID-19 outbreaks or changes to guidance and/or rules, a digital first consultation was undertaken.
- 2.1.5 Online activities were optimised to support access from mobile devices, such as phone, tablet, and desktop devices. This approach also aligned with the Planning Inspectorate's guidance at the time¹, which was updated in response to the

¹ The Planning Inspectorate, 'Advice Note Fourteen: Compiling the Consultation Report' (updated February 2021) <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-fourteen-compiling-the-consultation-report/>

COVID-19 pandemic and guidance from government. Details on these activities are provided in **Section 2.7**.

- 2.1.6 Cadent also recognised that there were likely to be some people who preferred to engage offline, and as such held eight in-person events across North West England. Details on these are provided in **Section 2.7**.

Developing the consultation approach

- 2.1.7 In advance of the consultation, pre-consultation briefing meetings took place with the host local authorities identified in **Table 2.1**. These meetings were an opportunity to introduce the Project, its role in decarbonising local industrial emitters, and provide insight into Cadent's proposed approach to consultation.

Table 2.1 Dates of pre-consultation briefing meetings with stakeholders

Stakeholder	Meeting date
Cheshire West and Chester Council	8 November 2021
Cheshire East Council	23 November 2021
Trafford Council	24 November 2021
Halton Borough Council	9 December 2021
St Helens Council	13 December 2021
Warrington Borough Council	13 January 2022
All-authority briefing ahead of consultation, attended by Cheshire East Council, St Helens Council, Warrington Borough Council and Trafford Council	20 January 2022

- 2.1.8 To help inform development of the Consultation Strategy, each local authority was provided with a bespoke briefing note detailing proposed consultation activities in its area and comments or changes to the proposed approach invited. Three local authorities responded to the briefing note providing comment. These responses helped refine the approach ahead of the start of the consultation period, including the identification of local community groups, locations for information, and a new event venue for St Helens at the World of Glass.

2.2 Consultation purpose

- 2.2.1 The purpose of the Stage One Consultation was to:
- Introduce Cadent and its ambition to deliver a hydrogen pipeline and technology to the region;

- Obtain feedback on the preferred route corridor, within which the pipeline could be routed, and search areas, within which HAGIs could be located;
- Provide information on how the Project will work in delivering hydrogen power to industrial and residential users, and its position in the wider context of the HyNet North West low carbon cluster;
- Ensure people know how to receive information on the Project both during and outside of the consultation period;
- Inform and prepare consultees ahead of Stage Two Statutory Consultation, which is anticipated to take place Autumn 2022; and,
- Seek comments on any others matters relating to the Project that consultees consider relevant.

2.2.2 The feedback received to the Stage One Consultation has informed the design and development of the Project. The defined pipeline route and locations for the HAGIs and other above ground infrastructure will be subject to consultation as part of the Stage Two statutory consultation proposed to take place in Autumn 2022.

2.3 When did it take place?

2.3.1 The Stage One Consultation launched at 00:01 on 26 January 2022 and ran until 23:59 on 11 March 2022, a period of 45 days.

2.4 Where did it take place?

2.4.1 The Consultation Zone (**Appendix C**) was defined broadly as comprising all residential and commercial addresses within the route corridor, including associated spurs and search areas. In several locations the project team revised this zone to include addresses outside the route corridor that may still experience some impact because of the proposals.

2.5 Who was consulted?

2.5.1 The consultation was open to all and widely publicised via email, postcards, print and digital advertising, and social media. Notification of the consultation period was particularly targeted at specific local stakeholders and groups including:

- **Local communities and elected representatives:** Households and businesses in the defined Consultation Zone (see paragraph 2.4.1) and their elected representatives (including MPs, councillors, and parish councils). This included landowners whose land may be affected by the Project (in addition to other activities – such as land referencing – already taking place).
- **Special and local interest groups:** Special interest groups, such as wildlife trusts, professional bodies, pressure groups, and organisations who may be interested in the proposals because of their area of knowledge or specialism (for example, local historical societies, conservation groups or charities).

- **Seldom heard groups:** Representatives of people considered seldom heard. Examples of groups considered seldom heard include young people, old people, people with physical disabilities or learning difficulties, and people for whom English is not their first language. During the consultation the project team sought to identify interested parties to include in future engagement.
- **Prescribed consultees:** Although the Stage One Consultation was non-statutory, a range of consultees drawn from the list in Schedule 1 of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the APFP Regulations) were contacted. This included statutory bodies such as Natural England, Historic England and the Environment Agency as well as the parish councils.

2.5.2 In addition, a wide range of community and other non-statutory stakeholders were identified and notified of the consultation. A full list of these community and non-statutory stakeholders can be seen in **Appendix B**.

2.6 Notification and Publicity

2.6.1 At the start of the consultation, a consultation postcard was distributed to 15,402 residential and commercial addresses within the Consultation Zone (see paragraph 2.4.1 and **Appendix C**).

2.6.2 The consultation postcard provided a brief description of the Project and directed people to the project website for more information and to provide feedback. A copy of the postcard is included in **Appendix D**.

2.6.3 On the day the consultation launched, emails were sent out to stakeholders to notify them of the consultation. This included the identified prescribed consultees outlined above in **Section 2.5**, and other relevant groups. Emails were also sent to nine Members of Parliament, the six host local planning authorities, and 44 parish councils to notify them of the consultation start and finish dates and inviting their feedback. A full list of these stakeholders can be seen in **Appendix B**.

2.6.4 Posters publicising the consultation (see **Appendix E**) were also sent to information points (see below).

Print and digital advertising

2.6.5 A publicity campaign spanning the length of the consultation encompassed print, digital and Google search advertising. **Table 2.2** provides details of the advertising that took place.

2.6.6 Two print advertisements were published in regional newspapers – one at consultation launch, announcing the start of the consultation period, and another with two weeks of consultation remaining, announcing the close of the consultation period.

2.6.7 Digital adverts publicising the start of the consultation period were followed by adverts publishing the close of the period with two weeks of consultation remaining. Google search adverts targeted the North West region and a number of relevant search terms, including 'hydrogen pipeline', 'north west hydrogen pipeline'

and 'north west pipeline'. Images of print, digital and search adverts in-situ can be seen in **Appendix F**.

2.6.8

In the lead up to consultation launch and throughout the consultation period, posts were issued via Cadent's Twitter, Facebook and LinkedIn channels. These publicised consultation events, encouraged feedback, and shared a link to the project website. Social media content was also published via the wider HyNet North West project social media channels.

Table 2.2 Consultation advertising schedule

Print advertising	
Date and detail	Media outlet
27 January 2022 'Consultation Open' advert	<ul style="list-style-type: none"> • Northwich Guardian • Winsford and Middlewich Guardian • Knutsford Guardian • Warrington Guardian
24 February 2022 'Consultation Closing' advert (approximately two weeks ahead of consultation closing)	<ul style="list-style-type: none"> • Northwich Guardian • Winsford and Middlewich Guardian • Knutsford Guardian • Warrington Guardian
Digital advertising	
26 January 2022 to 11 March 2022	<p>Digital adverts were displayed on all Reach plc outlets and targeted to IP addresses across the North West. This included regional online platforms such as:</p> <ul style="list-style-type: none"> • Manchester Evening News (www.manchestereveningnews.co.uk) • Liverpool Echo (www.manchestereveningnews.co.uk) • Cheshire Live (www.cheshire-live.co.uk) <p>And national online platforms such as</p> <ul style="list-style-type: none"> • Daily Mirror (www.mirror.co.uk) • Daily Express (www.express.co.uk) • Daily Star (www.dailystar.co.uk)

Digital advertising

26 January 2022 to 11 March 2022

Search adverts linking through to the project website were displayed on Google. These adverts were targeted at IP addresses across the North West and appeared whenever a pre-defined phrase was searched for. These phrases included 'north west hydrogen pipeline' and 'north west hydrogen', for example.

Press releases

- 2.6.9 A press release was issued at the beginning of the consultation period to notify people that the Stage One Consultation was open. It also provided an explanation of the proposals and told people where they could find more information and how to take part. This press release appeared in a national trade publications twice (Energy Digital), and in four regional publications (Business News Wales, Chester Standard, Northwich Guardian, and Runcorn and Widnes World). See **Appendix G** for a copy of the press release and cuttings from publications.
- 2.6.10 To coincide with the end of consultation another press release was issued. This thanked consultees for taking part, notified them of the next steps and that statutory consultation was planned for autumn 2022. This press release appeared in four national trade publications (Global Hydrogen Review, H2 View, Trade Insider Media, and World Pipelines) and four regional publications (Business News Wales, Chester Standard, Northwich Guardian, and Warrington Guardian). See **Appendix G** for a copy of the press releases and cuttings from publications.

2.7 Consultation Methods and Approaches

- 2.7.1 In accordance with the DCLG Guidance and to encourage participation in the consultation, a range of methods and techniques were used to ensure that the various consultees identified above and all sections of the community that could be affected by the Project could be involved in the process.

Consultation materials

- 2.7.2 A variety of materials were created. Collectively, these publicised the consultation and provided detail about the proposals so consultees could choose the information relevant to them. Materials were written and produced so they were easy to understand, and images and diagrams were used to aid accessibility.

Table 2.3 Consultation materials

Material	Detail
Postcard	Notifying residents that the consultation was open and sharing the project website address, freepost address and phone number. The consultation postcard can be viewed in Appendix D .
Brochure	Non-technical information brochure providing information on the Project and specific topics, such as routeing, above ground infrastructure, construction, the planning process and environmental considerations. The consultation brochure can be viewed in Appendix I .
Website	The Project website (www.hynethydrogenpipeline.co.uk) was a key source of information during the consultation and the main way to provide feedback. It held all consultation materials and supporting technical documentation. Images of the Project website are provided in Appendix H .
Exhibition boards	Available at in-person events and through the online virtual exhibition space, these provided an overview of project information, including illustrations of the route corridors and their context in the local area. The exhibition boards can be found in Appendix A .
Feedback form	Available both digitally and in hard copy format, this provided a structured way for people to provide their feedback. The feedback form can be viewed in Appendix J .
Scoping Report	The Scoping Report set out the proposed content, methodologies to be adopted and the anticipated likely significant environmental effects that are proposed to be considered in the EIA.
Route Corridor Report	The Route Corridor Report was published to explain how the preferred route corridor was developed.

In-person and online events

- 2.7.3 A dynamic approach to consultation events was adopted to cover the broad project area and ensure that events were as accessible as possible to consultees of all ages and lifestyles. As such, events were organised in the following way:

- Events were held across the Consultation Zone (see paragraph 2.4.1 and **Appendix C**).
- On two days (15 and 16 February), two events were held on the same day in different locations and times to accommodate anyone who may have wanted to come along after typical working hours.
- Events were also hosted on a Friday evening and on a Saturday to provide adequate opportunity for those who may work during the week and were unable to attend the weekday events.
- Online events were available for those who may not have wished to, or were unable to, travel to and attend an in-person event.

2.7.4 The events were publicised as drop-in events, which meant people were encouraged to stop by at a time convenient for them, to have individual conversations with members of the project team. The in-person events were held at venues selected based on their proximity to the preferred route corridor and prominence within local communities, disabled access, and available parking. All venues were subject to a thorough health and safety check. A list of the in-person and online consultation events is provided below in **Table 2.4**.

2.7.5 The events included project team representatives from a range of technical and non-technical disciplines (including a mix of specialists from the engineering, lands, consents, and community relations teams) so that a broad range of queries from attendees could be responded to. Key project materials were available at in-person events, including display panels explaining the Project, and large-scale maps were also made available (both shown in **Appendix A**). Photographs from physical events can be seen in **Appendix K**.

2.7.6 In addition to the in-person and online events, a virtual exhibition space was hosted on the Project website. This provided a virtual example of what a physical event space looked like. Users could view information on virtual exhibition panels and click on the panels and accompanying hotspots to access more information and provide feedback. Images of the virtual exhibition space can be seen in **Appendix L**.

Table 2.4 In-person and online consultation events

Date	Timings	Event Location	Attendees
15 February 2022	10:00 – 13:00	Mere and Tabley Community Club Warrington Road, Mere, Knutsford WA16 0PU	8
15 February 2022	15:00 – 19:00	The Fuse ROC Centre Warburton Lane, Partington, Manchester M31 4BU	17
16 February 2022	10:00 – 13:00	Anderton Village Hall	24

Date	Timings	Event Location	Attendees
		New Road, Anderton, Northwich CW9 6AE	
16 February 2022	15:00 – 19:00	Widnes Cricket Club Beaconsfield Road, Widnes WA8 9LA	0*
17 February 2022	18:00 – 19:00	Online event, hosted on Zoom	21
22 February 2022	18:00 – 19:00	Online event, hosted on Zoom	6
23 February 2022	15:00 – 19:00	Warrington Football Club Cantilever Park, Common Lane, Warrington, Cheshire WA4 2RS	15
24 February 2022	11:00 – 16:00	World of Glass Chalon Way, St Helens WA10 1BX	7
25 February 2022	16:30 – 20:30	St John's Church Centre School Lane, Hartford, Northwich CW8 1NP	6
26 February 2022	10:00 – 14:00	Whitley Village Hall Village Lane, Higher Whitley, Warrington WA4 4EJ	52

*The Widnes event took place on an afternoon in which North West England was experiencing a severe weather warning and storms, likely contributing to the zero attendance.

COVID-19 protocols at in-person consultation events

2.7.7 In-person consultation events were managed in line with all relevant and up-to-date government guidance. However, the safety of consultees was our priority and steps were taken above and beyond guidance. These included:

- People were advised to check the project website before attending in-person events, in case of postponement due to COVID-19.
- In-person events had COVID-19 check-in barcodes so that any potential spread could be monitored.
- Anti-bacterial hand gel was available for use.
- Where possible, windows were left open to improve airflow.

- The project team had masks which they wore if a member of the public attended wearing a mask themselves. As per government guidance at the time, masks were not required.
- All event venues were chosen so as to be large enough to allow for ample social distancing.
- A digital-first approach to consultation communications was taken in case of any COVID-19 disruption. This included two online events for people who were unable to, or did not feel comfortable, attending in-person events.

Information Points

2.7.8 In addition to materials being available on the website and on request, copies of consultation materials (the consultation brochure, poster and feedback forms) were deposited at high footfall information points, such as libraries, across the Consultation Zone. These are set out below in **Table 2.5**:

Table 2.5 Information points

Information point	Address
Anderton Village Hall	New Road, Anderton, Northwich CW9 6AE
Chester Library at Storyhouse	Hunter Street, Chester, CH1 2AR
Frodsham Community Centre	Fluin Lane, Frodsham WA6 7QN
Frodsham Library	Princeway, Frodsham, WA6 6RX
Grappenhall Library	Victoria Avenue, Grappenhall, Warrington WA4 2PE
Hartford Village Hall	Chester Road, Hartford, Northwich CW8 1LW
High Legh Village Hall	West Lane, High Legh, Knutsford WA16 6LR
Knutsford Library	Toft Road, Knutsford WA16 0PG
Meeting Lane Community Centre	Meeting Lane, Warrington WA5 2BG
Mere and Tabley Community Club	Warrington Road, Mere, Knutsford WA16 0PU
Northwich Library	Witton Street, Northwich CW9 5DR
Partington Community Centre	Central Road, Partington, Manchester M31 4FL
Partington Library	Central Road, Partington, Manchester M31 4FY

Information point	Address
Rainhill Library	View Road, Rainhill, Prescott L35 0LE
Runcorn Old Town Library	Granville Street, Runcorn WA7 1NE
St Helens Library	The World of Glass, Chalon Way East, St Helens WA10 1BX
The ROC Centre	Warburton Lane, Partington, Manchester M31 4BU
Warrington Library	Golden Square, Sankey Street, Warrington WA1 1TD
Whitley Village Hall	Village Lane, Whitley, Warrington WA4 4EJ
Widnes Cricket Club	Beaconsfield Road, Widnes WA8 9LA
Widnes Library	Victoria Square, Widnes WA8 7QY

Enquiries and information

- 2.7.9 Cadent provided a dedicated contact team for the duration of the consultation. They were accessed via the contact details below and this contact information was publicised widely in consultation materials.
- Freephone: 0800 860 6255.
 - Email: info@hynethydrogenpipeline.co.uk.
- 2.7.10 29 telephone queries and 49 email queries (not including consultation responses submitted via email) were received during the consultation period.

Requests for documentation

- 2.7.11 Consultation materials, including technical materials, were available to download from the project website. On request, the project team provided hard copies of consultation materials, including the consultation brochure, feedback form and copies of project maps. Five such requests were received via the freephone.
- 2.7.12 Large-scale versions of the HAGI images, route maps and consultation brochure were also available on request and distributed to those who requested them. One request for hard copy materials was made at an in-person consultation event.

2.8 Technical Engagement

- 2.8.1 In parallel to the public consultation and following on from the briefings and meetings that took place on the Consultation Strategy, the project team has been keen to have early technical engagement with stakeholders, in particular on the approach to the Environmental Impact Assessment (EIA) and the EIA Scoping stage. This stage of engagement, which remains ongoing, began in earnest in February 2022 (with some introductory meetings held before then) and has, to date, focussed largely on engagement with the six host local authorities through which the route corridors pass, and statutory consultees.
- 2.8.2 The purpose of this engagement has been to:
- Update stakeholders on the Project;
 - Provide specific details on the route corridor options;
 - Provide an overview of the nature of the pipeline and the need for associated HAGIs;
 - Establish a protocol for ongoing technical engagement on key topics;
 - Request data and evidence to support the assessment of the route; and,
 - Begin to discuss survey and assessment methodologies and help to inform the EIA Scoping Report.
- 2.8.3 **Table 2.6** summarises the meetings held. In most cases meetings have followed the following general format:
- An initial meeting has been held to introduce the technical team working on behalf of Cadent and establish protocols;
 - Follow up meetings have been held to discuss specific details; and,
 - Where relevant written documents summarising proposed survey methods and approaches to assessment have been shared for comment.
- 2.8.4 Engagement will remain ongoing throughout the preparation of the EIA providing an opportunity for the Local Planning Authorities (LPAs) and statutory consultees to comment on the emerging EIA methodologies for each of the key topics. It is intended meetings will be held where appropriate as a basis for agreement and providing an opportunity for discussion around key issues. Where required, Planning Performance Agreements (or similar) are being set up to provide a formal basis for ongoing conversations.
- 2.8.5 It is intended that early Statements of Common Ground will be progressed to support the ES and these will document the matters agreed during this early phase, therefore helping to provide clarity on any outstanding issues. The Statements of Common Ground will then be further evolved/updated and submitted at DCO application or examination.
- 2.8.6 In addition to the specific meetings listed in **Table 2.6** there has been ongoing communication to request data and share information.

Table 2.6 Technical engagement with stakeholders up to 24/06/2022

Stakeholder	Meeting date	Purpose
Canal & River Trust	13.04.2022	Introductory meeting, introducing the project, timescales, Ground Investigation programme, and potential crossings of Canals and Waterways.
Cheshire East Council (CEC)	23.11.2021	Initial briefing about project.
	20.01.2022	Attended bi-monthly joint LPA briefing.
	31.03.2022	Attended bi-monthly joint LPA briefing.
	30.05.2022	Pre-Preliminary Environmental Information Report (PEIR) Highways Methodology Meeting.
Cheshire West and Chester Council (CW&C)	31.03.2022	Attended bi-monthly joint LPA briefing.
	04.05.2022	Teams meeting with Head of Planning regarding Planning Performance Agreement.
	11.05.2022	Discussions about a potential meeting regarding Vale Royal Island.
	25.05.2022	Pre-PEIR Highways Methodology Meeting with Public Rights of Way team.
	06.06.2022	Pre-PEIR Highways Methodology Meeting with Highways team.
	09.06.2022	Host LPAs bi-monthly call.
Cheshire Wildlife Trust	15.03.2022	Initial introductory discussion.
Environment Agency	04.02.2022	Discussion regarding pre-application agreement.

Stakeholder	Meeting date	Purpose
	13.05.2022	Introductory call, introducing the project team and discussion on permitting requirements for ground investigations.
	13.06.2022	Introduction to project, focus on ground and surface water.
Friends of Carrington Moss	28.03.2022	Project team attended a briefing at a Friends of Carrington Moss meeting.
Halton Borough Council (HBC)	12.05.2022	Meeting to discuss highways interfaces.
	09.06.2022	Attended bi-monthly joint LPA briefing.
Historic England	24.05.2022	Meeting to discuss scoping response, geoarchaeology and Ground Investigation work, and settings assessment.
	30.05.2022	Meeting outlining the scheme, typical changes since scoping, and geoarchaeological and deposit model assessment requirement of the Scoping Opinion.
HS2	11.03.2022	Meeting held to introduce the project.
National Highways	07.03.2022	Introductory meeting.
	05.05.2022	Discussion on the scope of EIA Traffic assessment.
	13.05.2022	Pre-PEIR Highways Methodology Meeting
Natural England	26.05.2022	Telephone call to discuss district licensing.
Network Rail	09.05.2022	Ground Investigation requirements.

Stakeholder	Meeting date	Purpose
	22.04.2022	To discuss the process to agree crossings of infrastructure.
	28.02.22	Introduction to the Project.
Planning Inspectorate (PINS)	13.01.2022	Meeting held to introduce the Project.
	17.05.2022	Introduction for the new PINS case officer.
	20.06.22	Discussion regarding EIA approach.
St Helens Council (SHC)	20.01.2022	Attended bi-monthly joint LPA briefing.
	31.03.2022	Attended bi-monthly joint LPA briefing.
Trafford Council	20.01.2022	Attended bi-monthly joint LPA briefing.
	02.03.2022	Briefing for the authority's executive leadership.
	15.03.2022	All member invitation briefing.
	31.03.2022	Attended bi-monthly joint LPA briefing.
United Utilities (UU)	05.05.2022	Introductory meeting to discuss the project and discuss current thoughts.
	17.06.2022	Water Environment Liaison Meeting with the UU to discuss the interaction of pipeline on UU assets and interests, with particular focus on groundwater.
Warrington Borough Council (WBC)	20.01.2022	Attended bi-monthly joint LPA briefing.
	31.03.2022	Attended bi-monthly joint LPA briefing.
	31.05.2022	Pre-PEIR Highways Methodology Meeting.

Stakeholder	Meeting date	Purpose
	09.06.2022	Attended bi-monthly joint LPA briefing.

3. Feedback Mechanisms

This section outlines the ways consultees could provide feedback into the consultation and how analysis of feedback was managed.

3.1 How consultees could respond

- 3.1.1 Stakeholders and individuals could provide feedback to the Stage One Consultation through the response channels set out in **Table 3.1**.

Table 3.1 Consultation feedback methods

Feedback method	Details
Interactive map (pins on a map)	Drop a pin on a map with feedback, known as ConsultOnline, accessed via: www.hynethydrogenpipeline.co.uk
Digital feedback form	Fill in and submit the response online via the project website
Hardcopy feedback form	Fill in and submit the response via post
Freepost	Post a response to the consultation to the freepost address: FREEPOST HYPNET NWHP
E-mail	Email comments or a completed response form to info@hynethydrogenpipeline.co.uk

- 3.1.2 The Project website, Postcard, Brochure, Exhibition boards and Feedback form all made clear that responses were required by the stated consultation deadline (23:59 on 11 March 2022).

3.2 Questions asked

- 3.2.1 The feedback form (see **Appendix J**) contained 11 questions, structured around particular elements of the Project, to elicit detailed feedback from consultees on the proposals.
- 3.2.2 Responses to these questions were considered, alongside free-form white mail and interactive map responses, on a thematic basis and analysed in line with the approach detailed below in **Section 3.4**.

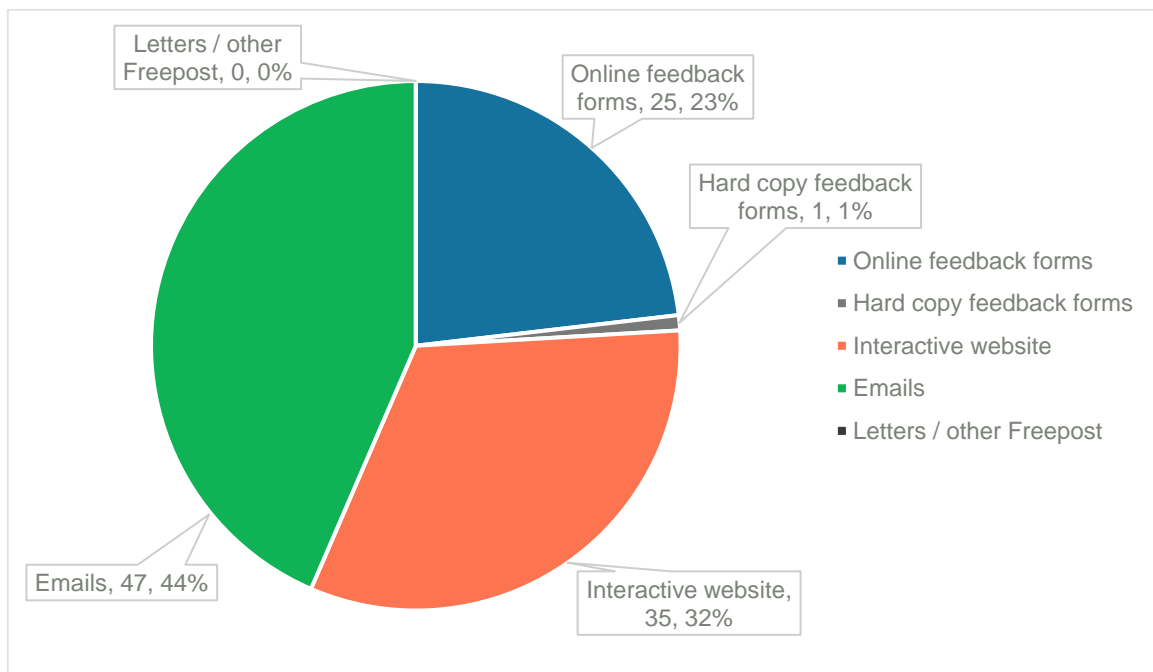
3.3 Number of responses received

3.3.1

A total of 108 pieces of feedback were received to the consultation. All were coded and analysed in line with the approach detailed below and were reported on as valid consultation responses.

- Online feedback forms: 25.
- Hard-copy feedback forms: 1.
- Interactive website / pins on a map: 35.
- Emails: 47.
- Letters and other responses received to the Freepost: 0.

Figure 3.1 Consultation responses received by feedback type



3.4 Data processing and analysis

3.4.1

All responses received (through the online and hardcopy feedback form, interactive website and by email) were logged with a unique five-digit identification number before being uploaded into a coding software platform to allow for analysis.

3.4.2

The purpose of the coding platform is to create a 'coding framework' which provides a list of themes and topics (codes) raised by the consultation feedback, from which the feedback can be organised. The coding framework was regularly updated to reflect any new themes and topics that were identified and reviewed to ensure there was no duplication or fraudulent feedback.

3.4.3

A coding framework was developed to provide a list of topics and themes raised in the consultation feedback. The framework was applied by analysts to all feedback

received, to capture and organise the issues raised in a systematic way to ease interrogation and analysis. The coding framework consisted of the following topics:

Table 3.2 Coding topic themes

Coding topic themes	
Above Ground Installations	Environment
Alternatives	General
Central Hub	Health and Safety
Consultation	Hydrogen technology
Construction	Information request
Corridor East (Partington to the Central Hub)	Operation
Corridor North (St Helens to the Central Hub)	Property and Compensation
Corridor South (Central Hub to Hydrogen Storage Facility)	Socio-economic
Corridor West (Stanlow to the Central Hub)	Traffic and Transport
DCO and Wider Planning issues	

3.4.4 Once the coding framework had been applied to the feedback received, similar themes were grouped together and organised into categories. Summaries of the feedback by topic and theme were provided to the Project team together with the full consultation responses to enable them to consider feedback and take it into account in the development, assessment, and evaluation processes.

3.4.5 All personal data received as part of the consultation was processed in accordance with General Data Protection Regulation (GDPR) 2018.

3.4.6 A record of the collated feedback received in response to the Stage One Consultation is provided in sections 4 and 5 of this CFR. The material is presented by consultee type under the headings set out in **Table 3.2** above and summarises the issues raised by consultees. The summaries provide a clear and objective precis of the views expressed by consultees.

3.5 Quality Assurance

- 3.5.1 Quality assurance measures were put in place to ensure that responses were accurately captured and analysed. A minimum of 75% of the coding of each analyst was quality checked or verified. This was undertaken by double coding a portion of each coder's outputs to ensure consistency in approach.
- 3.5.2 Team meetings were held, and updates issued, to discuss the process and compare working notes to ensure that a consistent and accurate approach was taken by each analyst. The Project team also reviewed the summary and raw data reports.

4. Feedback Received from Prescribed Consultees

4.1 Introduction

4.1.1 A total of 12 prescribed consultees provided feedback to the Stage One Consultation, which were grouped into the following topics within the coding framework:

- Above Ground Installations;
- Central Hub;
- Consultation;
- Construction;
- Corridor East (Partington to the Central Hub);
- Corridor North (St Helens to the Central Hub);
- Corridor South (Central Hub to Hydrogen Storage Facility);
- Corridor West (Stanlow to the Central Hub);
- DCO and Wider Planning issues;
- Environment;
- General;
- Hydrogen technology;
- Operation;
- Property and Compensation;
- Socio-economic; and
- Traffic and Transport.

4.1.2 Where comments were not provided by prescribed consultees, for topics within the coding framework, these headings are not shown.

4.1.3 It should be noted that the Planning Inspectorate (PINS) also collected comments on the Project Scoping Report over the same timeframe to prepare its Scoping Opinion. The Scoping Opinion is provided on the PINS website and details of the comments provided and Cadent's response are included in the Preliminary Environmental Information Report (PEIR).

Above Ground Installations

Location

- 4.1.4 Cheshire West and Chester Council said that the HAGIs should be sited to cause minimal impact to the local environment and to avoid adversely impacting on biodiversity, suggesting that brownfield land be used to avoid the use of green belt land.
- 4.1.5 Dutton Parish Council raised concern that its residents would be impacted by the construction of HAGIs.
- 4.1.6 Liverpool City Region Combined Authority expressed support for at least one HAGI in the West Corridor and the North Corridor due to the range of industry and energy generators in these areas. It also provided suggestions for the location of additional HAGIs in Runcorn East close to Daresbury Science Park and towards Sandymoor, and in Widnes in the vicinity of the Mersey Gateway development area.

Visual impact

- 4.1.7 The Canal and River Trust said that the visual impact of HAGIs on waterways should be minimised.

Central Hub

Design

- 4.1.8 Little Leigh Parish Council said that the Central Hub should be low-rise and well screened to reduce noise impacts if located in Dutton. It commented that the Project should be scrutinised by the planning system if compressors or other machines are to be installed there later on.

Site location

- 4.1.9 The Canal and River Trust said that the siting of the Central Hub should take into account the nearby Acton dredging tip, which it identified has an active environmental permit.
- 4.1.10 Liverpool City Region Combined Authority requested clarification on why the Central Hub was not located towards the axis of Stanlow to Manchester and Liverpool, as they considered that significantly more demand will be to the west of the Hub. It also suggested that the Central Hub be located within the corridor of existing COMAH and industrial demand sites between Runcorn and Warrington.

Consultation

Consultation other

- 4.1.11 Liverpool City Region Combined Authority said that local highway authorities should be consulted early if the pipeline crosses or follows any key route networks

in the Region. It also requested early engagement, including with Network Rail and train operating companies, if the pipeline crosses any rail alignments.

Construction

Construction approach

- 4.1.12 The Canal and River Trust advised that all crossings under its waterways must be installed using trenchless methods, with the pipeline and crown of the pipe needing to be at least 3.5 metres below bed level. It also commented that installations that interface with its waterways and assets will need to comply with its third party works Code of Practice.
- 4.1.13 It also suggested that the Construction Environment Management Plan (CEMP) include the following matters:
- Details of the storage of materials, fuels, chemicals and wastes;
 - Measures to prevent dust generation and wind-blown litter and debris;
 - Measures to prevent the runoff into canals and culverts of silty and contaminated water, fuels and chemicals;
 - Emergency procedures for response to pollution; and
 - Details of planned water abstractions and discharges which may impact the canal.
- 4.1.14 Little Leigh Parish Council said that the parish and adjoining areas are situated within the North Cheshire Green Belt and suggested that trenched land should be fully reinstated after works, including fencing, railings and native hedging restored. It said that this should be done speedily and to a high standard.
- 4.1.15 Natural England recommended that guidance on soil protection in the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites be used in the design and construction of the Project. It also advised that Cadent use a soil specialist to advise on soil handling.

Construction traffic

- 4.1.16 The Canal and River Trust said that the height, width, and weight limits of Winnington and Sutton Swing bridges be considered in the routing of construction traffic.
- 4.1.17 Cheshire West and Chester Council suggested that the proposed pipeline be routed with consideration of the potential impacts of construction traffic, and that planned and temporary access roads should seek to minimise disruption to local highways.

Construction impacts

- 4.1.18 The Canal and River Trust said that construction works close to waterway infrastructure could adversely affect structural integrity. It said that the structural

integrity of canals must not be put at risk during construction works as it could in a worst-case scenario result in the failure of the canal.

- 4.1.19 Cheshire West and Chester Council suggested that route options should seek to minimise carbon emissions generated through distances travelled by construction traffic and delays caused to existing traffic as a result.
- 4.1.20 Warburton Parish Council suggested that there should be no damage to field drains during construction and that necessary realignments should be in good order and tested for efficiency.

Construction programme

- 4.1.21 The Canal and River Trust recommended that construction works close to its waterways be carried out during the winter stoppage season to limit impacts on canal users and boating businesses.
- 4.1.22 Liverpool City Region Combined Authority requested clarification on whether the West and South Corridors would be constructed first as a priority connection, advising that this would support industry in Halton to utilise storage at the earliest opportunity.
- 4.1.23 Wincham Parish Council also requested clarification on the timescales and programme for construction works, including potential resulting disruption for local communities.

Corridor East (Partington to the Central Hub)

Route location

- 4.1.24 Warrington Borough Council provided a suggestion it received from a local resident that the route of the pipeline should follow the route of an old raw oil pipeline to Carrington refinery.

Corridor North (St Helens to the Central Hub)

Route location

- 4.1.25 The Canal and River Trust identified that the former Sankey Canal may be crossed as part of the North Corridor route and advised that the Canal is not fully navigable. It recommended that any crossing of the former Sankey Canal should be underground and that works should not prejudice any future restoration of the canal.
- 4.1.26 The Coal Authority said that the North Corridor and the St Helens to Warrington spur lies within Development High Risk Areas.
- 4.1.27 Dutton Parish Council expressed a preference for the North Corridor over the South Corridor, which it considered less acceptable.
- 4.1.28 Liverpool City Region Combined Authority expressed a preference for routes into Knowsley, Widnes, and Sefton to align with its plans for the wider decarbonisation of industry.

Corridor South (Central Hub to Hydrogen Storage Facility)

Northwich spur

- 4.1.29 The Canal and River Trust suggested that the route of the Northwich spur avoid the Anderton Boat Lift due to its designation status.

Route location

- 4.1.30 The Canal and River Trust expressed a preference for route option B and its associated spur as it would only require one crossing of the Weaver Navigation and would be set away from the Anderton Boat Lift. It suggested that the Barnton area has unstable ground to the north of the Trent and Mersey Canal, and that measures should be put in place to mitigate potential impacts of this unstable ground on the canal. It also commented that route option A is their least preferred route option due to the number of waterway crossings and resulting impacts.
- 4.1.31 Wincham Parish Council requested details and assurances that Cadent would take appropriate measures to ensure safety for works on land previously affected by brine extraction, which it advised had caused subsidence issues on other construction projects in the area.

Corridor West (Stanlow to the Central Hub)

Route location

- 4.1.32 The Canal and River Trust said that the route through the Western Corridor should avoid the zone of influence of the Dutton Canal Tunnel.
- 4.1.33 Dutton Parish Council said that land south of the A533 contains many undulations and dips such as Dutton Hollows. It also said that land between the A533 and the Trent and Mersey Canal contains areas of designated ancient woodland owned by the Woodland Trust.
- 4.1.34 The Parish Council stated that the land below the Trent and Mersey Canal is steep and cannot be considered stable. It said that the impact of disturbance as a result of the Project could adversely impact the Trent and Mersey Canal, which is poorly maintained. It also highlighted that the land adjacent to the River Weaver is prone to flooding in the winter and local residents have been displaced due to acute flooding in the area.

DCO and Wider Planning Issues

Scheme design

- 4.1.35 Liverpool City Region Combined Authority requested clarification on why a carbon pipeline is not proposed in the same corridor as the Hydrogen pipeline, to benefit from a single route plan. It also said that the current HyNet proposals do not meet the ambitions of the Liverpool City Region and should be increased and accelerated.

- 4.1.36 Sport England said that if the proposals prejudice the loss, or lead to the loss, of use of land as a playing field (within 5 years), any subsequent application and consultation with Sport England will be a statutory requirement.

Environment

Assessments approach

- 4.1.37 Natural England said that impacts on ancient woodland and ancient and veteran trees should be considered in line with paragraph 180 of the NPPF.

Green Belt and Green Spaces

- 4.1.38 Natural England suggested that the creation of links to existing green spaces to enhance and improve access should be considered as part of the proposals. It also requested that the Project identifies opportunities for new green space and management of existing spaces to be more wildlife friendly, such as through sowing wildflower strips.

Habitats

- 4.1.39 Natural England said that the Project should provide biodiversity net gains in line with paragraphs 147(d), 179 and 180 of the NPPF. It recommended that the Biodiversity Metric 3.0 be used to calculate biodiversity losses and gains for habitats and its Environmental Benefits from Nature tool be used to identify opportunities to enhance nature benefits and minimise adverse impacts.
- 4.1.40 It also made some suggestions for the inclusion of environmental enhancements as part of the Project. These included:
- the restoration of neglected hedgerows;
 - the creation of a new pond as an attractive feature on site;
 - the restoration of neglected environmental features;
 - the planting of trees characteristic to the local area;
 - the use of native plants in landscaping schemes to provide better nectar and seed sources for bees and birds; and,
 - the planting of additional street trees.
- 4.1.41 It also said that consideration should be given to how the Project could contribute to the wider environment and support the implementation of elements of local Landscape, Green Infrastructure or Biodiversity Strategies in place.

Historic environment

- 4.1.42 Canal and River Trust advised that the depth of the pipeline under canals would need to be agreed with them to ensure works do not undermine the structural integrity of canal infrastructure.

- 4.1.43 Dutton Parish Council identified the 60ft tall, 175-year-old Dutton Viaduct as a site of historic interest.
- 4.1.44 Liverpool City Region Combined Authority said that historic assets such as listed buildings, sites of archaeological importance and conservation areas are designed and implemented to protect the historic character of these assets. It also requested further details on how the crossing of the Sankey Canal would be designed and implemented to ensure preservation and enhancement in line with national planning policy.

Landscape and Visual impacts

- 4.1.45 Natural England advised that a Landscape and Visual Impact Assessment be provided to inform decision making where impacts are likely to be significant, and that assessment of landscape and visual impacts be robust due to the sensitivity of the local area and the number of sensitive receptors.
- 4.1.46 It suggested that consideration be given to whether any landscape features or characteristics can be incorporated into the Project, in line with local landscape character assessments, to enhance character and distinctiveness. It also commented that there may be opportunities to protect and enhance locally valued landscapes, and that enhancement measures could include installing green roofs on new buildings and designing lighting to encourage wildlife.

Mitigation measures

- 4.1.47 Natural England said that the mitigation hierarchy outlined in NPPF paragraph 180 should be followed. It recommended the consideration of off-site mitigation measures where on-site measures are not possible and the potential environmental value of brownfields sites. It also suggested that appropriate measures be incorporated for any adverse impacts on National Trails.
- 4.1.48 Wincham Parish Council queried the steps that would be taken to ensure minimal damage to wildlife and the environment from the construction and operation of the Project.

Public rights of way

- 4.1.49 Natural England suggested that the Project should consider potential impacts on access land, common land, rights of way and coastal access routes in the vicinity of the development. It said consideration should also be given to the potential impacts on any nearby National Trails.
- 4.1.50 It suggested that improvements to the existing public rights of way network should be identified, that existing footpaths should be reinstated, and that the creation of new footpaths and bridleways be considered. It also identified potential opportunities for enhancements, including the provision of a new footpath through the development to link existing public rights of way.
- 4.1.51 It said that relevant aspects of local authority green infrastructure strategies should be delivered where appropriate and that links to other green networks and urban fringe areas should be explored to help promote the creation of wider green infrastructure.

Wildlife

- 4.1.52 Natural England suggested that the impacts of the Project on any local wildlife and geodiversity sites should be considered in line with paragraphs 175 and 179 of the NPPF and relevant development plan policies. It also suggested that swift and bat boxes should be incorporated in the designs of new buildings.
- 4.1.53 It confirmed that it does not hold specific information on local sites and recommended that further information should be obtained from appropriate bodies such as local records centre, wildlife trusts, geo-conservation groups and recording societies.

General

General support

- 4.1.54 Liverpool City Region Combined Authority expressed general support for the principle of the proposed development and highlighted the opportunity that the overall HyNet programme offers as part of the North West's energy transition.

Route location

- 4.1.55 The Canal and River Trust advised that they do not allow overhead utility crossings over their waterways.
- 4.1.56 Cheshire West and Chester Council said that the route of the pipeline should minimise disruptive impacts on residents and service delivery in the Borough during the construction, operation, and decommissioning phases. It said that the Project should avoid routes that prejudice the Council's entry level farms and should consider farmers' requirements. It also recommended that the pipeline route consider land use impacts and seek to avoid disrupting carbon sequestration sites.
- 4.1.57 The Council said that the pipeline should minimise any impact that would create channels, which would increase the severity of impact from a natural disaster event, particularly flooding associated with sea level rise, pluvial and fluvial. It suggested that the pipeline should try to avoid sub surface soils that are more susceptible to ground movement through drying and cracking and fluid movement.
- 4.1.58 It also advised that the siting of HAGIs should be avoided where surrounding natural hazards, such as storm damage from fallen trees, lighting strike and extreme winds, could damage any Above Ground Infrastructure.
- 4.1.59 Liverpool City Region Combined Authority requested clarification on whether a hydrogen pipeline will be added to the Project, which would run in the direction of the Wirral.

Hydrogen technology

Storage

- 4.1.60 Liverpool City Region Combined Authority requested clarification on how the planning approvals for storage were linked to Cadent's proposals and the Stage One Consultation.

Source of hydrogen

- 4.1.61 Liverpool City Region Combined Authority requested clarification on whether the Project will transport Green and Blue Hydrogen through separate pipelines within the same route.

Operations

Hydrogen blending

- 4.1.62 Liverpool City Region Combined Authority noted that no connection was identified for blending hydrogen to the Local Distribution Networks in the Runcorn area. It requested clarification on the intent with respect to blending connections for Halton.
- 4.1.63 The Combined Authority also noted that no connection was identified for blending hydrogen to the Local Distribution Networks in the St Helens, Knowsley, Liverpool or Sefton area, and requested clarification on the intent with respect to blending connections for Liverpool City Region.

Property and Compensation

Compulsory purchase

- 4.1.64 The Canal and River Trust said that it will resist any compulsory purchase which may adversely impact its land and undertakings. It also suggested that acquisition of land from The Canal and River Trust should only be with consent.

Property impacts

- 4.1.65 Cheshire West and Chester Council raised concern about the effects on property assets during construction, specifically those which may be intended for sale.

Land access

- 4.1.66 The Canal and River Trust said that access to its waterways and supporting infrastructure must be maintained during the construction and operational phases. It also suggested that discussions would need to take place between Cadent and the Trust, specifically to discuss land access agreements.

Socio-economic

Community impacts

- 4.1.67 Sport England said that the Project must ensure that the relationship between outdoor sport as a Land Use and the outdoor sport facilities users is well integrated as the proposals are being developed. It recommended sources to be used to identify playing fields that could be affected by the pipeline, including Sports England's Active Places Power website, and Playing Pitch Strategies for Halton, Cheshire East, Cheshire West and Chester, Warrington, St Helens and Trafford.

Traffic and Transport

Local highways

- 4.1.68 Dutton Parish Council suggested that the A533 is currently a busy road, which will adversely impact on site access.

Public transport

- 4.1.69 Liverpool City Region Combined Authority suggested that the consultation should pay particular attention to any likely impacts upon active travel and public transport routes in the vicinity of the proposed pipeline, as a result of the pipeline and its construction.

5. Feedback Received from Local Communities and Businesses

5.1 Introduction

5.1.1 A range of members of the community provided feedback to the consultation. In order to assist the reader, the following section sets out details of the feedback received grouped as follows:

- Businesses and Community Groups;
- Members of the Public; and,
- Other interested Consultees who are not prescribed.

5.1.2 Feedback from potential landowners, or those with an interest in land along the preferred route corridor, have been captured within the above groups as necessary.

5.2 Businesses and Community Groups

5.2.1 A total of 15 businesses and community groups provided comments to the consultation, which fell into the following topics within the coding framework:

- Above Ground Installations;
- Alternatives;
- Central Hub;
- Consultation;
- Construction;
- Corridor North (St Helens to the Central Hub);
- Corridor South (Central Hub to Hydrogen Storage Facility);
- Corridor West (Stanlow to the Central Hub);
- DCO and Wider Planning issues;
- Environment;
- General;
- Health and Safety;
- Hydrogen technology;
- Information request;
- Property and Compensation; and,
- Socio-economic.

5.2.2 Where comments were not provided by prescribed consultees for topics within the coding framework these headings are not shown.

Above Ground Installations

Location

- 5.2.3 Altrincham and Bowdon Civic Society expressed concern about the siting of HAGIs in Warburton and Partington and requested a more detailed study of the locations and potential impacts. It suggested Carrington Industrial Estate as an appropriate location for HAGIs due to the brownfield status of the site, which it considered could minimise impacts on the Cheshire countryside.
- 5.2.4 Friends of Carrington Moss raised general concern about the location of HAGIs and said that it should be involved in future siting discussions.
- 5.2.5 Rostons commented on behalf of its clients that HAGIs should be sited so that they cause as minimal impact on retained land as possible.

Alternatives

Alternative route options

- 5.2.6 Friends of Carrington Moss requested confirmation on why alternative routes, such as the Manchester Ship Canal, were not considered.

Central Hub

Design

- 5.2.7 Dutton Hall Court Residents raised concerns about the size of the proposed Central Hub, commenting that it could extend to the size of several football pitches. It also raised concern that the consultation materials did not include information on the typical operational noise levels at the Central Hub.

Site location

- 5.2.8 Coda Investments Ltd said that the area around Marsh Lane was inappropriate for the siting of the Central Hub due to the area being greenbelt land, there being limited road infrastructure to support industrial access, and the impact on nearby residential properties. It considered the area opposite the Whitley Service Area as a more appropriate location due to its location in a predominantly industrial area, and the nearby road infrastructure being better suited.
- 5.2.9 Dutton Hall Court Residents expressed concern about the location of the Central Hub close to residential properties at Dutton Hall Court, which it considered to be the area most impacted by the Project. It considered that this location would adversely impact on the local environment, wildlife, heritage, and residents' quality of life. It also said that land south of the A533 was not suitable for the location of the Central Hub due to its sloping nature, but considered land north of the A533 more suitable due to the existence of brownfield land.

- 5.2.10 P A & S J Platt and Bartington Hall Trust said that their land, which forms part of the Central Hub search area, is liable to flooding from the nearby Trent and Mersey Canal and is sandy and steep. They suggested that the Central Hub should instead be sited to the north of the A533.

Traffic and transport

- 5.2.11 Dutton Hall Court Residents raised concerns that the Central Hub would result in adverse impacts on local road safety and congestion in an area that already experiences a high incidence of road incidents. It identified the junction of Northwich Road and Tarporley Road as experiencing significant traffic congestion throughout the day. It also raised concern that noise and light pollution from road traffic serving the Central Hub would adversely impact wildlife and recreation in the Weaver Valley.

Visual impact

- 5.2.12 Dutton Hall Court Residents expressed concerns about the visual impact of the Central Hub on the local landscape and wildlife of the Weaver Valley, including from on-site lighting and high security fencing. It said that the open rural nature of the local area exacerbates these potential impacts. It commented on the elevated nature of the southern section of the search area and said that siting the Central Hub there would result in high visibility which could deter people from moving to the area.

Consultation

Consultation approach

- 5.2.13 Altrincham and Bowdon Civic Society offered its support for the Project on the basis that meaningful consultation takes place when changes can be made to the Project. Gladman Developments Ltd requested detailed information on the pipeline route prior to the statutory consultation to enable an effective consultation process.

Consultation other

- 5.2.14 Altrincham and Bowdon Civic Society commented that they would like to be kept up to date on all matters in relation to the Carrington, Partington and Lymm areas, in which their members live and work.
- 5.2.15 Bloor Homes proposed that it meet with the project team regarding the potential North Corridor pipeline route through its development at the former Linkway Distribution Park.

Construction

Construction approach

- 5.2.16 Rostons, on behalf of its clients said that much of the pipeline route includes land that becomes wet and heavy during the winter, and that Cadent would need to ensure that access and works are carried out during suitable ground conditions. It

recommended that livestock proof fencing be used during construction, including wooden posts and railings where horses are present, and highlighted that detailed information on land drainage schemes before and after construction will need to be provided.

Construction traffic

- 5.2.17 Friends of Carrington Moss raised concern about the impact of construction traffic in exacerbating current congestion issues on local roads and requested information on how this would be managed and mitigated.

Construction impacts

- 5.2.18 Dutton Hall Court Residents expressed concerns that construction works would potentially generate pollution, which would drain through local watercourses into the River Weaver, adversely impacting local wildlife and habitats. It also raised concern that the construction of the Central Hub would cause disruption to the local area.
- 5.2.19 Friends of Carrington Moss raised concern that the use of trenching during construction of the pipeline could cause the disturbance of peat.
- 5.2.20 Rostons, on behalf of its clients proposed that the Project be constructed so that damage to agricultural land is minimised and said that the pipeline route should ensure that fields within construction boundaries are not severed or left with small areas that are uneconomical to farm.

Construction noise

- 5.2.21 Dutton Hall Court Residents raised concerns about potential noise impacts from the construction of the pipeline and the Central Hub, suggesting that these would be significant.

Construction programme

- 5.2.22 Rostons, on behalf of its clients said that information is required on the expected timetable for construction works.

Public rights of way

- 5.2.23 Gladman Developments Ltd queried whether road crossings over the pipeline would be allowed, and whether any restrictions would be placed on these crossings.
- 5.2.24 Ramblers Cymru – Flintshire raised concern that the construction of the pipeline would cause disturbance to walkers, horse riders and cyclists, and advised that all appropriate legal permissions be obtained to divert paths during construction.

Construction workers

- 5.2.25 Rostons, on behalf of its clients advised that larger construction compounds would be required where the pipeline crosses features such as railways and rivers, and said that details of the land needed for these will be required.

Corridor North (St Helens to the Central Hub)

Route location

- 5.2.26 Altrincham and Bowdon Civic Society expressed concern that pipelines to the Carrington paper factory and power station would likely cause major traffic issues on local roads, which it suggested were already busy.
- 5.2.27 Bloor Homes raised concern that the pipeline in the North Corridor would run through the former Linkway Distribution Park and significantly impact its consented residential development at the site. It requested confirmation that the pipeline route would indeed run through the Site and advised that routing through the Site would considerably delay building homes at the Site.
- 5.2.28 Promenade Park Residents Association advised that its group of properties is not a caravan park, despite the nomenclature used by Ordnance Survey. It commented that the properties are permanent residences and should be considered as such during scoping exercises.

Corridor South (Central Hub to Hydrogen Storage Facility)

Route location

- 5.2.29 Dutton Hall Court Residents advised that land around the Weaver Valley is of sloping nature and that construction works there have previously led to breaches of the nearby Trent and Liverpool Canal. It recommended that the Pipeline avoid being constructed into the Valley to avoid potential safety risks to the Project and the local environment.

Corridor West (Stanlow to the Central Hub)

Route location

- 5.2.30 Exolum Pipeline Systems identified high pressure aviation fuel pipelines in close proximity to the Pipeline which are part of its north-westerly pipeline section.

DCO and Wider Planning Issues

Scheme design

- 5.2.31 Exolum Pipeline Systems requested that the required protective provisions be applied to the Exolum high pressure fuel pipelines in close proximity to the proposed development.
- 5.2.32 HS2 said that legal agreements and protective provisions will be required within the DCO between HS2 and the proposed development. It suggested that there will be interfaces between HS2 and the proposed development in several locations throughout the Cheshire region.

Environment

Assessments approach

- 5.2.33 Ramblers Cymru – Flintshire advised that the temporary diversion of public rights of way during the construction period will need detailed assessment later in the development process.

Conservation Areas etc

- 5.2.34 Dutton Hall Court Residents identified that the area to the south and east of Dutton Hall Court, including the Trent and Liverpool Canal, the River Weaver and surrounding farmland, as being an Area of Outstanding Natural Beauty.

Green Belt and Green Spaces

- 5.2.35 P A & S J Platt and Bartington Hall Trust identified Dutton Dene as a listed ancient woodland, and said that there are other areas of ancient woodland to the south of the A533.

Habitats

- 5.2.36 Dutton Hall Court Residents commented that Cheshire is one of the least wooded counties in the UK and highlighted that the Central Hub search area is designated for the protection of biodiversity by the Cheshire Wildlife Trust, who it advised would intervene to ensure that this is maintained.

Historic environment

- 5.2.37 Dutton Hall Court Residents identified the Dutton Hall site, including Dutton Hall Court, Dutton Hall Farm, and the surrounding farmland as a site of historic interest with local and national importance. It suggested that excavations close by would likely uncover historic and archaeological artefacts that would add to the cost and timeframe of the Project.

Noise

- 5.2.38 Dutton Hall Court Residents raised concerns about noise generated by the Central Hub during the construction and operational phases, suggesting that it would have a particularly adverse impact on its nearby properties, and that the surrounding countryside exacerbates noise impacts by enabling the noise to travel further.

Public rights of way

- 5.2.39 Ramblers Cymru – Flintshire suggested that all existing public rights of way should be identified and safeguarded. It also suggested that in addition to legally recorded rights, there may be de facto rights on white roads and green lanes which should also be safeguarded.

Wildlife

- 5.2.40 Dutton Hall Court Residents suggested that there are numerous rare and protected species in the area, including Buzzards, Kestrels, Tawny Owls and Peregrines. It also suggested that in the vicinity of the proposed Central Hub, colonies of protected amphibians are present.
- 5.2.41 Friends of Carrington Moss raised concern about the effects of the pipeline on endangered wildlife birds and reserves, specifically those on Carrington and Warburton Mosses.

General

General support

- 5.2.42 Altrincham and Bowdon Civic Society and Friends of Carrington Moss expressed general support for the principle of the pipeline. The Civic Society said it could support this Project as having an overall positive benefit. Friends of Carrington Moss said that given the climate emergency, it was cautiously supportive of attempts to move away from dependence on fossil fuels.

Route location

- 5.2.43 Gladman Developments Ltd requested clarity on how watercourses would be crossed, particularly the River Weaver.
- 5.2.44 HS2 said that it will be important to identify the exact points of interface between the proposed development and HS2, in order to understand the effects of both construction/operation and how they can be avoided or mitigated as appropriate.

Health and Safety

Major incidents

- 5.2.45 Dutton Hall Court Residents expressed concern about the proximity of the Central Hub to residential properties and the potential loss of life in the event of a major incident.

Operational safety

- 5.2.46 Friends of Carrington Moss expressed concern about the potential safety of the Project. Gladman Developments Ltd requested further information on stand-off distances from the pipeline.

Safety standards

- 5.2.47 Gladman Developments Ltd requested further information on the Health and Safety Executives consultation zone distances, specifically for inner middle and outer zones and queried when they will be confirmed.

Hydrogen technology

Blue hydrogen

- 5.2.48 Friends of Carrington Moss raised concern about the use of Blue Hydrogen, rather than Green Hydrogen.

Source of hydrogen

- 5.2.49 BXB Tech suggested that Australia has developed a process to produce Hydrogen gas using minimal carbon dioxide and solid carbon residue.

Information request

Above Ground Installations

- 5.2.50 Tata Chemicals requested further information on the proposed HAGIs, including information on height.

Central Hub

- 5.2.51 Coda Investments Ltd and Tata Chemicals requested more information on the design of the Central Hub, querying what the Hub will look like. Tata Chemicals also requested further information on whether there will be visible fence lines at the Central Hub and their maximum anticipated height from ground level.
- 5.2.52 Coda Investments Ltd requested further information on the consideration of residential properties in the siting of the Central Hub and measures to mitigate the impact of the Central Hub on residential properties. It queried whether the search area for the Central Hub includes areas beyond the A533.

Property impacts

- 5.2.53 Rostons, on behalf of its clients requested that landowners and occupiers be provided with advance warning once the route of the pipeline has been decided.

Pipeline routeing

- 5.2.54 Coda Investments Ltd requested further information on whether the pipelines will be routed underneath existing properties.

Property and Compensation

Compensation

- 5.2.55 Bloor Homes suggested that they will seek compensation for deferment costs, should their housebuilding programme be deferred due to the pipeline routeing through the former Linkway Distribution Park site.

Property impacts

- 5.2.56 Rostons raised concern on behalf of its clients that due to the proposed HS2 Phase 2b Project, landowners in Cheshire are already affected. It also suggested that the corridor should avoid land owned and occupied by those already impacted by HS2 Phase 2b.

Land access

- 5.2.57 Gladman Developments Ltd suggested that information on the Project's use of easements should be made available to the public as part of the statutory consultation process.

Socio-economic

Business opportunities/impacts

- 5.2.58 Bloor Homes raised concerns that the North Corridor pipeline route will result in it not being able to sell new homes on its residential development at the former Linkway Distribution Park.
- 5.2.59 Friends of Carrington Moss raised concerns that the Project will result in a loss of agricultural land which will impact the local rural economy.
- 5.2.60 Rostons raised concerns on behalf of its clients that the Project would result in a loss of agricultural land which will impact the local rural economy. It also expressed concern that local agricultural businesses which have been built up over several generations will be impacted by disruptions as a result of the Project

5.3 Members of the Public

- 5.3.1 A total of 73 members of the public provided comments to the consultation, which fell into the following topics within the coding framework:
- Above Ground Installations;
 - Alternatives;
 - Central Hub;
 - Consultation;
 - Construction;
 - Corridor East (Partington to the Central Hub);
 - Corridor North (St Helens to the Central Hub);
 - Corridor South (Central Hub to Hydrogen Storage Facility);
 - Corridor West (Stanlow to the Central Hub);
 - DCO and Wider Planning issues;
 - Environment;

- General;
- Health and Safety;
- Hydrogen technology;
- Information request;
- Operation;
- Property and Compensation;
- Socio-economic; and,
- Traffic and Transport.

5.3.2 Where comments were not provided by members of the public for topics within the coding framework these headings are not shown.

