



Keuper Gas Storage Project

Preliminary Environmental
Information Report – Securing
Mitigation

PREPARED FOR
Keuper Gas Storage
Limited

DATE
August 2025

REFERENCE
EN0310001



DOCUMENT DETAILS

DOCUMENT TITLE	Keuper Gas Storage Project
DOCUMENT SUBTITLE	Preliminary Environmental Information Report – Securing Mitigation
PROJECT NUMBER	EN0310001
DATE	September 2025
VERSION	1.0
AUTHOR	ERM
CLIENT NAME	Keuper Gas Storage Limited

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ACRONYMS AND ABBREVIATIONS

Acronym	Description
CEMP	Construction Environment Management Plan
CWAC	Chester West and Chester
DCO	Development Consent Order
DEMP	Decommissioning Environmental Management Plan
EIA	Environmental Impact Assessment
EMS	Environmental Management System
ERM	Environmental Resources Management
EP	Environmental Permit
ES	Environmental Statement

Acronym	Description
HMMP	Habitat Management and Monitoring Plan
KGSL	Keuper Gas Storage Limited
KGSP	Keuper Gas Storage Project
MC	Material Change
OEMP	Operational Environmental Management Plan
PEIR	Preliminary Environmental Information Report
oCEMP	Outline Construction Environment Management Plan

19. SECURING MITIGATION

19.1 INTRODUCTION

- 19.1.1.1 One of the key objectives of an Environmental Impact Assessment (EIA) is to identify and define socially and environmentally acceptable, technically feasible and cost-effective mitigation measures which serve to reduce the negative effects of the Proposed Development.
- 19.1.1.2 Whilst the Consented Development included mitigation for each EIA topic, **Chapters 6 to 17** of this Preliminary Environmental Information Report (PEIR) have identified a number of updated mitigation measures to be included as part of the Material Change (MC) for the Proposed Development.
- 19.1.1.3 A number of mitigation measures have been developed during this preliminary stage of the EIA process to avoid, minimise, reduce or remedy (e.g. reinstate or restore) any negative effects identified, and to create or enhance positive effects such as environmental and social benefits. Mitigation measures include design provisions and construction practices, as well as management actions. Further mitigation measures will be developed as the EIA process is finalised and will be presented in the Proposed Development Environmental Statement (ES).
- 19.1.1.4 Describing the planned mitigation measures is only one aspect. There also needs to be clear implementation mechanisms for fully incorporating them as the Proposed Development moves through its various phases of detailed design, preconstruction, construction, operation and maintenance, and decommissioning.
- 19.1.1.5 In order to demonstrate that all necessary controls and mitigation measures will be identified and implemented, a tabulated summary of mitigation measures for the Proposed Development will be prepared (see Table 19.1). The mitigation summary table will:
- provide an audit trail of the controls and mitigation measures on which the assessment conducted identifies to avoid, minimise, reduce and/or offset significant effects of the Proposed Development; and
 - set out the way in which the measures will be translated into clear and enforceable controls, either via existing Development Consent Order (DCO) Requirements, new Material Change (MC) Requirements or other consent regimes.
- 19.1.1.6 Table 19.1 will be completed for the ES and will include a topic-by-topic summary of the mitigation measures identified for the Proposed Development.
- 19.1.1.7 Appropriate provisions to secure these measures will be made in the MC application, meaning that any consent granted for the Proposed

Development will include mechanisms for the implementation of suitable mitigation measures for significant environmental effects.

19.2 CONSTRUCTION PHASE MITIGATION MEASURES

19.2.1 THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

19.2.1.1 A Construction Environment Management Plan (CEMP) acts as a strategic level document that sets out the framework for effective management of safety, health, environment and social impacts during the construction of a development.

19.2.1.2 The main purpose of the CEMP will be:

- To provide mechanisms for ensuring that measures to mitigate potentially adverse environmental, social and economic effects are implemented;
- To ensure that standards of good construction practice are adopted throughout the construction of the development;
- To provide a framework for mitigating impacts that may be unforeseen or unidentified until construction is underway;
- To provide assurance to third parties that their requirements and the commitments made in the ES with respect to environmental and social performance will be met; and
- To provide a framework for compliance auditing and inspection to enable the Applicant is assured that their aims with respect to environmental performance are being met.

