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15 May 2024

Dear Mr Stevenson,

**PLANNING ACT 2008**

**PROPOSED NON-MATERIAL CHANGE TO THE KEUPER UNDERGROUND GAS STORAGE FACILITY ORDER 2017 S.I NO. 2017/433**

1. I am directed by the Secretary of State for Energy Security and Net Zero (“the Secretary of State”) to advise you that consideration has been given to the application (“the Application”) made by Keuper Gas Storage Limited (“the Applicant”) on 18 November 2022 to make changes which it states are not material to the Keuper Underground Gas Storage Facility Order 2017 (“the Order”) under section 153 of, and Schedule 6 to, the Planning Act 2008 (“PA2008”). This letter is the notification of the Secretary of State’s decision in accordance with Regulation 8 of the Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011 (as amended) (“the 2011 Regulations”).
2. The original application for development consent under the PA2008 was granted on 15 March 2017. Development consent was granted for the Keuper Underground Gas Storage Facility, which included consent for the construction and operation of a new underground natural gas storage facility consisting of up to 19 underground gas storage caverns with the capacity to store a working gas volume of approximately 500 million standard cubic metres (mcm), with an import and export capacity of up to 34 mcm per day, at Holford Brinefield in Cheshire. The Order was amended by the Keuper Underground Gas Storage Facility (Correction) Order 2017 which came into force on 8 August 2017.
3. The Applicant is seeking consent for various changes to the Order. The Secretary of State has considered the changes proposed and has addressed them below according to whether they relate to the use and storage of hydrogen. The Secretary of State has referred to the descriptions provided by the Applicant in the Keuper Gas Storage Project Application Statement dated 16 November 2022 (“Application Statement”).

#### Changes to the Order relating to hydrogen

4. The Applicant is seeking consent for changes to the Order amending the definition of 'gas' to include 'hydrogen' **and** further changes contingent on this, as below:
- amendment to the definition of 'gas' within Part 1, Article 2 of the Order to include 'hydrogen' gas within the definition, in addition to 'natural' gas which is as defined in section 235 of the PA2008 [Application Statement 2.4.2, 2.4.12];
  - amendment replacing the reference to 'connection to the National Grid's national gas transmission system network high pressure gas pipe adjacent to King Street (A530)' with the words 'connection to the gas transmission system pipeline' in the description of Work No 12 within Schedule 1 of the Order [Application Statement 2.4.15];
  - amendment of wording from 'national transmission system compound' to 'transmission system compound' in the description of Work No.5D, Work No.7 and Work No.13 within Schedule 1 of the Order and the title of Table 11 within Requirement 2 and the description of Requirement 4(1)(a)(iii) of Schedule 2 of the Order [Application Statement 2.4.16];
  - amendment to Requirement 22 of Schedule 2 of the Order to include natural gas 'or hydrogen' gas in the context of conveyance of gas from the authorised development [Application Statement 2.4.13]; and
  - an option to include an alternative location of the proposed gas connection compound in Work No.12 within Schedule 1 of the Order [Application Statement 2.4.14].

#### Changes to the Order not relating to hydrogen

5. The Applicant is seeking consent for other changes to the Order which do **not** relate to the proposed amendment to the definition of 'gas' to include 'hydrogen':
- amendment to the list of Certified Plans in Article 35 within Part 6 of the Order to include updated plans [Application Statement 2.4.18 - 2.4.20]:
    - a. 35(1)(e) Works plans 13-03-01/HOL/24/504-B2 and 13-03-01/HOL/24/510-B3;
    - b. 35(1)(i)(ii) Elevation drawings 13-03-01/HOL/24/274-B2 and 13-03-01/HOL/24/270-B5; and
    - c. 35(1)(m) Landscape plans 13-03-01/HOL/24/263-B2, 13-03-01/HOL/24/264-B2 and 13-03-01/HOL/24/266-B2;
  - amendment to the list of Certified Plans in Article 35 within Part 6 of the Order to include updated documents [Application Statement 2.4.7 – 2.4.10]:
    - a. 35(1)(j) the seismic survey report Revision A (document ref: 9.1);
    - b. 35(1)(k) the sub-surface safety assessment report Revision B (document ref: 9.2); and
    - c. 35(1)(l) the preliminary study of gas design capacity Revision B (document ref: 9.3);
  - amendment to the registered address of the 'undertaker' as defined in Part 1, Article 2 of the Order [Application Statement 2.4.21]; and
  - relocation of the proposed office, control and maintenance building in Work No.15 within Schedule 1 of the Order [Application Statement 2.4.18 – 2.4.20].

### Changes to the Order requested during the Consultation

6. During the consultation, minor changes were requested by the Canal and River Trust and Holford Gas Storage Limited:
  - amendment to the address of Canal and River Trust in Article 2 (Interpretation) of Amendments to Part 1 (PRELIMINARY) of the Order; and
  - amendment to paragraph 62, sub-paragraph 10 in Part 5 within Schedule 9 of the Order to the Protective Provisions for Holford Gas Storage Limited.
7. The Secretary of State considers, with regard to the consultation responses and the response from the Applicant confirming that it was content for these changes to be made as part of the Application, that these minor changes can be made.