Above Ground Installations

Design

5.3.3 A member of the public suggested that HAGIs should be designed to enable them to blend into the surrounding countryside.

Green Belt

5.3.4 Members of the public raised concerns about the siting of HAGIs on green belt land. These concerns included suggestions that siting on green belt land was unjustified and that the adverse visual impact on the landscape could pave the way to further industrialisation of green belt land.

Location

5.3.5 Members of the public raised concerns about the siting of the HAGIs, including that they would be disruptive to local areas and devalue nearby properties.

5.3.6 Some respondents provided comments regarding the interface of the HAGIs with existing or proposed infrastructure, including the SABIC ethylene pipeline and the route of the HS2 rail line, raising concerns about the proximity of the HAGIs to these and suggesting that they be avoided. Others recommended that the HAGIs be located on brownfield land to avoid using agricultural land, and said that more information should be provided on how the search areas were identified. A further respondent queried why two HAGIs were proposed to be sited in St Helens.

Visual impact

5.3.7 Members of the public expressed concerns that measures to mitigate the visual impact of the HAGIs would be ineffective or insufficient due to the size and lighting of the sites. A respondent suggested that landscaping be used to reduce the visibility of the HAGIs, while another questioned what measures were planned to mitigate the visual impact of the HAGIs.

Alternatives

Alternative schemes

- 5.3.8 A member of the public considered that electrification through heat pumps to be a more energy efficient alternative to the use of blended hydrogen for domestic heating.

Alternative route options

- 5.3.9 A number of comments were received from members of the public suggesting alternative routes for the pipeline. These included following the HS2 route and going under the River Mersey, which they suggested could minimise disruption and impacts from construction on local areas.

Use of funding

- 5.3.10 Members of the public commented that Cadent's funding would be better spent on providing insulation for customers' properties and on renewable energy schemes utilising wind, solar and tidal power. Another respondent suggested that the funding would be better spent replacing customers' gas boilers and cooking facilities with less polluting alternatives.

Central Hub

Design

- 5.3.11 Members of the public frequently requested further information on the size of the proposed Central Hub. This included requests for images of similar installations and details of the security measures and standards to be put in place there. A respondent similarly suggestion that specifics on the Central Hub's noise and light impacts, gas and vapour discharges and expected traffic flows should be provided.

Site location

- 5.3.12 Members of the public raised concerns about the location of the Central Hub, citing potential impacts on local communities, the ancient Dutton Dean woodland, and the fragility of the nearby Trent and Mersey Canal. Others suggested that the land south of the A533 was unsuitable for the siting of the Central Hub due to its sloping nature and the area being an Area of Outstanding Natural Beauty.
- 5.3.13 Other respondents objected to the siting of the Central Hub to the south of the A533 near the old Dutton Hall site, which they identified as the site of a medieval manor house. A member of the public suggested that the Central Hub be located underground or out of view of local residents due to concerns about the visual impact of the Hub on the local landscape and views from local residents' properties. A respondent suggested that Cadent make a commitment that the Central Hub would not be expanded beyond its currently proposed size, in order to prevent industrialisation of green belt land.

- 5.3.14 Queries were also received from members of the public about where the Central Hub would be located, who would be consulted on the siting, how the search area would be narrowed down, and whether the Central Hub would be an already established site like the HAGI at the King Street gas storage facility.

Traffic and transport

- 5.3.15 A member of the public raised general concern about the impact of the Central Hub on road safety and traffic congestion.

Visual impact

- 5.3.16 Members of the public raised concerns that the Central Hub would have an adverse visual impact, including from on-site lighting, on the local landscape and views from nearby residential properties. Others more specifically suggested that light pollution created by the Central Hub would affect neighbouring residents and local wildlife, and that land banking should be used to minimise the visual impact of the Central Hub on the surrounding landscape. Some respondents provided comments requesting further information on the sizes and types of structures of the Central Hub, what these would look like, and the measures taken to shield the Central Hub from view.

Consultation

Consultation approach

- 5.3.17 Members of the public raised concerns that the consultation had not been sufficiently advertised, that not enough time had been given to provide feedback, and that it was a PR exercise with the route already determined on the basis of cost and complexity. Others expressed concerns that communications had been poor, that they had only known of the consultation from other residents via word of mouth, and that Cadent were confused as to which parish councils to notify.
- 5.3.18 Some respondents requested that the consultation promotion and process be improved in future rounds of consultation, while a respondent suggested that the consultation be re-run to allow sufficient advertisement and opportunities for feedback.

Consultation events

- 5.3.19 Members of the public commented that information and responses to questions provided by project staff at consultation events were vague, unhelpful, and of insufficient detail. A respondent commented that the Whitley consultation event was during a school half-term which meant some found it difficult to find time to attend. Another, on the other hand, said that they found the in-person consultation event they attended to be helpful and informative.
- 5.3.20 A respondent proposed that a formal presentation with a full questions-and-answers session be provided to enable all attendees to hear every question and answer. They suggested that the drop-in events prevented attendees from hearing the questions and answers provided to others.

Consultation feedback

- 5.3.21 A member of the public commented that it was difficult to provide feedback, and that it took the use of two email addresses over two days to receive a verification email.

Consultation materials

- 5.3.22 Members of the public frequently raised concerns that the maps provided in the consultation materials were too vague and not of sufficient detail to understand the location of the pipeline routes, the Central Hub and HAGIs. Others suggested that more information on the environmental impacts would have been useful, while another commented that the materials did not include sufficient information on the Central Hub, including the likely operational noise levels there. Another respondent commented that the consultation materials were easy to understand.

Consultation other

- 5.3.23 A member of the public suggested that previous meetings on the wider HyNet North West proposals, including the carbon dioxide pipeline, did not make reference to the consultation.

Consultation promotion

- 5.3.24 Members of the public commented that the consultation was not sufficiently promoted, including that the flyer was not received by some or dismissed as regular junk mail, and that they were unaware of the consultation until later in the consultation period.
- 5.3.25 Members of the public raised concerns about the effectiveness of the consultation leaflet, including that they or other neighbouring residents had not received the leaflet, that the leaflet did not include details of the consultation events, and that the delivery of the leaflets did not give sufficient notice ahead of events. A respondent said that because of this they were unable to attend their local consultation event. Another suggested that Cadent employees should have hand delivered the leaflets to ensure that they were delivered to properties.
- 5.3.26 A respondent suggested that promotional materials should include times, dates, and venues rather than just general information. Another suggested that Whitley is an ageing community and that they may not be able to use the internet to access project information.

Consultation website

- 5.3.27 Members of the public commented that the consultation website was difficult to navigate, that information provided on the website was of insufficient detail, and that the feedback map did not show residential properties.

Construction

Construction approach

- 5.3.28 Members of the public queried whether 24-hour lighting would be required on construction sites and whether excavated ground would be fully restored. A respondent raised concern that existing flooding in Whitley would be exacerbated by construction of the Project.

Construction traffic

- 5.3.29 Members of the public raised concerns that local roads in the Lower Whitley area would be adversely impacted by construction traffic, including that existing congestion and road condition issues would be exacerbated. Some respondents more specifically identified local roads as including railway bridges and having height, width and weight restrictions that made them unsuitable for construction vehicles. The identified roads included Lower Rake Lane in Helsby, and Hatley Lane, Straight Length and Godscroft Lane in Frodsham.
- 5.3.30 A member of the public queried whether highways diversions and stopping up orders put in place for HS2 would be required for the Project, noting that these caused disruption to local communities.

Construction impacts

- 5.3.31 Members of the public raised concerns that the construction of the pipeline would adversely impact the local countryside and historic buildings in Lower Whitley, cause disruption to local residents, and result in a loss of residential amenity. Others raised concerns about the cumulative impact of construction works for both the Project and other infrastructure projects such as HS2 and the Tata incinerator.
- 5.3.32 Other respondents raised concern that constructing the pipeline would put residents, pets and wildlife at risk of harm.
- 5.3.33 A respondent considered that Cadent have a poor track record of ensuring the safety of cyclists during construction works, including that temporary traffic lights do not provide ample time to pass through, and suggested that this be considered when managing traffic.

Construction programme

- 5.3.34 Members of the public frequently requested clarification on the timescales and programme for construction works, including when disruption would likely take place, and whether it would conflict with the construction of the HS2 rail line.

Construction workers

- 5.3.35 Members of the public considered that the behaviour of Cadent staff on other work sites raised concern that construction works for the Project would not be completed, and suggested that Cadent must ensure that their workers do not park in residential areas while working on the Project.

Corridor East (Partington to the Central Hub)

Route location

- 5.3.36 Members of the public provided suggestions for the route of the pipeline in the East Corridor. These suggestions included that the pipeline follow the proposed HS2 route as much as possible to minimise disruption in Broomedge and Agden, be routed away from Lower Whitley and its nearby wildlife habitats, and that it be routed further to the east. Another suggested that the pipeline route should avoid the Spud Wood conservation and recreational area owned by the Woodland Trust.
- 5.3.37 Other respondents expressed concerns about the potential route location, including that the section near to Partington is currently being developed for residential homes, and that the route through the Warburton and Carrington mosses would lead to construction disturbance instigating the release of carbon from those mosses.

Corridor North (St Helens to the Central Hub)

River Mersey

- 5.3.38 A member of the public queried whether the pipeline would cross the River Mersey, and where crossings would be made.

Route location

- 5.3.39 Members of the public raised concerns over the routeing of the pipeline in the North Corridor. This including that the route corridor could run under the site of the Creamfields music festival in Daresbury, potentially impacting on the safety of the event, and that route corridor A had been chosen to save costs.
- 5.3.40 Others provided suggestions for the pipeline route, including that it avoids the SABIC ethylene pipeline, residential properties in Daresbury, and areas of environmental value.

Warrington spur

- 5.3.41 A member of the public raised concern that local playing fields would be lost to the Project.

Corridor South (Central Hub to Hydrogen Storage Facility)

Alternative proposal

- 5.3.42 A member of the public suggested that the Hydrogen Storage Facility be sited close to the existing Holford gas storage facility and be fed by a spur.

Route location

- 5.3.43 Members of the public highlighted that land within the South Corridor, particularly around Comberbach, already contains natural gas and chemicals pipelines,

underground electric cables, and land drains, and that the Project could cause crowding and safety issues as a result. Others raised similar concerns about the proximity of the South Corridor pipeline route to an existing aviation fuel pipeline running through Little Leigh to Stanlow, and that the SABIC ethylene pipeline was vulnerable to construction works.

- 5.3.44 Respondents also requested clarification on how a decision on the preferred options would be made and how the pipeline would interface with the HS2 rail line near the proposed Hydrogen Storage Facility. Another member of the public commented that it was unclear what the advantages and disadvantages of the two route options were.

Corridor West (Stanlow to the Central Hub)

Alternative proposal

- 5.3.45 A member of the public suggested that the pipeline should cross the River Weaver and be routed along the river bank eastward towards Northwich, as this area would return to its grassland state quickly.
- 5.3.46 Another respondent requested that the Project makes more use of the existing pipelines and high pressure gas mains with blending to take place closer to Stanlow. Another member of the public requested that the Western Corridor utilises existing pipelines rather than introducing new infrastructure. They also suggested that the HAGI's between Stanlow and the Central Hub are not required.

Route location

- 5.3.47 Members of the public identified features of note in the area. One member of the public identified four water washed lines near the Plumley underground storage facilities. Another identified four underground pipes located within the Runcorn Golf Course. Another respondent suggested that consideration should be given to the use of the disused railway near Hartford Golf Club. A further respondent raised concern that the Runcorn Golf Course will be closed due to the proposed development.
- 5.3.48 Members of the public requested clarification on the purpose of the two pipelines running southwards from the West Corridor along Lower Rake Lane and Straight Length in Frodsham (off Godscroft Lane/ Hatley Lane).
- 5.3.49 A respondent requested further information about the proposals in the area of Bartington Flood Plains and the River Weaver. Another member of the public raised concern that the area close to Whitley is frequently wet and liable to flooding. They commented that the construction access to land near Whitley is not suitable for heavy machinery as the roads are small, and the canal bridge has a weight limit.
- 5.3.50 A member of the public suggested that the proposed pipeline route should follow existing infrastructure such as the M56 and avoid key roads and commuter corridors. They recommended that the route of the proposed pipeline should avoid areas of environmental value and said that further information was required in order to provide comments on the West Corridor.

- 5.3.51 A respondent said that no additional pipelines should be located within their property due to drainage issues, land value reduction and blight which cannot be compensated. Another member of the public requested clarification on the siting of storage facilities.

DCO and Wider Planning Issues

DCO programme

- 5.3.52 A member of the public suggested that proposals should not be considered until all safety concerns are understood and planned for.

Local planning policies

- 5.3.53 A member of the public suggested that the Project proposals contradict local authority plans to improve the local area.

Environment

Assessments approach

- 5.3.54 A member of the public queried whether any wildlife studies had been carried out during the development of the proposals.

Agricultural land

- 5.3.55 A member of the public identified that much of the area covered by the Central Hub search area is agricultural land and expressed concern that this would be lost due to the development of the Central Hub.

Air Quality

- 5.3.56 Members of the public raised concerns that the burning of hydrogen produces higher levels of nitrogen dioxide than methane and that the replacement of natural gas with hydrogen only decreases emissions slightly due to it having a much lower calorific value, thereby requiring more hydrogen to be burned to achieve the same level of heating. A further respondent expressed concern about the cumulative impact of the Project, HS2 and the planned Tata incinerator on local air quality in Northwich.

Conservation Areas etc

- 5.3.57 A member of the public identified Great Budworth as being situated within a Conservation Area.

Green Belt and Green Spaces

- 5.3.58 Members of the public identified the local area as being of rural nature and raised concerns that the route of the pipelines would result in adverse impacts or loss of green belt land in Cheshire.

Habitats

- 5.3.59 Members of the public raised concerns about the impact of the Central Hub on ancient hedgerows and of the Project generally on species, including those protected by the Wildlife and Countryside Act 1981, and habitats such as Crow Holt Wood between the M56 and the proposed Central Hub. Others queried whether any trees would be removed for the pipeline route and HAGIs and how major ecological habitats near the River Weaver and Trent and Mersey Canal would be protected during and after construction. A member of the public highlighted that numerous trees in Great Budworth are subject to Tree Protection Orders.

Historic environment

- 5.3.60 Members of the public raised concerns about the impact of the Project on the historic environment, including assets such as historic and listed residential properties and churches and conservation areas, in areas such as Lower Whitley and between the M56 and the Central Hub. Another respondent suggested that Dutton Locks is often used by walkers and, due to its origin from the early industrial area, is of historic importance.

Landscape and Visual impacts

- 5.3.61 A member of the public considered there to be few areas with views like Dutton Hall Court and expressed concern about the industrialisation of the area as a result of the Project.

Mitigation measures

- 5.3.62 Members of the public queried whether measures would be put in place to mitigate impacts or increase biodiversity as part of the Project's social responsibilities, including the enhancement of biodiversity following the construction of the pipeline. A member of the public suggested that measures should be put in place to restore the environment following the construction of the Project, including the creation of additional habitats to offset adverse impacts.

Noise

- 5.3.63 Members of the public raised concerns about the potential for noise pollution from the Project and the proposed Central Hub, suggesting that it would adversely affect local wildlife and residents, and that it in combination with HS2 and the Tata incinerator would lead to unacceptable noise levels in Northwich.

Wildlife

- 5.3.64 A member of the public raised concern about the potential unavoidable impact to wildlife as a result of the Project. Another member of the public raised similar concern, specifically about the impact of the Central Hub on local biodiversity and nature conservation. They were especially concerned by the protection of native species.

5.3.65 Another respondent requested more information about both the short and long term impact on biodiversity around the Merseyside.

General

Government policies/targets

5.3.66 A member of the public suggested that the use of hydrogen will be important to meeting climate change goals.

Need Case

5.3.67 A member of the public raised concern that the proposed development will prolong the use of fossil fuels.

General objection

5.3.68 Some members of the public expressed general objection to the Project, often made without providing further information. Other objections to Project that did provide justifications for their objections included:

- that no route is acceptable as the pipe should not go ahead;
- that there is no need or desire for additional pipelines;
- concerns that the Project would become a danger to life if damaged;
- the development of the Project over a large area of the Cheshire countryside;
- that there is enough industrialisation in the area, and further industrialisation brought about by the Project is not needed or desired; and,
- concerns about the behaviour of Cadent staff on other work sites.

5.3.69 A member of the public objected to the Project due to the potential impact it may have on the local environment and considered that the Project would generate large amounts of pollution. A further respondent objected specifically to the route corridor between the M56 and the Central Hub due to the potential effects on wildlife and habitats, historic environment, tourism, and agriculture.

General support

5.3.70 Some members of the public expressed general support for the principle of the proposed location. One respondent was in support of measures to create a better climate, whilst another welcomed the use of hydrogen to make natural gas less carbon intensive.

5.3.71 A member of the public was pleased to see an innovative and low carbon energy solution being developed in the North West region.

Route location

1.1.1 Members of the public suggested that the Project should make use of existing pipelines and high-pressure gas mains, querying if they can be upgraded for use.

Some respondents requested the Project considers additional connections to residential areas which are currently not on existing gas mains, such as Little Leigh, Whitley, and Dutton.

- 5.3.72 A member of the public raised concern about the proximity of the Project to existing pipelines and requested clarification on the proposed pipeline route. Another respondent raised concern about the proposed development and residential developments currently under construction.

Health and Safety

Fire risk

- 5.3.73 A member of the public expressed concern about the impact of hydrogen on increased fire risk and safety impacts. They were particularly concerned by the flammability of hydrogen. Another considered the fire risk of the Project to be particularly high as hydrogen burns with an invisible flame.
- 5.3.74 Members of the public queried whether the Project plans to train local fire brigades to fight potential fires arising from the Project.

Leak risk

- 5.3.75 Members of the public raised concern about the effects of hydrogen on steel causing risk of leaks from pipes or seals. Another respondent was concerned that the safety risk of hydrogen leakage is higher as it is difficult to odourise. They considered the safety risk to be higher than that of methane.
- 5.3.76 A member of the public requested clarification on measures taken by the Project to ensure that there will be no leaks within the pipe. They also requested clarification on the plans in place to mitigate fire risk and pollution in the event of a pipeline risk. Another respondent similarly suggested that a cordon sanitaire may be required in the event of a leak.

Major incidents

- 5.3.77 Members of the public were concerned by the effects on local areas due to a potential hydrogen leak and subsequent explosion. One respondent was specifically concerned about the risk of hydrogen explosions near to built up areas.
- 5.3.78 A respondent was concerned that the Project would be a target for terrorist activities, and requested clarification on the plans in place in the event the pipeline is targeted in a terrorist attack.

Monitoring

- 5.3.79 A member of the public requested clarification on whether systems will be installed in residential properties to monitor for hydrogen gas leaks.

Operational safety

- 5.3.80 Members of the public requested more information about the approaches being applied to prevent major accidents and incidents during operation. One considered there to be significant risks of hydrogen explosions near to built up areas, whilst another was concerned by the risk of transportation.

Risk to existing infrastructure

- 5.3.81 Multiple members of the public were concerned about impacts to existing pipelines. One was particularly concerned by pipelines in Comberbach and said they were likely to be subject to additional scrutiny under COMAH. Another was concerned as a pipeline runs through their field, and considered there to be a risk of explosion.

Residential properties

- 5.3.82 A member of the public requested clarification on measures to offset or reduce pollution increases in residential properties when blended gas is burned.

Safety standards

- 5.3.83 A member of the public suggested that assurances should be made to ensure that the design, construction and supply of the pipeline system will be of the highest safety standards before works commence.
- 5.3.84 Another respondent requested that the Project should provide additional safety measures, suggesting that the Project approaches an ICP to develop a certification or verification scheme.

Hydrogen technology

Blue hydrogen

- 5.3.85 A member of the public said they were concerned that Blue Hydrogen is more polluting than natural gas. Another respondent expressed concern that the development and supply of Blue Hydrogen will still create substantial carbon dioxide emissions.

Residential use

- 5.3.86 A member of the public was interested to understand the practical impact of switching to the use of hydrogen and requested clarification on whether existing gas boilers in residential properties will work or whether new equipment will be required. Another respondent requested clarification on the plans to replace residential pipework and equipment to enable the supply of blended Hydrogen.

Storage

- 5.3.87 A member of the public requested more information on the approach to hydrogen storage, specifically requesting information on the technological approach to

create new storage. Another respondent requested clarification on why Cadent need to move and store pure Hydrogen, rather than blend with natural gas.

Source of hydrogen

- 5.3.88 A member of the public requested clarification on how Hydrogen will be created. Another queried whether the Hydrogen will be sourced from methane or by hydrolysis (Green Hydrogen). Another said they were concerned that Hydrogen used by the Project will be high emission grey hydrogen derived from natural gas rather than Green Hydrogen produced by hydrolysis.
- 5.3.89 A further respondent raised concern about the use of fossil fuels in the production of hydrogen supplied for the Project and requested clarification on whether the Project proposes to use fracked gas as a source of Hydrogen.

Water usage

- 5.3.90 A member of the public requested clarification on where the water used to generate Green Hydrogen would be sourced from. They also requested clarification on how waste products from the desalination process would be handled, specifically if sea water is used.

Information request

Central Hub

- 5.3.91 A member of the public requested information on the size of the Central Hub area, querying whether the buildings and installations would be larger than a normal Above Ground Installation. They also queried whether the Hub would have additional buildings, the size these would likely be and whether there would be 24-hour lighting at the Central Hub.
- 5.3.1 The same respondent requested information on the expected volume and frequency of traffic at the Central Hub and queried whether there would be traffic movements serving the Central Hub at night. They also requested information on how many road entrances would be required to serve the Central Hub.

Construction matters

- 5.3.2 A member of the public requested information on the construction timescale for the Central Hub. Another requested information on when information relating to construction methods and corridors will be made available to the public.

Pipeline design

- 5.3.3 A member of the public requested information on the diameter of the proposed pipeline.

Property impacts

- 5.3.4 Members of the public requested information on the potential impacts on land and property as a result of the proposed pipeline route. One member of the public

specifically requested information on whether the proposals will impact property and land in Bartington.

- 5.3.5 A respondent requested information on the measures proposed to prevent light pollution from the Central Hub impacting neighbouring residential properties.

Pipeline routeing

- 5.3.6 Members of the public requested information on when the pipeline routes will be established and made public. A respondent specifically requested information on how the route is affected by the proposed HS2 route.

Operations

Hydrogen blending

- 5.3.7 A member of the public raised concern about the use of hydrogen when blended with natural gas and requested clarification on what would happen should no hydrogen be available for blending. They also requested clarification on what happens when blending restarts, and whether the customer is required to take any actions.
- 5.3.8 A respondent requested clarification from Cadent on how they will assure that the gas network is suitable for accepting blended Hydrogen. Another queried whether the existing gas pipe network is suitable to use for blended hydrogen and were concerned that blending hydrogen into the existing gas pipe network will cause embrittlement.
- 5.3.9 A member of the public suggested that blended hydrogen could meet the heating requirements of chemical and glass industries. Another respondent expressed concern that the supply of blended hydrogen into the gas network will require the transport of the gas blend to be at a higher pressure to maintain the same calorific value. A further member of the public raised concern that the use of blended hydrogen will extend the use of highly polluting gas.

Property connections

- 5.3.10 Members of the public suggested that residential properties should be connected to the proposed pipeline for residential energy use, as many do not currently have a gas supply. Another expressed similar views and suggested that the Project should include connections to local residential centres.

Property and Compensation

Compulsory purchase

- 5.3.11 A member of the public requested clarification on whether residential properties would be compulsory purchased as part of the Project.

Property impacts

- 5.3.12 Members of the public raised concern about the impact the Project may have on residential properties. Another objected to the installation of the proposed pipeline in privately owned laned. A further respondent raised concerns that they had not been contacted, as they consider their property within the East Corridor will be impacted by the Project.

Land access

- 5.3.13 A member of the public requested written confirmation that survey access is no longer required on their residential property.

Socio-economic

Benefits

- 5.3.14 A member of the public suggested that assurances should be given that the Project will provide improved green energy benefits.

Business opportunities/impacts

- 5.3.15 A respondent raised concerns that local businesses in Whitley rely on tourists and were concerned that the Project will have a detrimental impact on visitor numbers.

Community impacts

- 5.3.16 A member of the public expressed concerns that there are no benefits to the local area of Whitley as a result of the Project. Another suggested that disruption expected at Whitley should be offset with tangible benefits.

Energy market

- 5.3.17 A member of the public requested clarification on the impact on electricity prices and supply as a result of the Project using renewable energy. They also suggested that assurances should be given that the Project will result in significant cost savings for consumers.
- 5.3.18 Another member of the public requested clarification on whether the construction of the Project would impact gas supply prices.

Traffic and Transport

Local highways

- 5.3.19 A member of the public raised concern that the A56 is a busy road, which frequently becomes congested when the M56 is closed. They also said that the A56/ Godscroft Lane junction is a particularly busy part of the A56.
- 5.3.20 A respondent suggested that a new cycle lane is being constructed along the A56 between Helsby and Frodham, which is likely to be used by pupils attending the local high school.

5.3.21 A member of the public requested clarification on how the Project will interface with the Warrington Western Link project. Another raised concern about the increasing industrialisation and cumulative impact of the proposed development and Tata incinerator on local traffic on the wider Northwich area.

5.3.22 A respondent raised concern that the Project will impact routes required in the event of an emergency.

5.4 Other Consultees

5.4.1 A total of eight other consultees provided comments to the consultation, which fell into the following topics within the coding framework:

- Above Ground Installations;
- Central Hub;
- Consultation;
- Construction;
- Corridor East (Partington to the Central Hub);
- Corridor South (Central Hub to Hydrogen Storage Facility);
- Corridor West (Stanlow to the Central Hub);
- Environment;
- General; and,
- Health and Safety.

5.4.2 Where comments were not provided by prescribed consultees for topics within the coding framework these headings are not shown.

Above Ground Installations

Location

5.4.3 Cheshire Wildlife Trust objected to the siting of the Rocksavage and Runcorn HAGIs as it considered that the important ecological features in the search areas would be difficult to avoid. It also suggested that the siting of the HAGIs at Higher Walton, St Helens, Clock Face and Burtonwood, Partington and the Central Hub avoid the important ecological features located in their respective search areas.

5.4.4 The National Trust identified that two of the HAGI search areas were in close proximity to their land interests and considered that the size of the likely sites and the high security fencing would adversely impact tenants and recreational users of its land. It suggested that the siting of the HAGIs be informed by a detailed assessment of potential heritage impacts, including the Dunham Woodhouse Conservation close to the Warburton HAGI.

Central Hub

Site location

- 5.4.5 Marbury Ward Councillors raised concern about the location of the Central Hub on Dutton farmland, which they highlighted as containing many trees, being in close proximity to residential properties, and accessed down narrow lanes. They commented that this siting would cause disturbances and ongoing access issues in the local area. They suggested that other open fields in the area, such as those close to the A533 and A49 crossroads, were more suitable for the Central Hub with better access.

Visual impact

- 5.4.6 Marbury Ward Councillors requested reassurance that the fencing for the Central Hub be screened with shallow rooted hedging and other screening plants to minimise adverse visual impacts.

Consultation

Consultation other

- 1.1.2 Cheshire Wildlife Trust suggested that the Project team contact environmental and community organisations such as the RSPB, CPRE and the Cheshire and Wirral Ornithological Society.
- 1.1.3 The Woodland Trust also proposed that it meet with the project team before the next stage of consultation to discuss the proposals in more detail.

Construction

Construction approach

- 5.4.7 Cheshire Wildlife Trust advised that carbon-rich storing habitats be avoided during construction of the pipeline to avoid disturbing the habitats and causing the emission of greenhouse gases.
- 5.4.8 Marbury Ward Councillors queried whether consideration had been given to lay fibre broadband cables in the same trenches as the pipeline in areas of poor broadband connection.

Construction traffic

- 5.4.9 The National Trust advised that their Dunham Massey estate is a major tourist destination as well as a place of work for tenants, staff, and volunteers, and suggested that disruption to travel routes to the estate during construction works should be minimised.

Construction impacts

- 5.4.10 Marbury Ward Councillors raised concern that the construction of the Project would cause significant disruption to local residents and the surrounding area. It said that it was unclear what measures would be put in place to mitigate potential localised flooding as a result of construction activities.
- 5.4.11 The Woodland Trust expressed concern that the proposed pipeline could potentially impact local ancient woodland, including loss of woodland to facilitate construction, noise and dust pollution on woodlands, and indirect impacts from working in close proximity.

Construction noise

- 5.4.12 British Horse Society recommended that sudden movement or machinery noises be avoided when horses are in range, and that operators must be able to shut off machinery or stop movement while horses pass and only resume once they are at least twenty metres past.

Public rights of way

- 5.4.13 British Horse Society advised that access to public rights of way must be kept unrestricted during the construction period, and that routes must be kept free of obstruction, debris, and trip hazards for the full width. It suggested that the surfaces of equestrian routes be maintained at least four metres wide to ensure their suitability for passing horses and riders, including their protection from poaching and damage from construction traffic and the cutting of vegetation where necessary to ensure use. It also commented that overhead hazards such as branches, cables and derricks should provide at least 3.7 metres clearance in case a horse becomes frightened and jumps.
- 5.4.14 It advised that temporary fencing alongside equestrian routes must be secured taut to ensure it does not flap in the wind and suggested that Heras fencing not be used unless it can be secured and remain taut.

Corridor East (Partington to the Central Hub)

Route location

- 5.4.15 The National Trust expressed concerns about the proximity of the East Corridor to its registered parkland and house at Dunham Massey, including that the Project could have potential impacts on the setting of numerous designated heritage assets on the estate. It raised concerns about the cumulative impact of the Project and other nearby developments, such as HS2, on Dunham Massey, its heritage assets and setting.
- 5.4.16 It also advised that the landform along the East Corridor is low-lying with sparse cover, containing a National Character Area and several local landscape types, and raised concerns about the siting of HAGIs and associated infrastructure in this relatively flat landscape.

Corridor South (Central Hub to Hydrogen Storage Facility)

Northwich spur

- 5.4.17 Cheshire Wildlife Trust expressed support for spur three on the basis that detailed routeing would avoid all identified important ecological features and that it contains the least number of features of the proposed spur options. It objected to spurs two and four due to the location of wildlife sites, ancient woodland and Sites of Special Scientific Interest unless it can be demonstrated that these features would not be directly impacted.
- 5.4.18 It advised that spur one contains important ecological features such as Beach Hill Wood ancient woodland and Barnton Cut Wood local wildlife site, as well as a significant area of open mosaic habitat. It suggested that spurs one and three could be routed to avoid impacting on nearby important ecological features.

Route location

- 5.4.19 A councillor from Cheshire West and Chester Council advised that there are a number of salt mines in the area of the South Corridor and that HS2 is planned to run to the east of Bostock. They also wished to understand more about the proposed pipeline, including how it would be constructed, through Moulton and Bostock Green.
- 5.4.20 Cheshire Wildlife Trust expressed its support for route Option B, though identified that it contains and is adjacent to a significant number of important ecological features. It suggested however that it could be routed between Mill Wood and the Mill Bottoms and Peover Eye local wildlife sites to avoid directly impacting these features.
- 5.4.21 The Trust identified that Option A contains fewer identified ecological features and no designated sites of international or national importance, though raised concern that the route crosses several watercourses which could be significantly affected. It suggested that detailed routeing could avoid local wildlife sites, areas of ancient woodland, peatlands and priority habitats within its route corridor. It further advised that there are a significant number of important ecological features located in both route options and the associated spurs, suggesting that there are significant risks with both route corridors.
- 5.4.22 Marbury Ward Councillors advised that land between the Trent and Mersey Canal and the A533 contains ancient woodland and that land below the Canal through Dutton is unstable, steep, and sandy. They also commented that the Trent and Mersey lacks a regular maintenance programme and is known to continually leak, therefore recommending that the pipeline be routed to the north of the Canal due to its fragility.
- 5.4.23 They commented areas close to the River Weaver are prone to flooding and recommended that the pipeline be routed north of the River to avoid potential impacts. They also queried what mitigation measures are being considered if the pipeline is to be routed to the south of the river.

Corridor West (Stanlow to the Central Hub)

Route location

- 5.4.24 Marbury Ward Councillors suggested that the land south of the A533 contains many undulations and dips such as Dutton Hollows, which may cause access issues.

Environment

Assessments approach

- 5.4.25 Cheshire Wildlife Trust recommended that the Habitats Regulation Assessment (HRA) consider the effects of other large infrastructure projects and local plan allocations near the Mersey Estuary, as well as other components and future stages of the wider HyNet project. It advised that the HRA assess whether any land in the application site is deemed functionally linked to an internationally designated site for nature conservation.
- 5.4.26 The Trust welcomed the inclusion of a climate section in the EIA though disagreed with the scoping out of greenhouse gas emissions associated with land use change due to it not being applicable. It highlighted that carbon storing habitats, such as peatlands woodlands and saltmarsh, are in the scoping area and that any disturbance could cause them to emit a significant amount of greenhouse gases, potentially over a long period. As a result, it advised that greenhouse gases associated with land use change therefore be scoped into the EIA on this basis.
- 5.4.27 The Trust welcomed the ecological and geographical scope proposed in the EIA Scoping Report, though disagreed with the scoping out of all breeding bird species not listed in Schedule 1 of the Wildlife and Countryside Act. It identified that many species of these non-Schedule 1 breeding birds known to breed in Cheshire are of local and international importance and advised that they be scoped into the breeding bird surveys to ensure the consideration of all breeding birds of conservation concern.
- 5.4.28 It disagreed with the proposal to scope out reptiles from assessment in the EIA, noting that they are rare in Cheshire and that any sites known to support them or reptile assemblages should therefore be considered locally important. As a result, it recommended that reptiles be scoped into the EIA at any sites or locations known to support reptile assemblages or reptile-supporting habitats.
- 5.4.29 It welcomed the identification and avoidance of statutory designated features in the EIA Scoping Report and recommended the use of the UK Habitat Classification Survey over the Phase 1 Habitat Survey methodology for habitat surveys to avoid the need for the time-consuming conversion of data to the Defra BNG Metric 3.0.
- 5.4.30 The Woodland Trust identified that there are numerous notable trees, that are likely to develop veteran features, recorded on the Ancient Tree Inventory within the corridor boundary. It requested that they be identified, retained, and given suitable route protection areas in line with Natural England and Forestry Commission advice to ensure their longevity and protection. It also advised that

surveys detailing woodland flora and fauna be undertaken alongside an assessment of historic mapping to ensure impacts to irreplaceable habitats are considered and mitigated against.

Habitats

- 5.4.31 Cheshire Wildlife Trust advised that the Project should provide a measurable biodiversity net gain in line with the requirements set out in the NPPF paragraphs 174d, 179b and 180d and the Environment Act 2021, and that it be delivered as part of project specific environmental commitments.
- 5.4.32 It recommended that Natural England's Biodiversity Metric 3.0 be used to measure biodiversity gains and losses and that the location of deep peat deposits be identified using the Natural England spatial dataset within their NE257 report. It requested that ancient woodland, deep peat deposits and saltmarsh be excluded from the scoping boundary in the interests of nature conservation and climate change.
- 5.4.33 It identified that there are several local authority ecological networks and wildlife corridors located in the route corridors and search areas, and that while it may not be feasible to avoid them altogether, they are unlikely to be impacted if important ecological features are avoided during detailed routing.
- 5.4.34 The Woodland Trust raised concerns that the Project would result in adverse impacts or the loss of ancient woodlands, veteran trees and Woodland Trust sites in or near the route corridors, including the permanent fragmentation of ancient woodlands due to the removal of adjacent semi-natural habitats like hedgerows and trees. It also recommended that any non-ancient woodlands affected by the Project be reviewed to ensure any areas of unmapped ancient woodland are accounted for.

Historic environment

- 5.4.35 The National Trust suggested that any assessment of the historic environment should include consideration of construction impacts, including from the pipeline route itself, and indirect impacts that may alter the appreciation of the significance of heritage assets at Dunham Massey.

Mitigation measures

- 5.4.36 British Horse Society suggested that the impact of noise on horses can be reduced using acoustic barriers, such as vegetation and buildings, and that unavoidable noises near horses should be mitigated through the range of sound and use of acoustic barriers where possible.
- 5.4.37 Cheshire Wildlife Trust recommended that development close to ecological features incorporates substantial measures to mitigate impacts on biodiversity while enhancing overall condition and achieving biodiversity net gain.
- 5.4.38 It suggested that the design of environmental elements of the Project consider ecological and green infrastructure networks outlined in the following local plan policies:

- Policy ENV1 Ecological Network in the Cheshire East Allocations and Development Policies 2020;
- Policy DM44 Ecological Network in the Cheshire West and Chester Land Allocations and Detailed Policies 2019;
- The Greater Manchester pilot Local Nature Recovery Strategy;
- Policy JP-G2 Green Infrastructure Network in the Greater Manchester proposed Places for Everyone 2021 plan;
- Policy DC4 Ecological Network in the Warrington Proposed Local Plan 2021-2038; and,
- Policies HE1 Natural Environment and Conservation and HE4 Green Infrastructure in the Halton Proposed Deliver and Allocations Local Plan 2019.

5.4.39 It advised that any further Local Nature Recovery Strategies or the National Nature Recovery Network published during the development of the Project be prioritised over the above policies. It also commented that targeting buffer zones and restoration areas within ecological networks for the delivery of mitigation and enhancement measures provides benefits for local biodiversity.

5.4.40 The Woodland Trust advised that the Project should ensure suitable buffer zones are provided to all areas of ancient woodland and Woodland Trust-owned sites to prevent adverse impacts and avoid root damage. It highlighted standing advice from Natural England and the Forestry Commission that states that a buffer zone of at least 15 metres from the boundary of the woodland is needed to avoid root damage. It also suggested that mitigation measures be considered to alleviate the impacts of detrimental edge effects on the characteristics of ancient woodland.

Noise

5.4.41 British Horse Society advised that noise-generating activities should be avoided close to equestrian routes and bridleways where possible and that works should assume that noise is likely to distress horses that are not used to such noises.

Wildlife

5.4.42 Cheshire Wildlife Trust requested that all local wildlife trusts are excluded from the scoping boundary, in the interest of nature conservation

General

General support

5.4.43 Marbury Ward Councillors were supportive of the pipeline in principle and the need for accessing new types of fuel.

Route location

5.4.44 Cheshire Wildlife Trust suggested that the pipeline route should avoid Cheshire Wildlife Trust reserves, irreplaceable habitats and peatlands, priority and notable

habitats, ecological networks and wildlife corridors, and statutory and non-statutory designated sites for nature conservation. The Trust advised that there are three Cheshire Wildlife Trust reserves, 10 peatland sites, 36 ancient woodland sites, 65 potential Local Wildlife Sites 86 non-statutory designated sites, and 1,368 parcels of priority and notable habitats within the route corridors which should be avoided.

Health and Safety

Construction safety

- 5.4.45 British Horse Society suggested that all construction workers and visitors should be made aware of equestrian routes and areas affected by the construction site, and requested that the Health and Safety specification and briefing should include a section covering the use of routes and areas used by equestrians. It suggested that warning notices be displayed in advance of the site, outlining the hazards for equestrians, site workers and visitors.
- 5.4.46 The Society suggested that staff should be on site to warn approaching equestrians of machinery noise or movements if activities are unable to be halted while horses pass. It suggested that a banksman should be fully briefed about the possibility of horses in the area and necessary actions taken to ensure safety of horse and rider or others in the vicinity. It also suggested that site staff warning equestrians of noise activities should be stationed in the open rather than behind equipment or objects, in order to avoid spooking horses.
- 5.4.47 The Society suggested that construction movements and noises should cease in the event of a horse being distressed to avoid escalating the situation. It suggested that activities should only resume once the equestrian indicates it is safe to do so, or is out of sight, or over 100 metres away. It also suggested that the Project should avoid using loose polyethene packaging and materials which may blow in the wind.

Operational safety

- 5.4.48 British Horse Society suggested that all operational workers and visitors should be made aware of equestrian routes and areas affected by the site.

6. Late Responses Received

This section outlines the feedback received to the consultation following the deadline for receipt of responses.

6.1 Prescribed Consultees

6.1.1 One prescribed consultee provided comments to the consultation, which were grouped into the following topics within the coding framework:

- Consultation;
- Construction; and,
- Corridor South (Central Hub to Hydrogen Storage Facility).

6.1.2 Where comments were not provided by prescribed consultees for topics within the coding framework these headings are not shown.

Consultation

Consultation approach

6.1.3 Lower Peover Parish Council highlighted the need to consult with existing businesses on the proposals.

Construction

Construction impacts

6.1.4 Lower Peover Parish Council expressed concerns about the potential for disruption during the construction phase of the project.

Corridor South (Central Hub to Hydrogen Storage Facility)

Route location

6.1.5 Lower Peover Parish Council raised concern about the proximity of the South Corridor route to the proposed route for the HS2 rail line and an existing oil storage facility.

7. Response to Feedback Received

This section outlines Cadent Gas' response to issues raised in the consultation.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Above Ground Installations					
Suggestion that further information should be provided on how the Above Ground Installations search areas have been identified			✓		Information on how the HAGI search areas have been identified is provided within the Route Corridor Report which was published as part of the non-statutory consultation exercise. Further details on how HAGI's have been sited and designed will be provided with an updated Route Corridor Report in the statutory consultation exercise.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the location, size and effects on local areas of AGI's			✓		The HAGIs will be sited and designed to minimise impacts on local communities as far as possible. Further details on the impacts which may be experienced by local communities and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Concern about the impact of constructing Above Ground Installations on residents in Dutton	✓				See response above.
Concern about the siting of above ground installations in the North corridor and a request for a more detailed study of the potential local impacts near Warburton and Partington				✓	See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the locations of the above ground installations and request for greater involvement in the siting of above ground installations				✓	Direct discussions have already taken place with the Friends of Carrington Moss and their involvement will be able to continue through both direct discussions and statutory consultation representations.
Suggestion for the minimisation of the visual impact of the Above Ground Installations on the Weaver Navigation and local waterways	✓				Further details on the visual impacts of the HAGIs and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation. A section has been added to the Project website to provide a better understanding of the look and use of the HAGIs.
Suggestion for the minimisation of the visual impact of the Above Ground Installations on the Weaver Navigation and local waterways	✓				See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that the Above Ground Installations be designed to blend in with the surrounding countryside			✓		See response above.
Request for clarification on measures to mitigate the visual impact of above ground installations			✓		See response above.
Concern that mitigation will not be able to hide the visual impact of the Above Ground Installation			✓		See response above.
Suggestion that Above Ground Installations be hidden by landscaping to mitigate visual and noise impacts			✓		Further details on the visual and noise impacts of the HAGIs and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that the location of Above Ground Installations should be sited in a way which causes as little impact to land as possible		✓	✓		The HAGIs will be sited and designed to minimise impacts on local communities and land as far as possible taking into account

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					the connecting pipelines. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Concern about the siting of above ground installations on green belt land				✓	The HAGIs will be sited and designed to minimise impacts on the green belt as far as possible taking account of the connecting pipelines. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Concern that two HAGI search areas are in close proximity to National Trust land and property interests				✓	The HAGIs will be sited and designed to minimise impacts on sensitive features of National Trust land as far as possible. Further details on the impacts

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
HAGI sites should be sited to cause minimal impact to the environment	✓				The HAGIs will be sited and designed to minimise impacts on the environment as far as possible taking account of the connecting pipelines. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
HAGI sites should not negatively impact on Biodiversity particularly by engrossing into the greenbelt where brownfield development is available	✓				When siting the HAGIs consideration is being given to the use of brownfield land in relation to the connecting pipeline routes wherever possible. Further details of proposed locations for the HAGIs, how they have been

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					identified and how any impacts which may result can be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that the siting of the Clock Face and Burtonwood HAGIs avoid the three important ecological features in the search area				✓	The Project to date has removed the need for the Burtonwood HAGI. The Clock Face HAGI will be sited and designed to minimise impacts on the environment as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that the siting of the Central Hub HAGI avoids the four important ecological features located in the search area				✓	The HAGIs will be sited and designed to minimise impacts on the environment as far as possible. Further details on the impacts which may result and

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Objection to the siting of the Rocksavage HAGI due to the location of at least seven important ecological features in the search area which will be hard to avoid				✓	See response above.
Suggestion that the siting of the Higher Walton HAGI avoids the 11 important ecological features in the search area				✓	See response above.
Suggestion that the siting of the Partington HAGI avoids the three important ecological features in the search area				✓	See response above.
Objection to the siting of the Runcorn HAGI due to the location of at least eight important				✓	See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
ecological features in the search area which will be hard to avoid					
Suggestion that the siting of the St Helens HAGIs avoid the three important ecological features located in the search area				✓	See response above.
The siting of any above ground elements should be informed by a detailed assessment of heritage impacts including the Dunham Woodhouse Conservation Area which lies within 500m of the Warburton HAGI search area				✓	The HAGIs will be sited and designed to minimise impacts on heritage assets as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Request for the siting of above ground installation on the Carrington Industrial Area as a brownfield site and to minimise effects of pipeline groundwork in the countryside		✓			The siting of HAGIs is considering the use of brownfield land wherever possible taking account of the connecting pipelines. Further details of proposed locations for the HAGIs,

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					how they have been identified and how any impacts which may result can be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that one or more HAGI should be located in the Mersey Gateway development area from Widnes to Ditton	✓				The proposed pipeline route and HAGI locations are being proposed to link to customers which have confirmed they wish to take hydrogen from the 'Phase 2' stage of the HyNet project. Phase 3 will be a future phase which allows expansion of the hydrogen network to other areas. Any required HAGIs or pipeline extensions for additional connections will be considered as appropriate at the later phase.
Request for one or more HAGI in Runcorn East, close to the	✓				The proposed HAGI locations are being proposed to link to

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Daresbury Science Park and towards Sandymoor					customers which have confirmed they wish to take hydrogen from the 'Phase 2' stage of the HyNet project. Phase 3 will be a future phase which allows expansion of the hydrogen network to other areas. Any required HAGIs or pipeline extensions will be considered as appropriate at the later phase.
Concern about the siting of the proposed Above Ground Installation in Northwich close to the HS2 route			✓		The Project design will identify all transport and utility infrastructure which the HyNet hydrogen pipeline could interact with. The design of any separation distances where the proposed pipeline runs parallel with, or crosses, any other infrastructure will follow all applicable UK regulations, standards and codes of practices.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that the AGI will devalue properties in Whitley			✓		The effect on the value on properties is not a matter which can be considered by the DCO application process, however the HAGIs will be sited and designed to minimise impacts on local communities as far as possible. Further details on the impacts which may be experienced by local communities and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Request for more information about why there are two proposed AGIs in St Helens			✓		HAGIs have been proposed in locations where they can service the identified customers for the Phase 2 stage of the HyNet project. The customers in St Helens are located so that two HAGIs are required.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Support for at least one HAGI between St Helens and the Central Central Hub	✓				Noted. The current proposals are two HAGIS within this area.
Support for at least one HAGI between Stanlow Hydrogen Production Plant and the Central Hub	✓				Noted. The current proposals are for at least one HAGI within this area.
Suggestion that the siting of Above Ground Installations avoid the existing SABIC ethylene pipeline due to safety risks			✓		The Project design will identify all transport and utility infrastructure which the HyNet hydrogen pipeline could interact with. The design of any separation distances where the proposed pipeline runs parallel with, or crosses, any other infrastructure will follow all applicable UK regulations, standards and codes of practices.

Alternatives

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that project funding would be better spent replacing customers' gas boilers and cooking facilities with less polluting alternatives			✓		<p>The Project is primarily focused on decarbonising multiple industrial customers and power generators across the North West, which will help reach UK climate goals. The potential future use of blending points will also allow hydrogen to be blended with natural gas and supplied into the wider pipeline network. This could play a role in reducing carbon emissions from home heating and cooking without the need for new equipment.</p> <p>Any programme of gas boiler or cooking facility replacement will be the responsibility of government policy. The Applicant is involved in a number of projects, including HyDeploy and the Hydrogen Village, that are aiming to further demonstrate</p>

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
				<p>how hydrogen could be used in homes.</p> <p>Further details of these projects are provided on the following websites: https://hydeploy.co.uk/ and https://hydrogenvillage.com/</p>
Suggestion that project funding would be better spent on insulating customers' properties			✓	<p>Cadent (the Applicant) is the UK's largest gas distribution network, managing a network of pipelines that transport gas to 11 million customers.</p> <p>While the Applicant supports wider policies that help the UK achieve its net zero goals, responsibility for any insulation policy sits with the government and relevant businesses.</p>
Suggestion that project funding would be better spent on renewable energy schemes			✓	<p>Cadent (the Applicant) is the UK's largest gas distribution network, managing a network of pipelines</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					<p>that transport gas to 11 million customers.</p> <p>While the Applicant supports wider policies that help the UK achieve its net zero goals, responsibility for any wider renewable energy policy sits with the government and relevant businesses.</p>
Suggestion that investments should be used to make progress with renewables such as tidal and wind turbines			✓		See response above
Suggestion that electrification through heat pumps are a better alternative to blended hydrogen for domestic heating			✓		A reduction in carbon emissions associated with residential properties will be achieved through a range of measures rather than a focus on one specific solution. The use of hydrogen is being assessed as part of the UK Government

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
				strategy to realise this reduction, alongside heat pumps and other technologies.
Consideration should be given following the HS2 route to minimise disruption			✓	Following the route of HS2 would provide a similar option to the alternatives considered on the eastern side of the project within Strategic Options B, C and D of the Routeing Study Report published during the non-statutory consultation. Whilst this option may remove disruption from certain other areas, it would not significantly reduce the pipeline route as links will still have to be made to the west, south and north. There is no guarantee that works would be able to be coordinated for the same time period and if they were, working alongside HS2 would provide its own integration challenges and added disruption

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					in these areas. The Project is though engaging with HS2 and looking at opportunities to reduce impact where possible.
Request for confirmation regarding why alternative routes were not considered such as the Manchester Ship Canal		✓			The alternative options that were considered during the Strategic Optioneering phase of the Route Corridor Report are all considered to provide feasible alternatives to the proposed pipeline route. A route that followed the Manchester Ship Canal would require the construction of major hydrogen pipeline within or on the banks of a canal which would present a unacceptable risk to construction safety, shipping safety and it would prove difficult to maintain appropriate proximity distances to canal-side buildings. as such this option is not considered to be a feasible alternative.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that the alternative option involving going under the Mersey would cause less damage			✓		The alternative option to route the pipeline under the Mersey Estuary was discounted on the basis that the Estuary is covered by a range of environmental designations and a complex drilling operation would be required. Further details are provided in the Route Corridor Report published in the consultation exercise.
Central Hub					
Concern about the size of the proposed Central Hub		✓			The ongoing design work for all elements of the Project takes into account the engineering requirements for construction and operations, the environmental and amenity issues which are being identified and the feedback from consultation responses. The design process is working on

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
				finding the most appropriate balance between all relevant matters so that a scheme can be developed that provides the smallest possible sized HAGI and minimises impacts on local communities and the environment.
Suggestion that the Central Hub cannot be sited south of Northwich Road due to the area being an Area of Outstanding Natural Beauty			✓	There are no landscape designations in this area which allocate the land as an 'Area of Outstanding Natural Beauty' or for other types of formal landscape value. The landscape and visual assessment of the area will be considered in the PEIR in order to minimise any potential impacts.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Objection to the siting of the Central Hub to the south of Northwich Road			✓		The objection is noted.
Suggestion that the Central Hub be sited underground or out of view of local residents			✓		It is not possible to site all equipment underground owing to operation and maintenance requirements. The design of the facility will consider the minimum potential impact in terms of size: overall footprint and heights and will be landscaped accordingly to blend into the local environment as far as possible.
Request for more information about the types and sizes of structures that will be required for the Central Hub			✓		The facility's design will consider the minimum potential impact in terms of size: overall footprint and heights and will be landscaped accordingly to blend into the local environment as far as possible. Key HAGI sites like Central Hub are in the 0.5 - 1.5 ha size range with bulk equipment generally no

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					greater than 3m in height. Indicative images of the proposed HAGI sites have been provided and some general information on HAGI's added to our website.
Request for more information in relation to the Central Hub and the required security measures and standards			✓		All HAGI sites will be unmanned facilities with CCTV and intrusion protection. There will be secure perimeter fencing, a small operations and welfare building and site lighting. Lighting will only be used for out of hours working which is not generally expected but may be required in the case of infrequent maintenance overruns and in the case of emergency.
Concern about the impact of the Central Hub on the ancient Dutton Dean woodland			✓		The Central Hub will be sited and designed to minimise impacts on the environment, including the ancient woodland at Dutton Dean as far as possible. Further details

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					on any impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Concern about the proximity of the proposed Central Hub to the historic site of Dutton Hall			✓		The Central Hub will be sited and designed to minimise impacts on heritage assets as far as possible taking into account the adjoining pipelines. Further details on the resultant impacts and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Concern about the siting of the Central Hub close to residential properties in Dutton Hall Court		✓			The Central Hub will be sited and designed to minimise impacts on local communities as far as possible taking into account the connecting pipelines. Further details on the impacts which may be experienced and how these

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that land to the south of the A533 is not suitable for the siting of the Central Hub due to its sloping nature		✓	✓		Existing topography will be taken into account when the preferred site for the HAGI is chosen.
Concern about the fragility of the nearby Trent and Mersey Canal			✓		Canals will be crossed using trenchless methods by tunnelling beneath them to minimise disturbance and will be designed in consultation with the Canals and Rivers Trust.
Concern about the impact of light pollution from the proposed Central Hub on local wildlife and neighbouring residents			✓		The Central Hub will be sited and designed to minimise impacts on local communities and the environment as far as possible. Further details on the impacts

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation. Lighting will only be used for out of hours working which is generally not expected but may be required in the case of infrequent maintenance overruns and in the case of emergency.
Suggestion that the impact of light pollution from the Central Hub are exacerbated by the open rural nature of the local area		✓			See response above.
Request for information on measures to prevent light pollution from the Central Hub impacting neighbouring residential properties			✓		See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the impact of the proposed Central Hub on local road safety and congestion		✓	✓		The capacity of the local road network will be considered within the siting and design of the Central Hub and will continue to be considered as the design of the Project evolves. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Request for clarification on the size of the proposed Central Hub			✓		Further details on the scale of the Central Hub will be provided during the statutory consultation.
Request for clarification on whether the proposed Central Hub would be an already established site such as the HAGI at the King Street gas storage facility			✓		Due to the proposed location of the Central Hub, which has been identified from the strategic route work identified in the non-statutory consultation documents, the option of using an existing facility is not possible. The

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					Central Hub will therefore be a new development.
Concern about the impact of the proposed Central Hub on residential properties in Dutton Hall Court		✓			See response above.
Concern that the siting of the Central Hub close to Dutton Hall Court would adversely impact on the local environment, wildlife, heritage and residents		✓			See response above.
Concern that the visual impact of the Central Hub would deter people from living in the nearby area		✓			See response above.
Concern that siting the Central Hub to the south of the search area would adversely impact on the local landscape due to its elevation above the Weaver Valley		✓			See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the visual impact of the Central Hub on the Weaver Valley		✓			See response above.
Concern about the visual impact of high security fencing around the proposed Central Hub		✓			See response above.
Concern about the impact of site access to the Central Hub on the local area		✓			See response above.
Concern about the impact of the Central Hub in causing disruption to the local area		✓			See response above.
Concern that siting the Central Hub close to residential properties would adversely impact on the quality of life of local residents		✓			See response above.
Concern about the visual impact of site lighting Central Hub on local residents		✓			See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the impact of the Central Hub on quality of life for local residents		✓			See response above.
Suggestion that land to the north of the A533 is suitable for the siting of the Central Hub due to the existence of brownfield land there		✓			The suggestion to site the Central Hub north of the A553 is noted.
Suggestion that there are existing congestion issues at the junction of Northwich Road with Tarporley Road		✓			The ability of the local road network to accommodate operational and construction traffic will be considered when siting the Central Hub and will continue to consider the design of the Project as it evolves. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
The Central Hub should not be located near to Marsh Lane due to limited road infrastructure, proximity to residential properties and being within an area of greenbelt		✓			The Central Hub will be sited and designed to minimise impacts on local communities and the environment as far as possible taking into account the connecting pipelines. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Concern that the siting of the Central Hub on Dutton farmland would cause disturbance to the local area				✓	See response above.
The Central Hub should be located opposite the Whitley Service Area as it provides suitable road infrastructure, has limited residential properties and is in a predominantly industrial area		✓			The area suggested has a number of constraints for routing multiple pipeline corridors to the west, south, east and north. A full assessment of constraints and their potential to influence the

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					siting of the Central Hub is being undertaken and the PEIR will report upon the environmental effects resulting from the location that is chosen.
Request for clarification on the proposed location of the Central Hub			✓		The Central Hub will be proposed within the Central Hub search area identified in the non-statutory consultation documents. Work continues to identify a precise location within the search area and more information will be presented in the statutory consultation documents.
Request for clarification on who will be consulted in the decision making process for the Central Hub			✓		A proposed location and design of the Central Hub will be subject to consultation with the public, the local authority and other interested stakeholders during the statutory consultation exercise. Feedback from that consultation process, as well as

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
				ongoing engineering and environmental work, will confirm the final proposed design for the DCO submission in 2023. The submitted proposals/application will also be subject to consultation when it is being examined by the Planning Inspectorate, with feedback received being used in the final decision on whether to approve it. Ultimately, the decision will be made by the Secretary of State for Business, Energy and Industrial Strategy.
Request for clarification on how the search area for the Central Hub will be narrowed down			✓	The ongoing design work for all elements of the Project takes into account the engineering requirements for construction and operations, the environmental and amenity issues which are being identified and the feedback from consultation responses. The

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					design process is working on finding the most appropriate balance between all relevant matters so that a viable scheme can be developed that minimises impacts on local communities and the environment.
The Central Hub should be sited north of the A533		✓			The suggestion to site the Central Hub north of the A553 is noted. Land is available north of the A553 within the identified area of search for the Central Hub.
Concern that the Central Hub will be sited adjacent to or on land which is liable to flooding		✓			The Central Hub will be sited and designed to take into account both its impact on areas of flood risk and the risk of flooding to the Central Hub itself. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
The Central Hub should be low-rise, well screened and silent in operation	✓			Further details on the visual appearance and operational impacts of the Central Hub will be provided in the statutory consultation documents. The Central Hub will be sited and designed to minimise impacts on local communities and the environment as far as possible. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that the siting of the Central Hub consider the nearby Acton dredging tip	✓			From aerial photography records it appears that the Acton dredging tip is located on land within a bend in the River Weaver to the west of Bartington. This area is outside of Central Hub search area and outside the pipeline corridor of interest. Generally,