19.2.1.3 The CEMP will introduce various supplementary management plans to address specific topics and / or in response to DCO requirements and / or specific conditions set out in other consents and licences, for example:

- A construction noise and vibration management plan;
- A dust management plan;
- A remediation strategy;
- A water quality monitoring plan;
- A spill response plan;
- An emergency response plan;
- A construction flood management plan;
- A construction waste management plan;
- A protected species management plan;
- A construction ornithology management plan;
- A soil management plan;
- A biosecurity plan; and
- A drilling management plan.

19.2.1.4 A CEMP has previously been produced for the Consented Development, initially provided with the ES, then further developed

as KGSP progressed to construction. To update the CEMP for construction use, input was required from a relevant construction contractor and statutory bodies then issued to Chester West and Chester (CWAC) before ultimately gaining approval.

- 19.2.1.5 An updated outline CEMP (oCEMP) will be provided as part of the ES for the MC application, to capture any significant changes to construction regarding the Proposed Development.
- 19.2.1.6 Post submission of the MC application, a future updated CEMP will be produced as the Proposed Development proceeds through the detailed design and pre-construction phases. As previously completed for the current Consented Development CEMP, input from relevant contractors, statutory bodies and local authorities will be required.
- 19.2.1.7 The future updated CEMP will reflect and conditional, requirements and obligations contained in the MC and DCO as well as specific mitigation (and monitoring) requirements that result from obtaining other consents and licences.
- 19.2.1.8 The construction contractors and all subcontractors will be required to comply with measures and procedures contained in the future updated CEMP.

19.2.2 CEMP PHASING AND REVIEW

- 19.2.2.1 The Proposed Development will be delivered in a number of discrete elements and activities.
- 19.2.2.2 The key components of the Proposed Development are as follows:
 - the proposed storage of hydrogen gas rather than natural gas, including consolidation of pipelines;
 - changes to the Gas Processing Plant (GPP) area and hydrogen compatible equipment, including a flare instead of a vent;
 - moving non-hydrogen equipment to a utility compound adjacent to the GPP; and
 - the National Transmission System (NTS) for natural gas is being replaced by the Hydrogen Above Ground Infrastructure (HAGI) for connection to the HyNet Hydrogen Pipeline
- 19.2.2.3 Construction of the Consented Development began in 2022. Elements of the Consented Development, which are not proposed to be amended in this MC application will continue to be discharged and constructed, the agreed mitigation for these elements will remain consistent with the CEMP for the Consented Development.
- 19.2.2.4 Continuing to discharge the Consented Development for the purpose of construction will be managed with CWAC. Consultation has been held with CWAC to confirm the Applicants intention to continue construction of elements not proposed to change.

- 19.2.2.5 Following approval of this MC Amendment, the indicative programme for the rest of the Proposed Development is based upon assumed dates and is split into key activities as shown in **Figure 2.14** in **Chapter 2, Proposed Development Description**.
- 19.2.2.6 Whilst there will, ultimately, be one CEMP, there may be other separate documents prepared for different elements of the Proposed Development. Where this is the case, each bespoke CEMP will be developed to a common high standard and each one will be submitted to the relevant statutory body for review and approval before development of any part of the relevant works commence.
- 19.2.2.7 The individual CEMPs will be focused on the activities concerned for a particular element or phase.
- 19.2.2.8 The Applicant will undertake regular reviews of the Proposed Development and emerging standards, guidance, and legislation to ensure that good industry practice is being applied at all times in the CEMP. The review process will be iterative and ongoing, so that new information is identified at an early stage and incorporated into any updated versions of a CEMP (and agreed with CWAC).

