Keuper Gas Storage Project

Preliminary Environmental Information Report – Planning and Policy Context

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ACRONYMS AND ABBREVIATIONS

Acronym	Description
BEIS	Business, Energy and Industrial Strategy
CNP	Critical National Policy
CWAC	Cheshire West and Chester Council
DCO	Development Consent Order
DESNZ	Department for Energy Security and Net Zero
EIA	Environmental Impact Assessment

Acronym	Description
ERM	Environmental Resources Management
ES	Environmental Statement
GHG	Greenhouse Gas
HBC	Halton Borough Council
KGSL	Keuper Gas Storage Limited
KGSP	Keuper Gas Storage Project
LDP	Local Development Plan
LPA	Local Planning Authority
MC	Material Change
NESO	National Energy System Operator
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
SoS	Secretary of State
SPD	Supplementary Planning Documents
T&S	Transport and Storage
UGS	Underground Gas Storage

5. PLANNING AND POLICY CONTEXT

5.1 PLANNING AND CONSENTING CONTEXT

5.1.1 OVERVIEW – PLANNING HISTORY

5.1.1.1 A review of historical planning applications associated with the Holford Brinefields is summarised below in **Table 5.1**. The review is based on the assessment undertaken for the application of the Consented Development in 2015. This includes the wider planning context of the area surrounding the Site. The table has reviewed against records held on Cheshire West and Chester's Planning Register to ensure it is up to date.

TABLE 5.1 - HISTORICAL PLANNING APPLICATIONS ASSOCIATED WITH THE HOLFORD BRINEFIELDS[1]

Planning Reference	Date	Description
Holford Brinefields Planning History		
7/10/65	27/11/1953	Brine Extraction and Waste Disposal
3/5/123	27/11/1953	Brine Extraction and Waste Disposal
3/5/884	27/11/1953	Brine Extraction and Waste Disposal
3/5/1945	30/08/1954	Brine Extraction and Waste Disposal
3/5/4645	01/06/1961	Brine Extraction
3/5/8376	15/12/1967	Brine Extraction
3/5/9161	15/01/1969	Brine Extraction
3/5/9734	16/10/1969	Brine Extraction
4/3235	19/04/1977	Brine Extraction
4/00/03423	27/04/1977	Disposal of Chemical Waste
4/00/06431	23/05/1979	Deposit of Halogenated Residues in Sealed Underground Rock Salt Cavities

[1] Source: Zyda Law, Keuper Gas Storage Project - Project Overview, November 2015 and Cheshire West and Chester Online Planning Register.

Planning Reference	Date	Description
4/00/11896	26/07/1983	Storage of Gas in Underground Salt Cavity at Holford Brinefield with Associated Wellhead Compound and Pressure Reduction Station Sited 150 m NW of Wellhead
4/22880	10/10/1990	Installation of Five Demountable Towers (7 m high) for the Provision of a Close Circuit Television Security System
4/22881	10/10/1990	Installation of Two Demountable Towers (7 m high) for the Provision of a Close Circuit Television System
4/32984/CCC	C 02/02/1998	Submission of Revised Conditions for the Continued Extraction of Rock Salt as Required by the Environment Act 1995
4/APP/2001/0415/CCC	26/03/2001	Application for Hazardous Substance Consent for the Storage of Natural Gas in Underground Cavities
APP/2001/0454	03/04/2001	Hazardous Substances Consent to Store Natural Gas in Underground Cavities
APP/2001/0415	04/04/2002	Hazardous Substances Consent for the Storage of Natural Gas in Underground Cavities at Land Around Drakelow Lane and the Former Cranage Airfield Site
4/APP/2002/0234 & 8	18/02/2002	Works, Including Drilling of Exploratory Well and Other Boreholes, Laying of Pipelines (Water/Brine), Controlled Solution Mining of Rocksalt to Create up to 8 Underground Cavities for the Storage of Natural Gas, Conversion of 6 Existing Cavities to Saturators, Laying of Gas Pipelines,