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					contaminated land has been identified as a development constraint, and avoided wherever possible.
Concern that the siting of the Central Hub on Dutton farmland would cause ongoing access issues in the local area				✓	Discussions are ongoing with landowners potentially affected to understand any possible issues, such as ongoing access, and to accommodate these as far as possible within the proposed design.
Suggestion that the Central Hub be sited on other open fields such as those closer to the A533 and A49 crossroads to enable better site access				✓	The area suggested has a number of constraints for routing multiple pipeline corridors to the west, south, east and north. A full assessment of constraints and their potential to influence the siting of the Central Hub is being undertaken and the PEIR will report upon the environmental effects resulting from the location that is chosen.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that the Central Hub could be located in the corridor around Runcorn to Warrington where existing COMAH sites and industrial demand sites are already present	✓				The Central Hub needs to connect not just the potential industrial customers of the Runcorn/Warrington areas (and St Helens further north), but also the Hydrogen Production facility at Stanlow, the Hydrogen Storage Facility south of Northwich and other connection points in Northwich and on the eastern corridor. The proposed pipeline configuration and the location of Central Hub search area is considered to provide the best location taking all of these into account.
Request for clarification on the why the Central Hub is not located towards the axis of Stanlow to Manchester and Liverpool	✓				The Central Hub needs to connect not just the Hydrogen Production facility at Stanlow and the potential industrial customers of the Runcorn/Warrington and Manchester areas, but also the

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					Hydrogen Storage Facility south of Northwich and other connection points in Northwich and St Helens. The proposed pipeline configuration and the location of Central Hub search area is considered to provide the best location taking all of these into account.
Concern about the proposed location of the Central Hub due to effects on community			✓		The Central Hub will be sited and designed to minimise impacts on local communities as far as possible taking into account the adjoining pipelines. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Request for pictures of other Hubs to be provided			✓		Further details of the proposed HAGIs will be provided in the statutory consultation documents. The Project has also added an update to the Project website.
Suggestion that land bankings should be used to mitigate the visual impacts of the Central Hub			✓		The Central Hub will be sited and designed to minimise impacts on local communities as far as possible, including from visual impact. Further details on the impacts which may be experienced by local communities and how these could be mitigated (including by potential screening) will be provided in the PEIR which will be subject to statutory consultation.
Request for further information on the methods proposed to shield the Central Hub from view			✓		See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the visual impact of the Central Hub		✓	✓		See response above.
Suggestion that fencing for the Central Hub be screened with shallow rooted hedging and other plants to mitigate adverse visual impacts				✓	See response above.
Request for the parameters of the Central Hub to be kept to a minimum			✓		The ongoing design work for all elements of the Project takes into account the engineering requirements for construction and operations, the environmental and amenity issues which are being identified and the feedback from consultation responses. The design process is working on finding the most appropriate balance between all relevant matters so that the scheme can be developed that provides the smallest possible sized scheme and minimises impacts on local

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					communities and the environment.
Suggestion that a commitment should be made to ensure that there will be no expansion of the Central Hub site			✓		The Central Hub site has been designed to accommodate the Phase 3 development within the proposed Phase 2 footprint and as such it is unlikely that the Phase 3 development will require expanding of the facility.
Concern about the impact of traffic serving the Central Hub on the Weaver Valley and local wildlife.		✓			The impact of traffic on both local communities and the environment will be considered within the siting and design of the Central Hub and will continue to be a consideration as the design of the Project evolves. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the size of the proposed Central Hub		✓			The ongoing design work for all elements of the Project takes into account the engineering requirements for construction and operations, the environmental and amenity issues which are being identified and the feedback from consultation responses. The design process is working on finding the most appropriate balance between all relevant matters so that a scheme can be developed that provides the smallest possible sized HAGI and minimises impacts on local communities and the environment.
Consultation					
Concern that at previous HyNet meetings no information was provided about the North West Hydrogen Pipelines consultation			✓		The Applicant's proposals for the Project are being developed as part of the wider HyNet North West programme/HyNet low

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
				<p>carbon cluster. The HyNet North West programme comprises many different projects. While these projects will operate in partnership with one another, they are being developed separately.</p> <p>The Applicant is aware that consultation on HyNet's CO2 pipeline ran at a similar time. However, the two projects are distinct. The Applicant is therefore unable to comment on the approach taken to consultations for other projects.</p> <p>However, this comment will be taken into consideration for future stages of consultation, noting that it could be useful to provide more information about the wider HyNet North West scheme.</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that Cadent did not know which Parish Councils to write to			✓		In preparation for the consultation, the Applicant developed a stakeholder database which identified prescribed consultees, relevant local authorities and other local stakeholders of interest. This included 44 parish councils, who were notified about the consultation. All parish councils that fell within the defined consultation zone (Appendix C) were also included. To this end, the Applicant took a proportionate and best practice approach to engagement with these stakeholders.
Concern that Consultation communications and meetings from HyNet have not been effective			✓		The Applicant took a proportionate and best practice approach to publicising consultation events. It identified and wrote to prescribed consultees, relevant local

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				<p>authorities and local stakeholders of interest. This included 44 parish councils, who were notified about the consultation. It also direct mailed 15,402 residential and commercial addresses within the consultation zone (Appendix C), had a dedicated project website (Appendix H) and publicised the consultation via print, digital and search advertising (Appendix F). Consultation and events were also publicised via social media.</p> <p>It sent posters (Appendix E) with event details to high footfall information points, such as libraries, across the project area, once the event programme had been finalised.</p> <p>All of this either directly referenced consultation events or</p>

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	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					<p>directed people to the dedicated project website where they could access more information about events.</p> <p>Regarding meetings, those in attendance endeavoured to answer questions in meetings in as much detail as possible at this early stage in the development process. More detail on the proposals will be shared at the statutory stage of consultation this autumn.</p>
Concern that ineffective communications prevented people attending consultation events			✓		See response above.
Concern that insufficient notice was provided ahead of the Consultation Events taking place			✓		See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that neighbouring properties have received leaflets and others have not			✓		<p>At the start of the consultation, Royal Mail delivered a consultation postcard to 15,402 residential and commercial addresses within the consultation zone (Appendix C). This broadly meant all addresses within the route corridor (including associated spurs) and above ground infrastructure search areas.</p> <p>This meant that those who received the postcard lived within the route corridor. Not all houses on the same street received direct communications because the whole street may not have fallen with the corridor.</p>
Concern that project information on the consultation website does not provide a sufficient level of detail			✓		<p>A range of consultation materials offering varying degrees of detail to cater for all audiences were provided.</p>

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
				<p>This included a high-level summary in the form of a brochure (Appendix I), alongside more detailed technical reports, such as the Scoping Report and the Route Corridor Report, which provided in-depth information about the evolution of the proposals.</p> <p>All materials were available to download from the project website or available in hardcopy form at numerous information points in the project area.</p> <p>The project website also included an interactive map which allowed people to search via post code and see the location of their land/property in relation to our proposals. People could then drop a pin on a specific part of the map and provide their</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					<p>feedback. The next stage of consultation will be statutory consultation and the means by which consultation will be undertaken will need to be set out in a Statement of Community Consultation document. This will be issued to each of the host local authorities for their comment. Statutory Consultation requires the publication of a PEIR. This document will be available on the website and it will provide a greater level of detail both on the project and on the likely significant environmental effects.</p>
<p>Concern that the approach to providing feedback is not effective</p>			<p>✓</p>		<p>There were numerous ways to provide feedback to make engaging with the project as easy as possible. This included:</p> <ul style="list-style-type: none"> • Online feedback form • Dropping pins on an online

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					<p>interactive map</p> <ul style="list-style-type: none"> • Hardcopy feedback form (available at consultation events, information points and available by request via phone, freepost or email) • Email • Freepost <p>While the Project did not accept feedback over the phone, a freephone was available 9am to 5pm, Monday to Friday to answer any questions and help people provide feedback. All feedback received is given due consideration and is being used to inform our evolving design.</p>
Concern that the approach to providing information by Project Staff at events was not effective			✓		The Project team adopted a dynamic approach to its consultation events to aid covering what was a broad

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
				<p>project area, holding both in-person and online events to cater for all audiences, including people who may not have wanted to travel to an in-person event or been able to.</p> <p>In-person events were publicised as drop-in events, which meant people were encouraged to stop by at their convenience and have individual conversations with members of the project team. Events included a broad mix of representatives from the project team so that a broad range of questions from attendees could be answered. However, where members of the project team were unable to answer specific questions at the time, the relevant information was gathered after the event and outstanding questions with specific individuals</p>

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
				<p>were followed up.</p> <p>Online events took the form of presentations from different members of the project team each covering their own disciplines, followed by a Q&A session at the end, offering people the chance to ask the team any questions they had. Similarly to in-person events, where members of the project team were unable to answer specific questions at the time, the relevant information was gathered after the event and outstanding questions with specific individuals were followed up.</p> <p>The Project was at a relatively early stage at the point of consultation, however the information the project staff</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					<p>received has been reviewed and has been used to inform the emerging design which will be presented at statutory consultation. At this stage more information on the Project will be provided, as well as a preliminary assessment of the potential for significant environmental effects. During the face to face meetings, online and via postal communication, respondents were always encouraged to use the feedback forms. This was so there is an accurate record of the points people wish to make. This approach will continue to be adopted during the next consultation stage.</p>
<p>Concern that the approach undertaken for leaflet delivery to promote the consultation was not effective</p>			✓		<p>At the start of the consultation, addresses within the consultation zone where procured via Royal Mail who then distributed a</p>

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
				<p>consultation postcard to 15,402 residential and commercial addresses within the consultation zone (Appendix C). This broadly meant all addresses within the route corridor (including associated spurs) and above ground infrastructure search areas.</p> <p>This meant that those who received the postcard lived within the route corridor. Not all houses on the same street received direct communications due to the non-linear boundary of the route corridor, which in some instances split streets up.</p>
Concern that the consultation has not been sufficiently promoted and with insufficient time			✓	A proportionate and best practice approach to publicising the consultation was followed. Prescribed consultees, relevant

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
				<p>local authorities and local stakeholders of interest were identified and written to. This included 44 parish councils, who were notified about the consultation. 15,402 residential and commercial addresses within the consultation zone (Appendix C) were also direct mailed by Royal Mail, there was a dedicated project website (Appendix H) and the consultation was publicised via print, digital and search advertising (Appendix F). Consultation and events were also publicised via social media.</p> <p>Posters (Appendix E) were issued with event details to high footfall information points, such as libraries, across the project area, once the event programme had been finalised.</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					Eight in-person and two online events were held and consultation ran for six weeks.
Concern that the consultation is a PR exercise			✓		<p>Consultation plays a vital role in the design process for the Project. Public consultation and engagement people's views to be heard and local knowledge gathered. This helps to refine the Project and present a more detailed design at this autumn's statutory consultation, during which people will have another opportunity to provide feedback.</p> <p>The Project team log and analyse all feedback received during consultation via email, online and physical feedback forms, letters and comments left on our interactive map as shown in the production of this report. Input from organisations, political</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					<p>stakeholders and businesses that were talked to in various meetings and briefings is also used. Public consultation is a requirement as part of the application process for nationally significant infrastructure project's (NSIP's) and all written comments are reported as part of this process. Information received has been used to inform our evolving design and will continue to do so following the next round of what will be statutory consultation.</p>
<p>Concern that the consultation materials did not include information on operational noise at the Central Hub</p>		✓			<p>Communications materials (such as the brochure and interactive map) provided information about HAGIs, including their purpose and what they are likely to look like. This included the height and size of associated equipment, distance between HAGIs along the pipeline route and what could</p>

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
				<p>be done to screen HAGIs and minimise any potential visual impact.</p> <p>One core purpose of the non-statutory consultation was to provide the public with an opportunity to provide comments on the proposed HAGI search areas. More information about what HAGIs will look like, their anticipated operational noise, and what could be done to mitigate any potential visual and audio impact will be shared at the statutory consultation.</p>
Concern that the consultation materials do not provide an adequate description of the Central Hub area			✓	<p>A description of the Central Hub can be found in the consultation brochure (Appendix I), in various places on our project website and by clicking on the 'our proposals explained' tab on the interactive map.</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					<p>More general information about HAGIs was provided throughout communication materials, including their purpose and what they may look like. This included the height and size of associated equipment, distance between HAGIs along the pipeline route and what could be done to screen HAGIs and minimise any potential visual and audio impact.</p> <p>More information about the location and appearance of the Central Hub will be shared at our next round of consultation.</p>
<p>Concern that the consultation was not sufficiently promoted as the consultation leaflets were not effective and often ignored or dismissed as junk mail</p>			✓		<p>The Applicant took a proportionate and best practice approach to communications. They identified and wrote to prescribed consultees, relevant local authorities and local</p>

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
				<p>stakeholders of interest. This included 44 parish councils, who were notified about the consultation. They also direct mailed 15,402 residential and commercial addresses within the consultation zone (Appendix C), had a dedicated project website and publicised the consultation via print, digital and search advertising (Appendix F). Consultation and events were also publicised via social media.</p> <p>The Applicant sent posters (Appendix E) with event details to high footfall information points, such as libraries, across the project area, once the event programme had been finalised, further information on which can be found in Section 2.6 and 2.7 of this report.</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that the consultation website was difficult to navigate			✓		Comments received concerning the difficulties experienced in navigating the Project website will be taken on board. Some changes being considered include an easier way for people to access and use the postcode search function on the interactive map.
Concern that the maps provided within the consultation documentation are not sufficiently detailed			✓		An iterative approach to consultation on the Project is being taken. The first, non-statutory, stage of consultation provided an opportunity for people to comment on the broad route corridor identified. Comments received will help develop a more detailed design for the pipeline, HAGI locations and construction plans. These more detailed plans will form the basis for the second, statutory, consultation.

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
				<p>There was an interactive map of our proposals and the area within which the Project would be located on the project website. This allowed people to enter their postcode and see their property / land in relation to the proposals. The map was also broken down into north, east, south, west sections and shown in the consultation brochure (Appendix I). In-person events included a double map panel and online events went through the route corridor and its location in detail.</p> <p>People's comments about the detail of the map used will be taken on board with the aim of making it more informative and easier to use at our statutory consultation.</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that the online feedback map does not show residential properties			✓		The interactive map of our proposals and the area within which the Project is located allowed people to enter their postcode and see their property / land in relation to the proposals. The map was also broken down into north, east, south, west sections and shown in the consultation brochure (Appendix I). In-person events included a double map panel and online events went through the route corridor and its location in detail.
Concern that the postcard promoting the Consultation Events did not provide clear or detailed information, making it difficult to attend the events			✓		A proportionate and best practice approach to publicising consultation events was taken. Prescribed consultees, relevant local authorities and local stakeholders of interest were identified and written to. This included 44 parish councils, who were notified about the

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
<p>consultation. 15,402 residential and commercial addresses within the consultation zone (Appendix C) were direct mailed by Royal Mail, a dedicated project website was established and the consultation was publicised via print, digital and search advertising. Consultation and events were also publicised via social media.</p> <p>Posters (Appendix E) with event details were sent to high footfall information points, such as libraries, across the project area, once the event programme had been finalised.</p> <p>All of this either directly referenced consultation events or directed people to the dedicated project website (Appendix H) where they could access more</p>				

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
<p>information about events. With regard to the postcard, its purpose was to direct people to the website where more information could be obtained. The postcard (Appendix D) included a Project email address, freepost and freephone all with the aim of making it easy and convenient to speak with someone on the project team in order to find out more information.</p> <p>It must be remembered that the country was also still responding to Covid. Keeping information concerning exhibitions on the website meant that dates and venues could have been easily changed in the event of a lockdown or other restrictions being placed on gatherings. It would have been harder to do</p>				

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that the Consultation event held in Whitley took place during half term			✓		<p>this if all information had been set out on the postcards.</p> <p>Consultation events were held over a two week period from the 15 February to 26 February 2022 . One event was in Anderton, which is located in relatively close proximity to Whitley, and took place outside of local school holiday times (16 February 2022). Events were held at a mix of times and on weekdays as well as weekends to allow as much attendance and flexibility as possible. Two online events also took place for people who could not travel to in-person events.</p> <p>Comments have taken on board about events being held in school holiday time. Events are not expected to be held during this</p>

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
				time in our second round of consultation.
Concern that the residential demographics within Whitley may limit their ability to engage with the project effectively			✓	<p>A consultation postcard was sent to 15402 residential and commercial addresses announcing that the non-statutory consultation was open. This included residents in Whitley.</p> <p>The consultation postcard (Appendix D) directed people to the Project website for more information, including an interactive website which allowed people to search by post code to see their property in relation to our proposals.</p> <p>Further to this, the postcard included an email address, freepost address and freephone. The Project team was on hand to answer questions and respond to</p>

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
				<p>requests for hardcopy materials.</p> <p>Eight in-person consultation events were held, however it is recognised that not everyone could travel to events. As such, two online consultation events we held so that people could find out more about our proposals and ask the Project team any questions they might have from home.</p>
Concern that the routeings and areas displayed in consultation documents are vague			✓	<p>The Applicant is taking an iterative approach to consultation on the Project. The first, non-statutory, stage of consultation provided an opportunity for people to comment on the route corridor identified. Comments received will help develop a more detailed design for the pipeline, HAGI locations and construction plans. These more detailed plans</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					will form the basis for the second, statutory, consultation.
Concern that there has been insufficient information provided about the consultation in the local area			✓		<p>A consultation postcard was sent to 15402 residential and commercial addresses announcing that the non-statutory consultation was open.</p> <p>Adverts were placed in regional newspapers and on regional news platforms, publicising that consultation was open. Online adverts were also geotargeted to IP addresses within the north west.</p> <p>Other communications included a social media presence, press coverage, Project website (publicised via a Google Ads campaign), and posters placed in prominent local places. More</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that there is insufficient information about the potential effects from the Central Hub during operation			✓		information is provided in Section 2.6 and 2.7 of this report.
					At non-statutory consultation the Project was at an early stage, having identified broad route corridors within which the pipeline could be routed and search areas within which our above ground infrastructure could be sited. The purpose of non-statutory consultation was to gather feedback from local people so that the Project can be refined and more detailed plans shared in the autumn's statutory consultation.
					A description of the Central Hub can be found in the hard-copy consultation document, project website and by using the interactive mapping tool under the 'our proposals explained' tab,

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					<p>reading; 'The Central Hub is the HAGI at the centre of our proposed pipeline network. It will be the connection and onward distribution point to users along the South, East and North corridors. The location of the Central Hub will be important as it will determine the end point of the pipeline routes for the rest of the network.'</p> <p>Information about what HAGIs involve was also provided in our consultation materials more generally, including their use, estimated height and size of associated infrastructure, distance between HAGIs along the pipeline route and screening measures. Furthermore, during the in-person consultation events pictures of other AGIs already in use were showed to display what</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					the Central Hub could look like once built. It is expected that more information about the location and appearance of the Central Hub will be shared in our next round of consultation.
Request for clarity regarding the detailed arrangements of the pipeline ahead of the Statutory Consultation		✓			An iterative approach to consultation on the Project is taken. The first, non-statutory, stage of consultation provided an opportunity for people to comment on the route corridor identified. Comments received will help develop a more detailed design for the pipeline, HAGI locations and construction plans. These more detailed plans will form the basis for the second, statutory, consultation.
Request for further and meaningful consultation at a stage when		✓			See response above.

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
stakeholders can influence the schemes iterative development				
Request for clear and early communications about future consultation events			✓	A proportionate and best practice approach to publicising the consultation. Prescribed consultees, relevant local authorities and local stakeholders of interest were identified and wrote to. This included 44 parish councils, who were notified about the consultation. 15,402 residential and commercial addresses within the consultation zone (Appendix C) were direct mailed via Royal Mail, a dedicated project website was established, and the consultation was publicised via print, digital and search advertising (Appendix F). Consultation and events were also publicised via social media.

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
<p>Posters (Appendix E) with event details were issued to high footfall information points, such as libraries, across the project area, once the event programme had been finalised.</p> <p>Eight in-person and two online events were held and consultation ran for six weeks.</p> <p>People's comments about publicising consultation events earlier have been taken on board. One way this will be done is to include details of consultation events on the postcard issued (Appendix D) to residential and commercial addresses within the consultation zone (or a more direct means to access information on consultation events, such as a QR code). People will continue to be asked</p>				

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					to register on our website for future updates.
Request for contact to be made with community groups and environmental organisations and bodies				✓	<p>The request for contact to be made with community groups and environmental organisations and bodies is noted.</p> <p>As required by the Planning Act 2008, statutory consultees will be engaged during this autumn's statutory consultation, as well as other interested stakeholders, including community groups and environmental organisations and bodies.</p>
Request for continued engagement with Altrincham & Bowdon Civic Society in relation to the proposed development in the vicinity of Carrington, Partington and Lymm		✓			The Altrincham & Bowdon Civic Society's interest in the Project is noted and engagement will continue as the Project develops.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Request for early and full consultation with Liverpool City Region Combined Authority and the Local Highway Authority should the proposed pipeline cross or follow any Key Route Network Highways	✓				The Liverpool City Region Combined Authority and the Local Highway Authority's interest in the Project is noted and steps will be taken to engage with them as the Project develops.
Request for early and full consultation with Network Rail should the proposed pipeline cross any rail alignments within the Liverpool City Region	✓				The Liverpool City Region Combined Authority and Network Rail's interest in the Project is noted and steps will be taken to engage with them as the Project develops.
Request for engagement with Bloor Homes regarding the potential routeing of the North Corridor pipeline through the former Linkway Distribution Park site		✓			The Project has noted Bloor Homes' interest in this site and will continue to engage as relevant as the detailed route for the pipeline develops, including at a second, statutory consultation.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Request for further engagement with the Woodland Trust ahead of the next round of consultation				✓	The Woodland Trust's interest in the Project is noted and engagement will continue as the Project develops.
Request for more information on environmental impacts within the consultation documents			✓		At statutory consultation, the PEIR will be presented, which summarises the environmental assessments that have been carried out. This information will form an important part of this consultation and will help people understand potential environmental impacts from the project.
Request for the consultation to be repeated with sufficient opportunities for feedback and more effective promotion of the consultation period			✓		An iterative approach to consultation on the Project. The first, non-statutory, stage of consultation provided an opportunity for people to comment on the route corridor

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees
				<p>the Applicant had identified. Comments received will help develop a more detailed design for the pipeline, HAGI locations and construction plans. These more detailed plans will form the basis for the second, statutory, consultation.</p> <p>A range of methods to promote the first stage of consultation were employed, including writing to over 15,000 households in the route corridor, relevant elected representatives as well as advertising and media releases in local press (Appendix G contains copies of the press releases and cuttings). This promotion is considered to have been appropriate but will consider additional measures for publicity in consultation with the relevant</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Request to improve the approach to consultation prior to the Autumn round of consultation			✓		<p>local authorities on the Statement of Community Consultation.</p> <p>The first round of consultation generated lots of useful feedback and allowed the Applicant to have constructive conversations with stakeholders across the project area. At the same time, following the close of consultation, a lessons learned review was undertaken to identify aspects of the consultation approach that could be modified ahead of the second stage.</p> <p>As required by the Planning Act 2008, the Applicant will also be producing a Statement of Community Consultation (SoCC) that will outline its approach to the statutory consultation. Local planning authorities will be consulted on the SoCC, which</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Responses provided at consultation events were vague and provided insufficient detail			✓		<p>will provide an opportunity to influence the approach.</p> <p>An iterative approach to consultation on the Project. The first, non-statutory, stage of consultation provided an opportunity for people to comment on the route corridor identified. Comments received will help develop a more detailed design for the pipeline, HAGI locations and construction plans. The aim was to provide as much detail as appropriate for the stage of consultation but recognises we were not always able to give as much detail as people wanted (particularly on pipeline routeing). More detailed plans will form the basis for the second, statutory, consultation.</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Satisfied that the consultation materials were easy understand			✓		The approach was to develop project materials in an accessible and easy-to-understand way so that anyone is able to understand how the proposals may affect them. This approach will continue for materials at the second, statutory consultation.
Satisfied that the Consultation event held at Whitley was effective			✓		It is noted that a consultation event at this venue was considered beneficial.
Construction					
Concern about the adverse impact of constructing the Central Hub on causing disruption in the local area		✓			The pipeline routing and facilities locations will be selected based upon environmental and engineering considerations. Transport routes to the proposed facilities locations will be identified and discussed with the relevant highway authorities in order to reduce the potential for

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					disturbance. Mitigation measures will be identified to minimise disruption and impacts in the local area.
Concern about the cumulative construction impacts of the proposed development, the Tata incinerator and HS2 on residents in Northwich			✓		Discussions with HS2 and other organisations are ongoing such that the design, construction and programme of concurrent projects can be coordinated to minimise disruption and cumulative impact.
Concern about the cumulative impact of construction works for the project and for HS2			✓		See response above.
Request for clarification on whether construction works will conflict with the construction of HS2			✓		Discussions with HS2 and other organisations are ongoing such that the design, construction and programme of concurrent projects can be coordinated to minimise disruption and cumulative impact. The current understanding is that

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					pipeline construction will precede HS2.
Concern about the effects of trenching during construction and the disturbance of peat		✓			The design of the Project will be informed by the results of environmental surveys which will include for the identification of peat. The intention will be to avoid peaty areas where this is possible. Where it is not possible the methods of construction will be informed by its presence and the adapted where appropriate to minimise impacts upon it. Mitigation measures will be identified to reduce impacts.
Concern about the impact of construction activities on the local countryside			✓		The impacts arising from the construction of the Project will be identified and preliminary assessments as to their significance reported in the PEIR for statutory consultation. Measures to mitigate impacts will

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					also be identified. The assessment will include for the consideration of landscape and visual effects.
Concern about the impact of construction disturbance on public rights of way users during pipeline laying		✓			All Public Rights of Way (PRoW) crossed by the pipeline route will be identified at an early stage and where practical will avoided. Where PRoW's are affected by the project then all relevant legal permissions will be obtained including the provision of temporary diversions where necessary. In a limited number of locations and for minimum time periods it may be necessary to close a PRoW where no practicable and safe alternative is available.
Concern about the impact of noise generated during the construction		✓			In locating the Central Hub consideration will be given to the proximity to residential properties.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
of the Central Hub on the local area					Both residencies and biodiversity receptors will be included in the noise and vibration assessment will also be undertaken. Where there is the potential for significant effects these would be subject to further consideration and if necessary mitigation measures identified to reduce the levels of noise generated at the facility during construction.
Concern about the noise impacts of constructing the Central Hub on the local area		✓			See response above.
Concern that construction of the pipeline will cause loss of residential amenity			✓		The impacts arising from the construction of the pipeline will be identified and preliminary assessments as to their significance reported in the PEIR for statutory consultation. Measures to mitigate impacts will also be identified. The

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
				assessment will include for the consideration of residential amenity in the context of noise, dust and visual effects.
Concern that Common Lane, Lach Dennis is already congested with traffic and that any construction would put residents, pets and wildlife at risk of harm			✓	When identifying the route of the pipeline consideration will be given to how it can be accessed for construction. Access routes along the local highway will be identified and an assessment made of the likely impacts arising from their use. Agreement on the methodology for the assessment will be sought with the relevant highway authorities. A Construction Traffic Management Plan (CTMP) will be prepared to manage traffic and to reduce its effects upon the environment and local communities.
Concern that construction traffic will add to congestion on small			✓	See response above

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
local roads in the vicinity of Lower Whitley				
Concern that construction traffic will affect the condition of roads near Lower Whitley			✓	See response above.
Concern that major excavations in Whitley could result in flooding in the village			✓	The excavations and any associated operations such as trench dewatering if necessary, and the control of surface water run-off will be designed managed to ensure that properties should not be affected by the construction works in the event of heavy, prolonged rain.
Concern that the behaviour of Cadent staff on other works does not reassure that construction of the proposals will be completed			✓	The Applicant recognises that any major infrastructure brings construction impacts. It is too early in the Project for detailed construction plans to be developed but the Applicant will look to minimise any impacts

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					<p>from construction.</p> <p>The Applicant cannot comment on previous projects but will expect all construction staff and contractors to maintain standards of excellence and follow industry best practice.</p>
Concern that the construction of the Central Hub could result in water pollution in local watercourses and the River Weaver		✓			<p>Pumping, dewatering and the control of surface water run-off will be managed to minimise silt pollution by the use of temporary drainage, settling ponds/tanks, etc. The Project is responsible for complying with regulatory requirements including Environment Agency guidelines where applicable.</p>
Concern that the construction of the Project will have a significant				✓	<p>The Project will seek to avoid Ancient Woodlands and Tree Preservation Orders where this is</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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adverse impact on ancient woodland					possible. If it is unavoidable then mitigation measures would be put in place to minimise disturbance.
Concern that the construction of the Project will impact historic buildings in Lower Whitley			✓		Consideration will be given to the potential for effects upon the historic environment consistent with national planning policy. The PEIR and subsequent ES will report upon the potential for effects during both construction and operation of the Project.
Concern that the construction of the project would cause disruption to the local area			✓	✓	The impacts arising from the construction of the Project will be identified and preliminary assessments as to their significance reported in the PEIR for statutory consultation. Measures to mitigate impacts will also be identified. A Code of Construction Practice will be prepared which will set out the measures to be taken to manage

Issue Raised by Topic	Stakeholder Group			Response from Cadent
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				the construction process with the objective of minimising its effects upon the local area.
Concern that woodlands will be impacted by noise and dust pollution as a result of the construction of the Project				✓ The routing of the Project will be selected considering a range of criteria. These will include the potential for it to generate noise and dust impacts. Mitigations will be put in place as required to minimise disruption and impacts to the local environment and a Code of Construction Practice will be prepared which will set out the measures to be taken to manage the construction process with the objective of minimising its effects upon the local area.
Consideration of including broadband cables within the				✓ Consideration has been given to this activity in partnership with a local authority, however due to

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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required trenching to improve rural internet connectivity					the safety clearances required in relation to the pipeline during operation for maintenance activities this was not deemed, currently, possible.
consideration should be given to cyclists during any required road works, specifically regarding the time required to navigate traffic lights			✓		A transport and logistics study is underway and a CTMP will accompany the application. This will consider cycling routes and cyclists. It will be developed in consultation with the relevant highway authorities. If and where traffic lights are to be used then they will comply with the requirements for light timings.
During construction the reinstatement of any trenched land or highways should be completed promptly and to a high standard	✓				Reinstatement of trenches in non-highway land and the working area will commence on completion of the construction works. The pipeline will be

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					constructed during the summer months reinstatement completed by the Autumn. In the event of very poor weather conditions making the land unsuitable for reinstatement then this will be delayed till the following spring however the land will be 'winterised' to protect the soil and subsoil from loss or damage. For works in the highway the reinstatement will be completed in time frames agreed with the relevant highways authorities and to the required NRSWA and HAUC Standards.
During construction there should be no damage to field drains and any realignment necessary should be in good order and tested for efficiency	✓				All land drains will be fully reinstated as required to ensure that they remain fully functional after construction.

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	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Land requiring trenching within the North Cheshire Greenbelt must be reinstated to the pre work condition or better	✓				The entire pipeline construction working area will be restored to the pre-working condition including the replanting of hedgerows where it is unavoidable that they are removed. Agricultural land will be restored in consultation with the landowner/occupier to enable agricultural operations to continue.
Planned access roads and temporary access roads so seek to prevent minimum disruption	✓				Access routes for construction will be identified in consultation with the relevant highway authorities. Measures will be put in place to manage construction traffic consistent with the CTMP which will be prepared to accompany the application.
Request for more information about how existing congestion on		✓			See response above.

Issue Raised by Topic	Stakeholder Group			Response from Cadent
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local roads will be managed during construction phase				
Request for the Project to minimise any disruption to travel routes within and around the Dunham Massey estate during the construction phase				✓ See response above.
Request for clarification of the priority connections in the proposal and which will be built first	✓			The construction phasing plan is still under development and will be developed alongside contractors when they employed later in the Project. Priority connections have yet to be identified as the pipeline will work as one system, with all elements commissioned in an approach which allow the network to operate.
Request for clarification on measures to mitigate the impacts				✓ The excavations and any associated operations such as

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of construction activities and workers on localised flooding					trench dewatering if necessary, and the control of surface water run-off will be designed and managed by the Contractor consistent with local and statutory authority guidance and regulation to prevent localised flooding in cases of reasonably expected weather conditions.
Request for clarification on the timescales and programme for construction works	✓	✓	✓		The indicative timescale and programme will be set out at the statutory consultation.
Request for clarification on whether highways diversions and stopping-up orders will be required during the construction period			✓		Generally pipeline crossings of major roads will be accomplished by a trenchless crossing technique (e.g. drilling) without affecting traffic flows but may require speed restrictions for safety. Minor roads will be completed by open-cut trenches using some form of traffic control (e.g. traffic lights), with a duration

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					at each location of typically less than five days. Pipeline road crossings also act as an access point to the pipeline route either side of the road and traffic control may be necessary in some locations to ensure vehicles can enter and leave the site safely. No road closures are currently planned. All traffic management will be planned and coordinated with the Local Highway Authority.
Request for clarification on whether land excavated for construction works will be restored following completion			✓		The entire pipeline construction working area will be restored to the pre-work condition including the replanting of hedgerows where it is unavoidable that they are removed. Agricultural land will be restored in consultation with the landowner/occupier to enable agricultural operations to continue.

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	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Request for clarity on whether road crossings over the pipeline will be allowed, and whether any restrictions will be required		✓			The pipeline will be constructed under existing public highways and private roads and tracks in accordance with the relevant current standards. If it is proposed in the future to construct a new road over the operational pipeline, then any new road will have to be designed and constructed to standards relevant at that time and in accordance with the easement for the pipeline.
Request for confirmation whether 24 hour lighting will be required during construction			✓		Generally the works will be completed during daylight hours between the Spring and Autumn. There will be some ongoing working during the winter months at specific locations and they will require task lighting during working hours, typically 08.00 am to 06.00 pm. Lighting outside of these hours will not be required

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					<p>unless it is for safety or security reasons.</p> <p>There will be limited requirements for 24 hr working for specific tasks e.g. pipeline testing and certain operations during some road/rail crossing construction. Lighting will be limited to task lighting to ensure safety and security.</p>
Request for further information on land drainage schemes for both pre and post construction		✓			All land drains will be fully reinstated as required to ensure that they remain fully functioning after construction.
Request for further information on the land required for construction compounds		✓			Consideration will be given to options for temporary construction compounds including size, number and location and whether temporary facilities will be installed on greenfield sites (and restored

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					afterwards) or if existing brownfield site will be utilised.
Route options should seek to minimise carbon emissions through distance travelled and causing delay to existing traffic	✓				Access routes for construction will be identified in consultation with the relevant highway authorities, these will seek to minimise the length of journeys to site but will also need to consider opportunities to avoid the need for traffic to pass through sensitive areas where possible. Measures will be put in place to manage construction traffic consistent with the CTMP which will be prepared to accompany the application.
Suggestion that construction traffic should use A roads and avoid using minor side roads and country lanes			✓		See response above.

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Suggestion that Hatley Lane, Straight Length and Godscroft Lane in Frodsham have height restrictions			✓		See response above.
Suggestion that Lower Rake in Helsby has width and weight restrictions	✓				See response above.
Suggestion that the height, width and weight limits of the Sutton Swing Bridge be considered in the routeing of construction traffic	✓				See response above.
Suggestion that access to public rights of way must be kept unrestricted				✓	All PRow crossed by the pipeline route will be identified at an early stage and where practicable will be avoided. Where PRow's are affected by the project then all relevant legal permissions will be obtained including the provision of temporary diversions where necessary. In a limited number of locations and for minimum time

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					periods it may be necessary to temporarily close a PRow where no practicable and safe alternative is available.
Suggestion that all appropriate legal permissions be obtained to temporarily divert paths during construction		✓			See response above.
Suggestion that all crossings under Canal and River Trust waterways must be installed using trenchless techniques	✓				Any work in the vicinity of or crossings beneath a canal will be designed, constructed and operated in accordance with various regulations, standards and Codes of Practice to ensure continued safety and integrity of the canal and the pipeline. The design of the pipeline crossing and the construction methods will be subject to a formal approval process by the authority responsibly for the canal. It is

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					currently envisaged that all canal crossings will be trenchless.
Suggestion that Cadent use a soil specialist to advise on and supervise soil handling	✓				Measures to protect soils will be set out in the PEIR and subsequently within the environmental statement which will accompany the application. The Code of Construction Practice will provide additional measures for the careful management of soils and will be prepared by an experienced consultant.
Suggestion that carbon storing habitats be avoided during the construction period, due to the potential for disturbance to result in GHG emissions from these habitats				✓	The route of the Project will seek to avoid habitats noted for their ability to store carbon. Where this may not be possible the effects arising from the pipeline will be assessed and measures to mitigate identified.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that construction workers do not park in residential areas that are narrow country lanes			✓		All construction vehicles and plant will park within the designated site working areas and parking along highways or verges within residential or rural areas will not be allowed. Construction workers will use construction vehicles (cars, 4x4, mini-bus, light vans etc.) to travel to/from the construction site to their places of residence where vehicles will be parked overnight as per usual practice.
Suggestion that construction works in close proximity to waterway infrastructure could adversely impact the structural integrity of the waterway	✓				Any work in the vicinity of or crossings beneath a canal will be design, constructed and operated in accordance with various regulations, standards and Codes of Practice to ensure continued safety and integrity of the canal and the pipeline. The design of the pipeline crossing and the

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					construction methods will be subject to a formal approval process by the authority responsibly for the canal.
Suggestion that installations that interface with Canal and River Trust waterways and assets will need to comply with their third party works Code of Practice, including sections on service crossings	✓				Any work in the vicinity of or crossings beneath a canal will be design, constructed and operated in accordance with various regulations, standards and Codes of Practice to ensure continued safety and integrity of the canal and the pipeline. The design of the pipeline crossing and the construction methods will be subject to a formal approval process by the authority responsibly for the canal. It is currently envisaged that all canal crossings will be trenchless.
Suggestion that the crown of the pipe will need to be installed at	✓				See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
least 3.5m below the hard bed level of the canal using trenchless techniques					
Suggestion that the structural integrity of canals must not be put at risk during construction works	✓				See response above.
Suggestion that construction works near Canal and River Trust waterways be undertaken in the winter stoppage season to limit impacts on canal users and boating businesses	✓				The design of the pipeline crossing, construction methods and timing will be subject to a formal approval process by the authority responsibly for the canal. It is currently envisaged that all canal crossings will be trenchless and hence construction will not affect canal users.
Suggestion that equestrian routes be maintained at least four metres wide to ensure users can pass each other				✓	Where the pipeline working areas abuts footpaths, tracks, bridleways or similar then appropriate measures will be considered to ensure the safety

Issue Raised by Topic	Stakeholder Group			Response from Cadent
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Suggestion that Heras fencing not be used along equestrian routes unless it can be secured tightly and remain taut				<p>of the public including riders and their horses. Such measure will include appropriate fencing, allowing sufficient room for horses and control of the works including temporarily stopping activities whilst horses are passing close by.</p> <p>✓ Fencing of the pipeline working areas will be completed in consultation with the landowner/occupier to ensure the fence installation and materials are acceptable and appropriate to the type of stock or other animals, including horses, on the land. Similarly where the pipeline working areas abuts bridleways or similar then appropriate fencing will be used to ensure the safety of the public including riders and their horses.</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that impacts to agricultural land as a result of the construction of the Project are kept to a minimum		✓			Impacts to agricultural land will be kept to a minimum. It is proposed to prepare a Code of Construction Practice. The Code will set out a number of measures to manage the construction process which will include for the sustainable use of soils and will be consistent with existing guidance and best practice such as Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.
Suggestion that machinery and movements be stopped or shut off while horses pass and resume when horses are at least twenty metres past				✓	Where the pipeline working areas abuts or crosses footpaths, tracks, bridleways or similar then appropriate measures will be considered to ensure the safety of the public including riders and their horses. Such measure will include appropriate fencing, allowing sufficient room for horses and control of the works

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					including temporarily stopping activities whilst horses are passing close by.
Suggestion that overhead hazards near equestrian routes provide a clearance of 3.7 metres				✓	Where the pipeline working areas abuts footpaths, tracks, bridleways or similar then appropriate measures will be considered to ensure the safety of the public including riders and their horses. Such measure will include appropriate fencing, allowing sufficient room for horses and control of the works including temporarily stopping activities whilst horses are passing close by.
Suggestion that public rights of way must be kept free of obstruction, debris and trip hazards for the full width of the route				✓	Where the pipeline working area is crossed by a public footpath then the footpath will be maintained in a safe condition. It is typical practice to provide gates and fencing at public footpaths

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					similar to a 'Level Crossing' that allow safe passage of members of the public across the working area.
Suggestion that sudden movement or noises of machinery be avoided where horses are within range				✓	Where the pipeline working areas abuts footpaths, tracks, bridleways or similar then appropriate measures will be considered to ensure the safety of the public including riders and their horses. Such measure will include appropriate fencing, allowing sufficient room for horses and control of the works including temporarily stopping activities whilst horses are passing close by.
Suggestion that temporary fencing alongside equestrian routes be secured and taut to avoid flapping in the wind				✓	Where the pipeline working areas abuts footpaths, tracks, bridleways or similar then appropriate measures will be considered to ensure the safety

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					of the public including riders and their horses. Such measure will include appropriate fencing, allowing sufficient room for horses and control of the works including temporarily stopping activities whilst horses are passing close by.
Suggestion that the CEMP include details of planned water abstractions and discharges which may impact canals	✓				It is proposed to prepare a Code of Construction Practice which will form the same role as a Construction Environmental Management Plan (CEMP). The Code will set out a number of measures to manage the construction process which will include for the use and disposal of water.
Suggestion that the CEMP include details on the storage of materials, fuels, chemicals and waste	✓				It is proposed to prepare a Code of Construction Practice which will form the same role as a CEMP. The Code will set out a

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					number of measures to manage the construction process which will include for the use and disposal of fuels, oils and waste etc.
Suggestion that the CEMP include measures to prevent dust generation, windblown litter and debris	✓				It is proposed to prepare a Code of Construction Practice which will form the same role as a CEMP. The Code will set out a number of measures to manage the construction process which will include for the minimisation of dust, litter and other debris.
Suggestion that the CEMP include measures to prevent runoff of silty water, contaminated water and chemicals into canals and culverts	✓				It is proposed to prepare a Code of Construction Practice which will form the same role as a CEMP. The Code will set out a number of measures to manage the construction process which will include for the use and disposal of water.

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Suggestion that the CEMP include pollution response emergency procedures	✓				It is proposed to prepare a Code of Construction Practice which will form the same role as a CEMP. The Code will set out a number of measures to manage the construction process which will include for pollution response procedures.
Suggestion that the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites be used in the design and construction of the proposed development	✓				It is proposed to prepare a Code of Construction Practice. The Code will set out a number of measures to manage the construction process which will include for the sustainable use of soils and will be consistent with existing guidance and best practice.
Suggestion that the construction of the project should not result in severed fields or small uneconomic land parcels		✓			The precise route of the pipeline will seek to avoid or minimise the occurrence of severed land during construction. Where appropriate additional measures

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					will be installed to ensure agricultural activity can be continued outside of the working areas e.g. installation of additional troughs for stock. On completion of construction operations all agricultural land will be returned to agricultural use.
Suggestion that the route of the pipeline will need to be fenced off during construction and request that livestock proof fencing is used		✓			The pipeline route will have demarcation of the working area. To protect the public and to ensure safety and security of the works appropriate fencing will be installed. In agricultural land fencing will be completed in consultation with the landowner/occupier to ensure the fence installation and materials are acceptable and appropriate to the land use and/or type of stock or other animals on the land.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that the surface of equestrian routes should be maintained to ensure suitability for horses				✓	Where the pipeline working areas abuts or crosses footpaths, tracks, bridleways or similar then maintenance of these within the working area will be completed as well as appropriate measures will be considered to ensure the safety of the public including riders and their horses. Such measure will include appropriate fencing, allowing sufficient room for horses and control of the works including temporarily stopping activities whilst horses are passing close by.
Suggestion that the surfaces of existing equestrian routes be protected to avoid poaching and damage from construction traffic				✓	See response above.
Suggestion that vegetation on equestrian routes be cut to ensure				✓	Where the pipeline working areas abuts or crosses footpaths, tracks, bridleways or similar then

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the full width of the route can be used				appropriate measures will be considered to ensure the safety of the public including riders and their horses. Such measure will include appropriate fencing, allowing sufficient room for horses and control of the works including temporarily stopping activities whilst horses are passing close by.
Suggestion that the width and weight limits of the listed Winnington Swing Bridge be considered in the routing of construction traffic	✓			A transport and logistics study is underway and prior to construction a detailed traffic management plan will be developed with the engagement of transport authorities. This will consider all height, width and weight limits at road, rail, river or canal bridges and will also consider when the bridge swings.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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Suggestion that work should only be carried out when ground conditions are suitable		✓			Impacts to agricultural land will be kept to a minimum. The Applicant proposes to prepare a Code of Construction Practice. The Code will set out a number of measures to manage the construction process which will include for the sustainable use of soils and will be consistent with existing guidance and best practice such as Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.
The proposed route should consider the impact from travel planning for the construction traffic	✓				A transport and logistics study is underway and prior to construction a detailed traffic management plan will be developed. This will specify access routes, depending on the type of vehicle along certain roads and some smaller country lanes will be closed to all construction traffic. Discussions

Issue Raised by Topic	Stakeholder Group			Response from Cadent
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				with Local Highway Authorities are ongoing such that disruption is kept to a minimum.
Corridor East (Partington to the Central Hub)				
Suggestion that the pipeline route follow the route of HS2 as closely as possible to minimise impacts in Broomedge and Agden			✓	Following the route of HS2 would provide a similar option to the alternatives considered on the eastern side of the Project within Strategic Options B, C and D of the Routeing Study Report published with the consultation exercise. Whilst this option would remove construction activities in certain areas, it would not significantly reduce the overall pipeline length as links will still have to be made to the west, south and north with the associated construction activities.
Concern that the Project will add to the cumulative impact of other				✓ The Project will undertake a cumulative effects assessment

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development pressures in the area, most notably HS2					which will examine the effects of the project alongside those of any other relevant developments in the study area, including HS2. Further details on the cumulative effects assessment and how any cumulative effects could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that the pipeline route avoids Spud Wood			✓		Consideration will be given to the avoidance of Spud Wood during the ongoing development of the East pipeline.
Suggestion that the route of the proposed pipeline follows that of an old raw oil pipeline to Carrington refinery	✓				Work is ongoing to identify the route of abandoned, existing and proposed 3rd party pipelines, cables, sewers, etc. and this information will be used to refine the route in consideration of all options.

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Suggestion that the Eastern Corridor is located further to the East			✓		The Eastern Corridor is located to allow potential connections to be made to the Warburton and Partington areas, where connections are available to both industrial customers and to the natural gas network which could allow blending of hydrogen into these networks to take place.
Concern about the route location and proposals for large housing developments planned near Partington			✓		The Applicant is aware of the development planned in the Partington area and this is being taken into consideration in the design of the Project.
Concern that the Project will be in close proximity to National Trust land and property interests with potential effects upon the setting of designated heritage assets				✓	The Project will be sited and designed to minimise impacts on heritage assets, including National Trust land and property, as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					which will be subject to statutory consultation.
Concern that the proposed route will travel through Warburton and Carrington Mosses with environmental and agricultural effects			✓		The Applicant is aware of these Mosses and their sensitive features, and they are being taken into consideration in its design. Our approach will be to try and avoid them wherever possible and if this is not possible in all cases then we will look to minimise disturbance and to mitigate any resulting effects. Further information will be presented in the PEIR for statutory consultation with a full assessment in the Environmental Statement (ES) which will accompany the application.
Concern that above ground structures and infrastructure associated with the proposed pipeline will be introduced to an				✓	The HAGIs will be sited and designed to minimise impacts on the landscape as far as possible. Further details on the impacts

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area of relatively flat farmed landscape				which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that the pipeline should be routed as far as possible from the residential area of Lower Whitley and avoid the wooded area to the South of Lower Whitley			✓	The route of the pipeline will take into consideration a number of constraints including protected mineral extraction around the village of Lower Whitley. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Corridor North (St Helens to the Central Hub)				
Request for clarification on whether the River Mersey would be crossed, and where crossings would be made			✓	The River Mersey will need to be crossed in potentially two locations within the Northern Corridor. We are working to

Issue Raised by Topic	Stakeholder Group			Response from Cadent
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				identify the crossing points and they will be identified within the documentation which will be provided at statutory consultation.
Concern about the loss of local playing fields to the project			✓	Local playing fields are being identified along the route and the design will aim to avoid these wherever possible. Similar consideration will be given to the siting of above ground infrastructure and the use of land for construction.
Suggestion that the pipeline route avoid the existing SABIC ethylene pipeline due to safety risks			✓	The Project design is identifying all pipelines and other utility infrastructure which the HyNet hydrogen pipeline could interact with. The design of any separation distances where the proposed pipeline runs parallel with, or crosses, any other utilities will follow all applicable UK

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					regulations, standards and codes of practices.
Suggestion that nomenclature used by Ordnance Survey incorrectly identifies a group of houses as a caravan park and that this should be considered within the routeing of the pipeline and the HAGI scoping exercises		✓			Any properties along the route will be investigated further to confirm their actual status. The pipeline route will be informed by site visits and surveys such that any potential inaccuracies in Ordnance Survey mapping will be identified.
Suggestion that the North Corridor contains a Development High Risk Area, as defined by the Coal Authority	✓				Coal Authority records are being considered in the design of the Project and any potential issues arising from land stability or other matters will be taken into account within the design.
Concern about the safety of the potential location of the pipeline, as it runs under the site used for Creamfields music festival in Daresbury			✓		The land referenced in the consultation responses as the Creamfields Festival site has been identified within the North Corridor. Discussions are taking

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					place with the landowners and festival operators on how to route the pipeline through this area.
Suggestion that the proposed pipeline is not routed near to residential properties in Daresbury			✓		The pipeline design will seek to avoid close proximities to residential properties wherever possible and will be sited to minimise impacts on local communities. No pipelines will run under houses. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Concern that local pipelines to the Carrington paper factory and/or power station may cause increased traffic congestion during construction		✓			The impact of traffic on both local communities and the environment is being considered as the design of the Project evolves. Further details on the impacts which may

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that the proposed pipeline route should avoid areas of environmental value			✓		The route of the pipeline is being designed to avoid areas of environmental value wherever possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Support for the routeing of the pipeline through North Corridor rather than the Southern Corridor	✓				Preference for the North Corridor is noted.
Suggestion that the North Corridor includes land consented for residential development at the former Linkway Distribution Park		✓			The North Corridor has been designed to avoid the Project at the Linkway site. The boundary here is however being reviewed

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					to make sure that no conflict emerges.
Concern about the impact of pipeline routeing in the North Corridor on a consented residential development at the former Linkway Distribution Park		✓			See response above.
Request for confirmation as to whether the potential North Corridor pipeline route would run across the site of the consented residential development at the former Linkway Distribution Park		✓			The North Corridor has been designed to avoid the Project at the Linkway site. The boundary here is however being reviewed to make sure that no conflict emerges.
Suggestion that the routeing of the North Corridor pipeline through the former Linkway Distribution Park would result in the delay in construction of new homes at the site		✓			See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that the former Sankey Canal which may be crossed in the North Corridor is not full navigable	✓				The Sankey (St Helens) Canal will be crossed by a trenchless (underground method), thereby avoiding any impact on the canal or any future plans to re-open the waterway.
Suggestion that proposed works should not prejudice any possible future restoration of the former Sankey Canal	✓				See response above.
Suggestion that any crossing of the former Sankey Canal should be underground	✓				See response above.
Concern that route corridor A has been chosen due to cost only			✓		The Route Corridor Study identifies that Alternative A was selected after the consideration of a number of issues, including cost, environmental impacts and construction and operational requirements.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Request to see proposals of routes into Knowsley, Widnes (Halton) and Sefton to align with local planning policies	✓				The pipeline routes are being proposed to link to customers which have confirmed they wish to take hydrogen from the 'Phase 2' stage of the HyNet project. There are currently no connections confirmed for the Knowsley, Widnes or Sefton areas. Any required pipeline extensions for additional connections will be considered as part of a later Phase 3 development.
Corridor South (Central Hub to Hydrogen Storage Facility)					
Concern about the proposed route in the south corridor near to Bostock due to existing salt mines and the proposals for HS2				✓	The Project is undertaking geotechnical investigations across all pipeline routes to determine suitability for soils for the pipeline and this will include for the presence of any existing salt mines. The Project is engaged with HS2 and the

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					crossing point will be carefully planned between HS2 and the Project.
Concern about the proximity of the proposed pipeline to aviation fuel pipes running through Little Leigh to Stanlow			✓		The design process is identifying all pipelines and other utility infrastructure which the Project could interact with. The design of any separation distances where the proposed pipeline runs parallel with, or crosses, any other utilities will follow all applicable UK regulations, standards and codes of practices.
Concern that the routeing of the pipeline to the east of Northwich close to existing pipelines would cause crowding and safety issues			✓		See response above.
Suggestion that land in the vicinity of Comberbach contains existing pipelines, electric cables and land drains			✓		See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that land within the South Corridor contains existing pipelines, electric cables and land drains			✓		See response above.
Suggestion that the SABIC pipeline transporting ethylene is vulnerable to works			✓		See response above.
Objection to Spur four due to the location of Bradley Meadow Wood, Hawton Clough and Little Leigh Ponds local wildlife sites and an area of ancient woodland unless it can be demonstrated that these features would not be directly impacted				✓	The objection is noted and the potential impact of the spur on environmental designations will be considered in the selection process of the Spur. Whichever spur is chosen, the preliminary environmental effects will be reported within the PEIR which will be consulted upon at statutory consultation.
Objection to Spur two due to the location of five local wildlife sites, Witton Lime Beds SSSI and an area of ancient woodland in the				✓	See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
spur route unless it can be demonstrated that these features would not be directly impacted					
Request for clarification on how a decision will be made on the preferred options			✓		Ongoing engineering and environmental work will be used alongside the non-statutory consultation responses received to determine the preferred route. Further information on the route and its preliminary environmental effects will be provided at statutory consultation.
Request for clarification on measures to mitigate the impacts of flooding from the River Weaver				✓	The Project will be sited and designed to take into account both its impact on areas of flood risk and the risk of flooding to the project itself. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation. A Flood

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					Risk Assessment will also be prepared.
Suggestion that areas close to the River Weaver are prone to flooding				✓	See response above.
Request for clarification on the advantages and disadvantages of the two possible route options for the South Corridor			✓		Section 4.5 of the Route Corridor Report issued for the non-statutory consultation provides details of the two options. Further technical and environmental work is being undertaken which alongside responses received to consultation will help to inform the selection of the preferred corridor. The choice will be presented at statutory consultation.
Request for further information on the interaction with the HS2 route			✓		Contact has been made with HS2 and will continue throughout the project, to ensure that all interfaces are identified and appropriately addressed.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Request for information and assurances regarding appropriate safety measures for construction and operation in areas of land previously affected by brine extraction	✓				The Project is undertaking geotechnical investigations across all pipeline routes to determine suitable ground conditions for the pipeline. The pipelines will be constructed and reinstated using best practice methods and in accordance with design codes and standards. Canals will be crossed using trenchless methods to minimise disturbance and settlement risk.
Suggestion that land below the Trent and Mersey Canal through Dutton is steep and unstable				✓	See response above.
Request for more information about the approach to construction of the proposed pipeline in the area south of Northwich between Moulton and Bostock Green				✓	Further details of the construction methods to be employed will be presented in the statutory consultation documents.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that detailed routeing could avoid the local wildlife sites, areas of ancient woodland, peatlands and priority habitats located in the Option A route corridor				✓	The environmental impact of the two options will be a consideration in the route selection process. Whichever option is chosen, the pipeline will be sited and designed to minimise impacts on the environment as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation. In the case of ancient woodland, it will be avoided where possible and mitigations put in place if necessary to minimise disturbance.
Suggestion that land between the Trent and Mersey Canal and the A533 contains areas of ancient woodland, including Dutton Dean				✓	Areas of ancient woodland will be avoided by the pipeline routes if possible and mitigations would be

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
				put in place to minimise disturbance.
Suggestion that Option A contains fewer identified ecological features and no designated sites of international or national importance				✓ The environmental impact of the two options will be a consideration in the route selection process. Whichever option is chosen, the pipeline will be sited and designed to minimise impacts on the environment as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Concern about the adverse impacts of Option A on local wildlife sites dissected and watercourses crossed by the route				✓ See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that Option B contains a significant number of important ecological features within and adjacent to the route corridor				✓	See response above.
Suggestion that Option B could be routed between Mill Wood and the Mill Bottoms and Peover Eye local wildlife sites to avoid directly impacting local ecological features				✓	See response above.
Support for the Northwich spur via Option B crossing the Weaver Navigation away from the Anderton Boat Lift	✓				See response above.
Suggestion that route option A is the least preferred route option due to the number of crossings of Canal and River Trust waterways and associated impacts	✓				The watercourse crossings needed by the two options will be a consideration in the route selection process. Whichever option is chosen, the pipeline will be sited and designed to minimise impacts on any such crossings as far as possible.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					Further details on the environmental impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that Spur one contains Beach Hill Wood ancient woodland and Barnton Cut Wood local wildlife site, as well as areas of open mosaic habitat				✓	The potential impact of the spur on environmental designations will be considered in the selection process of the Spur. In general, the Project will seek to avoid areas of ancient woodland. If there are any cases where this is not possible then mitigation measures would be put in place to minimise disturbance.
Suggestion that Spur one could be routed to avoid directly impacting on Beach Hill Wood ancient woodland, Barnton Cut Wood local wildlife site and open mosaic habitat				✓	See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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Suggestion that Spur three can be routed to avoid impacting on the adjacent Pump House Wood nature reserve				✓	Detailed route design work within the identified corridors will seek to avoid any environmentally sensitive areas where this is possible. The PEIR which will be published at statutory consultation will provide a preliminary assessment of the environmental effects and proposals for mitigation.
Suggestion that Spur three contains the least number of important ecological features of the four proposed spurs				✓	The comment is noted. The presence, or otherwise, of ecological features will be considered in the decisions on which options to select.
Suggestion that the area of Option B northeast of Northwich contains a concentration of ecological features, including Plumley Lime Beds SSSI, local wildlife sites, areas of ancient woodland, Holford				✓	See response above.