19.3 OPERATION AND MAINTENANCE PHASE MITIGATION MEASURES

- 19.3.1.1 An Environmental Permit (EP) will be required to operate and maintain the Proposed Development. The EP will have its own management and monitoring requirements set by the Environment Agency and will require an Environmental Management System (EMS) to be in place (most likely to ISO14001 equivalent, if not actually certified) and mitigation and monitoring requirements to be delivered through an Operational Environmental Management Plan (OEMP) or similar.
- 19.3.1.2 The EP will require a 'Technically Competent' person to be appointed to oversee the permit. Most environmental mitigation relating to specific aspects of operation will therefore be secured through the EP.
- 19.3.1.3 Some aspects of the operating Proposed Development may not fall within the remit of the EP, and these will be secured through other mechanisms as follows.
- An Habitat Management and Monitoring Plan (HMMP) will be prepared and included with the ES. It will secure delivery during operation, through monitoring, management and maintenance measures, of the landscaping provisions and biodiversity mitigation and enhancements;
 - Permanent surface water drainage and foul water drainage systems will be designed in detail in accordance with the principles set out in the Surface Water Drainage Strategy; and
 - An updated scheme for all permanent external lighting to be installed for the Proposed Development will be designed in detail

and submitted to and approved by CWAC. The design of the external lighting will be similar to the Consented Development and in accordance with the principles of an Indicative Lighting Strategy (or similar). This will include measures to minimise and mitigate any artificial light emissions during the operation of the Proposed Development.

19.4 DECOMMISSIONING PHASE MITIGATION MEASURES

- 19.4.1.1 The decommissioning activities and their associated impacts, and therefore required mitigation measures, are not expected to be materially different to those in the consented development.
- 19.4.1.2 Decommissioning will be carried out in accordance with management and mitigation measures outlined in the Decommissioning Plan (including a Decommissioning Environmental Management Plan (DEMP)). As decommissioning of the Proposed Development is not anticipated to commence until 50 years after Operation starts, the DEMP will be produced as and when needed post operation of the Proposed Development.

19.5 SUMMARY OF MITIGATION MEASURES AND SECURING MECHANISMS

- 19.5.1.1 **Table 19.1** will provide a summary of the mitigation measures that will be described in the ES and the way in which they will be secured through the MC (or under other relevant legislation).
- 19.5.1.2 The measures will be set out topic by topic and the individual topic chapters can be referred to if additional detail or more context is required (chapter and section number referencing will be provided in the table).
- 19.5.1.3 Reference will also be made to the Proposed Development stage or element (design, construction, , operation and maintenance, and decommissioning) that the measure most relates to and the party responsible for implementing the measure.
- 19.5.1.4 Lastly the mechanisms for securing the measures will be referenced in terms of management plans and similar that are the subject of MC requirements. These fall into two categories: material that will be included as part of the MC submission (typically in outline); and detailed material that are required to be produced and suitably approved at a later date (e.g. pre-construction).
- 19.5.1.5 **Table 19.2** will provide a list of the documents that will secure the mitigation relied upon in Table 19.1Table 19.2 and how they will be secured through the MC requirements or other regimes (e.g. environmental permitting).

TABLE 19.1 – SUMMARY OF MITIGATION MEASURES AND SECURING MECHANISMS

"It should be noted that this table will be populated for the ES. All the mitigation measures incorporated into the Proposed Development at this stage in the EIA process (i.e. production of the PEIR) are described in the topic Chapters 6 to 17 and should be reviewed in the context of these chapters. The information to be included in this table will be entirely drawn from those chapters in the process of completing the EIA process up to the point of ES submission".

Corresponding PEIR Chapter	Development Phase	Commitment (Mitigation Measure)	Embedded and / or Additional Mitigation	Commitment Securing Mechanism	Responsible Party for Compliance and Monitoring

TABLE 19.2 – SECURING MECHANISMS FOR MITIGATION

For similar reasons to those explained relating to Error! Reference source not found., this table will be populated at ES completion.

Corresponding PEIR Chapter	Development Phase	Commitment (Mitigation Measure)	Embedded and / or Additional Mitigation



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ERM London

2nd Floor, Exchequer
Court

33 St Mary Axe

London

EC3A 8AA

T: 020 3206 5200

www.erm.com