Planning Reference	Date	Description
		Construction of Above Ground Gas Processing Plant, Access Roads, Landscaping and Ancillary Development
4/32984/02/CCC	21/08/2002	Proposed Additional Cavities and Required Infrastructure
4/05/2102/FZ5	30/11/2006	Works Including Drilling Boreholes, Laying of Pipelines (Water/Brine), Controlled Solution Mining of Rocksalt to Create up to 28 Underground Cavities for the Storage of Natural Gas and use of Cavities for the Storage of Natural Gas, Laying of Pipelines, Construction of Above Ground Gas Compressor Station and Solution Mining Compound, Access Roads, Landscaping and Ancillary Development; at Lostock Hollows in the North, Drakelow Lane in the South.
06-1900-HAZ	09/10/2006	Continuation of Hazardous Substances Consent Following the Change of Control of the H165 Gas Storage Cavity at Holford from NG Gas to INEOS Enterprises
4/07/0015/FZ5/CCC	15/01/2007	Application made under Planning Condition 10 of 4.32984 and 5/98/0192P for 4 new boreholes and Cavities, together with extensions to site roads and new pipelines linking into existing Cavities and pump-house.
07/0015/FZ5	20/03/2007	Four New Boreholes
07/2891/FUL	14/11/2007	Installation of Utility Pipeline and Conduits 50 mm Water Pipe, 110mm Brine Pipe and BT Cable Duct)

Planning Reference	Date	Description
10/02683/MIN	23/11/2010	Associated Development to the Holford Brinefield Drilling Programme 2010 including the Laying of Pipelines and Cables
12/03526/MIN	01/08/2012	1km of New Buried Pipework to be Installed to Connect Four Existing Boreholes in the Saturator Network on Birches Lane Site
14/05318/MIN	13/02/2014	2.4 km new buried pipework 8", 10" and 14" diameter to connect boreholes to the saturator network
14/05319/MIN	13/02/2014	Extend Brine, mud and DBO pipework
Relevant updates to Site Planning History		
15/00117/HAZ	16/07/2015	Continuation of Hazardous Substances Consent 14/03374/HAZ (latest application) 4/08/0841/FZ5 (original application) associated with transfer of ownership from Ineos Enterprises to Keuper Gas Storage Limited
16/01362/HAZ	12/05/2016	New hazardous substances consent for the storage of natural gas
15/03221/HAZ	31/08/2016	Continuation of Hazardous Substances Consent 15/00117/HAZ (latest application) 4/08/0841/FZ5 (original application) associated with transfer of ownership from Ineos Enterprises to Keuper Gas Storage Limited
21/03902/REQ	15/02/2022	Detailed Requirement Submission for Phase 1, Stage 1 of Keuper Gas Storage Project (details below)

Planning Reference	Date	Description
21/04921/HAZ	22/12/2022	Hazardous Substances consent for the presence by means of storage, compression and treatment of hydrogen gas, a hazardous substance, on, over or under land off King Street, Byley, Cheshire
21/03110/DIS	12/01/2023	Discharge of condition 10 of planning permissions 4/32984 and 5/98/0192P
24/00480/DIS	Awaiting decision, received 16/02/2024	Discharge of condition 10 (details to be agreed prior to the commencement of development within a development phase) of planning permissions 4/32984 and 5/98/0192P

5.1.2 THE EXISTING DCO – STATUS

5.1.1.2 The existing 2017 Keuper Gas Storage Project (KGSP) Development Consent Order (DCO) was approved by the Secretary of State (SoS) on the 15 March 2017 and came into force on 5 April 2017. A subsequent Correction Order for minor errors came into force on 8 August 2017. An Amendment Order came into force on 16 May 2024. This related to an application for a Non-Material Change to the DCO to allow the inclusion of hydrogen gas storage in the definition of gas storage; the substitution (update of) various Certified Plans; and the update to the registered address of the Undertaker. Changes relating to the storage of hydrogen were not approved; the Amendment Order therefore addresses only those changes relating to address details and the substitution of various Certified Plans.