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
Moss peatland and parcels of priority habitat				
Suggestion that the Hydrogen Storage Facility be sited close to the existing Holford gas storage facility and be fed by a spur			✓	The location of the 19 gas storage caverns that will be used for hydrogen storage was selected by the storage operator Inovyn and is subject to a separate gas storage project DCO. Due to the size of pipeline required this cannot be managed by a smaller spur pipeline.
Suggestion that the pipeline be routed to the north of the River Weaver				✓ The pipeline routes will be selected using a range of criteria to ensure all technical and environmental matters are duly considered. The Project is also undertaking geotechnical investigations to determine suitable ground conditions for the pipeline and to identify any mitigations required to ensure long term pipeline stability.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that the pipeline be routed to the north of the Trent and Mersey Canal due to the fragility of the canal				✓	The Project is undertaking geotechnical investigations to determine suitable ground conditions for the pipeline. The pipelines will be constructed and reinstated using best practice methods and in accordance with design codes and standards. Canals will be crossed using trenchless methods to minimise disturbance and settlement risk.
Suggestion that the pipeline not be installed in the Weaver Valley due to the sloping nature of the land and potential associated environmental risks		✓			The pipeline routes will be selected using a range of criteria to ensure all technical and environmental matters are duly considered. The Project is undertaking geotechnical investigations to determine suitable ground conditions for the pipeline and to identify any mitigations required to ensure long term pipeline stability.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that the spur avoid the designated Anderton Boat Lift	✓				If a spur is chosen which passes close to the Anderton Boat lift, the spur will be sited and designed to minimise impacts on heritage assets as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that the Trent and Mersey Canal lacks a regular maintenance programme and has been known to breach.				✓	This comment is noted.
Suggestion that there a significant number of important ecological features within both route options of the South Corridor				✓	Whichever corridor option is selected, the pipeline will be sited and designed within it to minimise impacts on the environment as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					will be subject to statutory consultation.
Suggestion that there is unstable ground in Barnton to the north of the Trent and Mersey Canal which should be mitigated against	✓				The pipeline routes will be selected using a range of criteria to ensure all technical and environmental matters are duly considered. The feedback is noted, and the Applicant is undertaking geotechnical investigations across all pipeline routes to determine suitable ground conditions for the pipeline and to identify any mitigations required to ensure long term pipeline stability.
Support for Option B	✓			✓	The comments are noted and will be given due consideration in the selection of the preferred corridor option.
Support for Spur three				✓	See response above.

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
Corridor West (Stanlow to the Central Hub)				
Suggestion that hydrogen blending take place closer to Stanlow			✓	Hydrogen blending is limited to locations on the existing gas network that is suitable for development to accommodate distribution at scale.
Request for clarification on the purpose of the two pipeline spurs on the map running along Lower Rake Lane and Straight Length in Helsby and Frodsham, respectively			✓	The two spurs identified would not be pipeline spurs but would be used for access by construction vehicles. The boundary of the development shown must include all access points, from the public highway to the pipeline itself, that are needed to undertake the construction works.
Request for further information about the proposals in the area of Bartington Flood Plains and the River Weaver			✓	Further information will be made available during the statutory consultation exercise which can be used to inform further feedback.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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Concern that the Runcorn Golf Course will be closed due to the proposed development			✓		Runcorn Golf Club is located within the Runcorn Spur on the West Corridor. The proposed spur would pass through the golf course between Rocksavage Way and the access road into the Heath Business Park, using open cut construction. Potentially seven of the golf course's holes could be directly affected by the works, which would be expected to last for up to six months, which would be over the spring/summer period to avoid bad weather disrupting construction. These holes would then be restored and re-seeded and it is likely to be the following year when growth is sufficient to allow play to proceed again. A further four holes could also lose their access during the 6 months, while construction works are ongoing. While it may be possible for some holes to be

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					configured to provide additional holes during the disruption, it is expected that there would be a high magnitude of effect on the golf course. The golf course is considered to be a medium/high sensitivity receptor and therefore a major adverse and significant effect would occur.
Identification of 4 underground pipes located within the Runcorn Golf Course			✓		The design process is identifying all pipelines and other utility infrastructure which the Project could interact with. The design of any separation distances where the proposed pipeline runs parallel with, or crosses, any other utilities will follow all applicable UK regulations, standards and codes of practices.
Request for clarification on the siting of storage facilities			✓		A permission already exists for natural gas storage in cavities at the Holford Brinefield. It is

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					proposed that the permission for this storage is amended to include hydrogen storage. That application would be separate to this application. Further details of the cavities to be used are available at: https://infrastructure.planninginspectorate.gov.uk/projects/north-west/keuper-gas-storage-project/
Identification of four water washed lines near the Plumley underground storage facility			✓		The design process is identifying all pipelines and other utility infrastructure which the Project could interact with. The design of any separation distances where the proposed pipeline runs parallel with, or crosses, any other utilities will follow all applicable UK regulations, standards and codes of practices.
Concern that the area near to Whitley is liable to flooding			✓		The Project will be sited and designed to take into account

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					both its impact on areas of flood risk and the risk of flooding to the project itself. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation. A Flood Risk Assessment will also be prepared.
Suggestion that land adjacent to the River Weaver is prone to flooding in the winter	✓				See response above.
Concern that construction access to land near to Whitley is not suitable for heavy machinery due to small roads and weight limits on a bridge			✓		The construction access routes and associated traffic numbers will be identified as will the capability of the road network to accommodate them. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will

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					be subject to statutory consultation. A process of engagement and consultation with the relevant highway authorities is underway with the aim of agreeing the methodologies for assessment and the construction access routes.
Consideration should be given to the use of the disused railway near Hartford Golf Club alongside existing fuel pipeline			✓		The suggestion is noted and will be considered in the detailed pipeline routing work.
Suggestion that the proposed pipeline route follows existing infrastructure such as the M56			✓		The pipeline routes will be selected using a range of criteria to ensure all technical and environmental matters are duly considered. The West corridor route largely follows the M56 corridor where possible with consideration of other constraints in this area.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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Suggestion that the route of the proposed pipeline should avoid areas of environmental value			✓		The HAGIs and pipeline will be sited and designed to minimise impacts on the environment as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that further information is required to make comments on the West Corridor			✓		Noted. Further information will be made available during statutory consultation which can then be used to inform subsequent comments.
Suggestion that the proposed pipeline route should avoid key roads and commuter corridors			✓		Due to the linear nature of the pipeline route, it will need to cross key roads in certain places. However all major road crossings would be undertaken by trenchless crossings to avoid disturbance on the road network.

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	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that land below the Trent and Mersey Canal is steep and unstable	✓				The pipeline routes will be selected using a range of criteria to ensure all technical and environmental matters are duly considered. The project is undertaking geotechnical investigations across all pipeline routes to determine suitable ground conditions for the pipeline and to identify any mitigations required to ensure long term pipeline stability. Canals will be crossed using trenchless methods to minimise disturbance and settlement risk. Consultation is being held with CRT and with the owners of similar assets with the aim of agreeing the techniques by which their infrastructure would be crossed.
Concern that the impact of disturbance as a result of the project could adversely impact on	✓				The pipeline routes will be selected using a range of criteria to ensure all technical and

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the poorly maintained Trent and Mersey Canal					environmental matters are duly considered. The Project is undertaking geotechnical investigations across all pipeline routes to determine suitable ground conditions for the pipeline and to identify any mitigations required to ensure long term pipeline stability. Canals will be crossed using trenchless methods to minimise disturbance and settlement risk. Consultation is being held with CRT and with the owners of similar assets with the aim of agreeing the techniques by which their infrastructure would be crossed.
Suggestion that land between the Trent and Mersey Canal and the A533 contains areas of designated ancient woodland owned by the Woodland Trust	✓				The environmental impact of the two options will be a consideration in the route selection process. Whichever option is chosen, the pipeline will be sited and designed to

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					minimise impacts on the environment as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation. In the case of ancient woodland, it will be avoided where possible and mitigations put in place if necessary to minimise disturbance.
Suggestion that land south of the A533 contains many undulations and dips such as Dutton Hollows	✓			✓	The topography of land along route will be a consideration in the design and route of the pipeline.
Request for clarification on the purpose of the two pipelines running southwards from the West Corridor along Lower Rake Lane and Straight Length in Frodsham			✓		The two spurs identified would not be pipeline spurs but would be used for access by construction vehicles. The boundary of the development

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					shown must include all access points, from the public highway to the pipeline itself, that are needed to undertake the construction works.
Identification of the high pressure fuel pipelines in close proximity to the proposed development		✓			The Project design is identifying all pipelines and other utility infrastructure which the pipeline could interact with. The design of any separation distances where the proposed pipeline runs parallel with, or crosses, any other utilities will follow all applicable UK regulations, standards and codes of practices.
Suggestion that the pipeline should cross the river weaver and be routed along the river bank eastwards towards Northwich			✓		The pipeline routes will be selected using a range of criteria to ensure all technical and environmental matters are duly considered. The Project is undertaking geotechnical investigations across all pipeline

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				routes to determine suitable ground conditions for the pipeline and to identify any mitigations required to ensure long term pipeline stability. The maintenance and integrity of pipelines are considered as part of the design process which may rule out the installation along the river bank.
Request for no additional pipelines to be located within respondents property due to drainage issues, land value reduction and blight which cannot be compensated			✓	The pipeline routes will be selected using a range of criteria to ensure all technical and environmental matters are duly considered. The Project is undertaking geotechnical investigations across all pipeline routes to determine suitable ground conditions for the pipeline. The pipelines will be constructed and reinstated using best practice methods and in accordance with design codes and standards. No

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					pipelines will be placed under residential properties.
Suggestion that the route through the Western Corridor avoid the zone of influence of the Dutton Canal Tunnel	✓				The zone of influence of the Dutton Canal Tunnel will be considered in the routing of the pipeline.
Proposal to use the existing pipelines rather than introducing new infrastructure			✓		In order to use existing pipelines, those pipelines would need to connect to the correct locations where hydrogen is to be produced, stored and used, the pipelines would need to be unused at this time and they would need to be of an appropriate standard to carry hydrogen. The complexities involved across these three options mean that it is not considered to be a viable option.
The AGI's between Stanlow and the Central Hub are not required			✓		The HAGIs proposed between Stanlow and the Central Hub are

Issue Raised by Topic	Stakeholder Group			Response from Cadent
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				required to allow connections to be made to the main pipeline and the industrial customers of the hydrogen identified in this area.
DCO and Wider Planning Issues				
Suggestion that the proposals contradict local authority plans to improve the local area			✓	The proposals will be considered against relevant local authority plans and policies as material considerations in the decision making process. This will include a consideration of how the pipeline will provide benefits, alongside any impacts that the construction or operation may bring. As with all planning or DCO applications, the final decision be judged on a balance of all of these matters by the Planning Inspectorate.
Suggestion that the proposals should not be considered until			✓	The design, construction and operation of the proposed

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safety concerns are understood and planned for					pipeline will follow all applicable UK regulations, standards and codes of practices in relation to safety.
If the proposals prejudices the loss or leads to the loss of use of land used as a playing field (within 5 years) any subsequent application and consultation with Sport England will be a statutory requirement	✓				The proposed assessment will take account of sports pitches and playing fields and the sporting and recreational activities which take place on them. Such facilities are to be avoided wherever possible and further details of the identification and assessment of the proposal against these features will be continued with the PEIR which will be subject to statutory consultation.
Interfaces between HS2 and the proposed development will be required in several locations throughout the Cheshire region		✓			Discussions with HS2 are ongoing such that the design, construction and programme of the projects (should they be concurrent) can be coordinated to

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					minimise disruption and cumulative impact.
Legal agreements and protective provisions will be required within the DCO between HS2 and the proposed development		✓			Contact has been made with HS2 and will continue throughout the Project, to ensure that all interfaces are identified and appropriately addressed.
Request for the required protective provisions to be applied to the Exolum high pressure fuel pipelines in close proximity to the proposed development		✓			Contact has been made with Exolum and will continue throughout the Project, to ensure that all interfaces are identified and appropriately addressed.
The HyNet proposals do not meet the ambitions of Liverpool City region and should be increased and accelerated	✓				The current proposals form Phase 2 of the wider HyNet scheme. The parameters of Phase 2 have been identified from the confirmed interest received by the Applicant from customers of the hydrogen to be supplied. The future expansion of HyNet across the wider region to

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					be considered in Phase 3 which will be programmed around the progress of Phase 2 and the confirmation of other users in the future.
Request for clarification on why a carbon pipeline is not proposed in the same corridor as the Hydrogen pipeline, to benefit from a single route plan	✓				The proposed pipelines connect different customers to different storage locations and therefore cannot follow the same corridor. In the area where the proposed pipelines would be close, the requirement to maintain a suitable separation distance between them, and presence of existing utilities, limits opportunities to follow the same corridor.
Environment					
Any non-ancient woodlands affected by the proposed development should be reviewed				✓	Noted. Surveys of habitats are being undertaken in areas where there is potential for these to be

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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to ensure any areas of potentially unmapped ancient woodland are taken in to account					significantly affected by the Project, which will identify the habitat types present including ancient woodland. Where there is potential for significant effects, these would be subject to further consideration and assessment in the EIA, and mitigation included as appropriate.
As part of the development of the project, greater consideration should be given to Moore Nature Reserve and Reservoir as a recreational facility and wildlife haven			✓		Noted. Surveys of habitats and protected species are being undertaken in areas where there is potential for these to be significantly affected by the Project. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA.
Concern about the cumulative impact of the proposed development, the Tata incinerator			✓		The contribution of existing emissions sources to local air quality will be accounted for

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and HS2 on local air quality in Northwich					through the use of the Defra background pollution maps in the assessment, which are based on the National Atmospheric Emissions Inventory (NAEI). Further details of potential Air Quality impacts will be included in the PEIR which will be published at statutory consultation.
Concern about the cumulative noise impact of the proposed development, the Tata incinerator and HS2 on Northwich			✓		The noise and vibration assessment will consider other developments which could result in a cumulative impact and combined effect will be assessed in accordance with the relevant standards commensurate with the level of detail available at the time of the assessment. Further details of potential noise impacts will be included in the PEIR which will be published at statutory consultation.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the effects of proposed development on endangered wildlife and birds including reserves on Carrington and Warburton Mosses		✓			Noted. Biodiversity surveys are being undertaken in areas where there is potential for features to be significantly affected by the Project. Where there is potential for significant effects, these would be subject to further consideration and assessment in the EIA with the identification of mitigation where required.
Concern about the effects of the proposed development on historic and environmental factors between the M56 and the Central Hub			✓		The EIA will include an assessment of effects to the historic environment, with measures to minimise or mitigate effects to be identified where required. The results of the preliminary assessment will be presented within the Preliminary Environmental Impact Report which will be published at statutory consultation.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Historic assets must be considered in the design and construction of the proposed development to protect the historic character and importance of these assets	✓				See response above.
Concern about the effects of the proposed development on species and habitats between the M56 and the Central Hub			✓		Noted. Biodiversity surveys of species and habitats are being undertaken in areas where there is potential for these to be significantly affected by the Project. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and mitigation identified where required. The results of the preliminary assessment will be presented within the PEIR which will be published at statutory consultation.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the impact of the Central Hub on local biodiversity and nature conservation		✓			See response above.
Concern that the project will cause unavoidable impact to wildlife		✓			See response above.
Request for clarification on whether any wildlife studies have been carried out			✓		See response above.
Concern about the impact of noise pollution from the proposed Central Hub on local wildlife and neighbouring residents			✓		Both residences and biodiversity receptors will be included within the noise and vibration assessment. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and mitigation identified where required.
Concern about the impact of operation noise from the Central Hub on local residents		✓			Local residential receptors will be included within the noise and vibration assessment. Where

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and mitigation identified where required.
Concern about the impact of operational noise from the Central Hub on the local area		✓			See response above.
Concern about the impact of the Central Hub on ancient hedgerows		✓			Noted. Surveys of habitats are being undertaken in areas where there is potential for these to be significantly affected by the Project, which will include identifying important hedgerows. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the impact of the Central Hub on protected native species		✓			Noted. Surveys of protected species are being undertaken in areas where there is potential for these to be significantly affected by the Project. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA and identify mitigation where required.
Concern about the visual impact of the project on the non-industrial character of Dutton Hall Court and surrounding areas		✓			The Project will be sited and designed to minimise impacts on local communities as far as possible including from visual impact. Further details on the impacts which may be experienced by local communities and how these could be mitigated (including by potential screening) will be provided in the PEIR which will be subject to statutory consultation.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that burning hydrogen produces higher levels of nitrogen dioxide than methane		✓			<p>It is anticipated that the nitrogen dioxide concentrations created from the use of hydrogen will be comparable to natural gas, but the concentration is dependent on the equipment used. All industrial and power generation sites supplied with hydrogen (as part of HyNet) will be regulated by the Environment Agency, which has strict emissions limits for NOx, which are likely to further tighten over time. Therefore plants burning hydrogen will need to install appropriate equipment to meet these limits. Domestic equipment supporting hydrogen use will need to meet the same regulations as natural gas, with regard to nitrogen dioxide emissions. The Heating and Hot Water Industry Council are</p>

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
				currently undertaking related trials with industry partners.
Concern that the Project will have a detrimental impact and/or loss of numerous ancient woodlands, veteran trees and Woodland Trust sites				✓ Areas of ancient woodland, veteran trees and trust sites will be avoided by the pipeline routes if possible and mitigations would be put in place to minimise disturbance.
Concern that the Project will result in permanent fragmentation of ancient woodland due to the removal of adjacent semi-natural habitats				✓ Noted. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA. This will include consideration of the effect of loss and fragmentation of habitat, and identify mitigation where required. A preliminary assessment will be reported in the PEIR which will be published at statutory consultation.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that the proposals would have an adverse impact on local green belt land			✓		The HAGIs will be sited and designed to minimise impacts on the Green Belt as far as possible. Further details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation. The pipeline would be placed underground such that potential impacts upon the green belt would be during construction only.
Concern that the proposed Central Hub will result in the loss of agricultural land			✓		Effects on agricultural land are being considered in the PEIR and EIA assessments. The location of the Central Hub will be influenced by the route of the connecting pipelines and engineering requirements in addition to a number of environmental considerations. The quality of agricultural land will inform the

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					decision as to an appropriate location along with these other relevant factors.
Concern that the proposed development will impact the historic environment within Lower Whitley			✓		Consideration will be given to the potential for effects upon the historic environment consistent with national planning policy. The Preliminary Environmental Information Report and subsequent Environmental Statement will report upon the potential for effects during both construction and operation of the Project.
Concern that the proposed development will impact the historic environment within Whitley			✓		See response above.
Concern that the replacement of natural gas with hydrogen would only slightly decrease emissions due to the need to burn more			✓		The PEIR, which will be provided at statutory consultation, will include an initial Greenhouse Gas emissions assessment followed

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
hydrogen because of its lower calorific value				by further detailed analysis in the EIA. This will identify the change in emissions which would result from the Project. The Project is intended to transport hydrogen, it does not include for its production and it will be able to receive hydrogen from any production source, including green hydrogen.
Concern that the routing of the pipelines will cross large areas of greenbelt in the North West			✓	The potential impacts on the Green Belt concern HAGI only as the pipeline will be underground. The potential impacts on the Green Belt associated with HAGI will be taken into account in a systematic fashion that is in accordance with best practice. The assessments of Green Belt impacts will consider reasonable options for the siting of HAGIs in specific localities, helping to

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	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					inform a balanced view of likely environmental effects.
Identification of ancient woodland areas to the south of the A533		✓			The location of ancient woodlands across the study area have been mapped and these areas will be avoided wherever possible. Mitigation will be put in place to minimise disturbance.
Mitigation measures should be considered to alleviate impacts on ancient woodland from detrimental edge effects				✓	See response above.
Request for all areas of saltmarsh to remain excluded from the scoping boundary				✓	Noted. The Project is being designed to avoid and minimise impacts on priority habitats such as coastal saltmarsh. Surveys of habitats are being undertaken in areas where there is potential for these to be significantly affected by the Project. Where there is potential for significant effects

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					these would be subject to further consideration and assessment in the EIA. This will include consideration of the effect of loss and fragmentation of habitat, and identify mitigation where required.
Request for all local wildlife sites to be excluded from the scoping boundary				✓	Noted. The Project is being designed to avoid and minimise impacting Local Wildlife Sites. Surveys of species and habitats in Local Wildlife Sites are being undertaken in areas where there is potential for these to be significantly affected by the Project. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA. This will include consideration of the effect of loss and fragmentation of LWS and identify mitigation where required.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Request for ancient woodland and deep peat deposits to be excluded from the scoping boundary				✓	Noted. The Project is being designed to avoid and minimise impacting sensitive habitats. Surveys of habitats are being undertaken in areas where there is potential for these to be significantly affected by the Project and these include for the identification of ancient woodlands and areas of peat. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and mitigation identified where required. In the case of peat, if it is not possible to totally avoid such areas then methods of construction will be informed by its presence and adapted where appropriate.
Request for clarification on whether any trees would be			✓		Noted. An arboricultural survey will be undertaken in areas where

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
removed for the pipeline and associated infrastructure					there is potential for trees to be significantly affected by the Project. This will be presented as an appendix to the Environmental Statement which will be submitted with the application. Where there is potential for effects these would be subject to further consideration and assessment in the EIA, and mitigation identified where required.
Request for notable trees to be identified, retained and afforded a suitable root protection area, in line with Natural England and Forestry Commissions advice				✓	See response above.
Request for information on how listed structures on the Sankey Canal will be preserved and enhanced in line with national planning policy	✓				The presence of the Sankey Canal and its historic features has been noted and the Project will seek to avoid any significant effects.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Request for more information about the approaches to be applied to minimise the impacts of construction and operation of the proposed development on wildlife and the environment	✓				Noted additional information will be provided in the PEIR which will be published at statutory consultation. Biodiversity surveys of species and habitats are being undertaken in areas where there is potential for these to be significantly affected by the Project. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, mitigation identified to avoid or minimise impacts.
Request for more information on mitigation and offsetting measures to be applied to support the projects effects on biodiversity post construction			✓		See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Request for more information about the long and short term impact on biodiversity around the Mersey			✓		Noted, additional information will be provided in the PEIR which will be published at statutory consultation. Surveys of species and habitats within those parts of the study area around the Mersey are being undertaken where there is potential for these to be significantly affected by the Project. The ES will assess the likely impacts on habitats and species identified as having biodiversity value, during construction, operation and decommissioning of the Project.
Request for more information on the protection of sensitive ecological area including the River Weaver, the Weaver Navigation and the Trent and Mersey Canal during and post construction			✓		Noted, additional information will be provided in the PEIR which will be published at statutory consultation. Biodiversity surveys of species and habitats are being undertaken in those parts of the study area which includes the waterbodies referred to. Where

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					there is potential for these to be significantly affected by the Project. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and identify mitigation to avoid or minimise impacts, both during construction and in operation.
Suggestion for the consideration of impacts on nearby access land, common land, public rights of way and coastal access routes	✓				All recreational routes and access/common land that falls within the study area and Zone of Theoretical Visibility (ZTV) will be assessed in the Landscape and Visual Impact Assessment (LVIA). Direct impacts will also be identified and assessed and these will include impacts upon any open access land. A Public Rights of Way Management Plan will identify all affected PRowS and areas of open access and/or

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					common land and it will identify the management measures proposed. A preliminary document will be published at statutory consultation.
Suggestion for the consideration of links to existing green spaces to enhance and improve access	✓				The Project will consider the potential to maintain and where appropriate enhance green space connectivity.
Suggestion for the consideration of links to other green networks and urban fringe areas to create wider green infrastructure	✓				Noted. Mitigation to avoid or minimise impacts, both during construction and in operation will be identified. Any habitat creation that takes place as part of the Project will seek to increase habitat connectivity and align with strategic habitat conservation initiatives such as the Natural England National Habitat Network.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion for the consideration of potential impacts on any nearby National Trails	✓				All national trails that fall within the study area and Zone of Theoretical Visibility (ZTV) will be assessed in the Landscape and Visual Impact Assessment (LVIA). There are no national trails directly affected by the PEIR order limits and as such these are will not considered in the Preliminary PRow Management Plan (PRowMPP) which will be prepared and published at statutory consultation. Some Regional trails will be included in the PRowMPP.
Suggestion for the creation of a new pond as part of the proposed development	✓				Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and mitigation identified to avoid or minimise impacts, both during construction and in operation. Any habitat creation that takes

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					place as part of the Project will be described in the ES and align with best practice habitat conservation initiatives. The Applicant is looking to start discussions with Natural England regarding District Licensing.
Suggestion for the incorporation of swift and bat boxes in the designs of new buildings	✓				Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and mitigation identified to avoid or minimise impacts, both during construction and in operation. Any habitat creation that takes place as part of the Project will be described in the ES and align with best practice habitat conservation initiatives. The Applicant is looking to start discussions with Natural England regarding District Licensing.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion for the planting of trees characteristic to the local area as part of the proposed development	✓				See response above.
Suggestion for the restoration of neglected environmental features as part of the proposed development	✓				Noted. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and mitigation identified to avoid or minimise impacts, both during construction and in operation. Such mitigation would consider existing opportunities where present. Any habitat creation that takes place as part of the Project will be described in the ES and align with best practice habitat conservation initiatives.
Suggestion for the restoration of neglected hedgerows as part of the proposed development	✓				See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion for the use of native plants in landscape schemes to provide better nectar and seed sources for bees and birds	✓				See response above.
Suggestion that a Landscape and Visual Impact Assessment be provided with the proposal where impacts are likely to be significant	✓				A Landscape and Visual Impact Assessment (LVIA) will be provided to cover the construction and operational phases of the HAGI and surrounding land. In addition, a construction phase LVIA will be undertaken of construction compounds and land surrounding them where the size, level of activity, structures/materials stored and duration could result in the potential for significant landscape or visual effects. In order to ensure that all potentially significant effects are captured a precautionary approach will include all areas of the pipeline that are located within higher

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	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					sensitivity landscapes i.e. local landscape designations.
Suggestion that acoustic barriers such as vegetation and buildings be erected to mitigate noise impacts on horses				✓	The effect on livestock and any mitigation required will be considered, however, it should be noted that there is no accepted level at which health effects occur on other animals.
Suggestion that additional street trees be planted as part of the proposed development	✓				The majority of opportunities for planting as part of the Project are likely to be associated with the HAGIs and located away from public highways, however in urban settings e.g. St. Helens there could be opportunities for some new tree planting adjacent to the public streets but this would need to come forward with the agreement of the local highway authority. It is however more likely that landscaping schemes close to the pipeline

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					would consider low lying vegetation so that the roots would not affect the pipeline.
Suggestion that all existing public rights of way be identified and safeguarded		✓			All PRow crossed by the pipeline route will be identified at an early stage and where practical will be avoided. Where PRow's are affected by the project then all relevant legal permissions will be obtained including the provision of temporary diversions where necessary. In a limited number of locations and for minimum time periods it may be necessary to close a PRow where no practicable and safe alternative is available. A preliminary PRowMP will be prepared for publication at statutory consultation. This will identify the management measures proposed.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that detailed assessment of temporary diversions of public rights of way during the construction period be undertaken		✓			See response above.
Suggestion that any development near to ecological features include measures to mitigate impacts on biodiversity while enhancing overall condition and achieving BNG				✓	Noted. Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and identify mitigation to avoid or minimise impacts, both during construction and in operation. Any habitat creation that takes place as part of the Project will be described in the ES and align with best practice habitat conservation initiatives. As part of that assessment, BNG would be considered and applied where appropriate.
Suggestion that biodiversity net gain be delivered as part of the				✓	See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
project's specific environmental commitments					
Suggestion that any further Local Nature Recovery Strategies or the National Nature Recovery Network published during the development of the project be considered in the design of environmental elements				✓	Noted. Any updates to such strategies which are pertinent to the Project would be considered when designing environmental mitigation.
Suggestion that Biodiversity Net Gain is delivered on the project using the DEFRA 3.0 metric and associated good practice principles and guidance				✓	Noted. It is currently the applicants intentions to use the Defra Biodiversity Metric version 3.1 to calculate biodiversity losses and gains and to report the results within the ES. This will be the subject of further consultation with stakeholders.
Suggestion that birds of prey are frequently identified in the area of the proposed Central Hub		✓			Noted. Surveys of species including birds are being undertaken in areas where there is potential for these to be

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					significantly affected by the Project.
Suggestion that Cadent follow the mitigation hierarchy outlined in paragraph 180 of the NPPF to consider the retention of existing environmental features	✓				Noted, mitigation hierarchy is applied as part of the Project design and considered with other factors including technical design.
Suggestion that consideration be given to the potential environmental value of brownfield sites	✓				Noted. Baseline surveys to map the type and distribution of habitats are on-going, and would assess the suitability of habitats present to support associated species which are legally protected or otherwise conservation-notable. This mapping will include for brownfield sites recognising that they can have biodiversity interest. Should development be proposed on brownfield sites which are of biodiversity interest

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					then measures to mitigate effects will be identified.
Suggestion that consideration be given to whether any landscape features or characteristics could be incorporated into the proposed development to enhance local landscape character and distinctiveness	✓				If required, the outline design of mitigation planting associated with the HAGI will reflect the local landscape character and any distinctive features in the locality.
Suggestion that de facto rights on tracks such as white roads and green lanes be safeguarded		✓			Existing rights of access will be recorded and the Outline CTMP will set out the means by which construction traffic will be managed to reduce disruption to existing users.
Suggestion that Dutton Locks is of historic importance due to its origin from the early industrial era			✓		It is acknowledged that Dutton Locks are of historic importance, and this is recognised in their designation as listed buildings. Dutton Locks are outside of the Project boundary. The EIA will

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					include an assessment of effects to the historic environment, with measures to minimise or mitigate effects to be identified where required.
Suggestion that GHG emissions associated with land use change be scoped into the EIA				✓	The greenhouse gas emission methodology has been consulted upon at scoping and a preliminary assessment will be reported in the PEIR.
Suggestion that Great Budworth is a Conservation Area			✓		It is acknowledged that Great Budworth is a Conservation Area. At a distance of over 2km, it is not anticipated that it will be affected by the Project.
Suggestion that green roofing be provided on new buildings	✓				The permanent structures within the HAGI compounds are typically small-scale buildings up to 3.5m high, surrounded by pipework and other infrastructure. It is therefore unlikely that green

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					roofs would be feasible or provide much benefit given the limited footprint of the roofs.
Suggestion that historic and archaeological interests would be uncovered if excavations were to take place in the vicinity of Dutton Hall, which would add to the cost and timeframe of the project		✓			The EIA will include an assessment of effects to the historic environment and as with all developments of this scale, it is anticipated that there will be a need for a programme of archaeological excavation and recording in advance of development. Surveys will be completed in the course of the EIA in order to understand and minimise the extent of possible disturbance to archaeology.
Suggestion that impacts on ancient woodland and ancient and veteran trees be considered in line with paragraph 180 of the NPPF	✓				Areas of ancient woodland and veteran trees will be avoided by the pipeline routes if possible and mitigations would be put in place to minimise disturbance.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that improvements to the existing public rights of way network be identified	✓				The Preliminary PProWMP will focus on identification of affected PProW but will not specifically include for the improvement of the PProWS.
Suggestion that it should be assumed that noise generated by the project is likely to be distressing to horses				✓	The noise and vibration impact on public rights of way and on sensitive receptors such as stables will be considered as part of the assessment.
Suggestion that lighting be designed to encourage wildlife	✓				Noted. Surveys of species and habitats are being undertaken in areas where there is potential for these to be significantly affected by lighting related to the Project. Where such potential for significant effects exists, these would be subject to further consideration and assessment in the EIA.

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	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that locally specific information on local wildlife sites be obtained from appropriate bodies such as local records centres, geoconservation groups and recording societies	✓				Noted. Information on Local Wildlife Sites will be obtained from appropriate local sources as part of a detailed desk study, which would be outlined in the ES.
Suggestion that mitigation measures be incorporated for adverse impacts on National Trails	✓				Noted, the preliminary Order Limits are being drawn such that National Trails will not be affected.
Suggestion that mitigation measures should be used to offset damage caused as a result of the Project			✓		Mitigation will be embedded in the Project and where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and identify mitigation to avoid or minimise impacts, both during construction and in operation.
Suggestion that Natural England's Environmental Benefits from	✓				Noted. Where mitigation and habitat creation is to be provided

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Nature tool be used to identify opportunities to enhance wider nature benefits and minimise adverse impacts					as part of the Project this will be outlined in the ES. Defra Biodiversity Metric version 3.1 will be used in order to calculate biodiversity losses and gains, and the use of the Environmental Benefits from Nature Tool is being considered. Results will be summarised within the ES.
Suggestion that Natural England's Biodiversity Metric 3.0 be used to calculate biodiversity losses and gains for habitats	✓			✓	Noted. Defra Biodiversity Metric version 3.1 will be used in order to calculate biodiversity losses and gains. Results will be summarised within the ES.
Suggestion that the proposed development should provide biodiversity net gain in line with the NPPF	✓			✓	See response above.
Suggestion that new green spaces be identified and existing spaces	✓				Where there is potential for significant effects these would be subject to further consideration

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
managed to be more wildlife friendly					and assessment in the EIA, and identify mitigation to avoid or minimise impacts, both during construction and in operation. Any habitat creation that takes place as part of the Project will be described in the ES and align with best practice habitat conservation initiatives. As part of that assessment, BNG would be considered and applied where appropriate and would consider existing and new green space if required
Suggestion that noise generation should be avoided in the vicinity of public rights of way and equestrian routes				✓	The noise and vibration impact on public rights of way will be considered as part of the PEIR and EIA assessment.
Suggestion that noise impacts from the Central Hub are exacerbated by the open rural nature of the local area		✓			Screening or the lack of screening will be considered in the noise and vibration assessment.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that numerous protected species inhabit the area of the proposed Central Hub		✓			Noted. Surveys of protected species are being undertaken in areas where there is potential for these to be significantly affected by the Project.
Suggestion that offsite mitigation measures should be considered where onsite measures are not possible	✓				Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and identify mitigation to avoid or minimise impacts, both during construction and in operation. Any habitat creation that takes place as part of the Project will be described in the ES and align with best practice habitat conservation initiatives. As part of that assessment, BNG would be applied - this would consider opportunities offsite if appropriate and required.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that reptiles be scoped in to the EIA at any sites or locations known to, or have the potential to, support a reptile assemblage				✓	Surveys of protected species are being undertaken in areas where there is potential for these to be significantly affected by the Project. This includes reptile surveys.
Suggestion that the area of the proposed Central Hub is designated for protection of biodiversity		✓			The Project is being designed to avoid and minimise impacting sensitive habitats. Surveys of habitats are being undertaken in areas where there is potential for these to be significantly affected by the Proposed Development and will identify habitats of existing biodiversity value where there are present. If any sites are worthy of designation that are not currently, this would be raised as part of the assessment in the EIA.
Suggestion that the area to the south of Dutton Hall Court, including the Trent and Liverpool		✓			The land between Dutton Hall Court and the Trent & Mersey Canal is not an Area of

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Canal and the River Weaver, is an Area of Outstanding Natural Beauty					Outstanding Natural Beauty. The land is however, entirely allocated as Green Belt designation. The Trent & Mersey Canal (including land extending to the River Weaver) is designated as a Conservation Area. Any proposals which directly or indirectly affect these designations will be considered as part of the assessment in the EIA.
Suggestion that the assertion in the EIA Scoping Report that GHG emissions associated with land use change are not applicable as an emissions source is incorrect as semi-natural carbon storing habitats in the scoping area could be disturbed, leading to the emission of a significant amount of GHGs				✓	The greenhouse gases assessment in the PEIR and EIA will consider the potential for significant effects to arise from the release of sequestered carbon as a result of the Project.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that the assessment of any landscape and visual impacts should be robust, particularly in relation to Dunham Massey, the Trans Pennine Trail and the Cheshire Canal Ring Walk				✓	The village of Dunham Massey will be assessed as part of the LVIA, and this will include for the Registered Park and Garden (RPG) should it fall within the study area. Similarly the visual amenity of users of all long distance footpaths and other public rights of way that fall within the LVIA study area will be assessed. The LVIA will be robust and carried out in accordance with best practice guidance.
Suggestion that the buffer zones and restoration areas within ecological networks be targeted for the delivery of environmental mitigation, compensation and enhancement measures				✓	Where there is potential for significant effects these would be subject to further consideration and assessment in the EIA, and identify mitigation to avoid or minimise impacts, both during construction and in operation. Any habitat creation that takes

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Suggestion that the decision to scope out reptiles from the EIA is incorrect due to their rarity in Cheshire and consequent importance in the local environmental context				place as part of the Project will be described in the ES and align with best practice habitat conservation initiatives - local, regional and strategic as appropriate. As part of that assessment, BNG would be applied - this would consider opportunities offsite if appropriate and required.
				<p>✓</p> <p>Noted. Surveys of protected species, including reptiles, are being undertaken in areas where there is potential for these to be significantly affected by the Project. Where there is potential for significant effects on reptiles these would be subject to further consideration and assessment in the EIA.</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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Suggestion that the Dutton Hall site is of historic interest and importance		✓			Dutton Hall is the site of a Manor House built by the 16th century, though a modern farm now stands in the location. It is acknowledged that there may be associated archaeological remains in this area, and this will be considered as part of the EIA.
Suggestion that the ecological and green infrastructure outlined in Policies HE1 and HE4 of the Halton Proposed Delivery and Allocations Local Plan 2019 should be considered in the design of environmental elements				✓	All appropriate and relevant polices will be considered in the EIA in respect of biodiversity features
Suggestion that the ecological and green infrastructure outlined in Policy DC4 of the Warrington Proposed Local Plan 2021-2038 should be considered in the design of environmental elements				✓	All appropriate and relevant polices will be considered in the EIA in respect of biodiversity features

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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Suggestion that the ecological and green infrastructure outlined in Policy DM44 of the Cheshire West and Chester Land Allocations and Detailed Policies 2019 should be considered in the design of environmental elements				✓	See response above.
Suggestion that the ecological and green infrastructure outlined in Policy ENV1 of the Cheshire East Allocations and Development Policies 2020 should be considered in the design of environmental elements				✓	See response above.
Suggestion that the ecological and green infrastructure outlined in Policy JP-G2 of the Proposed Places for Everyone 2021 plan should be considered in the design of environmental elements				✓	See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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Suggestion that the ecological and green infrastructure outlined in the Greater Manchester pilot Local Nature Recovery Strategy should be considered in the design of environmental elements				✓	Any habitat creation that takes place as part of the Project will be described in the ES and it will consider best practice habitat conservation initiatives such as the Local Nature recovery Strategy as appropriate. As part of that assessment, BNG would be applied - this would consider opportunities offsite if appropriate and required.
Suggestion that the existing public rights of way network be extended to create missing links	✓				The Preliminary PRowMP which will be published at statutory consultation will focus on identification of affected PRow and the means by which they will be managed. This may include for temporary diversions but it will not include for the creation of new permanent PRow.
Suggestion that the Habitats Regulation Assessment consider				✓	The Habitat Regulations Assessment (HRA) process will

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other large infrastructure projects and local plan allocations near the designated Mersey Estuary					consider all other projects where they are pertinent to the assessment of effects in relation to the Project, in agreement with the relevant stakeholder.
Suggestion that the Habitats Regulation Assessment consider the effects of future and other stages of the wider HyNet project				✓	The HRA process will consider project stages where they are pertinent to the assessment of effects in relation to the Project, in agreement with the relevant stakeholder.
Suggestion that the Habitats Regulation Assessment include an assessment of land within the application site deemed to be functionally linked to an internationally designated site for nature conservation				✓	The HRA process will consider all functionally linked land parcels where there is a pathway for effects in relation to the Project, in agreement with the relevant stakeholder.
Suggestion that the impacts of the proposed development on local wildlife and geodiversity sites be	✓				Noted. The Project is being designed to avoid and minimise impacts upon designated sites.

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considered in line with paragraphs 175 and 179 of the NPPF and relevant development plan policies					The scope of assessment in the ES will account for the NPPF and other relevant planning policies, and relevant policy content will be summarised in the ES. The ES will assess the likely impacts on designated sites, and identify mitigation where required.
Suggestion that the location of deep peat deposits be identified using the spatial dataset in Natural England's NE257 report				✓	Noted, and this data set is being used to inform design.
Suggestion that the nearby Dutton Viaduct is a site of historic interest	✓				Dutton Viaduct was built in 1836 and is a Grade II* listed building. An assessment of the effects upon this structure will be undertaken should it fall within the boundary of the study area.
Suggestion that the proposed development could provide a new	✓				This proposal is unlikely to be possible as the permanent above

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footpath through the development to link existing public rights of way					ground elements of the scheme (HAGIs) are enclosed in a secure perimeter fence for public health and safety reasons. Existing land uses will continue across the route of the pipeline, which will be underground.
Suggestion that the proposed development deliver relevant aspects of local authority green infrastructure strategies where appropriate	✓				Noted. Biodiversity and landscape enhancements provided as part of the Project will be outlined in the EIA, and these will seek to accord with local conservation, landscape and green infrastructure strategies where relevant.
Suggestion that the proposed development help implement elements of local Landscape, Green Infrastructure and Biodiversity Strategies	✓				See response above.

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Suggestion that the reinstatement of existing footpaths and creation of new footpaths and bridleways be considered	✓				The Preliminary PProWMP will focus on identification of affected PProWs and will not include the creation of new permanent PProW.
Suggestion that the scope of breeding bird surveys include consideration of effects to all breeding bird species, rather than just those with WACA protection				✓	All breeding birds have protection under the W&CA1981. Surveys of breeding birds are being undertaken in areas where there is potential for these to be significantly affected by the Project.
Suggestion that the scoping out of all non-schedule 1 WACA breeding bird species from the EIA is incorrect due to the breeding of some such birds in Cheshire				✓	Surveys of breeding birds are being undertaken in areas where there is potential for those species to be significantly affected by the Project.
Suggestion that there are colonies of protected amphibians in the area of the proposed Central Hub		✓			Noted. Surveys of protected species are being undertaken in areas where there is potential for

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					these to be significantly affected by the Project.
Suggestion that there are ecological networks and wildlife corridors located in the route corridors which are unlikely to be impacted if other important ecological features are avoided by the route				✓	Noted. The ES will assess the likely impacts on habitats and species identified as having biodiversity value, which will include consideration of the effect of loss and fragmentation of habitat and identify mitigation where required.
Suggestion that there may be opportunities to protect and enhance locally valued landscapes as part of the proposed development	✓				The operational above ground elements of the Project at the HAGI sites will all be located outside the local landscape designations
Suggestion that trees in Great Budworth are subject to Tree Protection Orders			✓		Noted. The presence of TPOs across the route of the Project will be recorded using publicly available information.

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Suggestion to use the UK Habitat Classification System during habitat surveys rather than the Phase 1 Habitat Survey methodology to avoid the need for conversion for entry into the Defra BNG Metric 3.0				✓	The proposed method of assessment aligns with this suggestion.
Suitable buffer zones are provided to all areas of ancient woodland and to Woodland Trust owned sites to prevent adverse impacts				✓	Surveys of habitats are being undertaken in areas where there is potential for these to be significantly affected by the Project. Where there are potential for significant effects, these would be subject to further consideration and assessment in the EIA and identify mitigation which may include buffer zones.
Support for the identification and avoidance of statutory designated features in the EIA Scoping Report				✓	Noted. The Project is being designed to avoid and minimise impacts upon designated sites. The scope of preliminary assessment in the PEIR and

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					latterly the ES will account for NPPF and other relevant planning policies which provide policy protection for statutory (and non-statutory) sites, with relevant policy content summarised in the technical chapters. The PEIR and ES will provide a preliminary and final assessment respectively assessing the likely impacts on designated sites and identify mitigation where required.
Surveys detailing woodland flora and fauna should be undertaken to ensure that impacts to habitats are mitigated as part of the design of the proposals				✓	Surveys of protected species and habitats are being undertaken in areas where there is potential for these to be significantly affected by the Project. Where there are potential for significant effects, these would be subject to further consideration and assessment in the EIA and identify mitigation measures to minimise effects.

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The assessment of historic environment should take into account potential construction impacts and the potential to alter the ability to appreciate the significance of heritage assets on Dunham Massey				✓	Effects on the setting of Dunham Massey will be assessed as part of the EIA should it lie within the relevant study area.
General					
Concern about the proposed development and residential developments currently under construction			✓		Consultation with the relevant local planning authorities and regular reviews of the planning registers and local plan documents are undertaken in order to identify development proposals. Should any potential for conflicts be identified work will be undertaken to avoid or mitigate.
Concern about the proximity of the project to existing pipelines			✓		The Project design is identifying all pipelines and other utility infrastructure which the HyNet

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					hydrogen pipeline could interact with. The design of any separation distances where the proposed pipeline runs parallel with, or crosses, any other utilities will follow all applicable UK regulations, standards and codes of practices.
Concern that the proposed development will prolong the use of fossil fuels			✓		The HyNet North West Hydrogen Pipeline is a means by which hydrogen can be transported from suppliers to customers and whilst the initial proposals are that it will transport blue hydrogen (using natural gas as a fuel stock) the pipeline will be equally able to accommodate future supplies of green hydrogen.
General objection to the proposed development			✓		Objection is noted.

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General support for the principle of the proposed development	✓	✓	✓	✓	Support is noted.
It will be important to identify the exact points of interface with HS2 and the proposed development to understand how effects on both construction and operation of the railway are avoided or to be mitigated as appropriate		✓			Discussions with HS2 and other organisations are ongoing such that the design, construction and programme of concurrent projects can be coordinated to minimise disruption and cumulative impact. The current understanding is that pipeline construction will precede HS2.
Objection to the project due to concerns that it would generate large amounts of pollution			✓		The objection is noted. The pipeline will be sited and designed to minimise impacts from any potential pollution as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.

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Objection to the proposals due to concern that it would become a danger to life if damaged			✓		The objection is noted. The pipeline will be sited and designed to minimise impacts from any potential safety risks as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Objection to the proposals due to concerns about the behaviour of Cadent staff on other work sites			✓		<p>The Applicant recognises that any major infrastructure brings construction impacts. It is too early in the Project for detailed construction plans to be developed but the Applicant will look to minimise any impacts from construction.</p> <p>The Applicant cannot comment on previous projects but will expect all construction staff and contractors to maintain standards</p>

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					of excellence and follow industry best practice.
Objection to the proposals due to the area being sufficiently industrialized already and not needing further industrialization			✓		The objection is noted. The existing industry of the region is a major factor in the proposals to supply hydrogen to the high energy use of these industries and the opportunity for substantial greenhouse gas reductions that would arise from the switch to hydrogen.
Objection to the proposals due to the impacts on the local environment			✓		The objection is noted. The pipeline will be sited and designed to minimise impacts on the environment as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.

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Objection to the Proposed route corridor between the M56 and the Central Hub due to effects on wildlife and habitats, historic environment, tourism and agriculture			✓		The routing options for the pipeline have considered a number of environmental constraints which include biodiversity, the landscape, the historic environment and the presence of local businesses and residential areas. The intention is to use this information, together with the engineering studies, to identify a route which the Applicant considers to be consentable.
Request for clarification on the proposed pipeline route			✓		Further information will be made available during the statutory consultation exercise which can be used to inform future feedback.
Request for clarification on whether a Hydrogen Pipeline which will run in the direction of the Wirral will be added to the Project	✓				The current proposals form Phase 2 of the wider HyNet programme. The parameters of Phase 2 have been identified

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					from the confirmed interest received by the Applicant from customers of the hydrogen to be supplied. The future expansion of HyNet across the wider region to be considered in Phase 3 which will be programmed around the progress of Phase 2 and the confirmation of other customers in the future.
Request for clarity regarding how Cadent intend to cross watercourses, particularly the River Weaver		✓			Further information will be made available during the statutory consultation exercise which can be used to inform comments. Most major watercourses will be crossed by trenchless methods.
Request for consideration of additional connections to residential areas currently not on existing gas mains such as Little Leigh, Whitley and Dutton			✓		The Project will connect initially with large industrial and commercial gas customers in order to make the biggest reductions in CO2. This is consistent with the UK Hydrogen

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				<p>Strategy which initially focuses on emission reductions in industrial clusters. The Project also includes connections to the existing gas network to enable hydrogen to be received by domestic customers through a blended gas supply. Trials are in development for the future, wider residential use of hydrogen, such as a proposed Hydrogen Village at Whitby in Ellesmere Port. With regard to local villages, infrastructure would be required in or near to the villages to enable a connection in order to bring the hydrogen to the correct pressure. Discussions are taking place with a wide number of stakeholders around the transition from natural gas to hydrogen in homes and any additional residential connections would be made during this transition period.</p>

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Request for the proposed development to avoid routes that may service delivery and to accommodate occupational requirements	✓				The Applicant will identify access routes for construction which will take into consideration existing land uses wherever possible. The routes will be discussed with the relevant highway authorities and will be presented within the PEIR. To further manage construction a CTMP will be produced which will set out the means by which construction traffic will be managed to reduce impacts upon the surrounding land uses. In addition, crossings of major highways will be trenchless. This will mean that there will not be a requirement to close these highways during construction.
Request to ensure the route of the pipeline minimises any impact that would create channels to increase the severity of impact from a natural disaster event particularly	✓				Issues of flood risk, climate change and natural disasters are all being considered within the siting and design of the pipeline. Further details on the impacts

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flooding associated with sea level rise, pluvial and fluvial					which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Request to avoid routes that prejudice the Councils entry level farms and critically to listen to and accommodate farmers requirements	✓				Discussions are ongoing with the landowners/tenants along the proposed routes in order to aid the discussions on pipeline routes through their land and how the proposed works could impact on their businesses. The results of these discussions will be considered within the design.
Suggestion that all crossings under Canal and River Trust waterways must be at least 3.5m below bed level	✓				Any work in the vicinity of or crossings beneath a canal will be designed, constructed and operated in accordance with various regulations, standards and Codes of Practice to ensure continued safety and integrity of the canal and the pipeline. The

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					design of the pipeline crossing and the construction methods will be subject to a formal approval process by the authority responsibly for the canal. It is currently envisaged that all canal crossings will be trenchless.
Suggestion that increased use of hydrogen will be important in meeting climate change goals			✓		The comment is noted.
Suggestion that many canal structures are listed and should be avoided where possible	✓				The pipeline will be sited and designed to minimise impacts on heritage assets as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that the Canal and River Trust do not allow overhead	✓				Any work in the vicinity of or crossings beneath a canal will be

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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utility crossings over their waterways					designed, constructed and operated in accordance with various regulations, standards and Codes of Practice to ensure continued safety and integrity of the canal and the pipeline. The design of the pipeline crossing and the construction methods will be subject to a formal approval process by the authority responsibly for the canal. It is currently envisaged that all canal crossings will be underground and constructed via trenchless methods.
Suggestion that the depth of the pipeline under canals would need to be agreed with the Canal and River Trust to ensure works do not undermine the structural integrity of canal infrastructure	✓				See response above.

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	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that the pipeline route avoid Cheshire Wildlife Trust reserves				✓	The pipeline will be sited and designed to minimise impacts on the environment including local wildlife sites (Trust Reserves) as far as possible. Further details on the impacts which may result to habitats and species and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation. The Applicant will continue to engage with Cheshire Wildlife Trust with regard to the Project and any potential interactions with Trust landholdings.
Suggestion that the pipeline route avoid ecological networks and wildlife corridors				✓	The pipeline will be sited and designed to minimise impacts on the environment, including habitats as far as possible. Further details on the impacts which may result and how these could be mitigated will be

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					provided in the PEIR which will be subject to statutory consultation.
Suggestion that the pipeline route avoid irreplaceable habitats and peatlands				✓	See response above
Suggestion that the pipeline route avoid priority and notable habitats				✓	The pipeline will be sited and designed to minimise impacts on the environment as far as possible. Further details on the impacts upon any priority or notable habitats which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that there are 1,368 parcels of priority and notable habitats located in the route corridors which should be avoided				✓	See response above.

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	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that the pipeline route avoid non-statutory designated sites for nature conservation				✓	The pipeline will be sited and designed to minimise impacts on the environment including non-statutory designated sites as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that there are 86 non-statutory designated sites for nature conservation located within the route corridors which should be avoided				✓	See response above.
Suggestion that the pipeline route avoid statutory designated sites for nature conservation				✓	The pipeline will be sited and designed to minimise impacts on the environment including statutory designated sites as far as possible. Further details on the impacts which may result and how these could be mitigated will

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				be provided in the PEIR which will be subject to statutory consultation.
Suggestion that the project make use of existing pipelines and high pressure gas mains			✓	The Project represents the first steps in the transition from the use of natural gas to hydrogen. The customers to be supplied by the Project will retain their existing natural gas supplies in the short to medium term. Therefore it is not possible to re-use the existing pipelines.
Suggestion that there are 10 peatland sites located within the route corridors which should be avoided				✓ The pipeline will be sited and designed to minimise impacts on the environment including peat as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.

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Suggestion that there are 36 ancient woodland sites within the route corridors which should be avoided				✓	Surveys of habitats are being undertaken in areas where there is potential for these to be significantly affected by the Project, which will identify the habitat types present including ancient woodland. Where there is potential for significant effects, these would be subject to further consideration and assessment in the EIA, and mitigation included as appropriate.
Suggestion that there are 65 potential Local Wildlife Sites within the route corridors which should be avoided				✓	The pipeline will be sited and designed to minimise impacts on the environment including local wildlife sites as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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Suggestion that there are 86 non-statutory designated sites for nature conservation located within the route corridors which should be avoided				✓	The pipeline will be sited and designed to minimise impacts on the environment as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Suggestion that there are three Cheshire Wildlife Trust reverse within the route corridors which should be avoided				✓	The pipeline will be sited and designed to minimise impacts on the environment including local wildlife sites (Trust Reserves) as far as possible. Further details on the impacts which may result to habitats and species and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation. The Applicant will continue to engage with Cheshire Wildlife Trust with regard to the Project and any potential

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					interactions with Trust landholdings.
The route of the pipeline should consider land use impacts and not disrupt carbon sequestration sites	✓				The route of the pipeline will seek to avoid habitats noted for their ability to store carbon. Where this may not be possible the effects arising from the pipeline will be assessed and measures to mitigate identified.
The route of the pipeline should minimise disruptive impacts on residents in Cheshire West and Chester borough in the construction, operation and decommissioning phases	✓				The pipeline will be sited and designed to minimise impacts on the environment as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
The route of the pipeline should try to avoid sub surface soils that are more susceptible to ground	✓				The preferred route of the pipeline will be informed by a comprehensive ground

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movement through drying and cracking and fluid movement					investigation survey. This will be used to characterise the ground conditions through which the pipe could pass and will be used to inform its siting and methods of construction.
The route should avoid HAGIs where impact from the surroundings e.g., storm damage from falling trees, lightning strike or extreme winds on the infrastructure	✓				The pipeline will be sited and designed to minimise impacts from any potential safety risks as far as possible. Further details on the impacts which may result and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Health and Safety					
Suggestion that assurances are required that the design, construction and supply of the pipeline system will be of the			✓		All pipework and associated equipment will be designed to an industry good practice design standard which is specifically intended for hydrogen. The whole

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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highest safety standards before works commence					pipeline network will be inspected and maintained through a Pipeline Integrity Management System. The pipeline will be designed and operated in line with the requirements of a Major Accident Prevention Document, which will be submitted to the HSE.
Request for clarification on measures to offset or reduce pollution increases in residential properties when blended gas is burned			✓		No pollution increases are expected or have been experienced in trial Hydrogen Homes.
Request for clarification on systems to be installed in residential properties to monitor hydrogen gas leaks			✓		The Applicant does not plan to install any systems within residential properties, this Project does not supply hydrogen directly to residential properties and will maintain adequate separation between occupied buildings and the pipeline.

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					Any programme of gas boiler or cooking facility replacement will be the responsibility of government policy. The Applicant is involved in a number of projects, including HyDeploy and the Hydrogen Village, that are aiming to further demonstrate how hydrogen could be used in homes. These projects do not form part of the Development Consent Order. Further details of these projects are provided on the following websites: https://hydeploy.co.uk/ and https://hydrogenvillage.com/
Request for clarification on measures taken to ensure no leaks within the pipeline			✓		All pipework and associated equipment will be designed to a standard which is specifically intended for hydrogen service. There will be strict quality controls throughout every stage of design,

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					procurement, construction, testing, commissioning and maintenance and operation. The whole pipeline network will be inspected and maintained through a Pipeline Integrity Management System. The pipeline will be designed and operated in line with the requirements of a Major Accident Prevention Document, which will be submitted to the HSE.
Concern about the impact of hydrogen on increased fire risk and safety impacts			✓		See response above.
Concern that the safety risk of hydrogen leakage is higher than that for methane			✓		See response above.
Concern that the safety risk of hydrogen leakage is higher as it is difficult to odourise			✓		See response above.

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Concern that the fire risk of the project is high as hydrogen burns with an invisible flame			✓		See response above.
Request for clarification on plans to mitigate fire risk and pollution in the event of a pipeline leak			✓		All pipework will be designed to a standard which is specifically intended for hydrogen service. The whole pipeline network will be inspected and maintained through a Pipeline Integrity Management System. The pipeline will be buried (apart from HAGIs) to protect it from impacts which could cause a leak in line with controls used across the pipeline sector which transport flammable gases and liquids. The remote control centre will have visibility of the conditions in the pipeline and would be able to support remote operations/mitigations in case of an emergency.

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Concern that the project would be a target for terrorist activities and attacks			✓		<p>It is not considered that the Project is a likely target for terrorism as the National Risk Register indicates that publicly accessible locations and transport hubs are the highest risk as they are so called 'soft targets'. The Project will predominantly be buried with a number of HAGI sites which will be secured with security fencing. The Project once operational will be largely unmanned. The Project could be a target for terrorist attacks, as could any distributed and buried infrastructure such natural gas or water pipelines, but the Planning Inspectorate and other stakeholders have accepted our assessment that the risk of terrorism is not likely to be significant.</p>

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
Request for clarification on plans in place in the event the pipeline is targeted in a terrorist attack			✓	<p>The emergency services will be responsible for responding to terrorist attacks, but the pipeline and HAGIs will be reasonably protected through the use of security fencing on above ground sites and burial of the main pipeline.</p> <p>Personnel will be trained to respond to foreseeable emergency scenarios, including damage caused by third parties (malicious or accidental) in an appropriate manner, which will include the use of emergency shutdown systems. If an attack were to occur, it is anticipated that the Applicant's personnel would support any emergency service response. The remote control centre will have visibility of the conditions in the pipeline and would be able to support remote</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					operations/mitigations in case of an emergency.
Request for clarification on whether local fire brigades would be given training to fight potential fires arising from the project			✓		Fire and Rescue Service tactics will be determined by the relevant FRS. The Applicant will provide all necessary information to the FRS, Local Resilience Forums and other Emergency Responders and will engage with key stakeholders through the development of the Project to inform them of the product and its properties.
Suggestion that a cordon sanitaire may be required in the event of a leak			✓		The emergency services will lead the response if an accident were to occur. The Applicant will train its personnel to respond to foreseeable accident scenarios, including fires in an appropriate manner, which will include the use of emergency shutdown systems. This is in line with other

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					pipelines which transport flammable gases and liquids. The Applicant will provide information to the Local Resilience Forums and other Emergency Responders. If a leak were to occur, it is anticipated that the Applicant's personnel would support any fire service response.
Concern about the impact of the project on existing pipelines in Comberbach			✓		The Project design will identify all transport and utility infrastructure which the HyNet hydrogen pipeline could interact with. The design of any separation distances where the proposed pipeline runs parallel with, or crosses, any other infrastructure will follow all applicable UK regulations, standards and codes of practices.
Request for clarification on whether Cadent will fund training			✓		The emergency services will lead the response if an accident were

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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for staff to fight potential fires arising from the project					to occur. The Applicant will train its personnel to respond to foreseeable accident scenarios, including fires in an appropriate manner, which will include the use of emergency shutdown systems. This is in line with other pipelines which transport flammable gases and liquids. The Applicant will provide information to the Local Resilience Forums and other Emergency Responders. If a leak were to occur, it is anticipated that the Applicant's personnel would support any fire service response.
Concern about the flammability of hydrogen			✓		Hydrogen is a flammable gas, and this property is partly responsible for making it a useful fuel for industrial and domestic processes. Both hydrogen and natural gas are classified as having the same category of

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					hazardous properties 'extremely flammable gas'. The equipment and pipelines used for carrying hydrogen are designed specifically for hydrogen service.
Suggestion that the health and safety specification and briefing for all attending the site include the equestrian use of routes and areas				✓	During construction, a detailed induction will be required for each construction site and this will detail the potential hazards, which may include horses and equestrians where relevant.
Suggestion that all construction workers and visitors be made aware of equestrian routes and areas affected by the site				✓	See response above.
Suggestion that all operational workers and visitors be made aware of equestrian routes and areas affected by the site				✓	Operational workers and visitors will be subject to a site induction which will cover the operational site and this will detail the potential hazards, which may

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	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
				include horses and equestrians where relevant.
Suggestion that the banksman be briefed about the possibility of horses in the area and necessary actions to be taken to ensure safety				✓ During construction, a detailed induction will be required for each construction site and this will detail the potential hazards, which may include horses and equestrians where relevant. For specific tasks, such as for banksman, there may need to be further information provide such as specific equestrian routes or times, and this will be considered when planning and executing these work scopes.
Suggestion that warning notices be erected outlining the hazards for equestrians, site workers and visitors				✓ Each of the HAGIs will have fixed signage identifying the location and any key hazards. Visitors and workers will be subject to a site induction which will identify the key hazards. We will consider the hazards posed by / to equestrians

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					when designing signage for the Project.
Suggestion that staff be on site to warn approaching equestrians of machinery noise or movements if activities are unable to be halted while horses pass				✓	The request is noted and the potential to affect horses and horse riders will be identified within the Outline Code of Construction Practice.
Suggestion that site staff warning equestrians of noise activities be stationed in the open rather than behind equipment or objects to avoid spooking horses				✓	See response above.
Suggestion that construction movements and noises should cease in the event of a horse being distressed to avoid escalating the situation				✓	See response above.
Suggestion that construction activities should only resume after a horse is distressed once the				✓	See response above.

Issue Raised by Topic	Stakeholder Group			Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	
equestrian indicates it is safe to do so, or is out of sight or over 100 metres away				
Suggestion for the avoidance of loose polythene packaging and materials which may blow in the wind				✓ The Code of Construction Practice will detail the requirements for handling waste materials generated by construction activities. However, as a general principle, the amount of packaging will be minimised.
The Project should approach an ICP to do the verification scheme in order to provide some additional safety measures			✓	The Project will have a detailed quality management system to confirm that all equipment is installed to the design standards and commissioned in line with the commissioning procedure.
Concern about the risk of hydrogen explosions near built up areas			✓	The HAGIs (and route of the pipeline) will be located away from residential properties where possible. The measures in place

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					to prevent releases will be described in the Major Accidents and Disasters chapter of the PEIR and ES. A consultation distance around the pipeline will be set to prevent any unsuitable future development in close proximity to the pipeline. The design standard will require a minimum distance to occupied buildings.
Request for more information about approaches being applied to prevent major accidents and incidents during operation			✓		Chapter 16 of the Scoping Report describes the potential major accidents and disasters which could affect the Project. The approaches to prevent major accidents from occurring will be further described in the Preliminary Environmental Information Report and Environmental Statement.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the effects on local areas due to a potential hydrogen leak and subsequent explosion			✓		The HAGIs (and route of the pipeline) will be located away from residential properties where possible. The measures in place to prevent releases will be described in the Major Accidents and Disasters chapter of the PEIR and ES. The HSE will allocate a consultation distance around the pipeline to prevent any unsuitable future development in close proximity to the pipeline.
Concern about the proximity of the Central Hub to residential properties and potential loss of life in the event of a major incident		✓			The HAGIs (and route of the pipeline) will be located away from residential properties where possible. The measures in place to prevent releases will be described in the Major Accidents and Disasters chapter of the PEIR and ES. A consultation distance around the pipeline will be set to prevent any unsuitable

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					future development in close proximity to the pipeline. The design standard will require a minimum distance to occupied buildings.
Concern about security or potential for hazardous conditions, particularly for the above ground installations		✓			The HAGIs will be provided with security fencing to prevent unwanted access to the sites. This is common to the approach taken for existing (natural gas) AGIs.
Concern about the impact of the project on existing pipelines and associated safety risks			✓		The Project design will identify all transport and utility infrastructure which the HyNet hydrogen pipeline could interact with. The design of any separation distances where the proposed pipeline runs parallel with, or crosses, any other infrastructure will follow all applicable UK regulations, standards and codes of practices.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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Concern about the effects of hydrogen on steel causing risk of leaks from pipes or seals			✓		Hydrogen pipework can be subject to various types of corrosion, so all pipework will be designed to a standard which is specifically intended for hydrogen service. The whole pipeline network will be inspected and maintained through a Pipeline Integrity Management System.
Request for further information on the Consultation Zone distances, as discussed with the Health and Safety Executive		✓			The consultation distances will be set utilising the HSE's methodology following notification of a new Major Accident Hazard Pipeline. The Project will make this notification in line with the statutory timescales but have not yet done so.
Request for further information on stand-off distances		✓			The Project will design the pipeline network to a recognised design standard which will specify a minimum distance to occupied buildings based upon the size,

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				and pressure of the pipeline in that location. Appropriate distances will be specified as the pipeline design progresses.
Hydrogen technology				
Request for clarification on how the hydrogen will be created			✓	The Project itself is about the development of a hydrogen pipeline not the production of hydrogen itself. The Hydrogen Production Facility is separate to this Project. This Project considers the transportation of the hydrogen only. The pipeline has been designed to carry low carbon hydrogen and the Applicant is working with hydrogen suppliers in the North West, which includes hydrogen which will be produced at Stanlow manufacturing complex which will initially be considered to be 'blue' hydrogen.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that blue hydrogen is more polluting than natural gas			✓		<p>The process of hydrogen production does not form part of the Applicant's proposals. The HyNet North West Hydrogen Pipeline is the infrastructure through which hydrogen will be transported from suppliers to customers. The initial proposal is to transport blue hydrogen, however the pipeline will be equally able to accommodate all colours of hydrogen and the programme is aligned with the government's Hydrogen Strategy to help decarbonise industrial processes with the use of hydrogen. The most common production route at present for hydrogen is by steam methane reformation, where natural gas is reacted with steam to form hydrogen. This is a carbon-intensive process, but one which can be made low carbon through</p>

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					the addition of carbon capture, usage and storage (CCUS) – to produce a gas often called ‘blue hydrogen’. Blue hydrogen is still a low carbon alternative to using fossil gas alone and the wider HyNet scheme is developing safe CCUS solutions to manage the carbon emissions produced.
Request for clarification on where the water used to generate green hydrogen would be sourced			✓		The process of hydrogen production does not form part of the Applicant's proposals.
Request for clarification on how waste products from the desalination process would be handled if sea water is used			✓		See response above.
Request for clarification on plans to replace residential pipework and equipment to enable the supply of blended hydrogen			✓		The existing gas network is being upgraded and all new pipework will be suitable to transport hydrogen in the future. The introduction of hydrogen into the

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					existing gas network would only take place following rigorous trials and testing programmes regulated by the Health and Safety Executive and other statutory regulators as applicable.
Request for clarification on whether existing gas boilers in residential properties can burn hydrogen or whether new equipment is needed			✓		For 100% hydrogen use, residential properties would require an upgrade to appliances and meters to receive the gas. Existing appliances such as boilers can tolerate blended gas up to around 20%mol without the need for replacement.
Request for clarification on why Cadent need to move and store pure hydrogen rather than blend with natural gas			✓		The industrial customers supplied by the Project are seeking to decarbonise their operations. Greater levels of decarbonisation will be achieved through the use of 100% hydrogen than an alternative which uses a mix of hydrogen blended with natural

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					gas. Because of this, Cadent (the Applicant) proposes to transport pure hydrogen.
Suggestion that a process to produce hydrogen gas with minimal carbon dioxide and solid carbon residue has been developed in Australia		✓			The production of the hydrogen in itself does not form part of this Project. The Cadent network will be able to transport hydrogen manufactured from a range of technologies. The proposed hydrogen pipe is therefore 'colour blind' in that it can accept hydrogen from any source.
Request for clarification on whether hydrogen would be sourced from methane or from green hydrogen			✓		The production of the hydrogen in itself does not form part of this Project. However, it is understood that the supply would be created from natural gas. The proposed hydrogen pipe is however 'colour blind' in that it can accept hydrogen from any source and the Applicant is in discussion with Green Hydrogen Producers.

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Concern about the use of fossil fuels in the production of hydrogen supplied for the project			✓		See response above.
Concern about the use of blue hydrogen rather than green hydrogen		✓			See response above.
Concern that the development and supply of blue hydrogen creates substantial carbon dioxide emissions			✓		The HyNet North West Hydrogen Pipeline is a means by which hydrogen can be transported from suppliers to customers and whilst the initial proposals are that it will transport blue hydrogen (using natural gas as a fuel stock) the pipeline will be equally able to accommodate future supplies of green hydrogen. The organisation promoting the manufacture of the hydrogen which would be used in the pipeline is also proposing to capture the carbon dioxide which would be created in its manufacture and to store it

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					permanently in depleted gas fields in the Irish Sea. Further information can be found at hynethub.co.uk
Concern that the proposed development will use high emission grey hydrogen derived from natural gas rather than green hydrogen			✓		The Project does not include for the use of grey hydrogen. The aim is to provide a pipeline to transport low carbon hydrogen and this will initially be blue hydrogen where carbon emissions arising from its manufacture are captured and safely stored within depleted gas fields in the Irish Sea. Ultimately the goal is for green hydrogen to be the future source.
Request for clarification as to whether green and blue hydrogen will be transported through separate pipelines within the same route	✓				The proposed hydrogen pipe is 'colour blind' in that it can accept hydrogen from any source. Hydrogen produced from more than one source can be

Issue Raised by Topic	Stakeholder Group			Response from Cadent
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				transported through the same pipe.
Request for clarification on whether fracked gas would be used a source of hydrogen			✓	Cadent (the Applicant) does not produce gas (including fracked gas), or sell it. They have an obligation to receive any gas into our network that meets strict safety and regulatory criteria. This is a policy decision for UK Governments and the current Government has made its position clear on fracking.
Request for more information with regard to the technological approach to creating new storage			✓	The Hydrogen Storage Facility will be constructed and operated by Inovyn. The location of the 19 gas storage caverns that will be used for hydrogen storage was selected by the storage operator Inovyn and is subject to a separate gas storage project Development Consent Order and does not form part of this Project.

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Request for more information about the approach to hydrogen storage			✓		See response above.
Request for clarification on how the planning approvals for storage are linked to this consultation	✓				See response above.
Information request					
Request for information on the diameter of the proposed pipeline			✓		The pipeline will consist of pipes of various diameters. The exact dimensions are still being determined and will be provided within the information which will accompany Statutory Consultation.
Request for information on whether the proposals will impact property and land in Bartington along the pipeline route			✓		Further information on the pipeline route will be made available at Statutory Consultation. The documents

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				which accompany the consultation will include the preliminary Environmental Information Report. This will provide a more detailed description of the Project and the approach to its construction.
Request for information on the pipeline route and potential impacts on land/property			✓	See response above.
Request for information on when construction methods and corridors will be established and made public			✓	See response above.
Request for information on how the route of the proposed pipeline is affected by HS2			✓	The pipeline will need to cross the proposed HS2 route in two places, one on the East Corridor and one on the South Corridor. Cadent is in discussions with HS2 to understand its timescales and

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					the potential interactions between the two projects.
Request for information on when pipeline routes will be established and made public			✓		The pipeline route is in iterative process which takes into account engineering design work, environmental assessment and the consideration of consultation responses. Refined details will be provided during a statutory consultation exercise, and the final proposals shown in the submission of the Development Consent Order application in March 2023.
Request for more information on the design of the Central Hub		✓			All HAGI sites will be unmanned facilities with CCTV and intrusion protection. There will be secure perimeter fencing, a small operations and welfare building and site lighting. Lighting will only be used for out of hours working which is not generally expected

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					but may be required in the case of infrequent maintenance overruns and in the case of emergency.
					Further information on the design of the Central Hub, will be made available in the statutory consultation documents.
Request for information on whether the Central Hub will have visible fence lines and the maximum anticipated height from ground level		✓			The facility's design will consider the minimum potential impact in terms of size: overall footprint and heights and will be landscaped accordingly to blend into the local environment as far as possible. Key HAGI sites like Central Hub are in the 0.5 - 1.5 ha size range with bulk equipment generally no greater than 3m in height. Indicative images of the proposed HAGI sites have been provided and some general information on HAGI's added to our website.

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					Further information on the HAGIs, including the Central Hub, will be made available in the statutory consultation documents.
Request for further information on the above ground installations, including the height		✓			See response above.
Request for information on the size of the Central Hub area		✓	✓		The Central Hub will be sited and designed to minimise impacts on local communities and the environment as far as possible. Further information on the HAGIs, including the Central Hub, will be made available in the statutory consultation documents.
Request for information on whether buildings and installations in the Central Hub area will be larger than a normal Above Ground Installation			✓		See response above.

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Request for information on whether the Central Hub will have additional buildings, and the size these would likely be			✓		See response above.
Request for information on the expected volume and frequency of traffic at the Central Hub			✓		The Central Hub will be sited and designed to minimise impacts on local communities and the environment as far as possible. Further information on the HAGIs, including the Central Hub, and associated traffic volumes will be made available in the statutory consultation documents.
Request for information on whether there would be traffic movements serving the Central Hub at night			✓		All HAGI sites will be unmanned facilities with CCTV and intrusion protection. Traffic movements at night will only be required for out of hours working which is not generally expected but may be required in the case of infrequent maintenance overruns and in the case of emergency. Further

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					information on the HAGIs, including the Central Hub, and associated traffic volumes will be made available in the statutory consultation documents.
Request for information on whether there would be 24-hour lighting at the Central Hub			✓		Lighting will only be used at the Central Hub for out of hours working which is not generally expected but may be required in the case of infrequent maintenance overruns and in the case of emergency. Further information on the HAGIs, including the Central Hub, and associated traffic volumes will be made available in the statutory consultation documents.
Request for information on how many road entrances would serve the Central Hub			✓		When identifying the route of the pipeline consideration will be given to how it can be accessed for construction. Access routes along the local highway will be

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					identified and an assessment made of the likely impacts arising from their use. Further information on the HAGIs, including the Central Hub and access arrangements will be made available in the statutory consultation documents.
Request for information on the timescale for the construction of the Central Hub			✓		A detailed programme for the construction of the project would be prepared by the appointed contractor once consent has been granted. At this current stage however it is known that the project will be constructed between 2025 and 2026 with commissioning in early 2027.
Request for information on the consideration of residential properties in the siting of the Central Hub		✓			The Central Hub will be sited and designed to minimise impacts on local communities as far as possible taking into account the connecting pipelines. Further

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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					details on the impacts which may be experienced and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Request for information on measures to mitigate the impact of the Central Hub on residential properties		✓			See response above.
Request for information on whether the search area for the Central Hub includes areas beyond the A533		✓			Further information on the search area adopted for the Central Hub, taking account of constraints in this area will be provided in the statutory consultation documents.
Request for information on whether pipelines would be routed underneath existing properties		✓			It is not the intention to route pipelines under existing properties.
Request for landowners and occupiers to be provided with		✓			Landowners affected by the Project will be engaged via land

Issue Raised by Topic	Stakeholder Group				Response from Cadent
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advance warning, once the route of the pipeline has been decided					agents Fisher German. The pipeline routing proposal will be taken to a statutory consultation which all landowners will be invited to provide feedback to the project. Following statutory consultation the feedback will be reviewed, any Project design changes required will take place and feedback on consultation will be available to landowners. When the Project has reached this stage, landowners will be contacted to present terms for voluntary agreements which will identify in detail the impact on their land before the DCO application is submitted.
Operations					
Suggestion that residential properties be connected to the			✓		The HyNet North West Hydrogen Pipeline will connect initially with large industrial and commercial

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proposed pipeline for residential energy use					gas customers in order to make the biggest reductions in CO2. This is in line with the UK Hydrogen Strategy which initially focuses on emissions reductions in industrial clusters. The HyNet network also includes connections to the existing gas network to enable hydrogen to be received by domestic users through a blended gas supply in the future. Trials are in development for the wider residential use of hydrogen, such as Hydrogen Village at Whitby in Ellesmere Port.
Suggestion that the proposed pipeline be connected to supply local residential properties with gas			✓		See response above.
Suggestion that the project should include connection to local residential centres			✓		See response above.

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	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the use of hydrogen blended with natural gas			✓		The introduction of hydrogen into the natural gas network would only take place following rigorous trials and testing programmes regulated by the Health and Safety Executive and other statutory regulators as applicable.
Request for clarification on how Cadent will assure that the gas network is suitable for accepting blended hydrogen			✓		See response above.
Concern that the supply of blended hydrogen into the gas network will require the transport of the gas blend at a higher pressure to maintain the same calorific value			✓		See response above.
Request for clarification on what happens when blending is restarted, and whether customers are required to take any actions			✓		Customers will be notified and provided with all required information relating to any supply of blended hydrogen.

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Request for clarification on what would happen if no hydrogen is available for blending			✓		Customers would still be provided with gas. If no hydrogen was available the supply would be 100% natural gas.
Concern that the use of blended hydrogen extends the use of highly polluting gas			✓		The HyNet North West Hydrogen Pipeline will be developed to transport all types of hydrogen produced (meeting all appropriate safety standards), which includes supplying a future 100% hydrogen gas network.
Suggestion that blended hydrogen be supplied to meet the heating requirements of chemical and glass industries			✓		The Phase 2 customers include chemical and glass industries. Depending upon their operational requirements they are proposing to use either a blended or full hydrogen. Any blended hydrogen would not be done by the Applicant in these facilities.

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Concern that blending hydrogen into the existing gas pipe network will cause embrittlement			✓		There has been a significant level of materials research into this area and studies are ongoing. The introduction of hydrogen into the network for purposes of blending will be subject to UK regulatory approvals including HSE.
Concern that the existing gas pipe network is not suitable for blended hydrogen			✓		See response above.
Request for clarification on the intent with respect to blending connections for Halton	✓				This Project (Phase 2) proposes to provide a gas blended supply (methane and hydrogen) to the Manchester area customers, served from existing gas AGIs Partington and Warburton in the future. Blending is currently being considered by the Secretary of State for Business, Energy and Industrial Strategy. A future Phase 3 project may extend

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					blending across the wider North West UK region, but this does not form part of this DCO Application.
Request for clarification on the intent with respect to blending connections for the Liverpool City Region	✓				See response above.
Property and Compensation					
Objection to the installation of the proposed pipeline in privately owned land			✓		The footprint of the Project has not yet been defined and it has not been confirmed where the proposed pipeline will be installed. The pipeline will need to be installed in areas of private land however Landowners will be consulted, and when appropriate, terms for a voluntary agreement will be offered by the project to reflect the fact that land rights will be required from private landowners.

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Concern about the impact of the project on residential properties			✓		The Project will not impact residential buildings and will be routed in such a way that the pipeline will not be under any existing buildings.
Request for clarification on whether residential properties will be compulsory purchased as part of the project			✓		Where private land or rights over land are required for the Project to construct or operate the pipeline and associated infrastructure, terms for voluntary agreements will be offered to landowners. If agreements can't be reasonably reached then the Applicant will be seeking the appropriate rights for Compulsory Purchase within its Development Consent Order. The pipeline or associated infrastructure will not be routed under existing buildings and therefore residential property will not be affected by Compulsory Purchase. There may be a need to route through

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					land connected with residential properties such as paddocks.
Request for clarification on whether residential properties will be compensated			✓		Reasonable compensation is available for residential (or any other type) of property where there is a direct loss caused by temporary works on the property (such as crop loss and disturbance). Any land where permanent rights are required will be reasonably compensated for the necessary land rights.
Suggestion that the route corridor should avoid land owned and occupied by those impacted by the HS2 Phase 2B project		✓			The Applicant will liaise with the relevant parties at HS2 to ensure the projects are aware of their respective potential footprints. The Project will be routed according to best practice principles taking account of the environment, engineering and existing land use.

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Concern that landowners in Cheshire are already affected by the HS2 Phase 2B project		✓			See response above.
Suggestion that Bloor Homes will seek compensation for deferment costs if their housebuilding programme is deferred due to pipeline routeing through the former Linkway Distribution Park site		✓			These concerns are noted.
Concern that landowners who consider that their property in the East corridor will be impacted by the proposed development have not been contacted			✓		All reasonable efforts are being made to consult all parties affected by the Project. Fisher German is undertaking detailed land referencing (identification of people with interest in land) and those people identified will be invited to any future consultation events. The Communication and Engagement team issued a post card to addresses within the

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					proposed corridor inviting them to the previous round of consultation events.
Suggestion that the Canal and River Trust require the retention of access to their waterways and supporting infrastructure during construction and operations	✓				The Applicant will liaise with the Canal and River Trust to discuss these concerns. During construction the project will work with all landowners and occupiers to facilitate appropriate working area crossing points and agree access requirements.
Suggestion that the Canal and River Trust is a statutory undertaker which will resist any compulsory purchase which may adversely impact their land and undertakings	✓				The Applicant will liaise with the Canal and River Trust to discuss these concerns.
Suggestion that acquisition of land from the Canal and River Trust should only be with their consent	✓				See response above.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Suggestion that access to Canal and River Trust land require discussions and agreements between the Trust and the Developer	✓				See response above.
Suggestion that Cadent provide information on easements as part of the statutory consultation process		✓			When the Project is sufficiently developed to agree terms with landowners, precedent easement documents will be provided to landowners and their advisors. The statutory consultation will provide an overview of the easement documentation and other relevant information in relation to land rights.
Concern about the effects on property assets during construction, specifically those which may be intended for sale	✓				The Applicant will clearly communicate its construction programme to enable landowners and advisors to consider the wider impacts of the scheme.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Request for written confirmation when confirming that survey access will not be required for residential properties			✓		Survey access is required to assess different environmental habitats, some of which may be in private gardens or land ancillary to residential property. Survey access is required over wide ranges on land sometimes outside of the projects corridor. In very rare circumstances bat surveys are undertaken in residential properties.
Socio-economic					
Suggestion that assurances be given that the project will provide improved green energy benefits			✓		Low carbon hydrogen will be essential for achieving net zero and reducing the effects of climate change. Low carbon hydrogen will play an important complementary and enabling role alongside clean electricity in decarbonising our energy system. It is suited to use in a range of sectors where electrification is not

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					feasible or is too costly, and other decarbonisation options are limited. This may include generation of high temperature heat, such as in industrial furnaces in glass or steel manufacture, and for long-distance and heavy-duty transport vehicles. Hydrogen will be critical to the realisation of green energy benefits and is a versatile solution to meet some of the more challenging industrial requirements for energy.
Suggestion that assurances be given that the project will result in significant cost savings for consumers			✓		Developing a hydrogen economy requires tackling the ‘chicken and egg’ problem of growing supply and demand simultaneously, and the UK offers favourable conditions for both to readily expand at the same time. When it comes to production of hydrogen, the government has committed to

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					<p>a ‘twin track’ approach. This makes the most of the UK’s potential to produce large quantities of both electrolytic ‘green’ and CCUS enabled ‘blue’ hydrogen. It is difficult to provide guarantees of the difference this will make in terms of cost to consumers, but the energy sector and government will draw on lessons from offshore wind and other low carbon technologies and aim to capitalise on world-leading expertise in research and innovation and decarbonisation to help enable a cost effective solution for all.</p>
<p>Request for clarification on the impact on electricity prices and supply as a result of the project using renewable energy</p>			✓		<p>The government is responsible for setting the business models for energy and as such the way energy prices are set is not something the Applicant will have influence over. The Department</p>

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					for Business, Energy and Industrial Strategy will produce a commercial strategy for hydrogen and for all energy markets. This is not directly influenced by the HyNet North West Pipeline Project.
Request for clarification on the impact of the construction of the proposed development on gas supply prices			✓		See response above.
Concern about the impact of disruption resulting from the project on local agricultural businesses		✓	✓		The HyNet North West Pipeline Project team is already developing strong relationships and engaging directly with land agents and will continue to work closely with local members of agricultural businesses and landowners to understand any impacts of the proposal on their business and to minimise disruption wherever possible.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern about the impact of the loss of agricultural land as a result of the project on the local rural economy		✓	✓		See response above.
The Project must ensure that the relationship between outdoor sport as a Land Use and the outdoor sport facilities users should be well integrated as the proposals are being developed	✓				The proposed assessment will take account of sports pitches and playing fields and the sporting and recreational activities which take place on them. Such facilities are to be avoided wherever possible and further details of the identification and assessment of the proposal against these features will be continued with the PEIR which will be subject to statutory consultation.
Sources which should be used to identify playing fields that could be affected by the pipeline are: Sport Englands Active Places Power website, Playing Pitch Strategies	✓				The assessment undertaken will consider the suggested data sources related to playing fields.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
for Halton, Cheshire East, Cheshire West and Chester, Warrington, St Helens and Trafford					
Concern about the impact of the North Corridor pipeline route across the residential development at the former Linkway Distribution Park on the ability for Bloor Homes to sell new homes at the site		✓			Assessment of the effects of the project on the residential development at the former Linkway Distribution Park will be included, should this location fall within the route of the pipeline once it has been finalised.
Concern that the Project will have a detrimental impact on visitor numbers, which local businesses rely on			✓		The Project will work with people who have good local knowledge of the area to minimise short and long term disruption on recreation and tourism. The need to maintain recreational capacity and tourism throughout the Project development phase and future operational phase is recognised.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that there are no benefits as a result of the Project to the local area of Whitley			✓		Jobs related to the construction and operation of new infrastructure associated with the Project will add to the supply of local jobs and to those available to Whitley residents.
Suggestion that disruption expected at Whitley should be offset with tangible benefits			✓		The Project elements near Whitley will be designed to minimise impacts on local communities as far as possible. Further details on the impacts which may be experienced by local communities and how these could be mitigated will be provided in the PEIR which will be subject to statutory consultation.
Traffic and Transport					
Request for clarification on how the project will interface with the Warrington Western Link project			✓		Further work will be undertaken to consider the overlap of the West Link project with the

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					pipeline proposals. This information will be presented in the Environmental Statement submitted with the DCO Application.
Concern about the cumulative impact of the proposed development and the Tata incinerator on local traffic in Northwich			✓		The assessment of cumulative effects will be undertaken and presented with the environment statement which will accompany the application. The scope of the assessment will be agreed with the relevant local planning authorities including Cheshire West and Chester.
Suggestion that the A533 is currently a busy road which will adversely impact on site access	✓				The potential for effects upon the local highway network will be considered and assessed in line with industry standard methodologies. These will be discussed in advance with the local highways authorities. Where there is a potential to impact the

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
					existing network traffic management measures will be set out within an Outline CTMP.
Suggestion that the Godscroft Lane/A56 junction is a very busy area of the A5			✓		See response above.
Suggestion that the A56 becomes congested when the M56 is closed			✓		See response above.
Suggestion that a new cycle lane is being constructed along the A56 between Helsby and Frodsham			✓		Noted. This improvement will segregate cyclists from the carriageway and it will improve the environment for cyclists.
Suggestion that particular attention should be made if the pipeline results in impacts to active travel and public transport	✓				A preliminary assessment of the existing active travel and public transport across the whole area will be provided within the PEIR with potential impacts identified and mitigations proposed to address.

Issue Raised by Topic	Stakeholder Group				Response from Cadent
	Prescribed Consultees	Businesses & Community Groups	Members of the Public	Other Consultees	
Concern that the project will impact routes required in the event of an emergency			✓		It is not clear which routes these may be, but should any road closures be required on the project suitable diversions will be provided or allowance for emergency access will be retained. The traffic management measures will be discussed with the relevant highway authorities.

8. Summary and next steps

- 8.1.1 This Non-Statutory Consultation Feedback Report represents the first stage in the consultation process to help Cadent develop their proposals for the HyNet North West Hydrogen Pipeline. The consultation sought views on the route corridors, within which the pipeline could be located, and search areas, within which HAGIs could be constructed.
- 8.1.2 In total 108 pieces of feedback were received during the consultation. All feedback received from the Stage One Consultation has been considered by Cadent alongside ongoing design and environmental assessment work. Further details of how feedback has been considered will be included in the Design Evolution Report, which will be part of the statutory (second) consultation information and the DCO application documents.

Next Steps

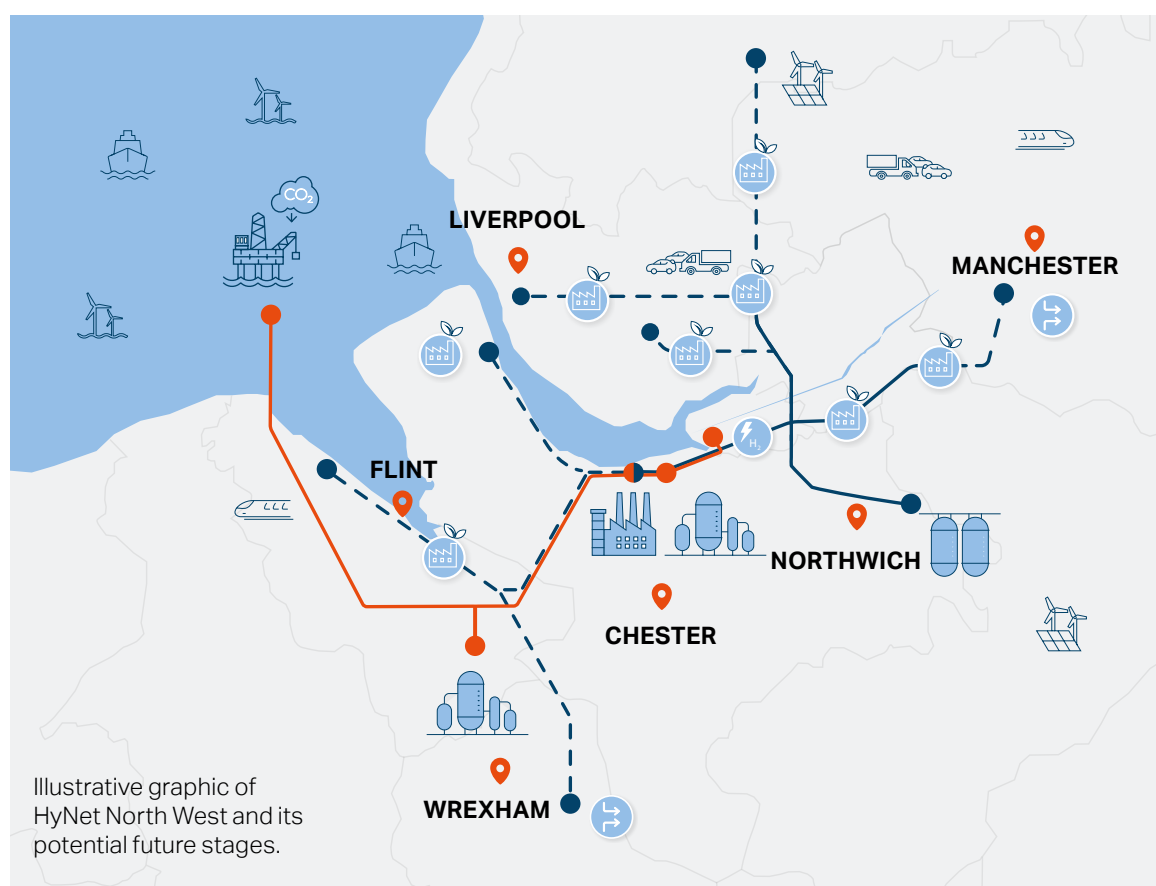
- 8.1.3 In accordance with the requirements of the Planning Act 2008, Cadent will consult on its defined pipeline route and locations for the HAGIs and other above ground infrastructure will be subject to consultation as part of the Stage Two statutory consultation proposed to take place in Autumn 2022. This will provide prescribed consultees, local communities and other interested parties with an opportunity to share their views on the design and wider information, prior to the submission of the DCO application. The results of this consultation will be provided in a further Consultation Report supporting the DCO application.
- 8.1.4 The Stage Two consultation will be undertaken in accordance with the Statement of Community Consultation.

Appendix A Exhibition Boards

HyNet North West Hydrogen Pipeline

Delivering clean growth

The plans, being developed by Cadent, the gas network operator for the region, are a key part of the ambitious HyNet North West low carbon cluster.



- Initial phases of Cadent's H₂ pipeline
- - - Potential future phases of Cadent's H₂ pipeline
- ENI's CO₂ pipeline
- Industrial CO₂ capture
- Low carbon H₂ production
- Underground H₂ storage
- CO₂ storage
- Industrial H₂ user
- Flexible H₂ power generation
- H₂ blending for homes and business
- CO₂ shipping
- H₂ from offshore wind
- H₂ fuelling for transport
- H₂ fuelling from solar and wind
- H₂ trains

The hydrogen pipeline will safely transport low carbon hydrogen produced at Essar's Stanlow Manufacturing Complex near Ellesmere Port to various industrial organisations. It will also transport hydrogen to blending stations in Warburton and Partington (near Manchester) where it will be blended into the existing gas network to heat homes and businesses. The project will link to underground hydrogen storage facilities that will be used to balance supply and demand.

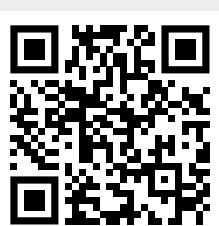
The pipeline will be underground, although we will need some additional infrastructure known as Hydrogen Above Ground Installations (HAGIs) at various locations along the route.

We anticipate to start construction in line with the hydrogen production plan, subject to obtaining planning consent.

HyNet North West

The pipeline is part of the HyNet North West low carbon cluster. HyNet is an innovative energy project that will unlock a low carbon economy for the North West and North Wales and put the region at the forefront of the UK's drive to achieve net zero.

Cadent is the UK's largest gas distribution network, managing a network of more than 80,000 miles of pipes, most of which are underground. These pipelines transport gas to 11 million customers throughout the North West, West Midlands, East Midlands, South Yorkshire, East of England and North London.



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Cadent
Your Gas Network

An overview of our proposals

HyNet North West Hydrogen Pipeline

Delivering clean growth

The HyNet North West Hydrogen Pipeline includes the construction, operation and maintenance of around 77 miles of new gas transportation infrastructure. The pipeline will vary in diameter along the route between 12 inches to potentially 48 inches. The primarily underground pipeline will connect a number of defined end points, distributing hydrogen to industry and blending hydrogen into the existing gas network in the North West.

End points	Why it's needed
Hydrogen production facility at Stanlow Manufacturing Complex	Provides a source of hydrogen to supply the pipeline network
Hydrogen storage facility, near Northwich	Allows hydrogen to be stored at times of peak supply and released into the network to meet demand
Blending to the existing gas network, near Warburton and Partington	Allows hydrogen to be blended with natural gas and supplied into the wider pipeline network
A cluster of industrial operations across the project area	Helps decarbonise industry in the region

The pipeline

The pipeline will connect to the proposed hydrogen manufacturing plant at Stanlow Manufacturing Complex, near Ellesmere Port. This will be the source of hydrogen for onward distribution into the network. The pipeline will then continue to a 'Central Hub' at the centre of the network. The Central Hub will act as the connection and onward distribution point for users and connection to storage along the south, east and north sections of the route corridor.

We have used our early feasibility and design work to date to develop a route corridor, a broad area within which the underground pipeline could be routed. On the map (shown on the Overview Map panel), the route corridor broadly represents a cross (or an 'X').

Spurs

In some areas, we have identified spurs off the route corridor. These are needed to take hydrogen from the main pipeline to specific industrial users in the region. We expect that these spurs will use a smaller type of pipe and will include installing pipe within roads, much like Cadent's existing network.

Hydrogen Above Ground Installations (HAGIs)

The majority of our new infrastructure will be underground. However, at certain points along the pipeline, we will need some above ground infrastructure. We call these Hydrogen Above Ground Installations (HAGIs).

These sites will also give us access to inspect the integrity of the pipeline and to manage the flow to different parts of the network. They will also allow future connections to the network.

HAGI Search Areas have been identified within the route corridor based on points along the pipeline network where connections or block valves are required. We currently anticipate needing around 12 HAGIs – please see our overview map for further details.

HAGI sites will also include connection points to the new hydrogen plant, storage facility, and to support connections to industrial users and blending points within the existing gas network.

Typically, HAGIs require a range of above ground equipment and structures. These structures are usually around 1.5 to 2 metres tall. HAGI sites vary in size, but typically range between 0.5 and 2 hectares. 1 hectare is around the size of a football pitch.



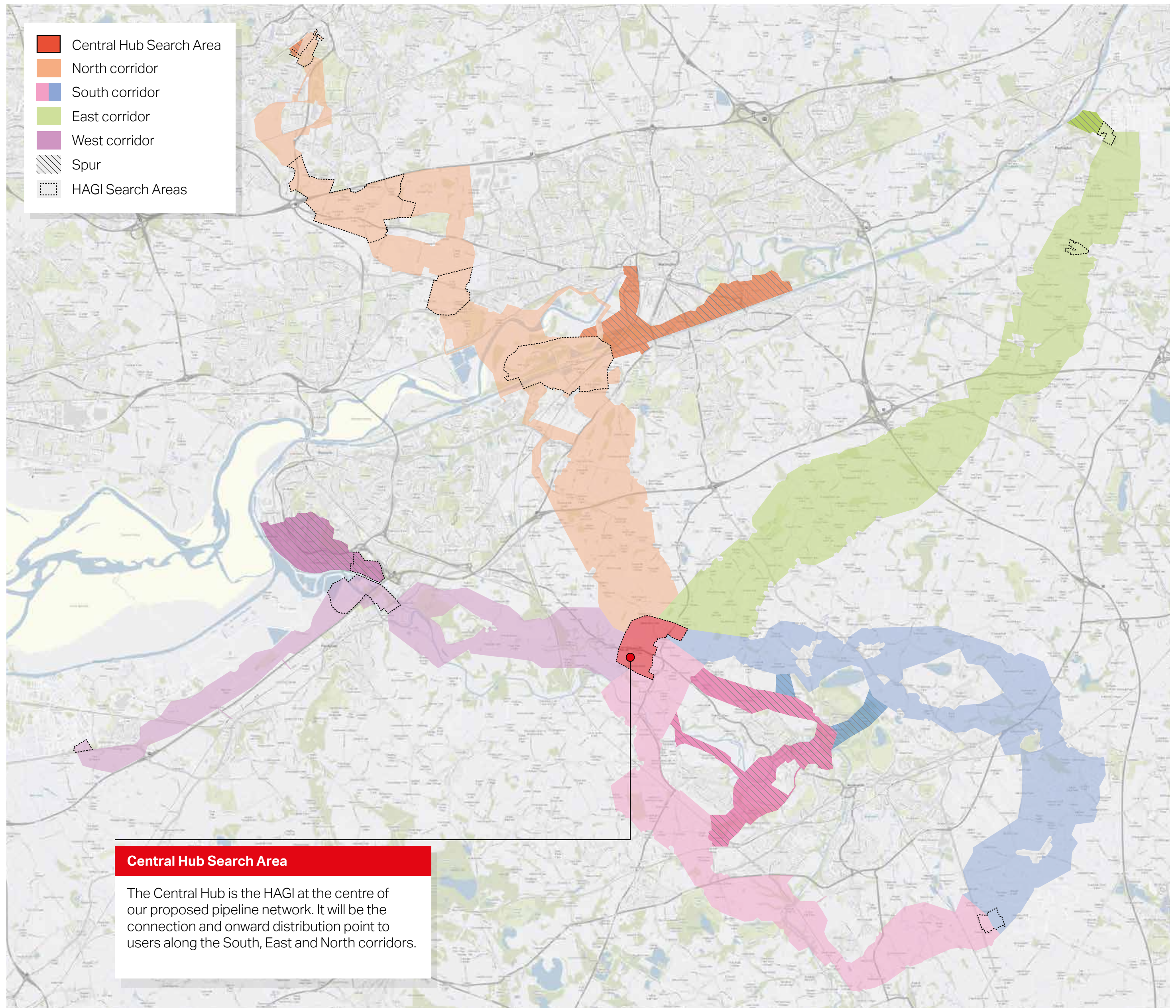
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This map shows an overview of the proposals we are consulting on and the route corridor we have identified within which our underground pipeline could be constructed.

This route corridor is based on preliminary desk-based assessments and initial site visits. Where the infrastructure needs to leave the main network to connect to industrial users and blending points, we have identified a number of spurs.

For the above ground infrastructure, we have identified search areas within which our HAGIs could be sited.



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How we developed our proposals



Option A: X Layout

Option A is the route corridor we are consulting on. This roughly forms an 'X' shape, with a Central Hub and four legs: west to Stanlow; north to St Helens; east to Partington and Warburton; and south towards Middlewich.

In developing our route corridor, we also assessed and ruled out three alternative corridors.



Option B: H Layout

This formed an 'H' shape. The western leg would have run from Stanlow to Frodsham; the north across the Mersey Estuary to St Helens; the east from Partington; the south past Warburton to a location near junction 20 of the M6, then south to the hydrogen storage facility.



Option C: XH Layout

This would have been a combination of options A and B, with the western, northern and eastern legs the same as those chosen in A. The connection to the hydrogen storage facility included the option provided in B, with a leg running from near junction 20 of the M6 to the hydrogen storage facility.



Option D: U Layout

This roughly formed an 'H' shape. It would have had a western leg running from Stanlow to St Helens across the Mersey Estuary (with a spur towards Warrington). The southern leg would have run from Stanlow to Middlewich and an eastern leg from Winsford to Carrington.

Please see our consultation brochure for more detail on these routes, but we have chosen our route corridor over the alternatives for reasons including:

- Option A: Unlike options B and D, it does not require a crossing of the Mersey which would result in additional environmental impacts on protected sites or require long distance drilling which would add costs and complexity to an already challenging project
- Option A: Unlike option C, it is deliverable with only a single Central Hub site



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How we construct pipelines

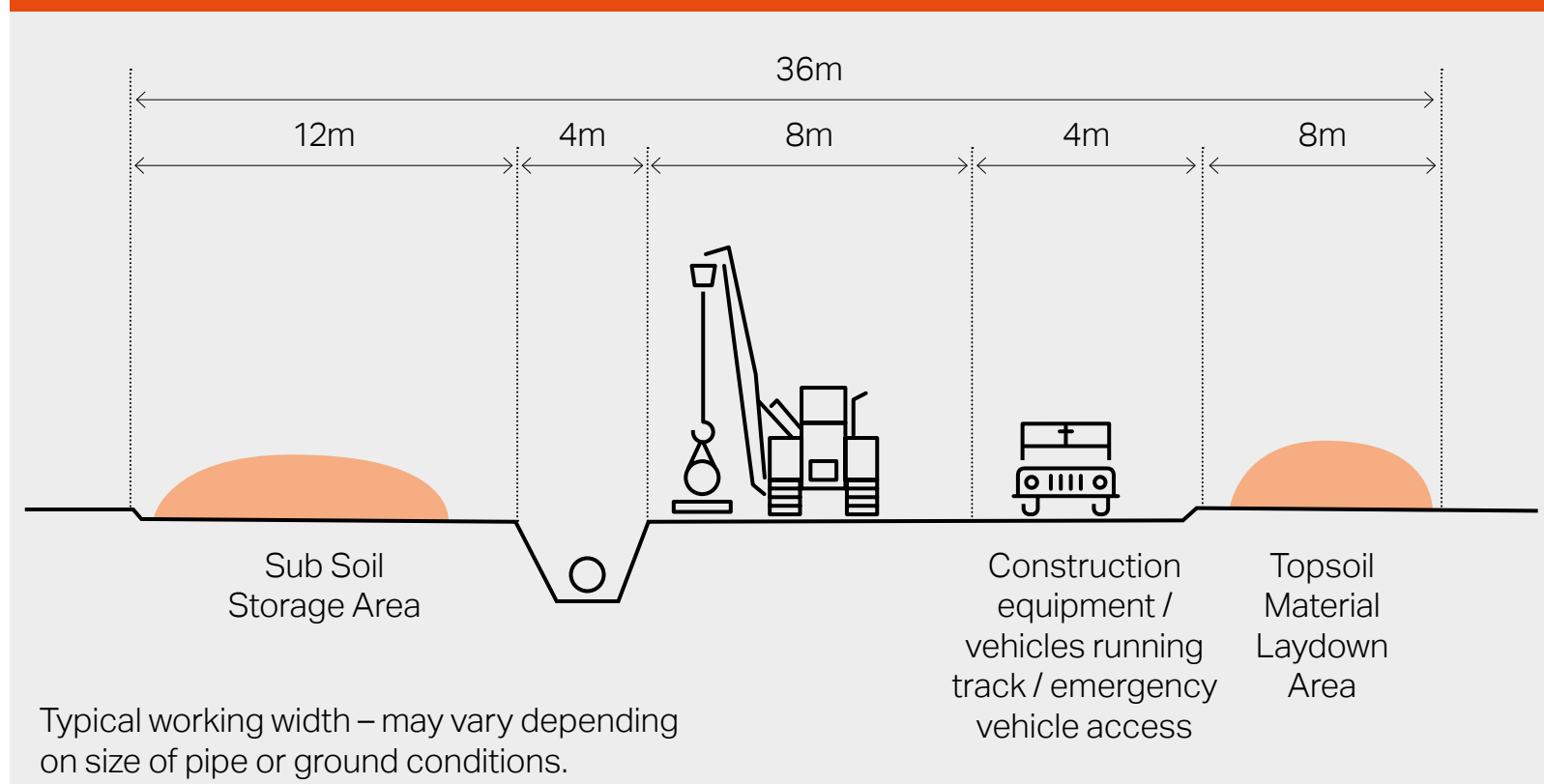
Cadent is an experienced and trusted operator of pipelines. We will make sure we bring our knowledge of constructing and maintaining the existing gas network to this project.

There are a number of different construction techniques we could use, including:

- **Open trenching** – this is the most common method for installing underground pipelines. We begin by marking out the total area within which construction work will take place. Topsoil is then carefully stripped and stored next to the pipeline route. The pipeline is delivered in short lengths (and placed on supports) which are then welded together. Then we dig the pipeline trench and lower the pipe into the trench using special vehicles called 'side booms'. The trench is then backfilled and the topsoil replaced.
Once the land above the pipeline has been fully reinstated, we will work hard to return it to its previous use.

- **Trenchless methods** – in some cases, for engineering and environmental reasons we need to consider trenchless methods of construction including micro tunnelling and horizontal directional drilling.

Diagram of open trench excavation



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What happens next?

**HyNet North West
Hydrogen Pipeline**

Delivering clean growth

Local people, including residents, local elected representatives and other stakeholders, have an important role to play throughout this process. We need your views and knowledge as we work to refine our final pipeline route.

After consultation closes, we will consider all the feedback we have received. We will also carry out lots of technical engineering and environmental work, to understand more about the areas we could route the pipeline in.

This work will help us identify a more detailed design for the pipeline route. We will present this design, alongside more detailed environmental work, at a second consultation later this year.

The HyNet North West Hydrogen Pipeline is a Nationally Significant Infrastructure Project. This means we will apply to the Planning Inspectorate and Government's Secretary of State for Business, Energy and Industrial Strategy for planning permission through a Development Consent Order (DCO), in accordance with the Planning Act 2008.

Your feedback can help us shape our proposals and create the best possible project.

Current project timeline

- January 2022:**
Non-statutory consultation launches
- Spring and Summer 2022:**
Habitat assessment surveys, including great crested newts and reptiles, along with other environmental surveys, to support our assessments and ongoing engineering design.
- Autumn 2022:**
Statutory consultation launches
- Spring 2023:**
Development Consent Order (DCO) submission
- Summer/Autumn 2024:**
Secretary of State decision
- 2025-2027:**
Construction takes place
- 2027:**
Pipeline operational

Please note that this is an indicative timeline and could be subject to change.

You can share feedback by:



Using our project website:
www.hynethydrogenpipeline.co.uk

Submit feedback on our website using our online feedback form and interactive map. The mapping tool allows you to leave comments at different location points along our route corridor.



Sending an email to:
info@hynethydrogenpipeline.co.uk

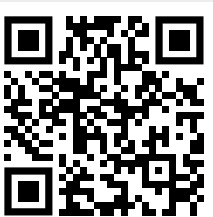
We welcome all feedback and any questions you might have about the project via email.



Sending written feedback to our freepost address:
FREEPOST HYNETH NWHP

You can write us a letter or send hard copy feedback forms, which are available at this event.

Please ensure you submit your feedback by 11 March 2022.



Scan with your phone's camera to access our website

Cadent
Your Gas Network

Appendix B List of stakeholders

Table B.1 Stakeholders notified - Members of Parliament

Member of Parliament	Constituency
Justin Madders MP	Ellesmere Port and Neston
Mike Amesbury MP	Weaver Vale
Rt Hon Esther McVey MP	Tatton
Andy Carter MP	Warrington South
Sir Graham Brady MP	Altrincham and Sale West
Kate Green MP	Stretford and Urmston
Marie Rimmer MP	St Helens South and Whiston
Edward Timpson MP	Eddisbury
Derek Twigg MP	Halton

Table B.2 Stakeholders notified - Local authorities

Local authority	Position
Cheshire East Council	Cllr Sam Corcoran (Leader of the Council)
Cheshire East Council	Principal Planning Officer
Cheshire West and Chester Council	Cllr Louise Gittins (Leader of the Council)
Cheshire West and Chester Council	Cllr Matt Bryan (Cabinet Member for Housing, Planning & Climate Emergency)
Cheshire West and Chester Council	Head of Planning
Cheshire West and Chester Council	Locality Officer

Local authority	Position
Cheshire West and Chester Council	Senior Locality Manager
Halton Borough Council	Cllr Mike Wharton (Leader of Council)
Halton Borough Council	Cllr Dave Thompson (Portfolio Holder for Major Projects)
Halton Borough Council	Operational Director, Policy, Planning and Transportation
St Helens Council	Cllr David Baines (Leader of the Council)
St Helens Council	Cllr Richard McCauley (Cabinet Member - Regeneration and Planning)
St Helens Council	Director of Strategic Growth
St Helens Council	Development Plans Manager
Warrington Borough Council	Cllr Russ Bowden (Leader of the Council)
Warrington Borough Council	Cllr Hitesh Patel (Cabinet Member for Environment, housing and public protection)
Warrington Borough Council	Development Manager
Trafford Council	Cllr Andrew Weston (Leader of the Council)
Trafford Council	Cllr James Wright (Portfolio Holder for Housing and Regeneration)
Trafford Council	Strategic Planning and Growth Manager

Table B.3 Stakeholders notified – Town and Parish Councils

Town and Parish Councils			
Acton Bridge Parish Council	Dunham Massey Parish Council	Little Leigh Parish Council	Walton Parish Council
Agden Parish Council	Dutton Parish Council	Lower Peover Parish Council	Warburton Parish Council
Antrobus Parish Council	Elton Parish Council	Lymm Parish Council	Weaverham Parish Council
Appleton Parish Council	Frodsham Town Council	Marston Parish Council	Whitegate and Marton Parish Council
Aston by Budworth Parish Council	Great Budworth Parish Council	Moulton Parish Council	Whitley Parish Council
Aston Parish Council	Hartford Parish Council	Northwich Town Council	Wincham Parish Council
Bold Parish Council	Hatton Parish Council	Penketh Parish Council	Barnton Parish Council
Bostock Parish Council	Helsby Parish Council	Pickmere Parish Council	Anderton with Marbury Parish Council
Carrington Parish Council	High Legh Parish Council	Plumley with Toft and Bexton Parish Council	Grappenhall and Thelwall Parish Council
Comberbach Parish Council	Ince Parish Council	Lach Dennis and Lostock Green Parish Council	Stockton Heath Parish Council
Daresbury Parish Council	Lach Dennis and Lostock Green Parish Council	Rainhill Parish Council	Warburton Parish Council
Davenham Parish Council	Little Bollington Parish Council	Sutton Weaver Parish Council	Weaverham Parish Council

Table B.4 Stakeholders notified - Community organisations

Community organisations			
AccessAble for Runcorn and Widnes	FOAM (Friend of Anderton and Marbury)	Post 16 Education and Training Team	Vesta
Age UK Mid Mersey Hubs	Fusion Inclusion	SEND youth club for young people with disabilities	Victoria Infirmary
Age UK Trafford	Groundwork Cheshire	Space4Autism	Warrington Community Living Domiciliary/Supported Living Network
Barnton Library	Halton Send Partnership	St Helens Council - 'Day Opportunities'	Warrington Disability Partnership
Barnton Memorial Hall	Halton Youth Cabinet	St Helens Council - 'The Visual Impairment Team'	Warrington Joint Autism and Learning disability partnership
Barnton Oakwood Medical Centre	Hartford Golf Club	St Helens Youth Council	Warrington learning disability community team
Brightlife Cheshire: By Older People for Older People	Latchford Community Hub	Sure Start to Later Life	WECA- Warrington Ethnic Community Association
Buzz Youth Activity Group	Learning disability community team	SUSO	Winnington Firdale Medical Centre
ChAPS	Link Up Club	The Cheshire East Local Offer	Winnington Garden Centre
CHAWREC- Cheshire race and equality centre	Mencap	The Early Help Schools and Partnership Team	Winnington Park Primary and Nursery School
Cheshire East Learning	Northwich Rotary	The SEND team	Winnington Park Rec Club

Community organisations

Disabilities Partnership Board			
Cheshire East Youth Support Service Youth Group - South	Northwich Town Council	The Welcome - Connected Communities Centre	YAZ (Youth Action Zone) St Helens
Cheshire West Community Access Team	O.C.E.A.N - Organising and Caring for Ethnic and All Nations (Cheshire)	Trafford Sensory Services Team for Adults	Young Carers Forum
Cheshire West Specialist Learning Disability Service	Orford Youth Base	Umbrella Halton	Young People's Service
Community and Day Centres	Over 55's Activity and Luncheon Club + Bingo	Vee's Place	Vesta

Table B.5 Stakeholders notified - Political and technical bodies

Political and technical bodies

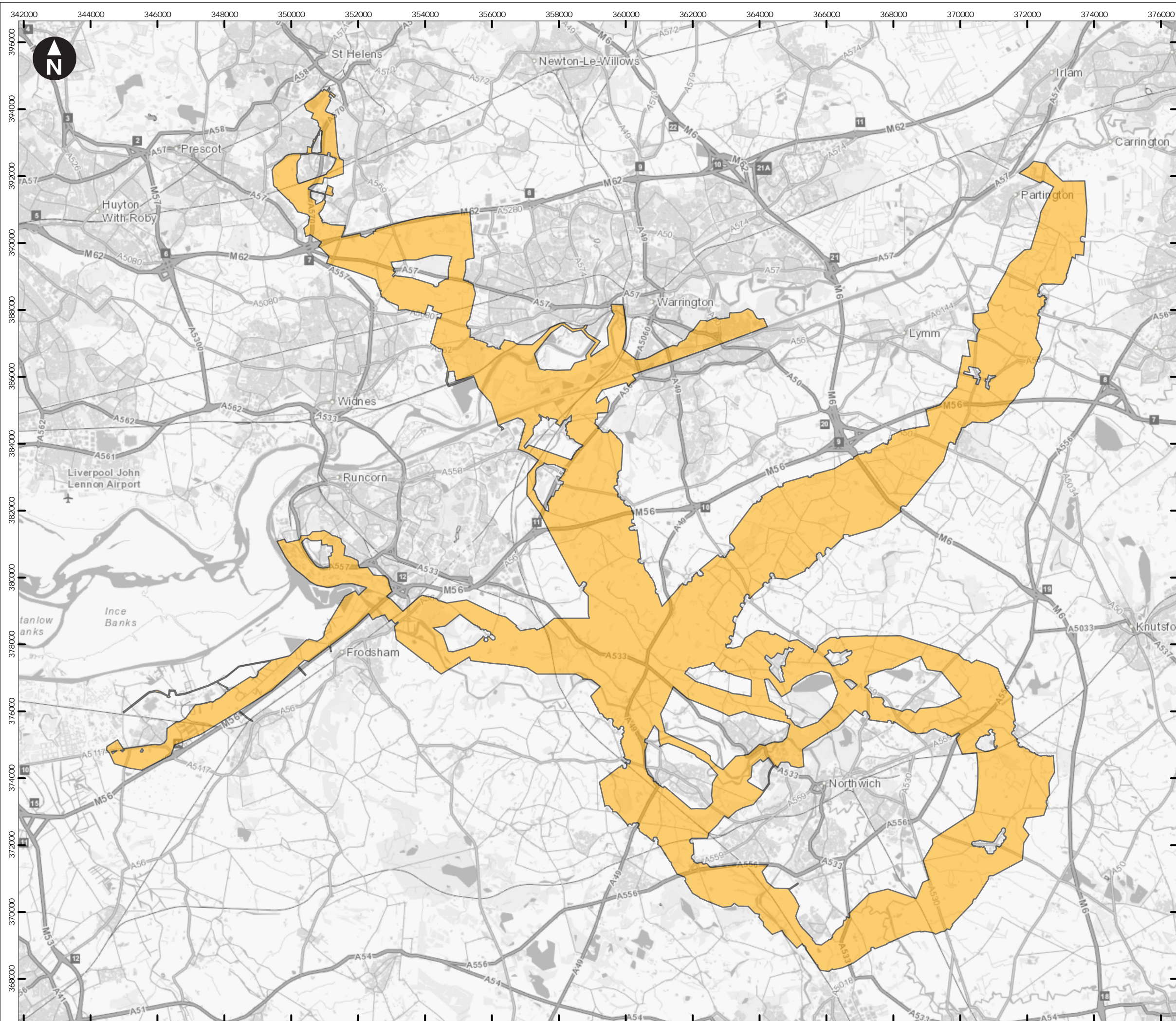
British Horse Society	North West Business Leadership Team
Canal & River Trust	Office of the Police & Crime Commissioner for Cheshire
Cheshire and Warrington LEP	Office of the Police & Crime Commissioner for Merseyside
Cheshire Fire and Rescue Service	Ramblers Association
Cheshire Wildlife Trust	Scottish Power Energy Networks
Greater Manchester Fire & Rescue	The Coal Authority

Political and technical bodies

Homes England	The Crown Estate Commissioners
HS2 Limited (Phase 2b)	The Environment Agency
Merseyside Fire & Rescue	The Equality and Human Rights Commission
National Grid	The Forestry Commission
National Highways	The Health and Safety Executive (HSE)
Natural England	The Historic Buildings and Monuments Commission for England (Historic England)
Network Rail	The Water Services Regulation Authority (Ofwat)
NHS Cheshire CCG	Transport for Greater Manchester
NHS England & NHS Improvement - North West	Transport for the North
NHS Halton CCG	United Utilities
NHS St Helens CCG	Wildlife Trust for Lancashire, Manchester and South Merseyside
NHS Warrington CCG	

Appendix C Consultation Zone

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Key
Consultation Zone

0 1 2 3 4 5 Kilometers
Scale at A3: 1:110,000
OS Open Greyscale: Contains OS data © Crown Copyright and database right 2020

Client
wood. Cadent

HyNet North West Hydrogen Pipeline Project
Stage One Non-Statutory Consultation
Consultation Feedback Report

Appendix C
Consultation Zone

wood.