5.1.1.3 An application was approved by Cheshire West and Chester Council on 15 February 2022 for the submission of details relating to the following Requirements (ref. 21/03902/REQ) and which relate to the construction of access roads:

- 3 – Construction/Environmental Management Plan;
- 4 – Approval of Details ((a)(vi), (b), (c), (d), (e));
- 6 – Landscaping;
- 7 – Access to Works (excluding watercourse crossing and culverting);
- 11 – Fencing and Other Means of Enclosure;

- 12 – Ground and Surface Water and Pollution Prevention;
- 13 – Hedgerows;
- 15 – Archaeology;
- 21 - European Protected Species; and
- 24 – Control of Radio Emissions

5.1.1.4 Following the approval of the above details, work commenced on site. The DCO has been implemented through the construction of access roads. This was confirmed by a letter from Cheshire West and Chester Council (dated 28 July 2023) to state that the project had lawfully commenced.

5.2 POLICY CONTEXT

5.2.1 INTRODUCTION

5.2.1.1 National, regional, and local policies are relevant to the consideration of the Proposed Development. At all levels, policies are designed to protect, and where possible, appropriately enhance the environment. This chapter of the Preliminary Environmental Impact Report (PEIR) identifies the relevant policies as context for the PEIR.

5.2.1.2 The Proposed Development is located within the administrative boundary of Cheshire West and Chester Council (CWAC) Local Planning Authority (LPA). This chapter reviews the planning policy of these LPAs and their relevance to the Proposed Development.

5.2.2 THE PLANNING AND INFRASTRUCTURE BILL (2025)

5.2.1.3 At the time of writing, the Planning and Infrastructure Bill is at Committee Stage in the House of Lords. The Bill proposes reforms to the NSIP consenting process, including in relation to consultation and the proposed removal of the distinction between material and non-material changes for post-consent amendment applications.

5.2.1.4 Although the reforms proposed under this Bill would be relevant to this application, a future Planning and Infrastructure Act (which would enact any reforms which are carried through the Committee Stage) is not yet in effect. As a result, the existing legal framework established under the 2008 Planning Act and subsequent amendments remains the relevant legislation for this application.

5.2.3 NATIONAL PLANNING POLICY

5.2.1.5 In July 2011 the UK government adopted a suite of National Policy Statements (NPSs) that apply to Nationally Significant Infrastructure Projects (NSIPs), including the Overarching NPS for Energy (EN-1) and NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4). The most recent update to these NPSs was in January 2024.

5.2.1.6 Whilst EN-1 is the only NPS directly applicable to hydrogen storage infrastructure projects, there are aspects of EN-4 that must be considered due to their relevance to the Proposed Development.

5.2.1.7 In April 2025, the Government launched consultation on revised NPS with draft updates made to EN-1, EN-3, and EN-5. A review of the draft version of EN-1 is included in the assessment below.

Overarching NPS for Energy (EN-1) 2024

5.2.1.8 EN-1 provides overarching national policy support for energy infrastructure. In Paragraph 1.3.5 of EN-1, hydrogen storage infrastructure is referenced as outside of the scope of other NPS, and in this case, EN-1 is the primary NPS to have effect as the basis for SoS decision making. The partial relevance of EN-4 is set out below.

5.2.1.9 In Section 3.4, the need for new nationally significant gas infrastructure is set out, which includes the need for low carbon hydrogen infrastructure, with reference to the Hydrogen Strategy which 'recognises the critical enabling role that hydrogen transportation and storage (T&S) infrastructure will need to play in connecting hydrogen producers with consumers and balance misalignment in supply and demand.' (3.4.19).

5.2.1.10 In recognition of the 'urgent need' for this infrastructure, hydrogen storage is considered to be Critical National Policy (CNP) Infrastructure (3.4.22)

5.2.1.11 CNP Infrastructure is strongly supported by the Government and it is stated in paragraph 3.3.63 that this need 'will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy.'

EN-1 NPS Assessment Principles

5.2.1.12 EN-1 contains sections on generic and technology-specific assessment principles and potential impacts which will guide applications and decision making by the SoS. Assessment Principles for the infrastructure covered by EN-1 are set out at Part 4. It states that the SoS will start the decision-making process with a presumption in favour of granting consent for energy NSIPs, given the level and urgency of need for infrastructure of these types.