Appendix D Consultation Postcard

CONSULTATION OPEN

Have your say on plans for new underground hydrogen pipeline

TAKE PART – 26 January to 11 March 2022

**HyNet North West
Hydrogen Pipeline**

Delivering clean growth

Cadent has announced plans for its HyNet North West Hydrogen Pipeline – a new underground hydrogen pipeline in your area that will help decarbonise the North West.

Now is your opportunity to provide any information that you think is important for us to consider. This will help us develop the best possible route for the new pipeline.



Go online to find out more about our proposals and share your thoughts:
www.hynethydrogenpipeline.co.uk



Or to access our website, scan this QR code with your phone's camera.

The proposed pipeline is being developed by Cadent, the region's gas network operator, and will be the UK's first 100 per cent low carbon hydrogen pipeline.



An illustration of the area we could be working in.

Cadent
Your Gas Network

The consultation

Cadent's consultation is now open and will run for six weeks from **00:01 on 26 January 2022 to 23:59 on 11 March 2022**.

You can find out all about our proposals on our website (www.hynethydrogenpipeline.co.uk). You can also ask the project team any questions you might have by emailing info@hynethydrogenpipeline.co.uk or calling **0800 8606 261**.

Ways to have your say:



Interactive map and feedback form on our website



info@hynethydrogenpipeline.co.uk



Feedback form – available from an in-person event, reference location or request one from our team (via the phone number above)



FREEPOST HYPNET NWHP

Address

Line 1

Line 2

Line 3

Line 4

Meet the team

You can meet the team, ask questions and find out more about the HyNet North West Hydrogen Pipeline at one of our eight in-person events. You can find details of these on our website or contact the team on the details above.

We'll also be holding two online webinars about the project. You can sign up for these at: www.hynethydrogenpipeline.co.uk/meet-our-team. All in-person events are Covid-permitting. Please check our website before attending.

Copies of our consultation brochure and feedback forms are available at locations across the project area. Visit our website or contact us to find out more.

Appendix E Poster

CONSULTATION OPEN

Have your say on plans for new underground hydrogen pipeline

HyNet North West Hydrogen Pipeline

Delivering clean growth

TAKE PART – 26 January to 11 March 2022



Unlocking an energy revolution to decarbonise the North West

Cadent has announced plans for its HyNet North West Hydrogen Pipeline – a new underground hydrogen pipeline in your area.

Now is your opportunity to provide any information you think is important for us to consider.

Give us your feedback



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Write: **FREEPOST HYNETHYDROGEN PIPELINE**

Meet the team

Meet our team and find out more by coming to one of our in-person or online events*. For details, go to www.hynethydrogenpipeline.co.uk/meet-our-team.

Any questions?

Email or call our project team on **0800 860 6261**.

***Covid-19:** In carrying out our in-person events, we will adhere to any Government guidance in place at the time. Should Government Covid-19 guidance require us to cancel our planned in-person events, we will endeavour to let people know and provide an online alternative.

Appendix F Advertisements

OPINION

'Cybercrime scammers have caused untold devastation'

THE cost of online fraud and cybercrime goes beyond the financial far too often people feel violated with many too embarrassed to admit they fell victim to a scam.

Unfortunately, cybercrime is on the increase and the pandemic has given rise to new and more complex types of scams all financial gaining the trust through sophisticated health scams, using false celebrity endorsements even fake Covid treatments.

Computer hacking, malware and cyber enabled fraud is thought to cost the UK nearly £2 billion each year and those criminals behind it are finding new ways to scam people every day.

We have a specialised cyber unit at Cheshire Police and this week I met with Detective Constable Andrew Kevan to learn more about the work he and his team do, to try and help keep my constituents safe.

Cybercrime can happen to anyone as I know only too well from my casework.

These scammers have caused untold devastation financially and emotionally to residents and

Esther McVey

Your MP's View

businesses.

The elderly and vulnerable are perhaps seen as the easiest targets, more trusting of people and possibly unaware of the huge scale of the scamming industry, but businesses and the young, usually viewed as more technical, are being targeted and are vulnerable too.

While sadly our elderly continue to receive cold calls with criminals hoping to tap into their good nature, it was another group that were singled out as targets, children getting their first phone, usually as they enter secondary.

Without thinking children are clicking on attachments which looks legitimate, perhaps about the latest game they are playing with

their friends, but police say it allows scammers to put malware on the phone and access their camera.

By no means do I want to scare parents but make them aware what are cyber experts are reporting. However sensible the child, it is so easy to fall into a trap.

To hammer home the importance of internet safety an example of Snapchat was used, just because the picture disappears, information can get into the wrong hands and be traced. That applies to everything we do online.

It goes without saying question everything and if it doesn't look or feel right it probably isn't.

There are many simple things we can all do to try and keep ourselves safe. But most importantly if you fall victim do not be ashamed or embarrassed, reach out for help.

Age UK and Citizens Advice are very active in our area and the work done by DC Kevan and his colleagues is fantastic.

My office is always available too. Sadly, this issue is not going away.



DC Andrew Kevan and Esther McVey

Last chance to take part in the first consultation for Cadent's HyNet North West Hydrogen Pipeline

HyNet North West Hydrogen Pipeline

Delivering clean growth

CONSULTATION CLOSING SOON: Submit feedback by 23:59 on 11 March 2022



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Find out more about our plans and have your say:



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SCAN ME

NEWS

Historian discovers the stories behind soldiers on memorial

By Jessica Farrington

jessica.farrington@nqnw.co.uk

AN author and historian has pieced together the forgotten stories behind the names featured on the Lostock and Chemical Works war memorials.

Tony Davies, from Tabley, has published his latest book entitled 'The lads from the Lostock area who never came home'.

Tony's keen interest in the subject has led him to previously publish a variety of books focusing on the First World War and the men who never came home, including those who lived in Tabley and Great Budworth.

He is currently researching the 400 plus men from Northwich who fell in the war between 1914 and 1919 and he is still looking for

anyone who has any information, medals or photographs to share.

"The Lostock book covers the memorial in the churchyard and the chemical works," Tony explained.

"I endeavoured to find out how old the men were, where they lived and with who, what they and their father did for a living prior to the war and if they were killed in action.

"I searched for the battalion war diary to see what was happening on that day."

Tony said researching these men and their lives had its limitations.

Speaking of the challenges he encountered, Tony said: "If they died of wounds then that could have been any time so there is no date to research.

"Again if they 'died' – that probably meant from dis-

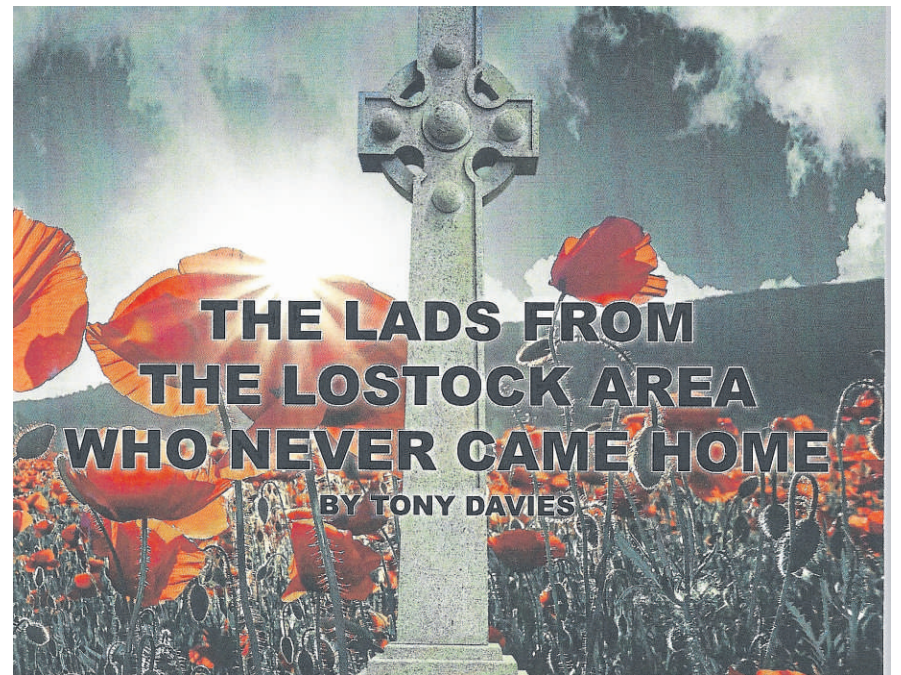
ease so again, no date to fall back on. We only have 25 per cent of their records remaining, as the rest were destroyed by bombing during the Second World War."

Tony is donating all profits from the sale of his latest book to the Poppy Appeal.

If anyone would like a copy of the book, or has any information – especially medals and photographs – of the men who were from Northwich and died during the war, contact tony@tonydavies.me.

Tony's wealth of knowledge and his passion for history means he has given many interactive history talks.

He has featured on both the History and Yesterday Channels and appeared at numerous re-enactment events and spoken in a large number of schools.



The cover of Tony's latest book

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HyNet North West
Hydrogen Pipeline

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The research is funded by the NIHR Health Technology Assessment Programme. The views expressed are those of the author(s) and not necessarily those of the NIHR, the NIHR or the Department of Health.



'Pathetic' prisoner set fire to his cell

By Lois Dean

lois.dean@newsquest.co.uk

A PRISONER who set fire to his cell and threatened to stab officers over a vape was branded 'pathetic' by a judge.

Martin Smith, of HMP Risley, threatened to set a 'big fire' in his cell if no one brought him vape capsules.

He also claimed that he had a shank and the next officer to walk through his door would 'get it'.

The case of Smith was heard before Chester Crown Court on Thursday in his absence as he refused to leave his cell to turn up to his sentencing.

Smith, who has spent 'virtually' all his adult life in prison, pleaded guilty at an earlier hearing to assaulting an emergency worker, unauthorised possession of an offensive weapon in prison and arson with recklessness as to whether life was endangered.

The court heard how the offences took place in September of 2019 and occurred in the 35-year-old's cell in the isolation unit.

He was serving a prison sentence at HMP Risley after being convicted of an attempted robbery.

Prosecuting, Derek Jones said how prison officers were alerted to Smith's cell after he pressed his buzzer to demand vape capsules.

He said if no one brings him them he will set a 'big fire' in his cell so officers decided to check on him regularly as he had also blocked the observation hatch of his cell with toilet paper.

Mr Jones said how the arson offence, and namely the damage to the cell door, cost £440.

Prison officers then tried to enter Smith's cell to retrieve him but their visibility was restricted due to the smoke from the fire.



Martin Smith was handed a 23-month prison sentence

Smith reminded them of his shank so an officer led others in to the cell using a riot shield.

The court was told how Smith 'lunged' and swung a sharp object around the shield which stabbed the officer in the arm, causing injury.

It was later discovered that Smith had melted and sharpened a plastic fork into a spike.

Due to police 'reluctancy' to enter the prison, Smith was arrested more than two weeks later.

Mr Jones shared that Smith

has 'dozens' of convictions for offences including criminal damage, robbery, and dishonesty.

Defending, Gareth Roberts asked the judge to adjourn the case due to his client's absence.

But his application was refused as recorder Michael Taylor claimed there was no guarantee that Smith would decide to turn up for the next hearing.

Mr Roberts acknowledged that Smith has an 'appalling' record.

Smith received a 23-month prison sentence.

Police investigate jobs who threw bricks at away fans

POLICE have launched an investigation into damage caused to coaches following Warrington Wolves' game against Castleford last night, Thursday.

Wire defeated the Tigers 34-10 in their first home game of the new Super League season at the Halliwell Jones Stadium, however the match was marred with violence outside afterwards.

A large group of youths blocked an official Castleford supporters coach on the junction of Dallam Lane and Tan-

ners Lane at around 10pm.

They then threw stones and bricks while visiting rugby supporters were on board, causing damage to three windows.

The youths are described as white and were all wearing dark coloured hooded tops.

Sergeant Mark Spaven, from Warrington local policing unit, said: "Thankfully there were no injuries reported however this was a frightening incident for the people who were on board the bus at the time.

"While our enquiries are

ongoing to identify the youths responsible I am appealing for anyone with information that could assist with the investigation to come forward."

Anyone with any information, CCTV or dash-cam footage ius asked to call Cheshire Police on 101, quoting IML1204059, or visit cheshire.police.uk

It is reported that a large number of supporters were left stranded for hours while a replacement coach was sourced from Yorkshire.

Bogus cold callers target residents in rogue scam

POLICE are warning residents in south Warrington not to be fooled by rogue traders.

It comes after a number of reports were made of bogus cold callers operating in the Stockton Heath area.

Cheshire Police officers are warning households to not fall for the scam and to check

identification.

A social media post by the force's Stockton Heath Police account read: "We have been made aware that rogue traders have been cold calling at addresses and trying to sell goods.

"Please consider the following advice regarding potential bogus callers.

"Use the door chain if you have one before opening the door, ask the caller for identification and check it carefully, and never feel pressured into buying any goods or services."

Any suspicious activity should be reported to Cheshire Police via cheshire.police.uk/ro/report or by calling 101.

Opportunistic thieves are to blame for spate of bike thefts

RESIDENTS are being urged to ensure their bicycles are secured properly following a spate of thefts.

The Latchford area has seen a number of incidents reported to police following a recent stealing spree by 'opportunistic thieves with light fingers'.

Cheshire Police says it will be hosting bike marking events in the near future once the weather improves to deter thieves.

Until then however, officers are reminding residents not to make things easy for criminals by ensuring bikes are secured with quality locks.

An update from the force's Latchford West Police team read: "There has been a recent spate of bike thefts across Latchford. The last one reported was from Silverdale.

It does not matter what condition or type of bike it is, these opportunistic thieves will lift anything with their light fingers."

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CRASH on Kingsdale Road in Whittle Hall

Crash closes roads

THIS was the scene after a crash caused road closures in Whittle Hall. Police were called to Kingsdale Road shortly before 2pm last Friday, January 21, after a collision involv-

ing two cars. The route was shut near to the junction with Barbondale Close until around 4pm, when the road was cleared.

A Cheshire Police spokesman said: "Officers were called to the junction of Kingsdale Road and Barbondale Close at 1.49pm following reports of a collision involving a white Range

Rover Evoque and a blue Audi S8. "No injuries were reported. "The road was blocked while recovery took place until around 4pm."

Search for prisoner

POLICE are appealing for information over the whereabouts of a wanted man.

John James Gilboy, who has links to Warrington, is wanted by Merseyside Police on recall to prison for alleged breaches of his licence conditions having previously been jailed for drug offences.

The 36-year-old, from Liverpool, is described as being 5ft10 with blue eyes and shaved hair.

He also has links to St Helens and Humberside.

A force spokesman said: "Gilboy, 36 years old and of Old Swan, has breached his license conditions following his release after serving a sentence for drug offences.

"He is 5ft 10in tall, blue eyes and shaved hair. He has links to the St Helens, Warrington and Humberside, as well as Liverpool.

"If you see Gilboy or hold any information, contact us via @MerPolCC on Twitter; Merseyside Police Contact Centre on Facebook or anonymously to Crimestoppers on 0800 555 111 with reference 21000645961."

Mum fails in prison drug bid

By Adam Everett
adam.everett@ngnw.co.uk

A MUM who attempted to smuggle more than £10,000 of drugs into a prison has been jailed.

Stacey Burns took a package filled with heroin, cocaine, ecstasy and ketamine into HMP Risley in order to pay off her own drug debts but was rumbled by a sniffer dog.

Liverpool Crown Court heard on Friday, January 14, that the 38-year-old attempted to visit an inmate who she claimed was her cousin in November 2019.

But she was stopped by security staff after entering the category C Warrington Road prison when a drugs dog indicated that she was carrying illicit substances.

Burns, from Manchester, then produced a small, 'sausage-shaped' package from her trousers.

The mother-of-three refused to say who had given the parcel to her as she was 'not a grass', but added that she had been 'bullied into doing it'.

This package was subse-



STACEY Burns

quently found to contain 14.7g of ecstasy, 6.42g heroin, 5.89g cocaine and 1.9g of ketamine – drugs with a street value of around £1,200, but which would be worth up to £11,600 in jail.

Burns, who was described in court as a 'diligent hard worker', began using cocaine and developed a 'significant habit' and racked up £3,000 in debts as a result.

She was jailed for three years for robbery in 2018, a crime committed in order to pay off

monies to dealers.

This offence saw her follow the victim for two miles over two bus journeys having spotted her withdrawing £1,000 from a bank before snatching her bag on her own doorstep.

Upon her release from custody in 2019, criminals continued to pursue for outstanding amounts owed and ordered her to smuggle tobacco into Risley prison on their behalf.

Burns, who has been clean of drugs since her release nearly three years ago, claims that she was unaware that the parcel contained drugs.

She said in letter to the court: "I bitterly regret my actions – I wish I had spoken out, but I did not do so out of fear."

The defendant admitted four counts of conveying a prohibited article into a prison during an earlier hearing and was locked up for 20 months.

Sentencing, judge David Aubrey said: "It's the all too familiar of using drugs, getting into debts, threats and then taking contraband into prison which, unfortunately, we see on so many occasions."

Have your say on Cadent's HyNet North West Hydrogen Pipeline

HyNet North West Hydrogen Pipeline

Delivering clean growth

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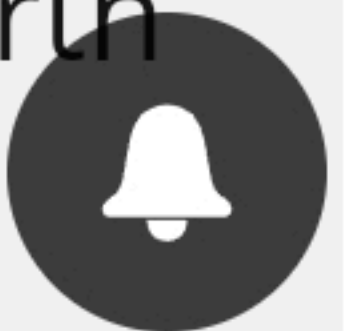
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musicMagpie CEO joins high-profile investors to back Fearless Adventures

Fearless Adventures was set up by three Manchester-based entrepreneurs last year

SHARE COMMENTS

By [Jon Robinson](#)
10:23, 28 FEB 2022

ENTERPRISE



Steve Oliver, CEO of musicMagpie

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hydrogen pipeline



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Appendix G Press Releases

Consultation launched on HyNet North West Hydrogen Pipeline

People across the North West are being encouraged to have their say on Cadent's plans to design, construct and operate a new underground hydrogen pipeline.

Cadent's HyNet North West Hydrogen Pipeline will take hydrogen produced at the Stanlow Manufacturing Complex to industrial users and power generators across the North West, supporting the switch away from natural gas to a low carbon economy in the region.

This project has the potential to prevent 10 million tonnes of carbon dioxide per year being emitted into the atmosphere by 2030. The project will also secure existing high skilled employment in the region and introduce new green jobs for future generations.

Cadent has identified potential route corridors for the pipeline. The pipeline will extend to Northwich, St Helens, Partington, Stanlow areas of the North West region. This draft proposal is the basis for this non-statutory public consultation.

Local people are now being asked to help Cadent develop the route of the pipeline and sites for other related infrastructure. The consultation will run until 23:59 on 11 March 2022. Cadent has launched an online consultation hub (www.hynethydrogenpipeline.co.uk) where people can find out more about the project and provide feedback. The project will also be holding eight in-person events across the project area and two webinars.

Rob Donovan, Cadent Head of Project Delivery for HyNet said: *"We are interested to hear any information that might help us identify the best route for the pipeline. Although the pipeline will largely be underground and will not be routed underneath any homes, there will be some above ground installations. Therefore, we want to understand areas that are important to local people so we can continue to develop the project including our future construction plans in the most appropriate way."*

"As the region's gas distribution network, we're committed to supporting a Net Zero Carbon future. This project will help achieve that and we're excited to be sharing our early plans with people".

The pipeline will be part of the HyNet North West low carbon cluster, an innovative low carbon and hydrogen energy project that will unlock a low carbon economy for the North West and North Wales. HyNet will support some of the North West's biggest businesses and employers by delivering and maintaining thousands of jobs for local people and helping the region lead the way in the UK's transition to Net Zero Carbon by 2050.

- ENDS -



Notes to editors

About Cadent

Cadent owns and operate the UK's largest gas distribution network, managing a network of more than 80,000 miles of pipes that transport gas to 11 million homes and businesses across West Midlands, North West England, East of England, and North London.

Cadent is involved in several hydrogen projects in partnerships with the energy sector. Cadent has published a hydrogen Ten Point Plan that outlines its ambition to make

hydrogen a safe, fair, and reliable choice for consumers. It can be read here:

www.cadentgas.com/tenpointplan.

About the consultation

Cadent is applying to Government for a Development Consent Order (DCO) to obtain permission to deliver the pipeline. As part of the DCO process, it will be carrying out two stages of consultation with this one being the first.

How to provide feedback and get further information

The public can find out more by:

- Emailing info@hynethydrogenpipeline.co.uk
- The interactive map and feedback form at www.hynethydrogenpipeline.co.uk
- Using the physical feedback form available at events
- Writing to FREEPOST HYPNET NWHP

About HyNet North West

HyNet North West is an innovative low carbon and hydrogen energy project that will unlock a low carbon economy for the North West and North Wales and put the region at the forefront of the UK's drive to net zero.

HyNet will produce, store, and distribute hydrogen as well as capture and store carbon from industry in the North West. The infrastructure has been designed to be both affordable and safe, and to be built quickly to help the region and the UK to meet its net zero targets by 2050.

In October 2021, the government confirmed that HyNet North West was a Track 1 Carbon Capture and Utilisation (CCUS) Cluster – one of two projects selected to lead the way in developing hydrogen and CCUS infrastructure. This means it is at the forefront of the energy revolution and will be decarbonising the region from 2025. For more information, please visit <https://hynet.co.uk/>

Media enquiries

For further information, please contact Portland Communications:

Charlotte Wills | + 44 (0) 78840 75451 | Charlotte.Wills@Portland-Communications.com

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Rob Donovan, Cadent Head of Project Delivery for HyNet said: "We are excited to launch our consultation on our proposals and get the thoughts of local people to help us identify the best route for the pipeline.

"Cadent is committed to supporting a Net Zero Carbon future for the UK. Delivery of these plans will be essential to unlocking the ambitions of HyNet North West which would benefit the area for many years and generations to come."

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Have say on huge new North West underground hydrogen pipeline

27th January




The proposed map of the new HyNet North West Hydrogen Pipeline.

BY MARK DOWLING
@MarkFDowling
REPORTER

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PEOPLE across the North West are being encouraged to have their say on a gas giant's plans to design, construct and operate a new underground hydrogen pipeline from the Stanlow Refinery.

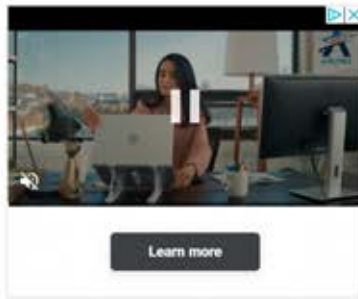
Cadent's HyNet North West Hydrogen Pipeline will take hydrogen produced at the Stanlow Manufacturing Complex, Ellesmere Port, to industrial users and power generators across the North West, supporting

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the switch away from natural gas to a low carbon economy in the region.

This project has the potential to prevent 10 million tonnes of carbon dioxide per year being emitted into the atmosphere by 2030. The project will also secure existing high skilled employment in the region and introduce new green jobs for future generations.



Cadent has identified potential route corridors for the pipeline.

The pipeline will extend to Northwich, St Helens, Partington, Stanlow areas of the North West region. This draft proposal is the basis for this non-statutory public consultation.



Residents are now being asked to help Cadent develop the route of the pipeline and sites for other related infrastructure.

The consultation will run until 11.59pm on March 11. Cadent has launched an online consultation hub (www.hynethydrogenpipeline.co.uk) where people can find out more about the project and provide feedback. The project will also be holding eight in-person events across the project area and two webinars.

Rob Donovan, Cadent head of project delivery for HyNet said: "We are interested to hear any information that might help us identify the best route for the pipeline.

"Although the pipeline will largely be underground and will not be routed underneath any homes, there will be some above ground installations. Therefore, we want to understand areas that are important to local people so we can continue to develop the project including our future construction plans in the most appropriate way.

"As the region's gas distribution network, we're committed to supporting a Net Zero Carbon future. This project will help achieve that and we're excited to be sharing our early plans with people."

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The Essar oil refinery at Stanlow, Ellesmere Port.

Earlier this week Essar has announced it has formed Vertex Hydrogen Limited, a transformative new joint venture with Progressive Energy, to build the UK's largest hydrogen hub at the Stanlow Manufacturing Complex.

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Waste fuel gases from Essar Stanlow, and natural gas, will be converted by Vertex Hydrogen into hydrogen, with carbon dioxide safely captured and stored by HyNet partner Eni SpA, underground offshore in Liverpool Bay.

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Consultation launched on HyNet North West Hydrogen pipeline

January 27, 2022 · 3 mins



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The route for Cadent's HyNet North West Hydrogen pipeline is out for public consultation until March 11

The route for [Cadent's HyNet North West Hydrogen Pipeline](#) in north-west England is out for public consultation until March 11.

Cadent has identified a potential route extending to Northwich, St Helens, Partington and Stanlow, with hydrogen produced at the Stanlow Manufacturing Complex transported to industrial users and power generators across the region.

The project has the potential to prevent 10 million tonnes of carbon dioxide per year being emitted into the atmosphere by 2030. The project will also secure existing high skilled employment in the region and introduce new green jobs for future generations.

Local residents are now being asked to help Cadent develop the route of the pipeline and sites for other related infrastructure. Cadent has launched an [online consultation hub](#) where people can find out more about the project and provide feedback. The project will also be holding eight in-person events across the project area and two webinars.

Rob Donovan, Cadent Head of Project Delivery for HyNet said: "We are excited to launch our consultation on our proposals and get the thoughts of local people to help us identify the best route for the pipeline. Cadent is committed to supporting a Net Zero Carbon future for the UK. Delivery of these plans will be essential to unlocking the ambitions of HyNet North West which would benefit the area for many years and generations to come."

HyNet North West and InterGen plan to create a low carbon power station at the independent power producer's Rocksavage Power plant in Liverpool City region.

Expected to begin in the mid-2020s, the partnership could reduce the CO2 emissions from the Runcorn power station by over 150,000 tonnes each year, the equivalent of taking 60,000 cars off the road every year.

Situated across one of the UK's largest industrial areas, HyNet North West will bring clean growth to safeguard jobs, and create thousands of new employment opportunities (click [here](#)).

To read how Cadent Gas is using technology to deliver gas networks, click [here](#).

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Independent renewable energy company Anesco gets £12m revolving credit facility from Santander UK to support delivery of its renewables pipeline



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Exergy Solutions selects Manchester for European hub

By Dominic Ellis

January 27, 2022 · 3 mins



Exergy Solutions drawn to Manchester's clear net zero vision and specialist digital talent

[Exergy Solutions](#) has selected Manchester for its European hub, bolstering the UK as it transitions to new power sources and renewable energy.

It marks the UK-based operation of Japanese-founded company, Exergy Power Systems, the spin off from The University of Tokyo that has developed a unique high power battery energy storage system (BESS).

Designed to rapidly respond to electricity network fluctuations caused among others, by the less predictable nature of renewables, the technology can be retrofitted to give existing power assets, such as back-up generators, new abilities to perform in a hybrid system.

[Dr Mike Musil](#), CEO of Exergy Solutions, said it chose Manchester for its European base because of the clear vision it has for its own net zero future and the specialist digital and engineering talent the city attracts. "It also provides us with the opportunity to establish the right partnerships. being in the North West." he said.

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"The sector's move to renewables has brought with it new challenges for reliable energy transition – with unpredictability of power supply and many assets too slow to react to grid disturbances. The Dynamic Containment (DC) market requires very fast reaction times from providers and the requirements are too challenging for some assets, such as back-up generators and fuel cells."

He said its team has developed a BESS with a patented cell design and chemistry, to provide fast power supply to support both the grid through DC provision and large power consumers through uninterruptible power supply (UPS) services.

It is also collaborating with The University of Sheffield, an expert in maximising the capabilities of BESS, to develop its 1MW containerised system with funding from Tokyo Metropolitan Government and Tokyo Gas. It will simulate the hybrid operation in a virtual power plant and demonstrate how the system can participate in the Dynamic Containment (DC) market.

Tim News, Chief Executive of MIDAS Greater Manchester's inward investment agency, said the city saw significant growth in the energy and environment sector last year. "As a city region, we are taking important steps towards Greater Manchester's own net carbon neutral 2038 target – as well as seeing major moves by companies developing the innovation to support a greener economy here in the UK and internationally," he said. To read more on Manchester's aim to reach net zero by 2038, click [here](#).

Cadent announced today that its HyNet North West Hydrogen pipeline is out for public consultation until March 11.

It has identified a potential route extending to Northwich, St Helens, Partington and Stanlow, with hydrogen produced at the Stanlow Manufacturing Complex transported to industrial users and power generators across the region. Click [here](#) for more details.

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Have your say on huge new North West underground hydrogen pipeline

27th January



The proposed map of the new HyNet North West Hydrogen Pipeline.

BY MARK DOWLING
@MarkFDowling
REPORTER

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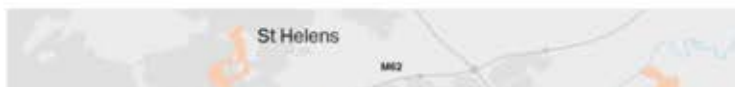
PEOPLE in Northwich are being encouraged to have their say on a gas giant's plans to design, construct and operate a new underground hydrogen pipeline across the North West.

Cadent's HyNet North West Hydrogen Pipeline will take hydrogen produced at the Stanlow Manufacturing Complex, Ellesmere Port, to industrial users and power generators across the region, supporting the switch away from natural gas to a low carbon economy.

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The Essar oil refinery at Stanlow, Ellesmere Port

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Waste fuel gases from Essar Stanlow, and natural gas, will be converted by Vertex Hydrogen into hydrogen, with carbon dioxide safely captured and stored by HyNet partner Eni SpA, underground offshore in Liverpool Bay.

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New underground pipeline could pass through Runcorn

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The proposed map of the new HyNet North West Hydrogen Pipeline

BY MARK DOWLING
 @MarkFDowling
REPORTER

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RESIDENTS are being asked for their views on a gas giant's plans to create a huge new underground hydrogen pipeline through Runcorn.

Cadent's HyNet North West Hydrogen Pipeline will take hydrogen produced at the Stanlow Refinery in Ellesmere Port to industrial users and power generators across the north west, supporting the switch away from natural gas to a low carbon economy in the region.

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It will also secure existing high skilled employment in the region and introduce new green jobs for future generations.

Cadent has identified potential route corridors for the pipeline.

Moore and Daresbury could form part of the 'north corridor', while the 'west corridor' extends to Weston Point.

The pipeline will extend as far afield as Northwich, St Helens and Partington.



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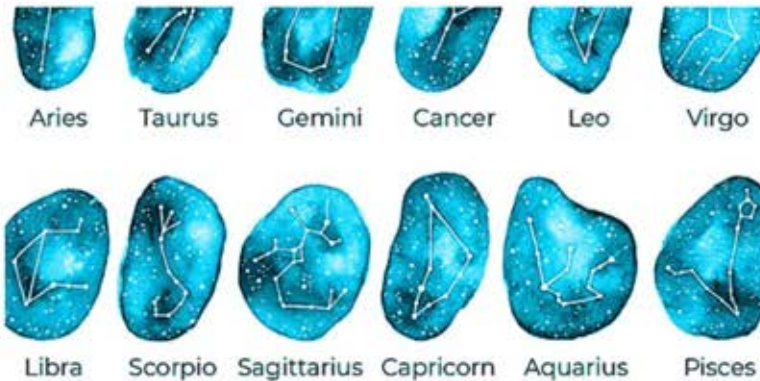
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People across the region consulted on the proposed HyNet North West Hydrogen Pipeline

Local communities across the North West have provided their views on the first round of consultation for Cadent's plans for a new underground hydrogen pipeline.

Over 150 people attended the consultation programme of eight in-person events across the region and two webinars. This was the first stage of consultation on the project that took place from 26th January to 11th March 2022.

The consultation offered local people an opportunity to learn more about how the project is being developed and proposals for pipeline route corridors.

Cadent's proposed HyNet North West Hydrogen Pipeline would take hydrogen produced at the Stanlow Manufacturing Complex to industrial users and power generators across the North West. This supports the switch from natural gas to a low carbon economy in the region. HyNet North West Pipeline will help to support the reduction in the amount of carbon dioxide per year being emitted into the atmosphere and will also secure existing high skilled employment in the region, introducing new green jobs for future generations.

Many attendees were keen to understand more about the technology and the benefits it will bring to the North West. People were also interested to know about the proximity of the pipeline to their homes. Cadent has confirmed that the pipeline would not be routed underneath homes.

There will be a further opportunity for local communities to have their say on the detailed proposed route for the pipeline through a second consultation planned for the Autumn.

Rob Donovan, Cadent Head of Project Delivery for HyNet said: "We are very grateful to speak with local people and get their views to help shape the future plans I want to say a huge thank you to everyone who was able to get involved at this stage.

"All feedback received will be used along with the technical and environmental work undertaken. This will help with the development of a more detailed design proposal for our future pipeline network. We are committed to plans that will minimise disruption to communities, wildlife, and the local environment.

“We’ll present our more detailed proposed plans to local people in the second round of consultation later this year. This is just the start of a conversation and we look forward to continuing to hear more from local communities.”

– ENDS –

Notes to editors

About Cadent

Cadent owns and operate the UK’s largest gas distribution network, managing a network of more than 80,000 miles of pipes that transport gas to 11 million homes and businesses across West Midlands, North West England, East of England, and North London.

Cadent is involved in several hydrogen projects in partnerships with the energy sector.

Cadent has published a hydrogen Ten Point Plan that outlines its ambition to make hydrogen a safe, fair, and reliable choice for consumers. It can be read here:

www.cadentgas.com/tenpointplan.

About the consultation

Cadent is applying to Government for a Development Consent Order (DCO) to obtain permission to deliver the pipeline. As part of the DCO process, it will carry out two stages of consultation and this one was the first.

The public can find out more by:

- Emailing info@hynethydrogenpipeline.co.uk
- Visiting <https://www.hynethydrogenpipeline.co.uk/>

About HyNet North West

HyNet North West is an innovative low carbon and hydrogen energy project that will unlock a low carbon economy for the North West and North Wales and put the region at the forefront of the UK’s drive to net zero.

HyNet will produce, store, and distribute hydrogen as well as capture and store carbon from industry in the North West. The infrastructure has been designed to be both affordable and safe, and to be built quickly to help the region and the UK to meet its net-zero targets by 2050.

In October 2021, the government confirmed that HyNet North West was a Track 1 Carbon Capture and Utilisation (CCUS) Cluster – one of two projects selected to lead the way in

developing hydrogen and CCUS infrastructure. This means it is at the forefront of the energy revolution and will be decarbonising the region from 2025. For more information, please visit <https://hynet.co.uk/>.



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People Across the Region Consulted on the Proposed HyNet North West Hydrogen Pipeline

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All feedback received will be used along with the technical and environmental work undertaken. This will help with the development of a more detailed design proposal for our future pipeline network. We are committed to plans that will minimise disruption to communities, wildlife, and the local environment.

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SCORES of people have had their say on ground-breaking plans for a new hydrogen pipeline across the North West.

Local communities provided their views on the first round of consultation for Cadent's plans for a new underground hydrogen pipeline.

Over 150 people attended the consultation programme of eight in-person events across the region and two webinars.

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The proposed map of the new HyNet North West Hydrogen Pipeline.

The consultation offered local people an opportunity to learn more about how the project is being developed and proposals for pipeline route corridors.



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committed and our pipeline route will be based on the best available information.

There will be a further opportunity for local communities to have their say on the detailed proposed route for the pipeline through a second consultation planned for the autumn.

Rob Donovan, Cadent head of project delivery for HyNet, said: "We are very grateful to speak with local people and get their views to help shape the future plans I want to say a huge thank you to everyone who was able to get involved at this stage.

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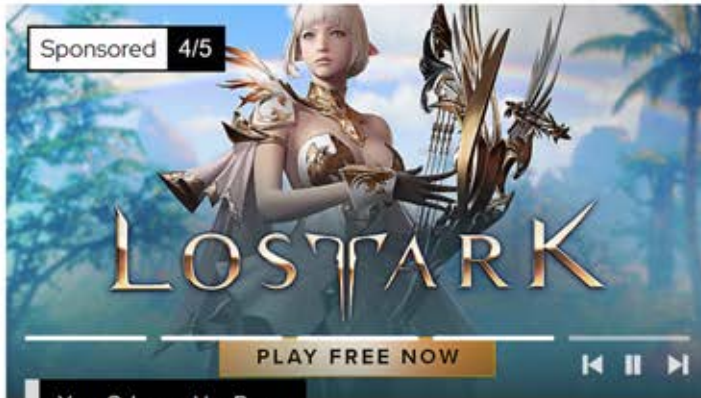
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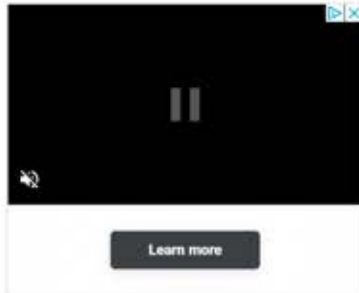
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Consultation on HyNet North West Hydrogen Pipeline comes to a close

Published by [Bella Weetch](#), Editorial Assistant

Global Hydrogen Review, Tuesday, 15 March 2022 12:00

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Local communities across the North West have provided their views on the first round of consultation for Cadent's plans for a new underground hydrogen pipeline.

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Over 150 people attended the consultation programme of eight in-person events across the region and two webinars. This was the first stage of consultation on the project that took place from 26 January – 11 March 2022.

The consultation offered local people an opportunity to learn more about how the project is being developed and proposals for pipeline route corridors.

Cadent's proposed HyNet North West Hydrogen Pipeline would take hydrogen produced at the Stanlow Manufacturing Complex to industrial users and power generators across the North West. This supports the switch from natural gas to a low-carbon economy in the region. The HyNet North West Pipeline will help to support the reduction in the amount of carbon dioxide per year being emitted into the atmosphere and will also secure existing high-skilled employment in the region, introducing new green jobs for future generations.

Many attendees were keen to understand more about the technology and the benefits that it will bring to the North West. People were also interested to know about the proximity of the pipeline to their homes. Cadent has confirmed that the pipeline would not be routed underneath homes.

There will be a further opportunity for local communities to have their say on the detailed proposed route for the pipeline through a second consultation planned for the autumn.

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By George Heynes on Mar 16, 2022 | Translate

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The HyNet North West Hydrogen Pipeline has had its first consultation with an attendance of over 150 people.

The pipeline could drastically change both the landscape and scope of the hydrogen economy in the UK and turn the North West region into one of the most influential regions for hydrogen.

Read more: [HyNet Hydrogen Production Plant - the UK's first large-scale low carbon hydrogen facility](#)
Read more: [New agreement will see HyNet supply 1,500 tonnes a year of hydrogen for zero-emission buses](#)

The Pipeline is aiming to transport hydrogen from Essar's Stanlow Manufacturing Complex to industrial users and various power generators across the North West.

In doing so this will decarbonise a wide array of different industries and also support companies transitioning to lower carbon activities.

The consultation offered local people an opportunity to learn more about how the project is being developed and proposals for pipeline route corridors.

Rob Donovan, Cadent Head of Project Delivery for HyNet, said, "We are very grateful to speak with local people and get their views to help shape the future plans I want to say a huge thank you to everyone who was able to get involved at this stage.

"All feedback received will be used along with the technical and environmental work undertaken. This will help with the development of a more detailed design proposal for our future pipeline network.



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ABOUT THE AUTHOR



George Heynes, News Journalist



H2 View's newest recruit, George joined the team as a News Journalist in March 2021. He studied Communication and Media at Bournemouth University, graduating in 2020, and also spent some time working as a press and communications assistant for a UK MP.

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HyNet North West Hydrogen Pipeline consultation closes

16th March



An above ground installation for natural gas. Picture: Cadent

BY MARK DOWLING

@MarkFDowling
REPORTER

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SCORES of people have had their say on ground-breaking plans for a new hydrogen pipeline across the North West.

Local communities provided their views on the first round of consultation for Cadent's plans for a new underground hydrogen pipeline, which will extend to Northwich.

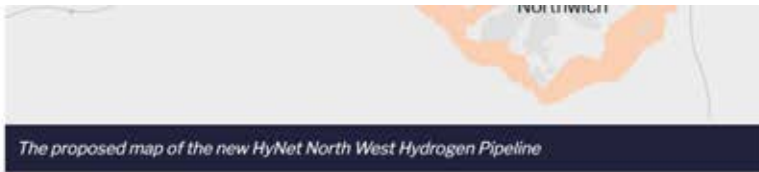
More than 150 people attended the consultation programme of eight in-person events across the region and two webinars.

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People were also interested to know about the proximity of the pipeline to their homes. Cadent has confirmed that the pipeline would not be routed underneath homes.

There will be a further opportunity for local communities to have their say on the detailed proposed route for the pipeline through a second consultation planned for the autumn.

Rob Donovan, Cadent head of project delivery for HyNet, said: "We are very grateful to speak with local people and get their views to help shape the future plans I want to say a huge thank you to everyone who was able to get involved at this stage.

"All feedback received will be used along with the technical and environmental work undertaken. This will help with the development of a more detailed design proposal for our future pipeline network. We are committed to plans that will minimise disruption to communities, wildlife, and the local environment.

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"We'll present our more detailed proposed plans to local people in the second round of consultation later this year.

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CONSULTATION CLOSES ON NORTH WEST HYDROGEN PIPELINE

17 Mar 2022 North West Business



Plans for a second consultation on Cadent's proposals for an underground hydrogen pipeline have been confirmed following completion of the first round of feedback.

Cadent's proposed HyNet North West Hydrogen Pipeline would take hydrogen produced at the Stanlow Manufacturing Complex, in Ellesmere Port, to industrial users and power generators across the region.

This supports the switch from natural gas to a low carbon economy in the region.

The HyNet North West Pipeline will help to support the reduction in the amount of carbon dioxide per year being emitted into the atmosphere. It will also secure existing high skilled employment in the region, introducing new green jobs for future generations.

It comes after communities across the North West provided their views on the first round of consultation for the proposals.

The consultation offered people an opportunity to learn more about how the project is being developed and proposals for pipeline route corridors.

Attendees were keen to understand more about the technology and the benefits it will bring to the North West.

People were also interested to know about the proximity of the pipeline to their homes. Cadent has said the pipeline would not be routed underneath homes.

There will be a further opportunity for communities to have their say on the detailed proposed route through a second consultation planned for the autumn.

Rob Donovan, Cadent head of project delivery for HyNet said: "We'll present our more detailed proposed plans to local people in the second round of consultation later this year.

"This is just the start of a conversation and we look forward to continuing to hear more from local communities."

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New underground pipeline could pass through Warrington

27th January



The proposed map of the new HyNet North West Hydrogen Pipeline.

BY MARK DOWLING
@MarkFDowling
REPORTER

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RESIDENTS are being asked for their views on a gas giant's plans to create a huge new underground hydrogen pipeline through Warrington.

Cadent's HyNet North West Hydrogen Pipeline will take hydrogen produced at the Stanlow Refinery in Ellesmere Port to industrial users and power generators across the north west, supporting the switch away from natural gas to a low carbon economy in the region.

This project has the potential to prevent 10 million tonnes of carbon dioxide per year being emitted into the atmosphere by 2030.



It will also secure existing high skilled employment in the region and introduce new green jobs for future generations.

Cadent has identified potential route corridors for the pipeline.

Latchford, Lower Walton and Centre Park could become a 'central hub' with Penketh, Moore and Daresbury forming part of the 'north corridor'.

Meanwhile, the 'east corridor' would pass through Lymm, High Legh and Whitley.



The pipeline will extend as far afield as Northwich, St Helens and Partington.



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Residents are now being asked to help Cadent develop the route of the pipeline and sites for other related infrastructure.

A consultation will run until March 11, and members of the public can find out more or provide feedback at hynethydrogenpipeline.co.uk.

Rob Donovan, Cadent's head of project delivery for HyNet said: "We are interested to hear any information that might help us identify the best route for the pipeline.

"Although the pipeline will largely be underground and will not be routed underneath any homes, there will be some above ground installations. Therefore, we want to understand areas that are important to local people so we can continue to develop the project including our future construction plans in the most appropriate way.

"As the region's gas distribution network, we're committed to supporting a Net Zero Carbon future. This project will help achieve that and we're excited to be sharing our early plans with people."



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The pipeline will be part of the HyNet North West low carbon cluster, an innovative low carbon and hydrogen energy project that will unlock a low carbon economy for the north west and North Wales.

HyNet will support some of the North West's biggest businesses and employers by delivering and maintaining thousands of jobs for local people and helping the region lead the way in the UK's transition to Net Zero Carbon by 2050.



The Essar oil refinery at Stanlow, Ellesmere Port

Earlier this week Essar has announced it has formed Vertex Hydrogen Limited, a transformative new joint venture with Progressive Energy, to build the UK's largest hydrogen hub at the Stanlow Manufacturing Complex.

Led by Essar as the majority shareholder, Vertex Hydrogen has been formed to provide the catalyst for development of a hydrogen economy across north west England and North Wales, as a central part of the HyNet decarbonisation cluster.

The UK's first low carbon hydrogen facility at Essar Stanlow will sit at the heart of the HyNet low carbon cluster, to produce a total of 1GW per year of hydrogen, across two units, from 2026. This is equivalent to the domestic heating energy used by a major British city region, such as Liverpool.

Waste fuel gases from Essar Stanlow, and natural gas, will be converted by Vertex Hydrogen into hydrogen, with carbon dioxide safely captured and stored by HyNet partner Eni SpA, underground offshore in Liverpool Bay.

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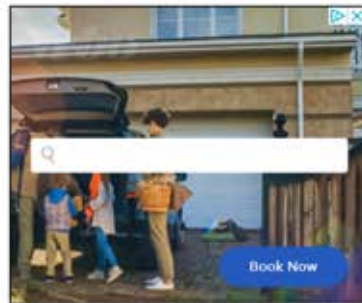
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Locals consulted on the proposed HyNet North West hydrogen pipeline

Published by Sara Simper, Editorial Assistant
World Pipelines, Tuesday, 15 March 2022 16:00

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Local communities across the North West have provided their views on the first round of consultation for Cadent's plans for a new underground hydrogen pipeline. Over 150 people attended the consultation programme of eight in-person events across the region and two webinars. This was the first stage of consultation on the project that took place from 26 January to 11 March 2022. The consultation offered local people an opportunity to learn more about how the project is being developed and proposals for pipeline route corridors.

Cadent's proposed HyNet North West Hydrogen Pipeline would take hydrogen produced at the Stanlow Manufacturing Complex to industrial users and power generators across the North West. This supports the switch from natural gas to a low carbon economy in the region. HyNet North West Pipeline will help to support the reduction in the amount of carbon dioxide per year being emitted into the atmosphere and will also secure existing high skilled employment in the region, introducing new green jobs for future generations.

Many attendees were keen to understand more about the technology and the benefits it will bring to the North West. People were also interested to know about the proximity of the pipeline to their homes. Cadent has confirmed that the pipeline would not be routed underneath homes.

There will be a further opportunity for local communities to have their say on the detailed proposed route for the pipeline through a second consultation planned for the Autumn.

Rob Donovan, Cadent Head of Project Delivery for HyNet said: "We are very grateful to speak with local people and get their views to help shape the future plans I want to say a huge thank you to everyone who was able to get involved at this stage.

"All feedback received will be used along with the technical and environmental work undertaken. This will help with the development of a more detailed design proposal for our future pipeline network. We are committed to plans that will minimise disruption to communities, wildlife, and the local environment.

"We'll present our more detailed proposed plans to local people in the second round of consultation later this year. This is just the start of a conversation and we look forward to continuing to hear more from local communities."

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Tuesday 22 March 2022 16:30

The organisations will collaborate on carrying out joint assessments of industrial enterprise transformation efforts.

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Appendix H Project website

Home

The HyNet North West Hydrogen Pipeline will help unlock an energy revolution that will decarbonise the North West.

Cadent's proposed pipeline will be the UK's first 100 per cent hydrogen pipeline. The pipeline project is part of the HyNet low carbon cluster and will deliver hydrogen to multiple industrial users and power generators in the region. It will also take hydrogen to gas blending points for introduction into the existing gas network, along with connecting associated hydrogen storage facilities to help balance the supply and demand on the pipeline.

Following the build of the hydrogen production plant at Stanlow, Cadent anticipates starting construction activities on the first part of the hydrogen network from 2025.

We are currently at an early stage in our work. So far, we have identified a broad route corridor within which the pipeline could be routed. We have also identified search areas for where our HAGIs could potentially be located.

We want to hear your views

We are holding a public consultation on our early plans for Cadent's HyNet North West Hydrogen Pipeline. We want to hear your views on the broad route corridor we have developed and the search areas for where HAGIs could be located.

Your local knowledge and feedback will help shape and refine our plans. All feedback will be reviewed, recorded and considered as we continue to develop our proposals.

Our non-statutory consultation: 26 January 2022 to 11 March 2022

Our first round of consultation on our early proposals for Cadent's HyNet North West Hydrogen Pipeline will run from **00:01 on 26 January 2022 to 23:59 on 11 March 2022**.

This consultation is non-statutory and will be followed by a second round of statutory consultation later in 2022.

We will consider all comments we receive and welcome any feedback you may have on our proposals.

Your feedback, alongside further technical and environmental surveying work, will help us to develop a more detailed design for the pipeline ahead of our second consultation.

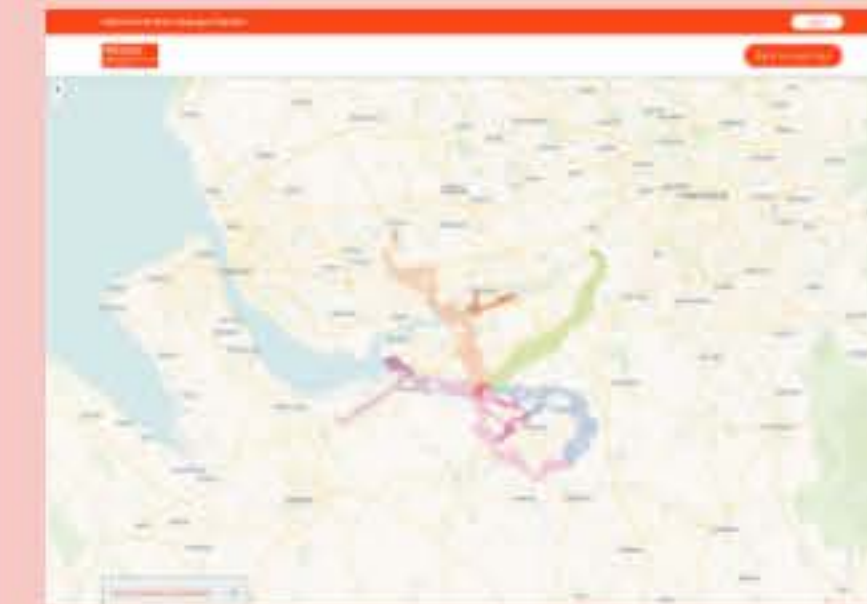
Please see [here](#) for more information regarding the wider HyNet North West project, including work to identify a suitable route for a new carbon dioxide pipeline.

The Consultation

Our consultation is now open. We want to know whether you have any views or information that can help us develop and finalise a proposed route for the pipeline within our route corridor.

[Find out more](#)

Feedback Map



This map shows an overview of the proposals we are consulting on. We have identified a route corridor, within which our underground pipeline could be constructed. For Hydrogen Above Ground Installations (HAGIs), we have identified search areas within which our HAGIs could be sited.

[See map](#)

REGISTER FOR UPDATES

Please register your contact details with us if you would like to be kept informed about our project.

[Register here](#)



HAVE YOUR SAY

We want to hear your views. There are plenty of ways for you to submit your feedback on our proposals for Cadent's HyNet North West Hydrogen Pipeline.

[Leave Feedback](#)

Please note, the deadline for submitting feedback is 23.59 on 11 March 2022.



The opportunity

Net zero by 2050

The government has set a target for the UK to be net zero by 2050. That means reducing harmful CO₂ emissions by 100 per cent.

To achieve this ambition, the government is exploring wide-ranging plans to transform how energy is produced and used, how people travel, and how our natural environment can be restored. This includes advancing the deployment of offshore wind, solar energy generation, electric vehicles and hydrogen and Carbon Capture Usage and Storage (CCUS).

The HyNet North West Hydrogen Pipeline and the wider HyNet North West low carbon cluster have a vital role to play in delivering this.

We are currently consulting on the HyNet North West Hydrogen Pipeline. Click [here](#) to find out more about our proposals and how to provide feedback.



Opportunities HyNet North West will unlock

With a bold history of innovation and industry, the North West is a natural choice to lead the UK toward decarbonisation and achieving net zero.

While establishing the region as a hub of innovation and clean growth, HyNet North West will create opportunities that will directly benefit the region:

- It will attract inward investment to increase regional prosperity
- It will boost the region's reputation as a highly attractive location for sustainable organisations
- It will provide opportunities for local people to develop new skills and to train to work in exciting and innovative sectors
- It will directly create thousands of new jobs

While HyNet North West will create these opportunities, the hydrogen pipeline will play a key role in helping them become a reality.

Click [here](#) to learn more about the benefits of the HyNet North West low carbon cluster.



The HyNet North West low carbon cluster will:

- Reduce carbon emissions by 10 million tonnes a year by 2030
- Provide nearly 50 per cent of the total hydrogen needed to meet the UK's net zero targets
- Single-handedly deliver 80 per cent of the UK's clean power targets for transport, industry and homes by 2030



HAVE YOUR SAY

We want to hear your views. There are plenty of ways for you to submit your feedback on our proposals for Cadent's HyNet North West Hydrogen Pipeline.

[Leave Feedback](#)

Please note, the deadline for submitting feedback is 23.59 on 11 March 2022.



The project

Overview of the project

The HyNet North West Hydrogen Pipeline is essential to unlocking the benefits and ambitions of HyNet North West. Our project will put in place the infrastructure to deliver clean hydrogen power to industry, and blended hydrogen power to homes across the region.

We are developing a network of underground pipelines that will safely take low carbon hydrogen produced at Essar's Stanlow Manufacturing Complex near Ellesmere Port to various industrial organisations.

The pipeline will also transport hydrogen to blending stations in Warburton and Partington (near Manchester) where it will be blended into the existing gas network to heat homes and businesses. The project will also link to underground hydrogen storage facilities that will be used to balance supply and demand.

Our pipeline will support the UK's drive towards a net zero future and will unlock permanent jobs in the region.

The pipeline will be underground, although we will need some additional above ground infrastructure, known as Hydrogen Above Ground Installations (HAGIs), at various locations along the route.

Following the construction of the hydrogen production plant at Stanlow, we anticipate starting construction on the first section of the hydrogen pipeline network from 2025, subject to obtaining planning consent.



Illustrative graphic of HyNet North West and its potential future stages. Click image to enlarge

Our current progress

We are currently at an early stage in our work. So far, we have developed a broad route corridor within which the pipeline could be routed. We have also identified search areas for where our Hydrogen Above Ground Installations (HAGIs) could potentially be located.

We have now launched our first stage of consultation on these early plans, which is open from 26 January 2022 to 11 March 2022. This consultation is non-statutory and will be followed by a second round of statutory consultation later in 2022.

Once this consultation has closed, we will consider all the feedback we have received. We will also carry out lots more technical engineering and environmental work to understand more about the areas we could route the pipeline in.

This work, alongside the feedback you provide, will help us identify a more detailed design for the pipeline route. We will present this, alongside our preliminary environmental work, at our second round of consultation later in 2022.

Click [here](#) to find out more about our proposals and how you can provide feedback.

Application process

The HyNet North West Hydrogen Pipeline is a Nationally Significant Infrastructure Project. This means we will apply to the Planning Inspectorate and Government's Secretary of State for Business, Energy and Industrial Strategy for a Development Consent Order (DCO), in accordance with the Planning Act 2008.

As part of the DCO process, we will be carrying out consultation and engagement with stakeholders and local communities. This will be undertaken throughout the pre-application phase during our two rounds of public consultation.

[Find out more about the DCO process](#)



HAVE YOUR SAY

We want to hear your views. There are plenty of ways for you to submit your feedback on our proposals for Cadent's HyNet North West Hydrogen Pipeline.

[Leave Feedback](#)

Please note, the deadline for submitting feedback is 23.59 on 11 March 2022.



About us

About Cadent

Cadent is the UK's largest distributor of natural gas, bringing it to 11 million homes and businesses throughout the North West, West Midlands, East Midlands, South Yorkshire, East of England and North London.

It is the company responsible for developing the HyNet North West Hydrogen Pipeline.

The delivery of net zero by 2050 requires an unprecedented amount of change and investment alongside collaboration. Cadent is committing as a business to rising to that challenge. This means moving towards low carbon energy like hydrogen.

Our ambition is to make hydrogen a safe, fair and reliable choice for consumers.

Our [Hydrogen Ten Point Plan](#) outlines our long-term commitment to decarbonise homes and businesses in a way that minimises the impact on the consumer, while also creating jobs across the UK.

About Cadent and its hydrogen projects

Cadent is the UK's largest gas distribution network, managing a network of more than 80,000 miles of pipes, most of which are underground. These pipelines transport gas to 11 million customers throughout the North West, West Midlands, East Midlands, South Yorkshire, East of England and North London.

Cadent is involved in several hydrogen projects in partnerships with the energy sector. The three main areas it leads on are blending, industrial power and decarbonising heavy transport.

Cadent
Your Gas Network

**Find out more information
about us**

[Read more](#)

About HyNet

HyNet is the UK's leading industrial decarbonisations project, transforming the North West of England, and North Wales. The low carbon energy project is being developed by a consortium of world-leading organisations and is at the forefront of the UK's journey to a Net Zero future.

From 2025, HyNet North West will produce, store and distribute hydrogen as well as capturing and storing carbon. It will decarbonise the North West of England and North Wales through the creation of state-of-the-art infrastructure.

This game-changing project has the potential to reduce carbon dioxide (CO₂) emissions by 10 million tonnes every year by 2030 – the equivalent of taking four million cars off the road. HyNet will create and maintain thousands of local jobs, as well as enable long-term sustainability for businesses and financial security for communities across the region.

HyNet
North West

**Find out more information
about us**

[Read more](#)



HAVE YOUR SAY

We want to hear your views. There are plenty of ways for you to submit your feedback on our proposals for Cadent's HyNet North West Hydrogen Pipeline.