5.2.1.13 The policy states that 'In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the SoS should take into account:

- Its potential benefits including its contribution to meeting the need for energy infrastructure, job creation, reduction of geographical disparities, environmental enhancements, and any long-term or wider benefits; and
- Its potential adverse impacts, including on the environment, and including any long-term and cumulative adverse impacts, as well

as any measures to avoid, reduce, mitigate or compensate for any adverse impacts, following the mitigation hierarchy'.

5.2.1.14 Therefore, the general assessment principles of the NPS requires that environmental, social and economic benefits and adverse impacts, at national, regional and local levels should be considered when assessing a proposed development.

Critical National Priority Infrastructure

5.2.1.15 At paragraph 4.1.7 the qualification of a project as CNP Infrastructure is stated as increasing the likelihood that any residual effects of the development will be outweighed by the need case. Residual effects result where the SoS considers that a project, as required by a NPS, has mitigated an impact as far as possible but effects may remain. This presumption does not apply to residual effects in relation to human health and public safety, defence, irreplaceable habitats or unacceptable risk to the achievement of net zero.

5.2.1.16 However, qualification as CNP Infrastructure does not disqualify the need for an applicant to demonstrate that the project has met the requirements of the NPS, applying the mitigation hierarchy and aligning with legal and regulatory requirements.

5.2.1.17 The Applicant has had due regard to the relevant assessment principles and guidance on impacts in preparing this PEIR and will continue to do so in developing the Proposed Development and the Application.

Draft Update to EN-1 (April 2025)

5.2.1.18 In April 2025 updates were made to EN-1. The update seeks to align policy with the UK Government's Clean Power 2030 Action Plan and assist with meeting country's 2050 net zero target.

5.2.1.19 EN-1 will remain in effect whilst the updated NPS is under review. However, the consultation documents are clear that draft NPSs can be considered on a case-by-case basis, for the SoS to decide on their relevance. Updates to this document may be a material consideration to the Proposed Development. This will continue to be monitored and reviewed.

5.2.1.20 The update to EN-1 includes increased recognition of the importance of hydrogen storage to decarbonising energy. Further detail is included in the Needs Case at Section 3.3 below.

5.2.1.21 To support this position, the updated EN-1 confirms that hydrogen storage will continue to be considered CNP Infrastructure, with explicit reference to hydrogen distribution, pipelines and storage (3.4.23).

NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4)

5.2.1.22 Whilst there is reference in EN-4 to hydrogen developments, the guidance within this NPS has effect only for natural gas infrastructure. However, there are aspects within this NPS that are relevant to the Proposed Development. For example, paragraph 1.6.6 states that there is provision for the applicability of the guidance within this NPS where it relates to 'other matters which the Secretary of State thinks are important and relevant to their decision on applications for hydrogen infrastructure'.

5.2.1.23 The NPS addresses the use of salt caverns for the storage of gas, indicating this use is considered acceptable in principle by the Government subject to criteria set out in the NPS.

5.2.1.24 At Section 2.8 there is consideration of site selection criteria and impacts for mitigation for underground natural gas storage developments. The following assessment criteria, whilst directly applicable only to natural gas storage, are relevant considerations for the Proposed Development:

- Noise and vibration;
- Gas emissions;
- Water quality and resources; and
- Disposal of brine

5.2.1.25 The above guidance will be taken into account for relevant aspects of the Proposed Development.

The National Planning Policy Framework

5.2.1.26 The National Planning Policy Framework (NPPF) was updated in December 2024 (with minor corrections in February 2025) and sets out the Government's Planning Policies for England and how these should be applied. It also provides a framework for locally prepared plans.

5.2.1.27 The Policies contained within the NPPF are expanded upon and supported by the Planning Practice Guidance.

5.2.1.28 Paragraph 5 of the NPPF states:

5.2.1.29 "The Framework does not contain specific policies for nationally significant infrastructure projects. These are determined in accordance with the decision- making framework in the Planning Act 2008 (as amended) and relevant national policy statements for major infrastructure, as well as any other matters that are relevant (which may include the National Planning Policy Framework). National policy statements form part of the overall framework of national planning policy, and may be a material consideration in preparing plans and making decisions on planning applications."