[Leave Feedback](#)

Please note, the deadline for submitting feedback is 23.59 on 11 March 2022.

The Consultation

What we're consulting on

Our consultation is now open for the HyNet North West Hydrogen Pipeline and will run from 00:01 on 26 January to 23:59 on 11 March.

The project includes the construction, operation and maintenance of around 125 kilometres of new gas transportation infrastructure. The pipeline will vary in diameter along the route between 12 inches to 48 inches. The pipeline will connect a number of defined end points, distributing hydrogen to industry and blending hydrogen into the existing gas network in the North West.

In this consultation, we want to know whether you have any views or information that can help us develop and finalise a proposed route for the pipeline within our route corridor. [Click here to provide your feedback.](#)

Defined end points	Why it's needed
Hydrogen production facility at Stanlow Manufacturing Complex	To provide a source of hydrogen to supply the pipeline network
Hydrogen storage facility, near Northwich	To allow hydrogen to be stored at times of peak supply and released into the network to meet demand
Blending to the existing gas network, near Warburton and Partington	To allow hydrogen to be blended with natural gas and supplied into the pipeline network
A cluster of industrial operations across the project area	To allow hydrogen to be blended with natural gas and supplied into the pipeline network

The project

The HyNet North West Hydrogen Pipeline is essential to unlocking the benefits and ambitions of HyNet North West.

[Find out more](#)

The pipeline

The pipeline will connect to the existing hydrogen plant at Stanlow Manufacturing Complex. This will be the source of hydrogen for onward distribution into the network. The pipeline will then continue to the 'Hydrogen Hub' at the centre of the network. The Central Hub will act as the connection and onward distribution point for users along the south, east and north route corridors.

For more information about how we could construct our pipeline, see [here](#).

Spurs

In some areas, we have identified spurs off the route corridor. These are needed to take hydrogen from the main pipeline network to specific industrial users in the region. We expect that these spurs will use a smaller type of pipe and will include installations within roads, much like Cadent's existing network.

We want to know whether you have any views or information that can help us develop and finalise a proposed route for the pipeline within our route corridor, or the spurs we have identified.

[Provide your feedback](#)

Hydrogen Above Ground Installations (HAGIs)

The majority of our new infrastructure will be underground. However, at certain points along the pipeline, we'll need some above ground equipment. We call these Hydrogen Above Ground Installations (HAGIs). This equipment helps maintain the correct pressure in the pipeline, as well as ensuring security of supply.

HAGI search areas have been identified within the route corridor based on points along the pipeline network where connections or block valves are required. We currently anticipate needing around 14 HAGIs and have identified search areas for where these could be located.

What do HAGIs look like?

Typically, HAGIs require a range of above ground equipment and structures. These structures are usually around 1.5 to 2 metres tall. HAGI sites vary in size, but typically range between 0.5 and two hectares'. One hectare is around the size of a football pitch.

We want to know if you have any information that could inform the siting of a HAGI, or if there's anything you'd like us to consider when we look for a location.

[Provide your feedback](#)

Why we hold consultations

Local people, including residents, local elected representatives and other stakeholders, have an important role to play throughout this process. We need your views and knowledge as we work to develop and refine our final pipeline route.

We'll consider all comments we receive, alongside further technical and environmental surveying work. This will help us to develop a more detailed design for the pipeline ahead of our second consultation due later in 2022. We will also identify sites for our HAGIs within our search areas.

Click [here](#) to find out more and provide your feedback.



HAVE YOUR SAY

We want to hear your views. There are plenty of ways for you to submit your feedback on our proposals for Cadent's HyNet North West Hydrogen Pipeline.

[Leave Feedback](#)

Please note, the deadline for submitting feedback is 23.59 on 11 March 2022.



How we developed our proposals

Assessment of alternative route corridors

In developing our route corridor (as shown [here](#)), we also assessed and ruled out three alternative route corridors. Below, the route corridor we are consulting on is labelled 'A'. Alternatives that were ruled out are labelled 'B', 'C' and 'D'. We've provided an explanation for why B, C and D were ruled out and why we decided to move forward with A.

All alternative route corridors were developed with consideration to a range of technical, environmental and cost factors. They were also developed with the same objective in mind – to deliver hydrogen to defined end points.

For more information about how we developed our proposals, please refer to our [Route Corridor Study](#).

- A** This is the route corridor we are consulting on. It roughly forms an 'X' shape, with a Central Hub and four legs: west to Stanlow; north to St Helens; east to Partington and Warburton; and south towards Middlewich.
- B** This formed a 'H' shape. The western leg would have run from Stanlow to Frodsham; the north across the Mersey Estuary to St Helens; the east from Partington; the south past Warburton to a location near junction 20 of the M6, then south to the hydrogen
- C** This would have been a combination of options A and B, with the western, northern and eastern legs the same as those chosen in A. The connection to the hydrogen storage facility included the option provided in B, with a leg running from near junction 20 of the M6 to the hydrogen storage facility.
- D** This roughly formed a 'H' shape. It would have had a western leg running from Stanlow to St Helens across the Mersey Estuary (with a spur towards Warrington). The southern leg would have run from Stanlow to Middlewich and an eastern leg from Winsford to Carrington.

Why we ruled out the alternatives

We chose A as the most appropriate option because:

- B and D both involved crossings of the Mersey Estuary. This would have led to additional environmental impacts because of how close our work would have been to a Special Protection Area and Ramsar site (Ramsar sites are designated as wetlands of international importance). The long distance drilling that these options require would have also been challenging and added cost to the project.
- C would have needed an additional Central Hub site. This would have made our project more complex to construct and required the use of more land.

Hydrogen Above Ground Installations (HAGIs)

Search areas for HAGIs have been identified along the preferred route corridor. Their locations have been informed by the points along the pipeline network where we think we'll need connections or block valves. We've also tried to avoid key landmarks.

Have your say

We want to hear your views. There are plenty of ways for you to submit your feedback on our proposals for Cadent's HyNet North West Hydrogen Pipeline.

[Leave Feedback](#)

Please note, the deadline for submitting feedback is 11 March 2022

Environmental considerations

The underground pipeline and HAGIs will be designed and constructed to minimise impact on natural habits and the environment. This includes looking at a wide range of factors, including ecology and wildlife, the historic environment and existing ground conditions.

The project team will be carrying out a number of surveys, site and route investigations, as well as other assessments, to better understand potential environmental issues and impacts.

The underground pipelines will primarily run through open land and will not be routed under people's homes.

Some surveys may be required in areas beyond the preferred route corridor and HAGI search areas to gain a better understanding of local habitats and how the project may impact them. There is, however, no intention to conduct surveys in private houses. Surveys will predominantly take place on open land and we will always work with landowners to seek voluntary access.

We want to know whether you have any views or information regarding how we plan to address environmental considerations.

[Provide your feedback](#)



HAVE YOUR SAY

We want to hear your views. There are plenty of ways for you to submit your feedback on our proposals for Cadent's HyNet North West Hydrogen Pipeline.

[Leave Feedback](#)

Please note, the deadline for submitting feedback is 23.59 on 11 March 2022.



Meet our team

You can find out more about the HyNet North West Hydrogen Pipeline at our consultation events.

We are planning to host a number of in-person events between the 15 and 26 February and two online events on the 17 and 22 February.

The events are a great opportunity to meet the technical team and to ask any questions you may have about the project.

Our in-person events:

Location	Date	Time
Mere and Tabley Community Club Warrington Road, Mere, Knutsford WA16 0PU	15 February 2022	10am to 1pm
The Fuse ROC Centre Warburton Ln, Partington, Manchester M31 4BU	15 February 2022	3pm to 7pm
Anderton Village Hall Northwich, CW9 6AE	16 February 2022	10am to 1pm
Widnes Cricket Club Beaconsfield Rd, Widnes WA8 9LA	16 February 2022	3pm to 7pm
Warrington Football Club Cantilever Park, Common Lane, Warrington, Cheshire, WA4 2RS	23 February 2022	3pm to 7pm
World of Glass Chalon Way E, St Helens, WA10 1BX	24 February 2022	11am to 4pm
St John's Church School Lane, Hartford, Northwich CW8 1NP	25 February 2022	4:30pm to 8:30pm
Whitley Village Hall Village Ln, Higher Whitley, Warrington WA4 4EJ	26 February 2022	10am to 2pm

Our online events:

17 February 2022, 6-7pm

[Register here](#)

22 February 2022, 6-7pm

[Register here](#)

Covid-19

In carrying out our in-person consultation events, we will adhere to any Government guidance in place at the time.

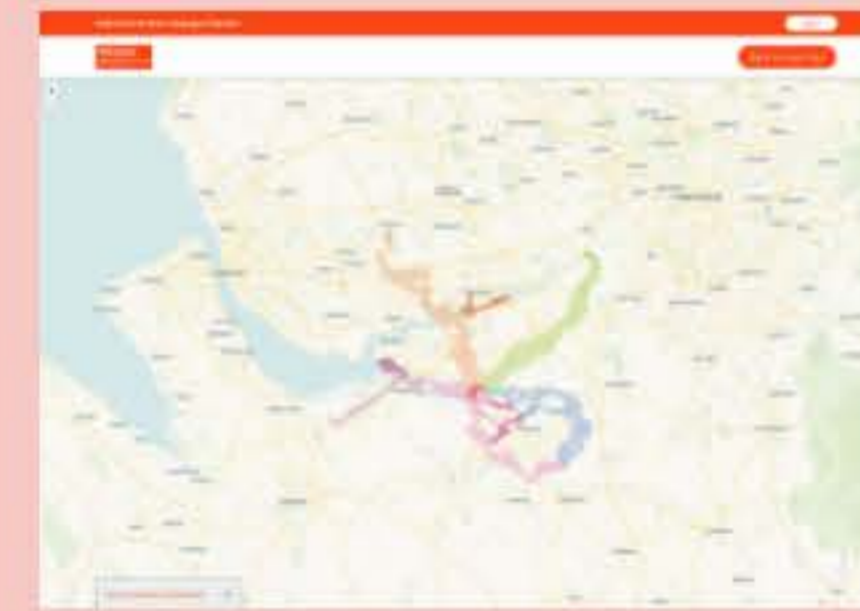
Should Government Covid-19 guidance require us to cancel our planned in-person consultation events, we will endeavour to let people know and provide an online alternative.

The Consultation

Our consultation is now open. We want to know whether you have any views or information that can help us develop and finalise a proposed route for the pipeline within our route corridor.

[Find out more](#)

Feedback Map



This map shows an overview of the proposals we are consulting on. We have identified a route corridor, within which our underground pipeline could be constructed. For Hydrogen Above Ground Installations (HAGIs), we have identified search areas within which our HAGIs could be sited.

[See map](#)

REGISTER FOR UPDATES

Please register your contact details with us if you would like to be kept informed about our project.

[Register here](#)



HAVE YOUR SAY

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[Leave Feedback](#)

Please note, the deadline for submitting feedback is 23.59 on 11 March 2022.



Knowledge share

On this page you can view and download a selection of materials that provide more information about the HyNet North West Hydrogen Pipeline.

Should you require any of these materials in a more accessible format, please contact the project team by emailing info@hynethydrogenpipeline.co.uk or calling **0800 8606 261.**

[Scoping Report, non-statutory consultation, January 2022](#)



[Consultation Postcard, non-statutory consultation, January 2022](#)



[Route Corridor Report, non-statutory consultation, January 2022](#)



[How we could construct our pipeline, non-statutory consultation, January 2022](#)

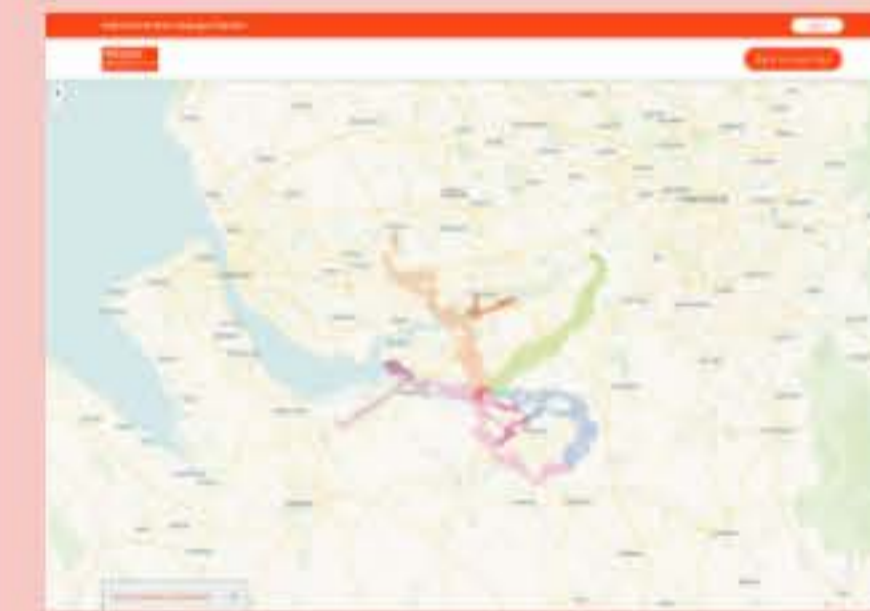


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[Register here](#)



HAVE YOUR SAY

We want to hear your views. There are plenty of ways for you to submit your feedback on our proposals for Cadent's HyNet North West Hydrogen Pipeline.

[Leave Feedback](#)

Please note, the deadline for submitting feedback is 23.59 on 11 March 2022.

Back to main site

Back to main site

Overview of our proposals

This map shows an overview of the proposals we are consulting on. We have identified a route corridor, within which our underground pipeline could be constructed.

This route corridor is based on preliminary desk-based assessments and some initial site visits. Where the infrastructure needs to leave the main network to connect to industrial users and blending points, we have identified a number of spurs.

For the above ground infrastructure, we have identified search areas within which our HAGIs could be sited.

To help explain the proposals, we've split the route corridor into individual sections, although we will need to construct a pipeline in each of these sections.

For more information about our west, north, east and south corridors, as well as the Central Hub and Hydrogen Above Ground Installations (HAGIs), please click on the 'Our proposals explained' tab.

Leave your feedback

If you wish to leave a comment, you need to register first

Register >

Already registered?

If you already have an account, please log in here

Log in >



Back to main site

Our proposals explained

West corridor: Stanlow to the Central Hub, and the Runcorn spur

The route corridor

This route corridor starts at the proposed hydrogen production plant at Essar's Stanlow Manufacturing Complex. From there, it runs east towards the M56. Before it gets to the M56, it turns to run east again up the north side of the M56 in the direction of Frodsham and the Rocksavage roundabout. Just before the Rocksavage roundabout, the route corridor turns east again, crossing the M56, towards the River Weaver Navigation. The corridor then travels in the direction of Little Leigh, avoiding the Chapel and Dell ancient woodland, the listed buildings in the area and Aston Park. It then crosses the railway line before arriving at the Central Hub.

The spur

In this area, we'll also need a spur in the direction of Runcorn. This will connect to the pipeline network via the Rocksavage HAGI Search Area and will extend roughly north-east, crossing the River Weaver Navigation. The spur then runs approximately north-west with two options around Weston, one to the west and the other to the east. We need this spur to connect to the following users:

- Intergen
• The Heath Business and Technical Park
• Inovyn

The spur options are bounded by the Manchester Ship Canal to the west and Runcorn Heath to the east. Therefore, crossing of the A557 Expressway near the Weston Point Interchange would be required.

HAGIs

In this area, we think we will need three HAGIs (see page 9 for more information on what a HAGI is). These would be:

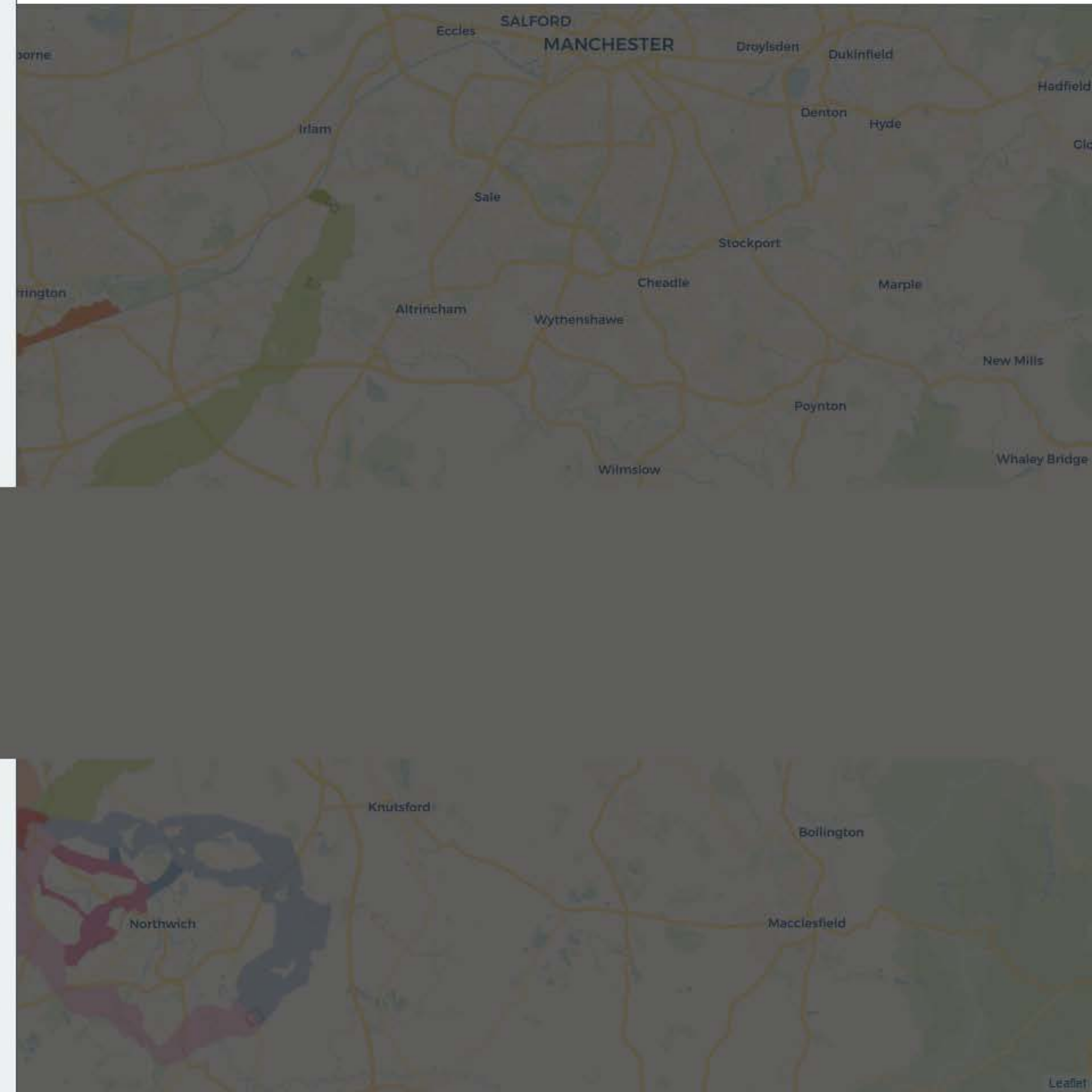
- Hydrogen Plant HAGI Search Area
• Rocksavage HAGI Search Area
• Runcorn HAGI Search Area

North corridor: St Helens to the Central Hub, and the St Helens and Warrington spurs

East corridor: Central Hub to Partington, and the Partington spur

South corridor: Central Hub to Hydrogen Storage Facility, and the Northwich spur

Central Hub



Feedback Form

HAVE YOUR SAY

Local people, including residents, local elected representatives and other stakeholders, have an important role to play throughout this process. We need your views and knowledge as we work to develop and refine our final pipeline route.

Our first round of consultation will run for six weeks from **26 January until 23:59 on 11 March 2022**.

We'll consider all comments we receive, alongside further technical and environmental surveying work. This will help us to develop a detailed design for the pipeline ahead of our second consultation. We will also identify sites for our HAGIs within our search areas.

You can share feedback by:

- Submit feedback on our website using our online feedback form (below) and [interactive map](#)
- Send an email to info@hynethydrogenpipeline.co.uk. We welcome all feedback and any questions you might have about the project via email.
- Sending written feedback to our freepost address: **FREEPOST HYPNET NWHP**. You can write us a letter or send hard copy feedback forms, which are available to download and print [here](#), at events, deposit locations or by request. A full list of deposit locations is available [here](#).

You can find out more about the HyNet North West Hydrogen Pipeline at our [consultation events](#).

We are planning to host a number of in-person events between the **15 and 26 February 2022**, and two online events on the **17 and 22 February 2022**. Click [here](#) for more information.

See [here](#) for more information about our privacy policy and how we protect your privacy.

Early stages of our work

Page 1 of 7

1. Please share your views and provide any additional information on the early stages of our work that helped to identify our route corridor, or any of our strategic alternatives.

Character Count: **7000**

Enter your views

[Continue](#) →

Feedback sections

Early stages of our work

[Stanlow to the Central Hub, and the Runcorn spur](#)

[St Helens to the Central Hub, and the St Helens and Warrington spurs](#)

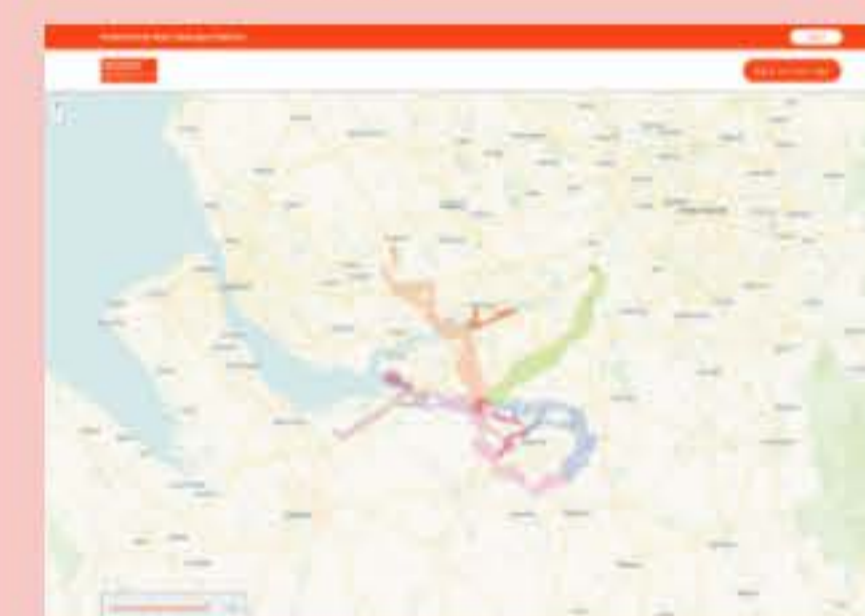
[Central Hub to Partington, and the Partington spur](#)

[Central Hub to Hydrogen Storage Facility, and the Northwich spur](#)

[The Central Hub](#)

[Your details](#)

Feedback Map



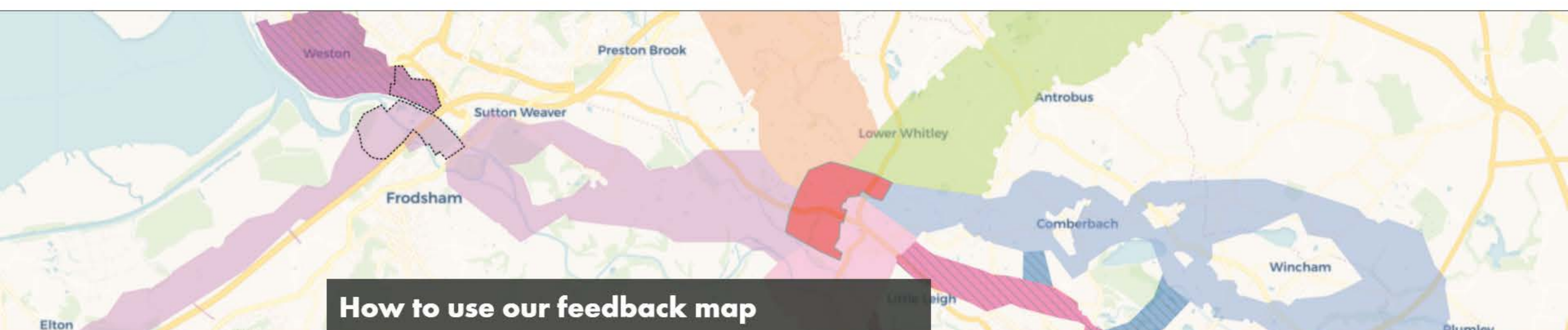
This map shows an overview of the proposals we are consulting on. We have identified a route corridor, within which our underground pipeline could be constructed. For Hydrogen Above Ground Installations (HAGIs), we have identified search areas within which our HAGIs could be sited.

[See map](#)

The project

The HyNet North West Hydrogen Pipeline is essential to unlocking the benefits and ambitions of HyNet North West.

[Find out more](#)



How to use our feedback map

Register

To give us your feedback on the project, you will need to register. Please provide us with your name, email, and postcode and tell us if you are responding on behalf of an organisation or as an individual.

You will be sent an email to confirm your identity. Please click the link in the email to confirm. If you are not automatically logged in please click on login.

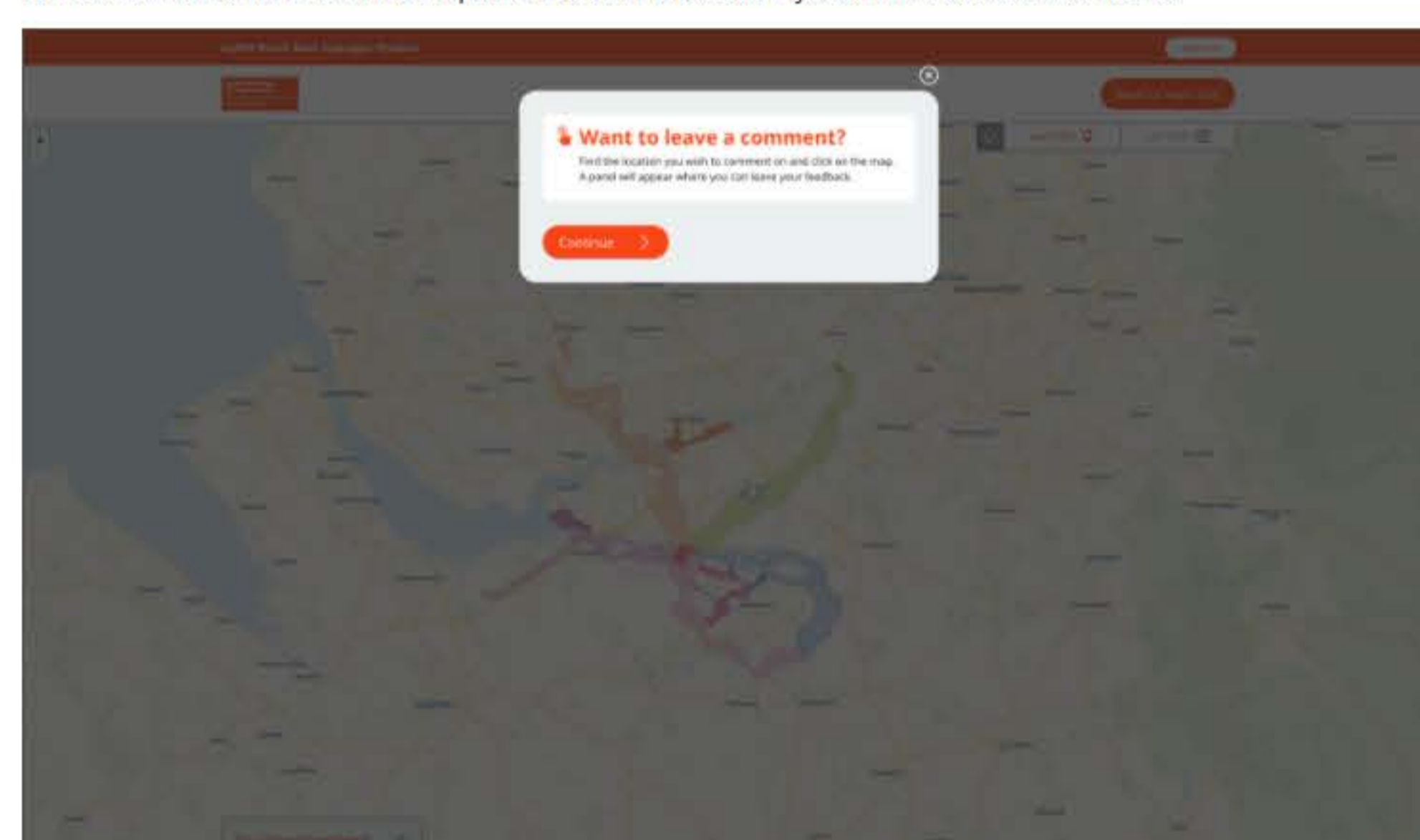
[Click here](#) to view our GDPR Policy on how we manage data for this project.

Login

Visit [/login](#) and enter your email and password.

Add your feedback

You can zoom and move the map around to the location you wish to leave feedback.



Click on the map and a panel will pop out to allow you to leave a comment at that point:

Type your comment into the text box. If you wish to provide lengthy feedback (greater than 1000 characters), please write your comment in a document i.e. Word and upload it as an attachment at the bottom of the page.

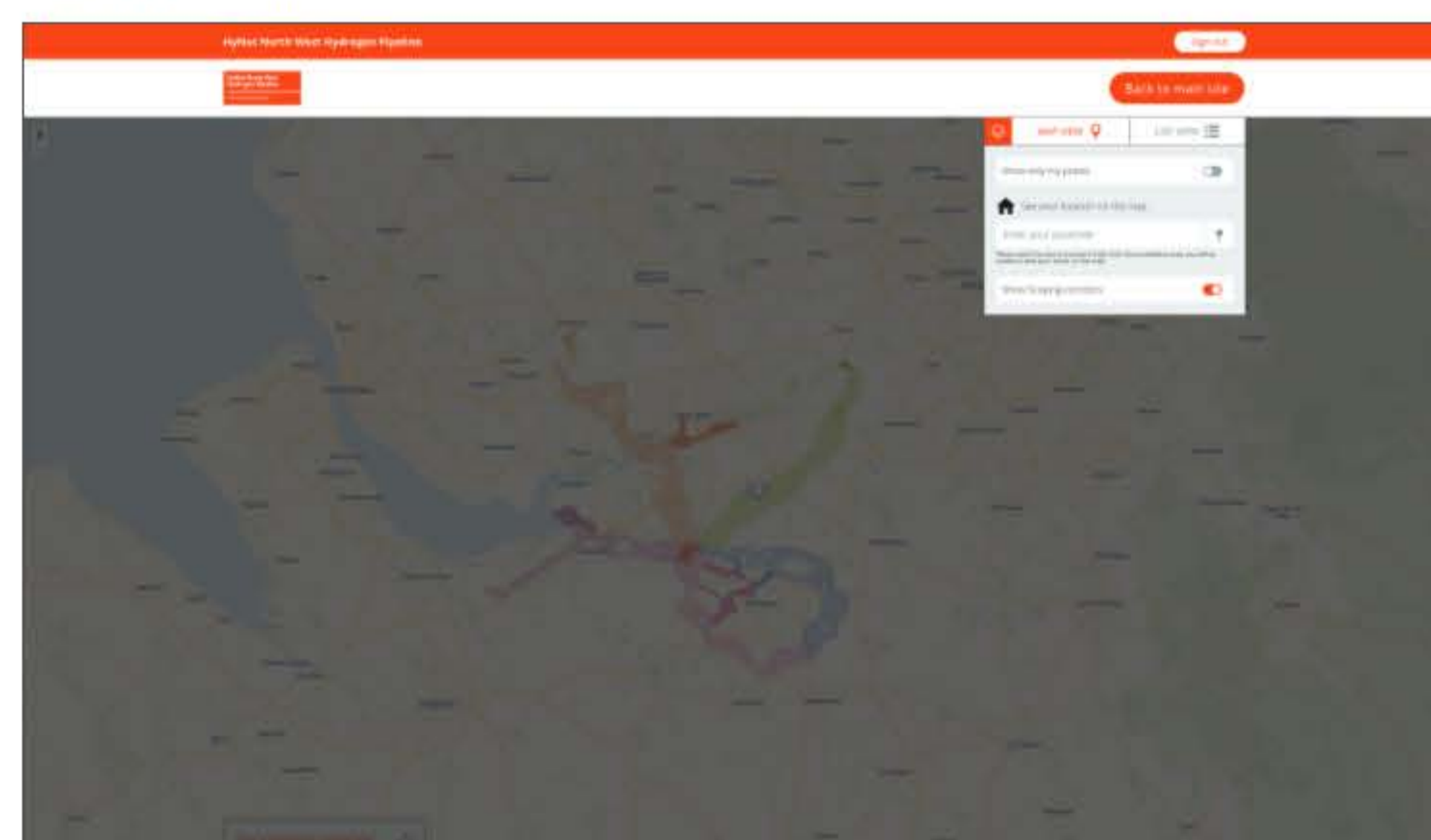
Click on 'Add my comment' to add your feedback to the map. Your pointer will appear on the map. This is important as your comment will not be registered unless you click here to send it to us.

Please note: You are unable to edit a comment once it has been submitted. If you wish to leave additional feedback please add a further comment.

Features

Scoping Corridors and Plot your location

You are able to turn the scoping corridors graphic on and off by clicking on the layers icon and selecting 'Show scoping corridors'. You can also enter your postcode and plot your home on the map to see how close you are to the area (please note that locations further than 2km from the consultation area are not viewable).



List view

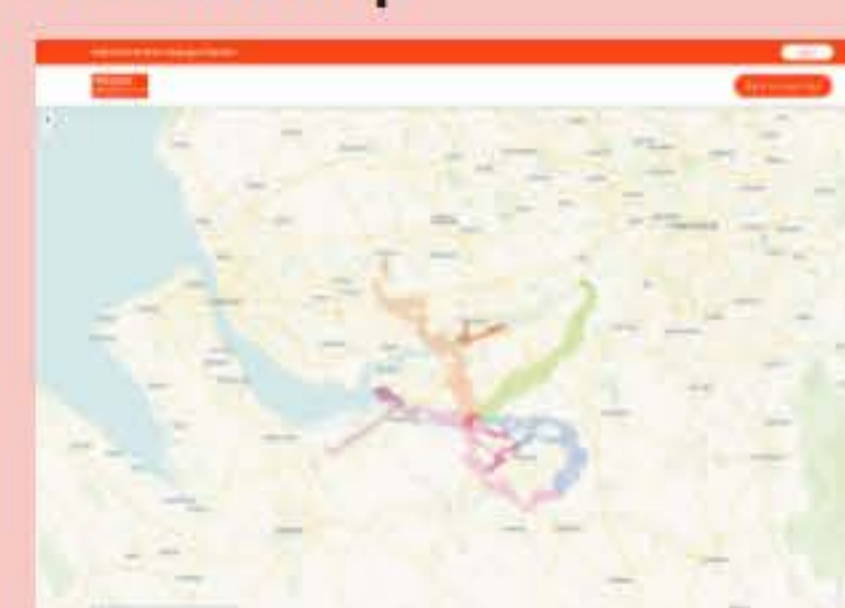
You can view a list of all of your feedback either on the map or using the 'list view':

The Consultation

Our consultation is now open. We want to know whether you have any views or information that can help us develop and finalise a proposed route for the pipeline within our route corridor.

[Find out more](#)

Feedback Map



This map shows an overview of the proposals we are consulting on. We have identified a route corridor, within which our underground pipeline could be constructed. For Hydrogen Above Ground Installations (HAGIs), we have identified search areas within which our HAGIs could be sited.

[See map](#)

REGISTER FOR UPDATES

Please register your contact details with us if you would like to be kept informed about our project.

[Register here](#)

Contact us

To submit feedback, ask questions and find out more, get in touch with the project team via the contact details below:

Email: info@hynethydrogenpipeline.co.uk

Register to stay informed: www.hynethydrogenpipeline.co.uk/keep-in-touch

Write to us: FREEPOST HYPNET NWHP

Call: 0800 860 6261




HAVE YOUR SAY

We want to hear your views. There are plenty of ways for you to submit your feedback on our proposals for Cadent's HyNet North West Hydrogen Pipeline.

[Leave Feedback](#)

Please note, the deadline for submitting feedback is 23.59 on 11 March 2022.



News updates

Update - 17 November 2021

Cadent announces plans for new hydrogen pipeline to support green growth in the North West

[Read update](#)

Privacy Policy

Privacy policy for HyNet North West Hydrogen Pipeline

Your privacy matters to us and we go to great lengths to protect it - please do take some time to get to know how we work. If you do not understand some of the terms we have used or you have any questions, then please contact us and we will do our very best to assist you.

Before we start, we need to tell you that Cadent Gas Limited of Pilot Way, Ansty Park, Coventry, CV7 9JU is the data controller for the Cadent HyNet North West Pipeline Project ("Project"). This means that Cadent is responsible for both choosing the type of data used, and how such data is going to be used for this Project.

As data controller, Cadent is registered with the Information Commissioner's Office, under registration number of ZA195116.

This website is managed on behalf of Cadent by Camargue Group Ltd, registered address: Eagle Tower, Montpellier Drive, Cheltenham, Gloucestershire GL50 1TA. Registered in England No.: 3954008. Camargue Group Limited ("Camargue") has been appointed by Cadent to undertake consultation and communications activities for the Project. Camargue is a data processor for the purposes of the Project. All personal data collected via this website by Camargue on Cadent's behalf will be processed in compliance with UK data privacy laws.

Contact details for any queries or comments on this policy should be addressed to Camargue using the contact details listed at the end of this document.

This notice explains:

- when we may collect information from you
- what information we collect
- why we collect it
- how we use that information
- how long we keep that information for
- the choices we offer, including how to access and update that information.

How does Cadent process your information?

The information we process about you as an individual will vary depending on the type of interaction you have with us about the Project.

We may collect and use:	<ul style="list-style-type: none">• Your name• Your address• Phone number• Email address• If you represent an organisation relevant to the Project's work• Any pertinent information you may wish to provide to us in order that we can consult with you effectively
We use this information to:	<ul style="list-style-type: none">• To inform the design of the project and support the development of an application for a Development Consent Order• To keep you up to date with our work on the project• To meet any requirements under the relevant statutory processes and to comply with law
We share this information with:	<ul style="list-style-type: none">• The contractors and sub-contractors that are supporting Cadent on this project Relevant governmental bodies such as The Planning Inspectorate, the Department for Business, Energy and Industrial Strategy and or any other organisation, as required by the relevant statutory processes and to comply with law
Our legal basis of processing is:	<ul style="list-style-type: none">• Legal / Regulatory Obligation and for the legitimate interest for maintaining our Gas Network

What information may we collect from your electronic device?

- Our website uses a mechanism called "cookies". Cookies record your details and your preferences so that when you log on to the website, you can use that website without having to re-enter your information every time you do so. If you need more information on how cookies work in detail, or if you do not wish us to collect information from your device in this way please [review our information on Cookies](#) for more details.
- When you visit our web site, our computer system may track information about your visit. This information is automatically saved by our computer servers and the information is saved electronically. For more details please [review our information on Cookies](#).

Information others may provide to us?

- People contacting us by telephone, email, by letter or by using social media may provide us with your personal information.
- Members of the public may provide our employees, contractors and sub-contractors with your personal information.
- Other businesses may supply us with your personal information
- We may be provided with your personal information by regulators, and the Courts within the terms of their data privacy obligation.

Who may have access to your personal information?

- Those employees or approved contractors and sub-subcontractors who need to know your personal information for the reasons set out above.
- Those employees or approved contractors or sub-contractors who need to know your personal information for the purposes of record keeping in accordance with the law, regulations or in accordance with our licence from Ofgem.
- We may sometimes be required to disclose your personal information to third parties such as local authorities, courts and tribunals, regulatory bodies and/or law enforcement agencies for the purpose of complying with applicable laws and regulations, or in response to legal processes, or as part of the project planning application process as detailed above.

How long do we keep your personal information?

- We will keep the information for the purposes of the Project and maintaining our gas network. In some circumstances, some of the information may be made anonymous so that it cannot be associated with you and you cannot be identified from it.

How to access and obtain, rectify and/or erase your data, restrict or object to a further processing of your data

- There may be circumstances where you wish to access and obtain details of your personal data held by us – if so then please contact us in writing using the contact details set out below.
- It is important that the information we have in our records is both accurate and current. If your personal information changes, please keep us informed.

Where you use any chat room, notice board or social networking site, please be careful about giving out information about yourself or others. For more details on how we deal with misuse please visit our [Terms and Conditions page](#).

Third-party links

This website may include links to third-party websites, plug-ins and applications. Clicking on those links or enabling those connections may allow third parties to collect or share data about you. We do not control these third-party websites and are not responsible for their privacy statements. When you leave our website, we encourage you to read the privacy policy of every website you visit.

Contact

Community Relations Team by emailing info@hynethydrogenpipeline.co.uk Otherwise, the postal address is **FREEPOST HYNETH NWHP**

or call **0800 860 6261**

Please note that this notice may be changed from time to time. The version of this notice is identified by the date shown below.

The project

The HyNet North West Hydrogen Pipeline is essential to unlocking the benefits and ambitions of HyNet North West.

[Find out more](#)

The opportunity

The government has set a target for the UK to be net zero by 2050.

[Find out more](#)

REGISTER FOR UPDATES

Please register your contact details with us if you would like to be kept informed about our project.

[Register here](#)

Appendix I Consultation brochure



**HyNet North West
Hydrogen Pipeline**
**Non-statutory consultation
Consultation brochure**

**HyNet North West
Hydrogen Pipeline**

Delivering clean growth

Contents

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About Cadent and its hydrogen projects

Cadent is the UK's largest gas distribution network, managing a network of more than 80,000 miles of pipes, most of which are underground. These pipelines transport gas to 11 million customers throughout the North West, West Midlands, East Midlands, South Yorkshire, East of England and North London.

Cadent is involved in several hydrogen projects in partnerships with the energy sector. The three main areas it leads on are blending, industrial power and decarbonising heavy transport.

Cadent has published a Hydrogen Ten Point Plan that outlines its ambition to make hydrogen a safe, fair and reliable choice for consumers. You can read it here: www.cadentgas.com/tenpointplan.

Our non-statutory consultation

The HyNet North West Hydrogen Pipeline will help unlock an energy revolution to decarbonise the North West.

This proposal will be the UK's first 100 per cent low carbon hydrogen pipeline at scale. The plans shown in this brochure are being developed by Cadent, the gas network operator for the region, and are part of the ambitious HyNet North West low carbon cluster. HyNet is an innovative energy project that will unlock a low carbon economy for the North West and North Wales and put the region at the forefront of the UK's drive to achieve net zero.

The HyNet North West Hydrogen Pipeline

We are developing a pipeline that will safely transport low carbon hydrogen produced at Essar's Stanlow Manufacturing Complex near Ellesmere Port to various industrial organisations. The pipeline will also transport hydrogen to blending stations in Warburton and Partington (near Manchester) where it will be blended into the existing gas network to heat homes and businesses. The project will also link to underground hydrogen storage facilities that will be used to balance supply and demand.

Our pipeline will support the UK's drive towards a net zero future and will unlock permanent jobs in the region. The pipeline will be underground, although we will need some additional above ground infrastructure known as Hydrogen Above Ground Installations (HAGIs) at various locations along the route.

Following the construction of the hydrogen production plant at Stanlow, we anticipate starting construction on the first section of the hydrogen pipeline network from 2025, subject to obtaining planning consent.

We want to hear your views

Local people including residents, local elected representatives and other stakeholders, have an important role to play throughout this process. Your views will help shape and refine our final pipeline route.

We need your local knowledge and welcome any feedback you may have on our proposals for the HyNet North West Hydrogen Pipeline. Your insights are also invaluable in helping us to understand any potential impact from the project.

We have currently identified a broad route corridor within which the pipeline could be routed. We have also identified search areas for where our HAGIs could potentially be located.

All feedback you share will be reviewed, recorded and carefully considered as we develop our plans.

This consultation will run for six weeks from **00:01 on 26 January 2022 until 23:59 on 11 March 2022.**

There is more information about the project in this brochure and on our website. There are also a number of ways for you to submit your feedback:



Use the interactive map on our website
www.hynethydrogenpipeline.co.uk



Fill out a paper feedback form
These are available on request, at in-person events and deposit locations. A list of deposit locations can be found on our website.



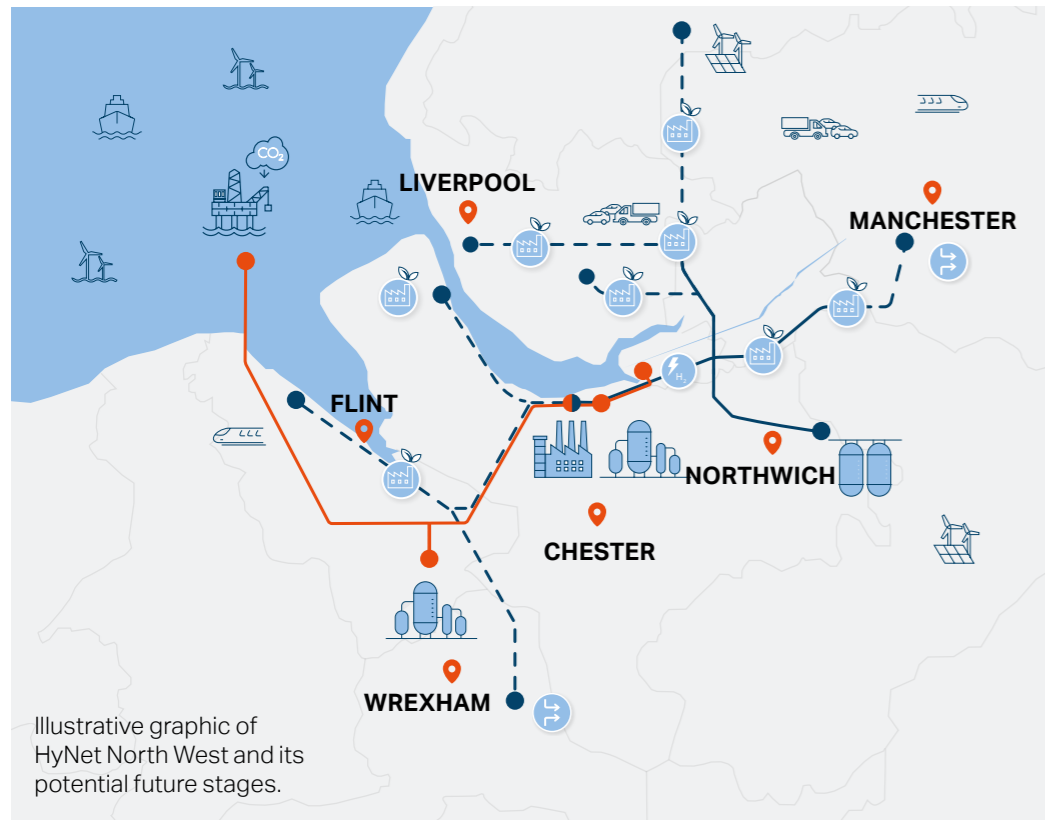
Email:
info@hynethydrogenpipeline.co.uk



Write to us:
FREEPOST HYNETH NWHP

See pages 20 and 21 of this brochure to find out more about this consultation and the planning process.

HyNet North West, the hydrogen pipeline and delivering a low carbon future



- Initial phases of Cadent's H₂ pipeline
- - - Potential future phases of Cadent's H₂ pipeline
- ENI'S CO₂ pipeline
- Industrial CO₂ capture
- Low carbon H₂ production
- Underground H₂ storage
- CO₂ storage
- Industrial H₂ user
- Flexible H₂ power generation
- H₂ blending for homes and business
- CO₂ shipping
- H₂ from offshore wind
- H₂ fuelling for transport
- H₂ fuelling from solar and wind
- H₂ trains

What is HyNet North West?

HyNet North West is a ground-breaking energy project that will unlock a low carbon economy for the North West and North Wales, placing the region at the forefront of the UK's drive to net zero.

While ambitious, delivery of HyNet is relatively low-cost and achievable. It meets the major challenges of reducing carbon dioxide emissions.

HyNet will produce, store and distribute hydrogen (H₂), as well as capture and store carbon from industry, in the North West and North Wales. It will use state-of-the-art technology to build new infrastructure while also upgrading and reusing existing infrastructure, which is currently involved in fossil fuel production.

The infrastructure has been designed to be both affordable and safe, and to be built to begin to remove carbon emissions quickly, helping the region and the UK to meet its net zero targets by 2050.

This hydrogen pipeline will play a vital role in delivering hydrogen to users across the region. In addition to the HyNet North West Hydrogen Pipeline, the wider HyNet North West scheme includes:

- Hydrogen Production Plant at Stanlow – developed by Essar Oil UK
- Hydrogen storage at Northwich – developed by INOVYN
- Carbon dioxide pipeline – developed by Liverpool Bay CCS. Please visit www.hynethub.co.uk for more information on this consultation

This consultation is for the HyNet North West Hydrogen Pipeline and is being run by Cadent.

Find out more

For more information about the benefits of HyNet North West, visit www.hynet.co.uk/benefits.

Opportunities for the region

With a bold history of innovation and industry the North West is a natural choice to lead the UK toward decarbonisation and reaching net zero.

While establishing the region as a hub of innovation and clean growth, HyNet will create opportunities that will directly benefit the region:

- It will attract inward investment to increase regional prosperity
- It will boost the region's reputation as a highly attractive location for sustainable organisations

- It will provide opportunities for local people to develop new skills and to train to work in exciting and innovative sectors
- It will directly create thousands of new jobs

Environmental benefits

- HyNet could reduce carbon emissions by 10 million tonnes a year by 2030
- HyNet will provide nearly 50 per cent of the total hydrogen needed to meet the UK's net zero targets
- HyNet will single-handedly be able to deliver 80 per cent of the UK's clean power target for transport, industry and homes by 2030

Economic benefits

- By 2050, HyNet could generate up to £17 billion for the local region, and £31 billion for the UK
- HyNet will directly provide 6,000 permanent jobs for the region
- HyNet is leading the way to a hydrogen economy, which will support up to 75,000 jobs across the UK by 2035

Find out more

In October 2021, the Government announced HyNet as the UK's leading industrial decarbonisation cluster. This means the scheme has been selected to lead the way in developing hydrogen and CCUS infrastructure. This places the region at the heart of the UK's drive to net zero.

HyNet is key to decarbonising industry across the region with the potential to reduce carbon emissions by 10 million tonnes every year by 2030. That's equivalent to taking four million cars off the road.

Net zero by 2050

The UK has committed to net zero emissions by 2050. This means that over the next 30 years we need to reduce our net carbon dioxide emissions by 100 per cent.

To achieve this, the Government is exploring wide-ranging plans to transform how energy is produced and used, how people travel, and how our natural environment can be restored.

This includes advancing the deployment of offshore wind, solar energy generation and electric vehicles, hydrogen and Carbon Capture Usage and Storage (CCUS).

HyNet will help the UK succeed in its drive to net zero.

The technology

What is hydrogen?

Hydrogen doesn't typically exist by itself in nature and must therefore be manufactured using one of a variety of processes. Each process adds cost and, like all energy transformation processes, comes at the cost of some efficiency. However, once energy is converted into hydrogen it can be stored and transported and then turned back into other forms of energy. This makes it tremendously versatile, capable of uses in the power, heat and transport sectors.

By 2030, the Government is aiming for 5GW of low carbon hydrogen production capacity to be used across the economy. To achieve this, organisations from across the energy industry must work together to scale up low carbon hydrogen production.

To make this happen we must change the way we get our heat and hot water. In the UK, more than 80 per cent of fuel for heat comes from natural gas.

This means we need to transition to greener forms of gas. Instead of natural gas that is produced from fossil fuels, we need an alternative source, and that gas is hydrogen. While most hydrogen today is produced in ways that also emit greenhouse gases, it is possible to produce it in ways that are low carbon, therefore supporting our net zero ambitions.

From 2025, the aim is for HyNet North West to produce, store and distribute such low carbon hydrogen, as well as capture and store carbon from industry in the North West of England and North Wales.

What solution does hydrogen offer?

Traditionally we have burned fossil fuels (such as natural gas) to produce the energy we need day-to-day for cooking and heating our homes, as well as providing power for industrial use. But this produces carbon dioxide, a greenhouse gas that contributes to global warming.

Hydrogen offers a clean alternative source of fuel that doesn't release harmful emissions into the atmosphere.

Hydrogen can also be used in multiple sectors which presents an opportunity to reduce carbon emissions across different industries, in power generation, transport, and in our homes and businesses.



What's the difference between blue hydrogen and green hydrogen?

There are many different ways of making low carbon hydrogen. Two main types of low carbon hydrogen are typically described as either 'blue' or 'green'. The HyNet consortium will initially be producing low carbon blue hydrogen, and the hydrogen pipeline will be able to carry all types of low carbon hydrogen. This means it will be capable of transporting both 'blue' and 'green' hydrogen.

Blue hydrogen

This is produced by 'splitting' natural gas. Carbon dioxide is a by-product of this process, which is then captured and stored underground, offshore. Blue hydrogen can be regarded as 'low carbon' provided that almost all carbon dioxide created during production is captured and stored – just as we are doing with HyNet, with capture rates of 97 per cent.

Green hydrogen

This is produced via the electrolysis of water. Electrolysis means to use electricity to split water into hydrogen and oxygen. This process must be powered by a renewable source of electricity (e.g. wind or solar, nuclear) so that no carbon dioxide is emitted in the production of the electricity. Large-scale green hydrogen generation requires the construction of new renewable electricity generation infrastructure. Many renewable energy developers are looking to co-locate hydrogen production with new or existing infrastructure.

Did you know?

In the UK's Hydrogen Strategy, the Government has set a target for 5GW of low carbon hydrogen production capacity by 2030. 5GW would be approximately sufficient power to heat 1.5 million homes for one year.

Why is the hydrogen pipeline needed?

The HyNet North West Hydrogen Pipeline (the project we are consulting on) will be the UK's first 100 per cent hydrogen pipeline at scale and is essential to unlocking the benefits and ambitions of HyNet.

The pipeline will deliver the infrastructure needed to provide clean hydrogen power to industry, and blended hydrogen power to homes across the region. Without the hydrogen pipeline, the benefits of the HyNet low carbon cluster scheme cannot be realised.

What is blended hydrogen?

Blended hydrogen is when we mix hydrogen (up to 20 per cent by volume) into the existing natural gas pipelines. This hydrogen and natural gas mix is less carbon intensive, reducing the environmental impact of the energy we use in our homes and businesses while allowing existing domestic appliances, such as our hobs and boilers, to keep working without any changes.



An overview of our proposals

The HyNet North West Hydrogen Pipeline includes the construction, operation and maintenance of around 125 kilometres of new gas transportation infrastructure. The pipeline will vary in diameter along the route between 12 inches to 48 inches. The primarily underground pipeline will connect a number of defined end points, distributing hydrogen to industry and blending hydrogen into the existing gas network in the North West.

Defined end points	Why it's needed
Hydrogen production facility at Stanlow Manufacturing Complex	Provides a source of hydrogen to supply the pipeline network
Hydrogen storage facility, near Northwich	Allows hydrogen to be stored at times of peak supply and released into the network to meet demand
Blending to the existing gas network, near Warburton and Partington	Allows hydrogen to be blended with natural gas and supplied into the wider pipeline network
A cluster of industrial operations across the project area	Helps decarbonise industry in the region

Find out more

Over the next few pages, you can read more about our proposals and how we developed them. We've also provided more detail on each route corridor, so you can see our plans in your area.

The pipeline

The pipeline will connect to the proposed hydrogen plant at Stanlow Manufacturing Complex, near Ellesmere Port. This will be the source of hydrogen for onward distribution into the network. The pipeline will then continue to a 'Central Hub' at the centre of the network. The Central Hub will act as the connection and onward distribution point for users and connection to storage along the south, east and north sections of the route corridor.

We have used our early feasibility and design work to date to develop a route corridor, a broad area within which the underground pipeline could be routed. On the map, the route corridor broadly represents a cross (or an 'X'). We'll consider all comments we receive during this consultation, alongside further technical and environmental surveying work. This will help us to develop a more detailed design for the pipeline ahead of our second consultation, which is scheduled for later this year.

Spurs

In some areas, we have identified spurs off the route corridor. These are needed to take hydrogen from the main pipeline to specific industrial users in the region. We expect that these spurs will use a smaller type of pipe and will include installing pipe within roads, much like Cadent's existing network.

What you can tell us

We want to know whether you have any views or information that can help us develop and finalise a proposed route for the pipeline within our route corridor, or the spurs we have identified.

Hydrogen Above Ground Installations (HAGIs)

The majority of our new infrastructure will be underground. However, at certain points along the pipeline, we will need some above ground infrastructure. We call these Hydrogen Above Ground Installations (HAGIs). These sites will give us access to inspect the integrity of the pipeline and to manage the flow to different parts of the network. They will also allow future connections to the network.

HAGI search areas have been identified within the route corridor based on points along the pipeline network where connections or block valves are required. We currently anticipate needing around 12 HAGIs, which would be located within the search areas we have identified. You can see these search areas on the maps later in this document.

HAGI sites will also include connection points to the new hydrogen plant, storage facility, and to support connections to industrial users and blending points within the existing gas network.

What do HAGIs look like?

Typically, HAGIs require a range of above ground equipment and structures. These structures are usually around 1.5 to 2 metres tall. HAGI sites vary in size, but typically range between a half and two hectares. One hectare is around the size of a football pitch.

HAGI sites will need security fencing, which is typically 2.4 metres high, and gates for entrance and exit. However, in some cases fences may need to be higher and additional security measures added.

Block valves

Where the distance between two HAGIs is greater than 16 kilometres, we may need to install a Block Valve Installation (BVI). These are smaller than HAGI sites, typically measuring around half a hectare (half a football pitch). BVIs may also be required at locations where the pipeline needs to cross a river or watercourse.

Fences will be approximately 2.4 metres high and a gate for entrance and exit will be required. Access for service vehicles (typically light goods vehicles) will be needed. This is likely to include an access track (or similar) and space for vehicles to turn.

Currently, we think there will be two points along the route corridor where we will need to install BVIs.

Access to HAGI sites from road networks will be needed. This is usually via an access track, or similar. Operatives will need space to safely park their vehicles and open the gates to the HAGI.

HAGIs will also need to connect into the local electrical distribution and telecommunications network.

What you can tell us

We want to know if you have any information that could inform the siting of a HAGI, or if there's anything you'd like us to consider when we look for a location.

How we developed our proposals

Assessment of alternative route corridors

In developing our route corridor (as shown later in this brochure), we also assessed and ruled out three alternative route corridors. We call the route corridor we are consulting on 'A'. Alternatives that were ruled out are called 'B', 'C' and 'D'. We've provided an explanation for why B, C and D were ruled out and why we decided to move forward with A.