5.2.1.30 Notwithstanding, sections of the NPPF that may be of relevance to the scope of the Proposed Development include:

- Section 2: Achieving sustainable development;
- Section 6: Building a strong, competitive economy;
- Section 11: Making effective use of land;
- Section 12: Achieving well designed places;
- Section 13: Protecting Green Belt land;
- Section 14: Meeting the challenge of climate change, flooding, and coastal change;
- Section 15: Conserving and enhancing the natural environment;
- Section 16: Conserving and enhancing the historic environment; and,
- Section 17: Facilitating the sustainable use of minerals.

5.2.1.31 Paragraph 7 of the NPPF confirms that "the purpose of the planning system is to contribute to the achievement of sustainable development".

5.2.1.32 Paragraph 8 confirms that achieving sustainable development "means that the planning system has three overarching objectives" which are economic, social and environmental. The economic objective includes the need to identify and co-ordinate the provision of infrastructure; the social objective aims to support strong, vibrant and health communities; and the environmental objective aims "to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy".

5.2.4 LOCAL POLICY

Local Plans - Cheshire West and Chester Council

5.2.1.33 The majority of the Site is within the Borough of CWAC. The Local Development Plan (LDP) is set out in two parts:

- Part 1: Strategic Policies; and
- Part 2: Land Allocations and Detailed Policies.

5.2.1.34 There are also several Supplementary Planning Documents which cover topics related to the Proposed Development.

5.2.1.35 CWAC is currently consulting on the Issues and Options (Regulation 18) version of a new LDP. The current Local Development Scheme identifies that this new plan will be submitted in December 2026, with adoption in Summer/Autumn 2027. It will replace Parts One and Two of the current LDP with a single Plan.

5.2.1.36 As the new LDP progresses, it will gain material weight in the consideration of this Application. It will continue to be reviewed as this Application progresses. Relevant updates are included in the 'Emerging Policy' section below.

The Cheshire West and Chester Local Plan (Part One) Strategic Policies (2015)

5.2.1.37 Part One of the Local Plan provides the overall vision, strategic objectives and spatial strategy for the borough to 2030.

5.2.1.38 Policies relevant to the Proposed Development include:

- SO10: North Cheshire Green Belt;
- SO16: Sustainable Waste Management;
- STRAT 1: Sustainable Development;
- STRAT 8: Rural Area;
- STRAT 9: Green Belt and Countryside;
- STRAT 10: Transport and Accessibility ;
- STRAT 11: Infrastructure;
- ECON 1: Economic Growth, Employment and Enterprise;
- ECON 3: Visitor Economy;
- SOC 5: Health and Wellbeing;
- ENV 1: Flood Risk and Water Management;
- ENV 2: Landscape;
- ENV 4: Biodiversity and Geodiversity;
- ENV 5: Historic Environment;
- ENV 6: High Quality Design and Sustainable Construction; and
- ENV 9: Minerals Supply and Safeguarding

The Cheshire West and Chester Local Plan (Part Two) Land Allocations and Detailed Policies (2019)

5.2.1.39 Part Two of the Local Plan provides further detailed policies and land allocations to support the strategic objectives and policies in the Local Plan (Part One), also to 2030.

5.2.1.40 Policies relevant to the Proposed Development include:

- DM11: Manchester Airport Safeguarding Zone;
- DM12: Jodrell Bank Radio Telescope Consultation Zone;
- DM17: Advertisement Control Order;
- DM44: Protecting and Enhancing the Natural Environment;
- DM45: Trees, Woodland and Hedgerows;

- M4: Proposals for Exploration, Appraisal or Production of Hydrocarbons;
- M6: Salt and Brine Working (Controlled Brine Extraction) Preferred Area;
- ENV1: Flood Risk and Water Management;
- EN4: Biodiversity and Geodiversity;
- ENV9: Minerals Supply and Safeguarding; and
- N1: Northwich Settlement Area

Cheshire West and Chester – Supplementary Planning Documents

5.2.1.41 The following Supplementary Planning Documents (SPD) are relevant to the Proposed Development:

- Oil and Gas Exploration, Production and Distribution SPD (2017)

5.2.5 EMERGING POLICY

5.2.1.42 At the local level, there is one SPD in preparation by Halton Borough Council which may need to be considered as it progresses. CWAC is also currently preparing an update to its Local Plan. It is not expected that this will be adopted prior to the submission of this application.

Cheshire West and Chester – Local Plan Issues and Options (Regulation 18) 2025

5.2.1.43 The draft update to the Local Plan will replace the current Part One and Two with a combined, single document. Many of the current policies have been carried across.

5.2.1.44 Draft policies relevant to the Proposed Development include:

- SD 1 – Sustainable Development;
- NO 1 – Northwich;
- GB 1 – Green Belt and Countryside;
- TA 1 – Transport and Accessibility;
- ID 1 – Infrastructure and Developer Contributions;
- EG 1 – Economic Growth, Employment and Enterprise;
- VE 1 – Visitor Economy;
- HW 1 – Health and Wellbeing;
- FW 1 – Flood Risk and Water Management;
- LA 1 – Landscape;
- GI 1 – Green Infrastructure, Biodiversity and Geodiversity;
- HE 1 – Historic Environment;

- DS 1 – High Quality Design;
- DS 2 – Sustainable Construction;
- DS 3 – Climate Adaptation;
- EN 1 – Energy Supplies and Energy Related Developments;
- EN 4 – Sustainable Energy and Heat;
- EN 5 – Low Carbon Fuel and Carbon Capture;
- MW 1 – Managing Waste;
- MS 1 – Minerals Supply;
- MS 3 – Safeguarding ;
- MS 5 – Restoration;
- MISC 1 – Safeguarded Areas Around Aerodromes; and
- MISC 2 – Jodrell Bank

5.2.1.45 Relevant policy updates will be considered as the Proposed Development progresses.

5.2.6 GUIDANCE

Nationally Significant Infrastructure Projects: Advice on Good Design

5.2.1.46 In October 2024 the Planning Inspectorate (PINS) published non-statutory design Guidance: 'Nationally Significant Infrastructure Projects: Advice on Good Design'.

5.2.1.47 There is clear reference at section 4.7 of EN-1 to the need for energy projects to achieve good design. This reflects the recommendations within this Guidance, with reference to the benefits of establishing design principles early in the project process and the requirement for applicant assessment of how good design has been achieved. This should include reference to design development and consideration of alternatives.

5.2.1.48 There is recognition in both documents that the function and efficiency of infrastructure is a key element of good design, and whilst visual appearance should be considered as 'far as possible', as well as the project's response to local context, it is acknowledged that there are often limited opportunities to contribute to the enhancement of the quality of the area.

5.2.1.49 An assessment of the design development is included in **Chapter 3, Alternatives** of this PEIR.

5.3 NEEDS CASE

5.3.1 INTRODUCTION

5.3.1.1 The principle of underground gas storage (UGS) at the Site has already been established through the approval of the Consented Development in 2017. The Application in 2022 for a Non-Material Change to allow the storage of hydrogen gas at the Site identified significant national and regional need for a hydrogen gas storage site of this size to meet established goals to decarbonise the UK's energy supply. Since this Application was made, there has been increased acknowledgement of the essential contribution hydrogen needs to make to meet this goal, and additional strategies, funding, targets, and policy to support its expanded use have been published.

5.3.1.2 The Proposed Development will contribute to national ambitions, as well as addressing regional and local needs, as an essential element to the HyNet hydrogen cluster. It will provide benefits from hydrogen development to the local economy in compliance with local policy.

5.3.1.3 This section builds on the above policy context to establish the need for the Proposed Development, identifying how it will meet established targets and contribute to broader goals. Additional consideration of policy through a Planning Statement will follow as part of the Material Change Application.

5.3.2 DECARBONISING THE UK'S ENERGY SYSTEM

5.3.1.4 There is clear commitment by the UK Government to achieve net zero by 2050, with commitment to legally binding targets to bring greenhouse gas (GHG) emissions to net zero through the Climate Change Act 2008 (2050 Target Amendment) Order 2019. The UK has set interim carbon budgets to limit the total GHG emissions over a 5-year period. The most recently announced budget (the Sixth Carbon Budget) was set in 2021 and requires a 77% reduction in emissions from 1990 levels between 2033-2037.