All alternative route corridors were developed with consideration to a range of technical, environmental and cost factors. They were also developed with the same objective in mind – to deliver hydrogen to defined end points.

A This is the route corridor we are consulting on. It roughly forms an 'X' shape, with a Central Hub and four legs: west to Stanlow; north to St Helens; east to Partington and Warburton; and south towards Middlewich (see pages 12-19 for more detail).

B This formed a 'H' shape. The western leg would have run from Stanlow to Frodsham; the north across the Mersey Estuary to St Helens; the east from Partington; the south past Warburton to a location near junction 20 of the M6, then south to the hydrogen storage facility.

C This would have been a combination of options A and B, with the western, northern and eastern legs the same as those chosen in A. The connection to the hydrogen storage facility included the option provided in B, with a leg running from near junction 20 of the M6 to the hydrogen storage facility.

D This roughly formed a 'H' shape. It would have had a western leg running from Stanlow to St Helens across the Mersey Estuary (with a spur towards Warrington). The southern leg would have run from Stanlow to Middlewich and an eastern leg from Winsford to Carrington.

Why we ruled out the alternatives

We chose A as the most appropriate option because:

- B and D both involved crossings of the Mersey Estuary. This would have led to additional environmental impacts because of how close our work would have been to a Special Protection Area and Ramsar site (Ramsar sites are designated as wetlands of international importance). The long distance drilling that these options require would have also been challenging and added cost to the project.
- C would have needed an additional Central Hub site. This would have made our project more complex to construct and required the use of more land.

Hydrogen Above Ground Installations (HAGIs)

Search areas for HAGIs have been identified along the preferred route corridor. Their locations have been informed by the points along the pipeline network where we think we'll need connections or block valves (more information on block valves on page 7). We have also tried to avoid key landmarks and potential obstacles where possible.

Find out more

You can find out more about the work to develop a route corridor, and the alternatives we considered, in our Route Corridor Report. This is available on our website or by contacting our team (details on the back page).

Environmental considerations

The underground pipeline and Hydrogen Above Ground Installations will be designed and constructed to minimise impact on natural habitats and the environment. This includes looking at a wide range of factors, including ecology and wildlife, the historic environment and existing ground conditions.

The project team will be carrying out a number of surveys, site and route investigations, as well as other assessments, to better understand potential environmental issues and impacts.

The underground pipelines will primarily run through open land and will not be routed under people's homes.

Some surveys may be required in areas beyond the preferred route corridor and HAGI search areas to gain a better understanding of local habitats and how the project may impact them. There is, however, no intention to conduct surveys in private houses. Surveys will predominantly take place on open land and we will always work with landowners to seek voluntary access.

What you can tell us

We want to know whether you have any views or information about how we plan to address environmental considerations.

How we would construct the project

Cadent is an experienced and trusted operator of pipelines. We will make sure we bring our knowledge of constructing and maintaining the existing gas network to this project.

Constructing an underground hydrogen pipeline

To build our underground pipeline we will have to cross roads, railways, waterways and other sensitive areas. To do so we may need to use a number of different construction techniques. These include:

Open trenching

Open trench excavation is the most common method for installing underground pipelines. Open trenching begins by marking out the total area within which construction work will take place. Topsoil is then carefully stripped and stored next to the pipeline route. Meanwhile, the pipeline is delivered in short lengths and placed on supports. These short lengths of pipeline are welded together into longer sections called 'strings'.

The pipeline trench is then dug, with excavated material stored separately from the already stripped topsoil. The pipeline 'strings' are then lowered into the trench using special vehicles called 'side booms' (pictured) and welded to the pipeline that's already been laid.

The trench is then backfilled using the previously excavated material and the topsoil is replaced. Once the land above the pipeline has been fully reinstated, it can be returned to its previous use.

We anticipate that open trenching will be the predominant technique we use to construct our underground pipeline.

Trenchless methods

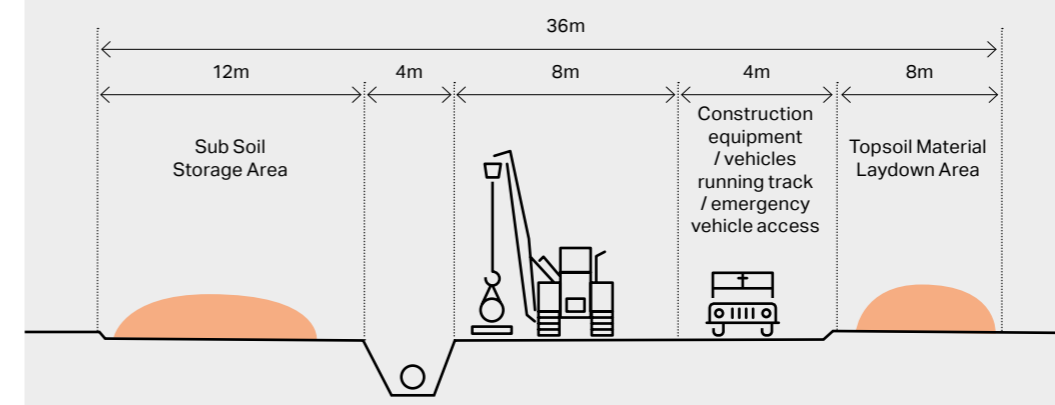
In some cases, for engineering and environmental reasons, open cut methods are not viable so trenchless methods will be considered.

Possible trenchless techniques that will be assessed as part of the design could include:

- Auger boring
- Horizontal directional drilling
- Microtunneling

We will provide more information on our construction methods as the project develops.

Diagram of open trench excavation



Typical working width – may vary depending on size of pipe or ground conditions.

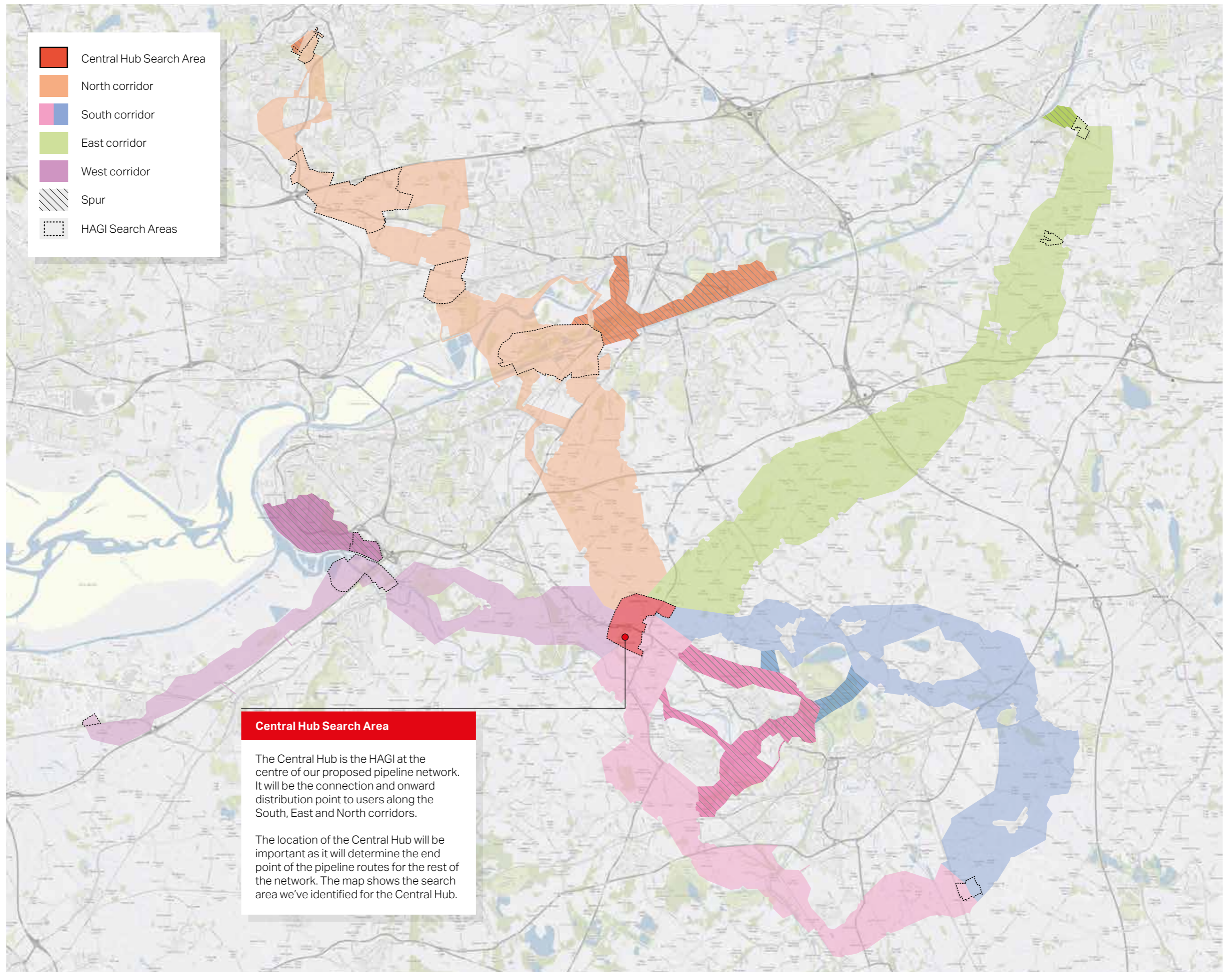
Overview map

This map shows an overview of the proposals we are consulting on. We have identified a route corridor, within which our underground pipeline could be constructed.

This route corridor is based on preliminary desk-based assessments and some initial site visits. Where the infrastructure needs to leave the main network to connect to industrial users and blending points, we have identified a number of spurs.

For the above ground infrastructure, we have identified search areas within which our HAGIs could be sited.

To help explain the proposals, we've split the route corridor into individual sections, although we will need to construct a pipeline in each of these sections. Over the next few pages, you can see each section of the route corridor in more detail.



Route corridors

West corridor: Stanlow to the Central Hub, and the Runcorn spur

The route corridor

This route corridor starts at the proposed hydrogen production plant at Essar's Stanlow Manufacturing Complex.

From there, it runs east towards the M56. Before it gets to the M56, it turns to run east again up the north side of the M56 in the direction of Frodsham and the Rocksavage roundabout.

Just before the Rocksavage roundabout, the route corridor turns east again, crossing the M56, towards the River Weaver Navigation.

The corridor then travels in the direction of Little Leigh, avoiding the Chapel and Dell ancient woodland, the listed buildings in the area and Aston Park.

It then crosses the railway line before arriving at the Central Hub.

The spur

In this area, we'll also need a spur in the direction of Runcorn. This will connect to the pipeline network via the Rocksavage HAGI Search Area and will extend roughly north-east, crossing the River Weaver Navigation.

The spur then runs approximately north-west with two options around Weston, one to the west and the other to the east.

We need this spur to connect to the following users:

- Intergen
- The Heath Business and Technical Park
- Inovyn

The spur options are bound by the Manchester Ship Canal to the west and Runcorn Heath to the east. Therefore, crossing of the A557 Expressway near the Weston Point Interchange would be required.

HAGIs

In this area, we think we will need three HAGIs (see page 7 for more information on what a HAGI is). These would be:

- Hydrogen Plant HAGI Search Area
- Rocksavage HAGI Search Area
- Runcorn HAGI Search Area

Your opportunity to comment

We want your views and any information that could help us to develop a route for the pipeline or identify a site for our HAGIs within this corridor.

Provide your comments by:



Using our project website:
www.hynethydrogenpipeline.co.uk

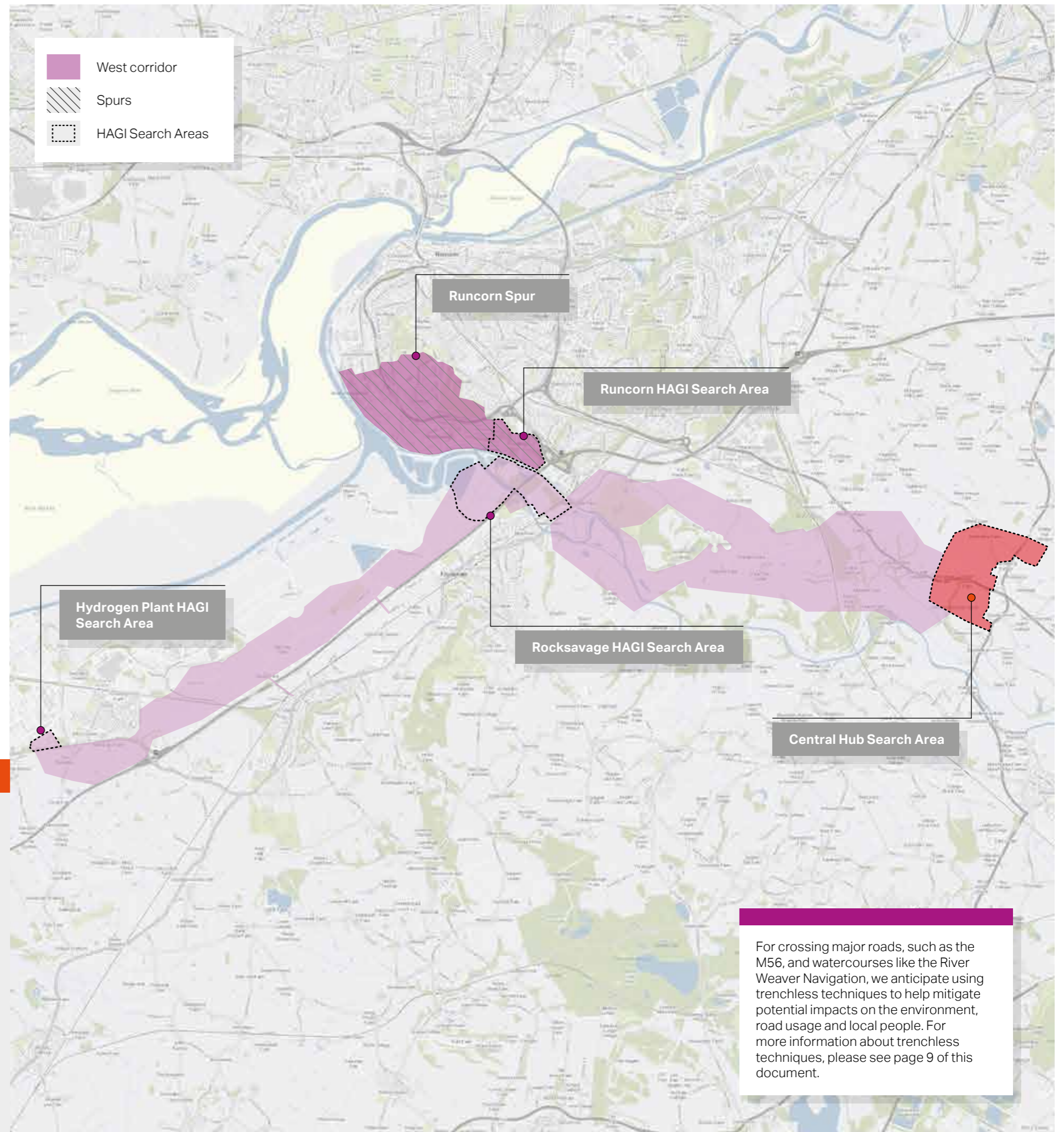


Sending an email to:
info@hynethydrogenpipeline.co.uk



Sending written feedback to our freepost address:
 FREEPOST HYNETH

Please ensure you submit your feedback by 11 March 2022.



For crossing major roads, such as the M56, and watercourses like the River Weaver Navigation, we anticipate using trenchless techniques to help mitigate potential impacts on the environment, road usage and local people. For more information about trenchless techniques, please see page 9 of this document.

Route corridors

North corridor: St Helens to the Central Hub, and the St Helens and Warrington spurs

The route corridor

This route corridor starts at Pilkington Glass Works in Ravenhead, St Helens.

From there, it travels south along the route of the St Helens Linkway. To cross the A570 and later, the Manchester to Liverpool railway lines, and to avoid the areas of Sutton Green and Lea Heath, there are two options. The first is to go south-west from Pilkington Glass Works through an area of open fields. The second is to go east, under local fields and recreational sites such as Sherdley Park golf course.

Both options join back up near Micklehead roundabout on the A570. At this point, the route corridor option travels south to the Clock Face HAGI Search Area by crossing the M62.

From here, there are two different ways to reach the Cuerdley HAGI Search Area, travelling either north or south of the A57. The corridor then travels south-east towards the Fiddlers Ferry Power Station site and crosses the St Helens Canal and the River Mersey.

The corridor then runs south, avoiding Moore and Walton and crossing the A56 and the M56 before passing through open fields to connect to the Central Hub.

The spurs

In this area, we'll also need three spurs: two in the direction of St Helens and one in the direction of Warrington. The spur at the northern end of the corridor will connect to the pipeline network near Ravenhead. We need this spur to connect to the following users:

- NSG-Pilkington's Greengate Works
- Glass Futures

We'll also need a spur near Micklehead Green to the south of St Helens. This will connect to the pipeline network via the Clock Face and Burtonwood HAGI Search Areas and may involve crossing the River Mersey.

We need this spur to connect to the following users:

- NSG's NGF site on Lea Green Industrial Park

The spur in the direction of Warrington will connect to the pipeline network via the Higher Walton HAGI Search Area. This will involve crossing the River Mersey, West Coast Mainline, A5060, A49, A5061 and A50. One part of the spur will travel north, and the other east to connect to the following users:

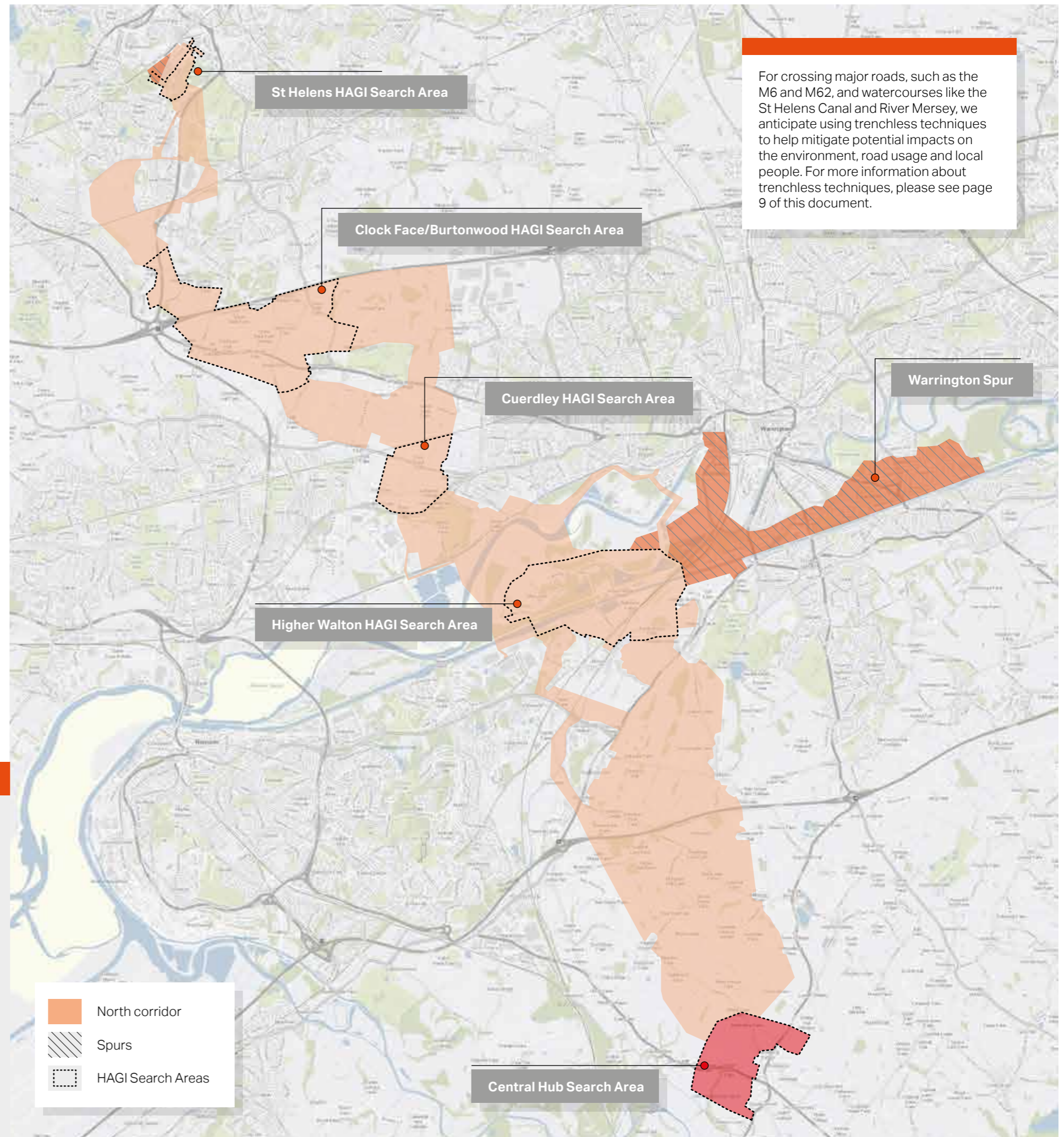
- Pilkington UK Ltd
- Glass Futures
- NGF Europe Ltd
- Novelis
- PQ Silicas
- Ingevity / Solvay

HAGIs

In this area, we think we will need five HAGIs (see page 7 for more information on what a HAGI is). These would be:

- St Helens HAGI Search Area
- Clock Face/Burtonwood HAGI Search Area
- Cuerdley HAGI Search Area
- Higher Walton HAGI Search Area

For crossing major roads, such as the M6 and M62, and watercourses like the St Helens Canal and River Mersey, we anticipate using trenchless techniques to help mitigate potential impacts on the environment, road usage and local people. For more information about trenchless techniques, please see page 9 of this document.



Your opportunity to comment

We want your views and any information that could help us to develop a route for the pipeline or identify a site for our HAGIs within this corridor.

Provide your comments by:

Using our project website:
www.hynethydrogenpipeline.co.uk

Sending an email to:
info@hynethydrogenpipeline.co.uk

Sending written feedback to our freepost address:
 FREEPOST HYNETHROGEN PIPELINE

Please ensure you submit your feedback by 11 March 2022.

- North corridor
- Spurs
- HAGI Search Areas

Route corridors

East corridor: Partington to the Central Hub, and the Partington spur

The route corridor

This route corridor starts on Manchester Road in Partington.

From there it travels south through open fields and the existing industrial areas of Partington.

It continues to cross the B5160 before turning slightly south-west, predominantly through rural fields. It then crosses the River Bollin, Bridgewater Canal, A56, M56 and A50, before also crossing the M6 to the south of Lymm Interchange.

From there, it passes through more rural fields, crossing the A49 and A559 before reaching the Central Hub.

The spur

In this area, we'll also need a spur in the direction of Partington. This will connect to the pipeline network via the Partington HAGI Search Area, crossing the A6144 just south of where Manchester Road meets Common Lane. We need this spur to connect to the following users:

- SAICA, Partington

HAGIs

In this area, we think we will need two HAGIs (see page 7 for more information on what a HAGI is).

These would be:

- Partington HAGI Search Area
- Warburton HAGI Search Area

Partington and Warburton HAGIs will be blending points to allow hydrogen to be blended with natural gas and supplied into the wider gas pipeline network to maximise the extent of supply.

Your opportunity to comment

We want your views and any information that could help us to develop a route for the pipeline or identify a site for our HAGIs within this corridor.

Provide your comments by:



Using our project website:
www.hynethydrogenpipeline.co.uk

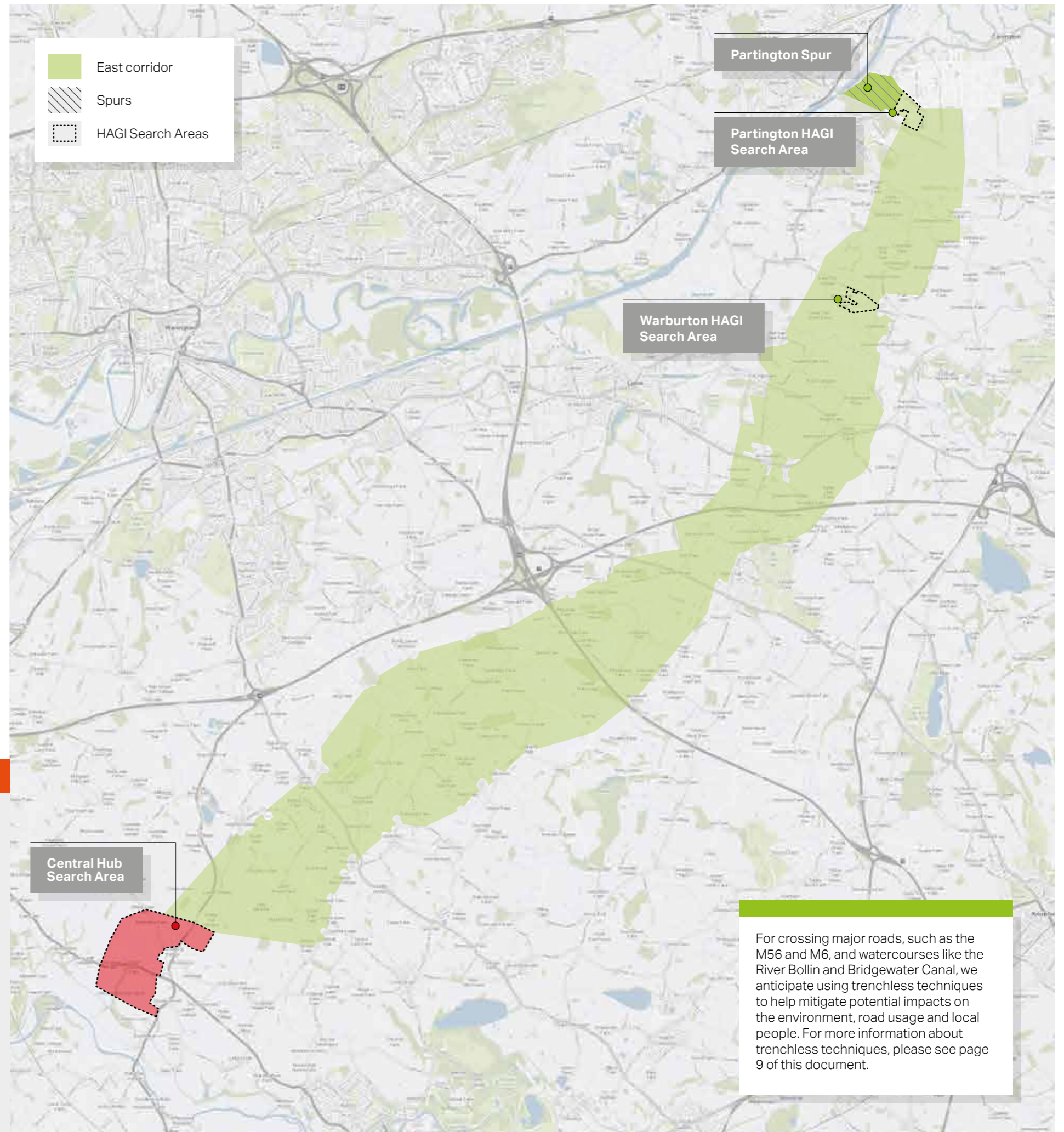


Sending an email to:
info@hynethydrogenpipeline.co.uk



Sending written feedback to our freepost address:
FREEPOST HYPNET NWHP

Please ensure you submit your feedback by 11 March 2022.



For crossing major roads, such as the M56 and M6, and watercourses like the River Bollin and Bridgewater Canal, we anticipate using trenchless techniques to help mitigate potential impacts on the environment, road usage and local people. For more information about trenchless techniques, please see page 9 of this document.

Route corridors

South corridor: Central Hub to Hydrogen Storage Facility and the Northwich spur

The route corridor

This route corridor is made up of two different possible options.

- **Option A, west of Northwich** (shown in pink) starts at the Central Hub, travelling south along the A49, with crossings at various intersections, including the River Weaver Navigation, the Trent and Mersey Canal, the West Coast Mainline and the A49 in between Pinfold Hollows and Weaverham.

It continues south, along the western edge of Northwich, crossing the regional rail line between Northwich and Middlewich and the A556.

From there it travels south east, before crossing and briefly following the line of the West Coast Mainline. Near Moulton, the corridor turns east, crossing a number of roads, the Trent and Mersey Canal and another railway, to get to the existing hydrogen storage facility.

- **Option B, east of Northwich** (shown in blue) starts at the Central Hub and travels east, passing through the open fields around Comberbach and crossing the A559. The corridor splits to avoid Wincham, using open fields to continue east.

After crossing the A556 and a regional rail line between Plumley and Lostock Graham stations, the corridor travels south and south-west, through open fields to the existing hydrogen storage facility.

Based on our current understanding, option A is our preferred corridor.

The spur

Regardless of the option selected, we'll also need a spur in the direction of Northwich to connect to Tata Chemicals Europe, Winnington.

For this, there are four options.

Two options extend south-east from the Central Hub, involving crossings of the Trent and Mersey Canal, the River Weaver Navigation, the West Coast Mainline and the A553.

The other options connect via either option A or option B.

HAGIs

In this area, we think we will need one HAGI (see page 7 for more information on what a HAGI is).


This would be:


- Hydrogen Storage Facility HAGI Search Area


Your opportunity to comment

We want your views and any information that could help us to develop a route for the pipeline or identify a site for our HAGIs within this corridor.

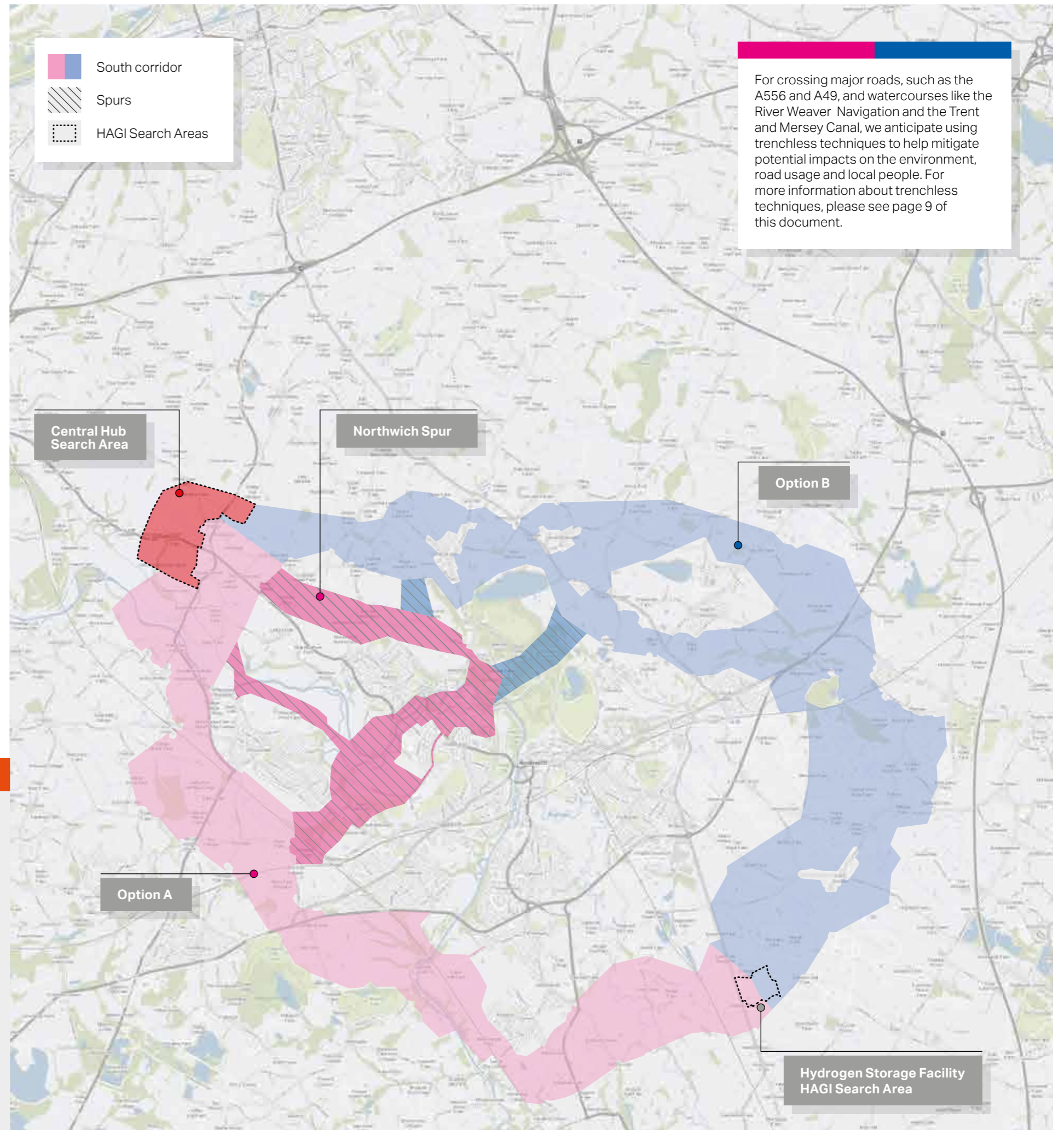
Provide your comments by:

 **Using our project website:**
www.hynhydrogenpipeline.co.uk

 **Sending an email to:**
info@hynhydrogenpipeline.co.uk

 **Sending written feedback to our freepost address:**
FREEPOST HYNETH NWHP

Please ensure you submit your feedback by 11 March 2022.



Have your say

Local people, including residents, local elected representatives and other stakeholders, have an important role to play throughout this process. We need your views and knowledge as we work to develop and refine our final pipeline route.

Our first round of consultation will run for six weeks from **00:01 on 26 January 2022 until 23:59 on 11 March 2022**. This consultation period is non-statutory and will be followed by a second round of statutory consultation later in 2022.

Should you require this consultation brochure, or any of our other materials, in a more accessible format, please contact the project team by emailing info@hynethydrogenpipeline.co.uk or calling 0800 8606 261.

We'll consider all comments we receive, alongside further technical and environmental surveying work. This will help us to develop a more detailed design for the pipeline ahead of our second consultation. We will also identify sites for our HAGIs within our search areas.

You can share feedback by:



Using our project website:
www.hynethydrogenpipeline.co.uk

Submit feedback on our website using our online feedback form and interactive map. The mapping tool allows you to leave comments at different location points along our route corridor.



Sending an email to:
info@hynethydrogenpipeline.co.uk

We welcome all feedback and any questions you might have about the project via email.



Sending written feedback to our freepost address:
FREEPOST HYPNET NWHP

You can write us a letter or send hard copy feedback forms, which will be available at events, deposit locations or by request. A full list of deposit locations is available on our website.

Please ensure you submit your feedback by 11 March 2022.

Meet the team

You can find out more about the HyNet North West Hydrogen Pipeline at our consultation events.

We are planning to host a number of in-person events between **15 and 26 February 2022**, and two online events on **17 and 22 February 2022**.

Covid-19: In carrying out our in-person consultation events, we will adhere to any Government guidance in place at the time.

Should Government Covid-19 guidance require us to cancel our planned in-person consultation events, we will endeavour to let people know and provide an online alternative.

The events are a great opportunity to meet the technical team and to ask any questions you may have about the project.

For event details, timings and locations please visit www.hynethydrogenpipeline.co.uk.

Next steps

After the consultation closes, we will consider all feedback we have received. We will also carry out lots more technical engineering and environmental work, to understand more about the areas we could route the pipeline in.

This work will help us identify a more detailed design for the pipeline route. We will present this, alongside our preliminary environmental work, at our second consultation later this year.

Application process

The HyNet North West Hydrogen Pipeline is a Nationally Significant Infrastructure Project. This means we will apply to the Planning Inspectorate and Government's Secretary of State for Business, Energy and Industrial Strategy for a Development Consent Order (DCO), in accordance with the Planning Act 2008.

As part of the DCO process, we will be carrying out consultation and engagement with stakeholders and local communities. This will be undertaken throughout the pre-application phase during our two rounds of public consultation.

You can find out more about the DCO process here: www.infrastructure.planninginspectorate.gov.uk/application-process.

Current project timeline

-  **January 2022:**
Non-statutory consultation launches
-  **September 2022:**
Statutory consultation launches
-  **Spring 2023:**
Development Consent Order (DCO) submission
-  **Summer/Autumn 2024:**
Secretary of State decision
-  **2025-2027:**
Construction takes place
-  **2027:**
Commissioning phase before pipeline becomes operational

Please note that this is an indicative timeline and could be subject to change.

Contact us

To submit feedback, ask questions and find out more, get in touch with the project team via the contact details below:



Email: info@hynethydrogenpipeline.co.uk



Register to stay informed:

www.hynethydrogenpipeline.co.uk/keep-in-touch



Write to us: FREEPOST HYNET NWHF



0800 8606 261

Appendix J Feedback form

Non-statutory consultation Feedback form

Project overview

We are developing a network of underground pipelines that will safely take low carbon hydrogen produced at Essar's Stanlow Manufacturing Complex, near Ellesmere Port, to various industrial organisations. The pipeline will also transport hydrogen to blending stations in Warburton and Partington (near Manchester), where it will be blended into the existing gas network to heat homes and businesses. The project will also link to underground hydrogen storage facilities that will be used to balance supply and demand.



Go online to find out more about our proposals and share your thoughts:
www.hynethydrogenpipeline.co.uk

Or to access our website, scan this QR code with your phone's camera.

The consultation

Our first round of consultation is now open and will run from 00:01 on 26 January 2022 until 23:59 on 11 March 2022.

We currently have a route corridor, within which we are looking to route the pipeline. We have also identified search areas where Hydrogen Above Ground Installations could be located. We are asking for your views on these options to help us refine our plans.

The HyNet North West Hydrogen Pipeline is a Nationally Significant Infrastructure Project. Our application will be made to the Planning Inspectorate and, ultimately, the Secretary of State for Business, Energy and Industrial Strategy will decide whether to grant permission for the project.

Have your say



Please complete this feedback form and return to us using our freepost address: **FREEPOST HYNETHYDROGEN PIPELINE**. If you need more space to provide your feedback, please feel free to include additional pages.

If you require this form in an alternative format, please contact 0800 8606 261.



Alternatively, you can provide your feedback online at www.hynethydrogenpipeline.co.uk or by email to info@hynethydrogenpipeline.co.uk.

Please submit your feedback by 23:59 on 11 March 2022.

We will take all the feedback we receive into consideration as we continue to develop our plans for the HyNet North West Hydrogen Pipeline.

To find out more, visit the website or contact the project team by emailing info@hynethydrogenpipeline.co.uk or calling 0800 8606 261.

Personal Information

Please refer to the privacy notice on this form for details of how we will handle your data.

Title:	First name:
--------	-------------

Surname:

Date

Company/Organisation, where applicable (optional)

Address:

Postcode:

E-mail:

A. Early stages of our work

A1. Please share your views and provide any additional information on the early stages of our work that helped to identify our route corridor, or any of our strategic alternatives (see page 8 of the brochure).

B. Stanlow to the Central Hub, including the Runcorn spur

For more information about our plans in this area, please see page 12-13 of the document or view the interactive map on our website.

B1. Please share your views and provide any information that could help us to develop a route for our pipeline in the corridor between Stanlow and the Central Hub, including the Runcorn spur.

B2. Please share your views and provide any additional information about the search areas we have identified for the Hydrogen Above Ground Installations between Stanlow Hydrogen Production Plant and the Central Hub, including the Runcorn spur.

Privacy Statement

Your privacy matters to us and we are transparent about how we use your data.

FAQs

Why are we collecting this data?

- To support us developing and planning our hydrogen network as part of the HyNet Hydrogen North West Pipeline Project
- To allow us to keep you up to date as the project progresses and to inform you of any future consultations
- To meet our statutory obligations under the Planning Act 2008 and any other relevant legislation

Who are we sharing this information with?

- With our contractors and suppliers whom we have contracts in place with to support in the development of the Project, for example Camargue who act on behalf of Cadent Gas Limited (Cadent)
- With relevant government bodies, such as the Planning Inspectorate and the Department of Business, Energy and Industrial Strategy to supporting the Project planning application process

How long we will keep that information?

- We will keep the information for the purposes of the Project and maintaining our gas network

How do I update my data or find out more?

If you wish to update your information or make any requests, please contact:



Email: info@hynethydrogenpipeline.co.uk



Phone: 0800 8606261

Contact us

To submit feedback, ask questions and find out more, get in touch with the project team via the contact details below:



Email: info@hynethydrogenpipeline.co.uk



Register to stay informed:

www.hynethydrogenpipeline.co.uk/keep-in-touch



Write to us: FREEPOST HYNETH NWHP



0800 8606 261

Appendix K Photographs from in-person events

Overview map

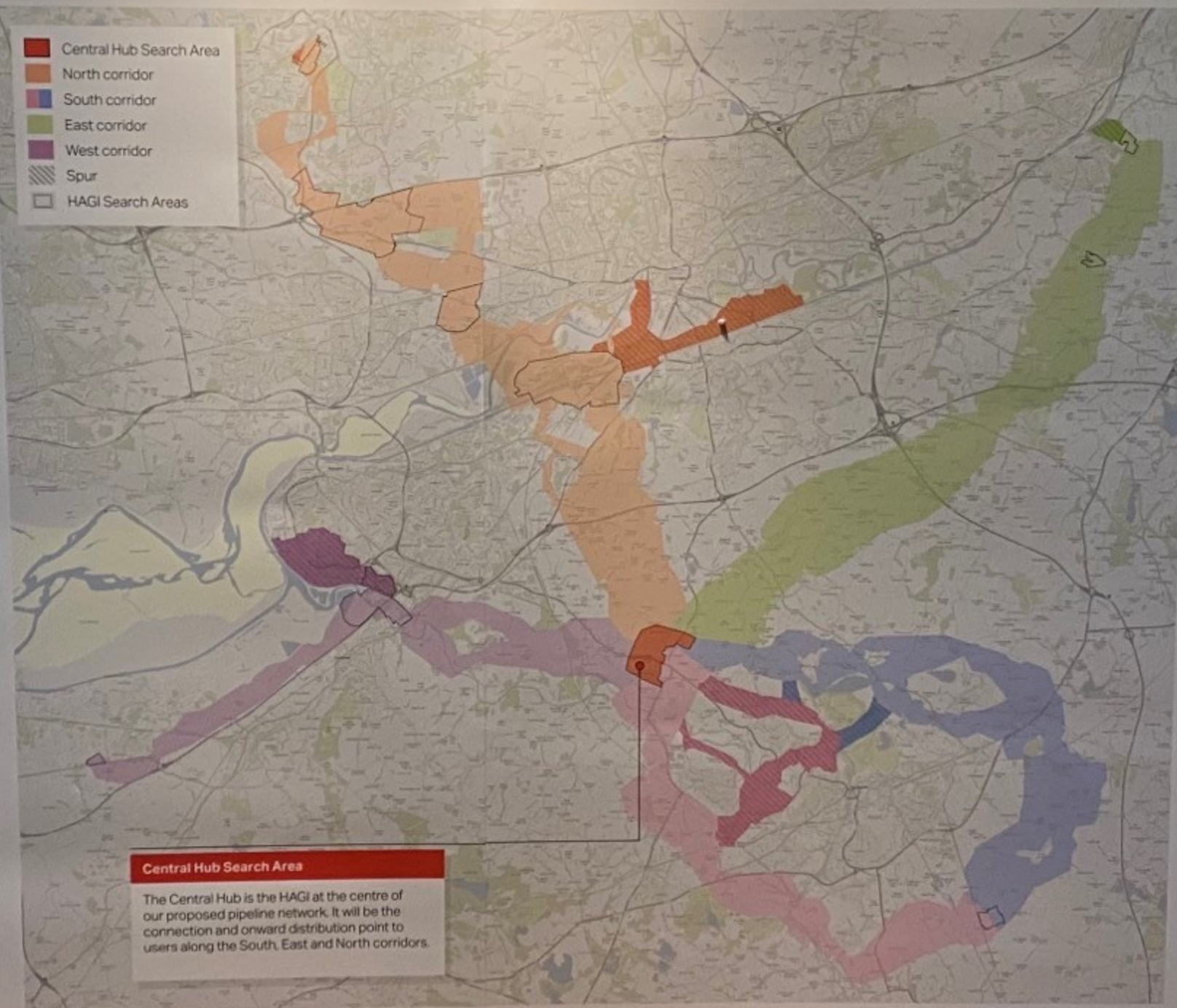
HyNet North West
Hydrogen Pipeline

Delivering clean growth

This map shows an overview of the proposals we are consulting on and the route corridor we have identified within which our underground pipeline could be constructed.

This route corridor is based on preliminary desk-based assessments and initial site visits. Where the infrastructure needs to leave the main network to connect to industrial users and blending points, we have identified a number of spurs.

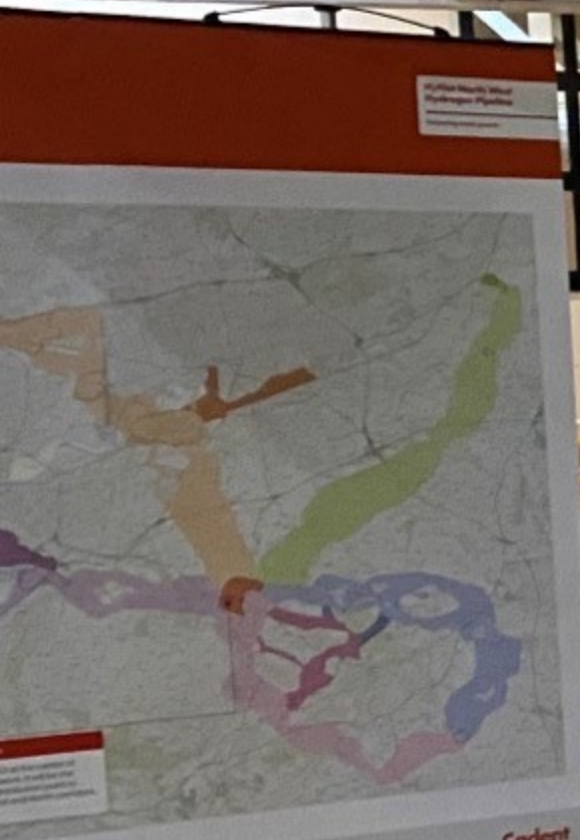
For the above ground infrastructure, we have identified search areas within which our HAGIs could be sited.



Scan with your phone's camera to access our website

Cadent
Your Gas Network





How we construct pipelines

Cadent is the national operator of pipelines. We will make sure we are working with you to protect and maintain the existing infrastructure.

HyNet North West Hydrogen Pipeline

How we developed our proposals

HyNet North West Hydrogen Pipeline

Option A is the route corridor we are consulting on. This roughly forms an 'X' shape, with a Central Hub and four legs: west to Stanlow north to St Helens; east to Partington and Warburton; and south towards Middlewich.

Option B: H Layout

Option C: WH Layout

Option D: U Layout

HyNet North West Hydrogen Pipeline

What happens next?

HyNet North West Hydrogen Pipeline

Delivering clean energy

Local people, including residents, local elected representatives and other stakeholders, have an important role to play throughout this process. We need your views and knowledge as we work to refine our final pipeline route.

After consultation closes, we will consider all the feedback we have received. We will also carry out lots of technical engineering and environmental work, to understand more about the areas we could route the pipeline in.

This work will help us identify a more detailed design for the pipeline route. We will present this design, alongside more detailed environmental work, at a second consultation later this year.

The HyNet North West Hydrogen Pipeline is a Nationally Significant Infrastructure Project. This means we will apply to the Planning Inspectorate and Government's Secretary of State for Business, Energy and Industrial Strategy for planning permission through a Development Consent Order (DCO), in accordance with the Planning Act 2008.

Your feedback can help us shape our proposals and create the best possible project.

Current project timeline

- January 2022:** Non-statutory consultation launch
- Spring and Summer 2022:** Habitat assessment surveys, including great crested newts and reptiles, along with other environmental surveys, to support our assessments and ongoing engineering design.
- Autumn 2022:** Statutory consultation launches
- Spring 2023:** Development Consent Order (DCO) submission
- Summer/Autumn 2024:** Secretary of State decision
- 2025-2027:** Construction takes place
- 2027:** Pipeline operational

Please note that this is an indicative timeline and could be subject to change.

You can share feedback by:

- Using our project website:** www.hynethydrogenpipeline.co.uk
Submit feedback on our website using our online feedback form and interactive map. The mapping tool allows you to leave comments at different location points along our route corridor.
- Sending an email to:** info@hynethydrogenpipeline.co.uk
We welcome all feedback and any questions you might have about the project via email.
- Sending written feedback to our freepost address:** FREEPOST HYNENWHP
You can write us a letter or send hard copy feedback forms, which are available at this event.

Please ensure you submit your feedback by **11 March 2022**.

Scan with your phone's camera to access our website

Cadent
Your Gas Network

HyNet North West Hydrogen Pipeline

Delivering clean growth

The plans, being developed by Cadent, the gas network operator for the region, are a key part of the ambitious HyNet North West low carbon cluster.

Illustrative graphics of HyNet North West and its potential future stages.

- Industrial CO₂ capture
- Future phase of Cadent's H₂ pipeline
- EMTS CO₂ pipeline
- Industrial CO₂ capture
- Low carbon H₂ production
- Underground H₂ storage
- CO₂ storage
- Industrial H₂ user
- Blending H₂ power generation
- H₂ blending for homes and business
- CO₂ shipping
- H₂ from offshore wind
- H₂ fueling for transport
- H₂ fueling for use and retail
- H₂ lines

The hydrogen pipeline will safely transport low carbon hydrogen produced at Essar's Stanlow Manufacturing Complex near Ellesmere Port to various industrial organisations. It will also transport hydrogen to blending stations in Warburton and Partington (near Manchester) where it will be blended into the existing gas network to heat homes and businesses. The project will link to underground hydrogen storage facilities that will be used to balance supply and demand.

The pipeline will be underground, although we will need some additional infrastructure known as Hydrogen Above Ground Installations (HAGIs) at various locations along the route.

We anticipate to start construction in line with the hydrogen production plan, subject to obtaining planning consent.

HyNet North West

The pipeline is part of the HyNet North West low carbon cluster. HyNet is an innovative energy project that will unlock a low carbon economy for the North West and North Wales and put the region at the forefront of the UK's drive to achieve net zero.

Cadent is the UK's largest gas distribution network, managing a network of more than 80,000 miles of pipes, most of which are underground. These pipelines transport gas to 11 million customers throughout the North West, West Midlands, East Midlands, South Yorkshire, East of England and North London.

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An overview of our proposals

HyNet North West Hydrogen Pipeline
Delivering clean growth

The HyNet North West Hydrogen Pipeline includes the construction, operation and maintenance of around 77 miles of new gas transportation infrastructure. The pipeline will vary in diameter along the route between 12 inches to potentially 48 inches. The primarily underground pipeline will connect a number of defined end points, distributing hydrogen to industry and blending hydrogen into the existing gas network in the North West.

End points	Why it's needed
Hydrogen production facility at Stanlow Manufacturing Complex	Provides a source of hydrogen to supply the pipeline network
Hydrogen storage facility near Northwich	Allows hydrogen to be stored at times of peak supply and released into the network in peak demand
Blending to the existing gas network, near Warburton and Partington	Allows hydrogen to be blended with natural gas and supplied into the wider gas network
A cluster of industrial operations near the pipeline area	Helps decarbonise industry in the region

The pipeline

The pipeline will connect to the underground gas network at Stanlow Manufacturing Complex, near Ellesmere Port. This will be the source of hydrogen for transport into the pipeline network. The pipeline will then continue to a blending station at Warburton and Partington. The pipeline will also connect to a storage facility near Northwich. The pipeline will also connect to a cluster of industrial operations near the pipeline area.

Spurs

In some areas, we have identified spur off the main pipeline to supply specific industrial users. These are known as Hydrogen Above Ground Installations (HAGIs). We expect that these spurs will be a small number of pipes and will include installing pipe and valves to connect to the existing gas network.

Hydrogen Above Ground Installations (HAGIs)

The majority of our new infrastructure will be underground. However, at certain points along the pipeline, we will need some above ground infrastructure. We call these Hydrogen Above Ground Installations (HAGIs).

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Overview map

HyNet North West Hydrogen Pipeline
Delivering clean growth

This map shows an overview of the pipeline route and the main corridors we have identified where our underground pipeline could be constructed.

The map includes a legend with the following categories:

- Underground pipeline route
- Hydrogen production facility
- Hydrogen storage facility
- Blending station
- Industrial operations
- Hydrogen above ground installation (HAGI)

An interactive map allows users to zoom in and out, and to view detailed information about the pipeline route and the locations of the production facility, storage facility, blending station, and industrial operations.

Key locations: Stanlow Manufacturing Complex, Northwich, Warburton and Partington.

Key features: The pipeline route is shown in red, with various colored areas indicating the locations of the production facility, storage facility, blending station, and industrial operations.

Key facts: The pipeline will be around 77 miles long, with a diameter ranging from 12 inches to 48 inches. It will be primarily underground.

Key benefits: The pipeline will help decarbonise industry in the North West and provide a source of low carbon hydrogen for transport to various industrial users.

Key next steps: We are currently in the planning and design phase of the project. We expect to start construction in line with the hydrogen production plan, subject to obtaining planning consent.

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This interactive digital display provides a detailed view of the pipeline route, allowing users to zoom in and out and to view detailed information about the pipeline route and the locations of the production facility, storage facility, blending station, and industrial operations.

Key locations: Stanlow Manufacturing Complex, Northwich, Warburton and Partington.

Key features: The pipeline route is shown in red, with various colored areas indicating the locations of the production facility, storage facility, blending station, and industrial operations.

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Key next steps: We are currently in the planning and design phase of the project. We expect to start construction in line with the hydrogen production plan, subject to obtaining planning consent.

How we construct pipelines

HyNet North West Hydrogen Pipeline
Delivering clean growth

Cadent is an experienced pipeline contractor and has a proven track record in the construction and maintenance of gas pipelines.

We have a range of construction methods and equipment that we can use to construct and maintain gas pipelines. Our experienced construction teams are used to working in a variety of environments and can provide a high level of safety and quality.

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HyNet North West Hydrogen Pipeline

Delivering clean growth

The plans, being developed by Cadent, the gas network operator for the region, are a key part of the ambitious HyNet North West low carbon cluster.



Illustrative graphic of HyNet North West and its potential future stages.

- Initial phases of Cadent's H₂ pipeline
- - - Potential future phases of Cadent's H₂ pipeline
- - - EN'S CO₂ pipeline
- Industrial CO₂ capture
- Low carbon H₂ production
- Underground H₂ storage
- CO₂ storage
- Industrial H₂ user
- Flexible H₂ power generation
- H₂ blending for homes and business
- CO₂ shipping
- H₂ from offshore wind
- H₂ fueling for transport
- H₂ fueling from solar and wind
- H₂ trans

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HyNet North West

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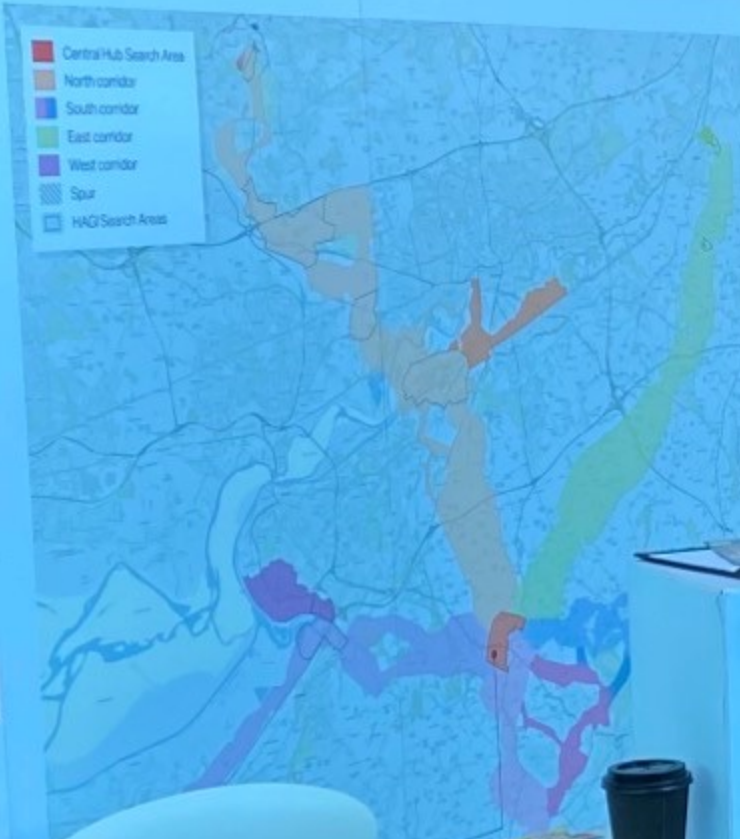
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Overview map

This map shows an overview of the proposals we are consulting on and the route corridor we have identified within which our underground pipeline could be constructed.

This route corridor is based on preliminary desk-based assessments and initial site visits. Where the infrastructure needs to leave the main network to connect to industrial users and bending points, we have identified a number of spurs.

For the above ground infrastructure, we have identified search areas within which our HAGs could be sited.



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This event is open
11am to 4pm

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Welcome to
our consultation
event



Appendix L Virtual exhibition space



Welcome to our consultation

The plans, being developed by Cadent, the gas network operator for the region, are a key part of the ambitious HyNet North West low carbon cluster.

- Initial phases of Cadent's H₂ pipeline
- Potential future phases of Cadent's H₂ pipeline
- EN's CO₂ pipeline
- Industrial CO₂ capture
- Flexible H₂ power generation
- H₂ blending for homes and business
- CO₂ shipping
- H₂ from offshore wind
- Local hydrogen production
- Low-carbon H₂ storage
- CO₂ storage
- H₂ blending for residential business
- H₂ blending for transport
- H₂ blending from steel and wind
- H₂ reuse

Find out more



An overview of our proposals

The HyNet North West Hydrogen Pipeline includes the construction, operation and maintenance of around 22 miles of new gas transport infrastructure. The pipeline will vary in diameter along its route between 72 inches to potential 48 inches. It's a major underground pipeline that will connect a mix of demand and supply, drawing hydrogen from existing gas network infrastructure.

Find out more



How we developed our proposals

The region is currently consulting on a plan to build a new hydrogen network of around 22 miles of new gas transport infrastructure. We've worked with a number of key stakeholders to develop our proposals. We've also worked with a number of key stakeholders to develop our proposals.

Find out more



Overview map

Find out more



How we construct pipelines

Find out more



What happens next?

Local people, including residents, local elected representatives and other stakeholders, have an important role to play throughout this process. We need your views and knowledge as we work to refine our final pipeline route.

Find out more





HyNet North West Hydrogen Pipeline

Delivering clean growth

What happens next?

Key milestones

- Autumn 2023: Full business case approved
- Spring 2024: Planning and design work begins
- Summer 2024: Construction starts
- Autumn 2025: Pipeline completion
- 2026-2027: Full operation

Find out more

Cadent



HyNet North West Hydrogen Pipeline

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