5.3.1.5 These legal commitments are accompanied by a suite of policy documents setting strategies for meeting these goals. In 2021, the Government published the 'Net Zero Strategy', and the economic and energy security benefits of net zero are assessed in the 'Net Zero Growth Plan' and 'Energy Security Plan' published under the policy paper 'Powering up Britain' in 2023.

5.3.1.6 The 'Clean Power 2030 Action Plan' (2024) brings together these aims to establish short-term goals for clean energy development. It is clear on the need for a fundamental overhaul of the energy sector needed, including the requirements to "install clean sources of power at a pace never previously achieved; identify the energy mix needed for the 2030 power system and reorder the connection queue to achieve it; develop a flexible system that can accommodate and store Britain's renewable resources…" (Foreword by Chris Stark, Head of Clean Power 2030).

5.3.3 THE NEED FOR HYDROGEN

5.3.1.7 The Department for Energy Security and Net Zero (DESNZ) and Department for Business, Energy and Industrial Strategy (BEIS) Energy White Paper, 'Powering our Net Zero Future' (2020) establishes a clear shift to clean energy, with low-carbon hydrogen recognised as essential to this process. The Government has set a goal of reaching 5GW of low-carbon hydrogen production capacity by 2030. The use of hydrogen in heating and transport in addition to its existing use in industry, is in development and will drive further demand for hydrogen infrastructure.

5.3.1.8 The National Energy System Operator's (NESO) 'Future Energy Scenarios: Pathways to Net Zero' (2024) models credible energy pathways to meet net zero, with hydrogen playing a central role in each scenario. This is maintained in the 2025 update, which identifies a particular need for storage in the mid-2030s, which aligns with solution mining timescales.

5.3.1.9 In line with these goals, in June 2025 the Government published The UK Infrastructure 10 Year Strategy. The strategy identifies that progress has been made to support the growth of low carbon hydrogen production, with the first round of funding for green hydrogen projects now allocated. The Government has also progressed the commercial business models for hydrogen transport and storage, confirming that £500m will be allocated to hydrogen infrastructure following the Spending Review 2025, with the aim to develop regional hydrogen transport and storage networks.

5.3.4 HYDROGEN STORAGE

5.3.1.10 Storage facilities for hydrogen are critical to the expansion of the network, with large-scale facilities increasing in importance as production grows. Hydrogen storage connects producers with consumers to manage changes in demand, but it also has wider benefits to the decarbonisation of the energy network as a whole.

5.3.1.11 As set out in the UK Hydrogen Strategy (2021), because hydrogen must be manufactured, storage is essential to manage fluctuations in demand and ensure a steady supply. Currently, most hydrogen is produced and used directly in industrial processes, with one operator overseeing both processes meaning that demand and supply can be predicted and managed. As the use of hydrogen is expanded for heating, power, and transport, storage will be essential infrastructure to enable production to be expanded in line with emerging demand.

5.3.1.12 The UK Hydrogen Strategy and the Clean Power 2030 Action Plan recognise that hydrogen storage infrastructure will also help to balance supply and demand as a part of the wider energy network. As more of the UK's energy generation shifts to intermittent renewable power generation, hydrogen can act as an energy storage medium to support security of supply and balance the energy network.

5.3.1.13 NESO's 'Future Energy Scenarios' 2024 sets out that between 14 TWh and 49 TWh of hydrogen storage will be required by 2050, across a range of net zero pathways. This equates to between approximately 3,950 to 12,830 million cubic metres (mcm) (calculated based on higher heating value).

5.3.1.14 There is specific reference in the Hydrogen Strategy 2021 to underground salt cavern storage, identifying the potential to repurpose caverns currently used for storing natural gas. The Energy Networks Association's report, 'Britain's Hydrogen Network Plan' (2021) establishes that underground storage is able to provide large volume storage at the lowest cost per unit, which offers a significant strategic advantage for the development of hydrogen in the UK.

5.3.1.15 This is echoed in The Hydrogen Strategy Update to the Market: July 2025 which emphasises the importance of hydrogen storage networks as the basis for direct Government investment. This builds upon the December 2025 Update which established the specific need for salt cavern storage, acknowledging that '*by its technological characteristics alone, geological storage can provide a resilient, long-term supply of hydrogen'.* The flexibility of salt cavern storage is an additional key benefit, as '*hydrogen network balancing will need to occur on an intra-day basis, so fast-cycle storage will be required as well as storage that can operate over longer periods, for example to meet seasonal imbalances, both of which can be supplied by salt cavern storage.'*

5.3.1.16 The EN-1 NPS supports this goal by designating hydrogen storage NSIPs as CNP Infrastructure. This has been carried forward to the draft update to EN-1 (2025).

5.3.1.17 In the context of the urgent need for hydrogen storage infrastructure to support the expansion of hydrogen use to meet Net Zero, the Material Change Application is critical. Once at full capacity, the Proposed Development will have a working gas volume of 400 standard mcm with an import and export capacity of up to 45 mcm per day. With NESO's lowest estimated requirement of 3,950 mcm of hydrogen storage required by 2050, the project will make an important contribution to meeting this goal. As the use of hydrogen expands over the next few decades, the growth in storage capacity at the Site will align with this increased demand and use, and, therefore, allow the UK's short- and long- term hydrogen storage goals to be met.

5.3.5 HYNET

5.3.1.18 HyNet North West is a cluster of organisations developing advanced carbon capture and storage, hydrogen production, hydrogen distribution networks and hydrogen storage infrastructure with the aim to decarbonise industry in the northwest. With a significant concentration of industry and manufacturing in the region, it is a clear target for the development of infrastructure to achieve

decarbonisation goals. HyNet is part of the transition of the sector to a low carbon economy, retaining and growing jobs, skills, and economic output.

5.3.1.19 HyNet includes two hydrogen production plants with capacities of 350 MW and 1000 MW. A number of electrolytic hydrogen projects have also been announced in the region. These additional projects will link into HyNet's infrastructure.

5.3.1.20 Cadent is developing a hydrogen transport system to connect to the hydrogen production plant, major industrial and power generation users, and the Proposed Development. HyNet has worked closely with hydrogen customers to establish demand and storage requirements.

5.3.1.21 The hydrogen infrastructure established by the cluster will enable the use of hydrogen across the region to be expanded in line with government ambitions, with the Proposed Development representing a critical element.

5.3.1.22 The Government recognises the value of regional 'cluster' strategies in the expansion of the use of hydrogen. Economically, the hydrogen value chain is interdependent which requires coordination. HyNet is recognised in the UK Hydrogen Strategy (2021) as a key industry-led project to establish the distribution and transmission of hydrogen. The Energy Networks Association's report, 'Britain's Hydrogen Network Plan' (2021) estimates that the delivery of clean gas at scale via HyNet North West will create 5,000 jobs and save 1 million tonnes of CO_2 per annum.

5.3.6 LOCAL BENEFITS

5.3.1.23 The local benefits of the Proposed Development are also recognised in local planning policy. Policy ENV 9, 'Minerals Supply and Safeguarding' in CWAC's Local Plan Part 1 and Policy M 6 'Salt and Brine Working' in Part 2 support the extraction of salt and brine and the links this has to nationally significant gas storage capacity.

5.3.1.24 The creation of the caverns via salt mining will supply Inovyn's established brine operations in the region. The Proposed Development will, therefore, support existing industry and lead to job creation during the construction and operation and maintenance phases.

5.3.7 CONCLUSION

5.3.1.25 The established suitability of the Site for Underground Hydrogen Storage (UHS) represents a significant and recognised strategic opportunity in the expansion of the UK's hydrogen capacity. There is clear acknowledgement across the sector for the urgent and critical need to expand hydrogen storage capacity, and as a large-scale storage facility, the Proposed Development will contribute to this goal.

5.3.1.26 The fast-cycling function of the storage facility is essential to the balancing of supply and demand as the hydrogen market expands and matures. It can also function as an energy storage system to balance fluctuations in renewable energy production.

5.3.1.27 In its local context, the Proposed Development will contribute to the established brine industry and create jobs in the construction and ongoing operation of the gas storage facility. The Proposed Development will be of critical strategic importance to the HyNet North West cluster and will unlock the decarbonisation of industry across the region.

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