### **Consultation on the Non-Material Change Application**

8. The Applicant published a notice of the Application in accordance with Regulation 6 (Publicising the application) of the 2011 Regulations (the “Regulation 6 notice”) for two consecutive weeks in the local press (Runcorn Weekly News and Norwich and Winsford Guardian) on 24 November 2022 and 1 December 2022. The Application was also made publicly available on the Planning Inspectorate’s (“PINS”) website, such that there was an opportunity for anyone not notified to also submit representations to PINS.
9. In accordance with the requirements of Regulation 7 of the 2011 Regulations, pre-submission consultation was carried out with specified parties listed in Appendix 8 of the Consultation and Publicity Report (“Consultation Summary”).
10. In accordance with the requirements of Regulation 7 of the 2011 Regulations, specified parties, such as the local planning authority, were notified by email on 17 November 2022.
11. The deadline for receipt of representations on the Application was 11:59pm on 6 January 2023. In accordance with the requirements of Regulation 7(5) of the 2011 Regulations, the Secretary of State made available all responses to the consultation on the PINS website on 6 February and 28 February 2023.
12. The Applicant submitted its Consultation Summary as required by Regulation 7A of the 2011 Regulations on 12 December 2022, which included a copy of the Regulation 6 notice and which stated that the Applicant has complied with all necessary steps set out in Regulations 6 and 7 of the 2011 Regulations in respect of stakeholder consultation and its public engagement approach. This was published on the PINS website on 13 December 2022 and an updated version published on 18 April 2023.
13. The Secretary of State wrote to the Health and Safety Executive on 18 April 2023 as no response had been received to the Applicant’s consultation by the original date of 6 January 2023. The Health and Safety Executive responded on 28 April 2023 and this was published on the PINS website on 16 May 2023.

14. Representations were received and considered from: Canal & River Trust, Environment Agency, Historic England, Health and Safety Executive, Holford Gas Storage Limited, Lloyds Bank, National Grid, NATS Ltd, Natural England, Nick Jones (a local resident), Santander, Shropshire Council, The Coal Authority and United Utilities. The Applicant responded to the representations in their Consultation Summary, updated on 11 April 2023.
15. The Secretary of State has considered the representations received in response to the consultation and does not consider that any further information needs to be provided by the Applicant or that further consultation is necessary in order for the Secretary of State to determine the Application.

### **Consultation Responses**

16. The Environment Agency, Shropshire Council and The Coal Authority responded to the consultation but had no comment to make on the Application.

#### *The Canal and River Trust (“CRT”)*

17. CRT considered the Application would not directly or indirectly impact its waterways located some distance to the west of the site and did not request any amendments to protective provisions in relation to CRT’s interests. CRT requested amendment of its address details within the Order. The Applicant did not object to this change being made in the amended Order, provided this does not delay any decision-making process. The Secretary of State has updated their address in the amended Order.

#### *Historic England (“HE”)*

18. HE agreed with the Applicant that the *“proposed physical changes to the location of the office building and gas connection compound do not introduce any new or different impacts on the cultural heritage resource. Similarly, the amendments to the definition of gas and to the transmission system are unlikely to have any new or different impacts”*.

#### *Health and Safety Executive (“HSE”)*

19. The Secretary of State consulted HSE on 18 April 2023<sup>1</sup> as no response had been received by the original deadline of 6 January 2023. HSE responded on 28 April 2023<sup>2</sup> stating that they had no comment on the Application with regards to CEMHD5 Land Use Planning or CEMHD7 Explosives. The Secretary of State notes this response but does not consider that it assists her in determining this Application.

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<sup>1</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN030002/EN030002-001594-Offsen%20-%20Keuper%20Gas%20Storage%20-%20Information%20Request%20HSE%20180423.pdf>

<sup>2</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN030002/EN030002-001596-Response%20from%20the%20Health%20and%20Safety%20Executive%2028.04.2023.pdf>

*Holford Gas Storage Limited (“HGSL”)*

20. HGSL had no specific comments on the proposed amendments but requested an amendment of a typographical drafting error in its protective provisions within the Order. The Applicant did not object to this change being made in the amended Order, provided this does not delay any decision-making process. The Secretary of State has made this amendment to the Order.

*Lloyds Bank*

21. Lloyds Bank requested further information on the properties affected by the proposals. The Applicant confirmed that it has responded to Lloyds Bank, providing details of the individual and relevant property.

*National Grid*

22. National Grid raised that the proposed work location is within the High-Risk zone for its transmission apparatus and that work must not proceed without further assessment from its Asset Protection team. The Applicant confirmed that it contacted National Grid and started direct discussions on the Development in February 2023. The Applicant explained that the consented DCO for natural gas storage includes a connection to the National Transmission System and protective provisions for National Grid were agreed at that time. The Applicant confirmed that, while a change to hydrogen would mean that a connection to the National Transmission System is no longer required and that works would actually move further from National Grid assets, the protective provisions would remain and the Applicant would liaise and agree with National Grid on any works in the vicinity of their infrastructure.

*NATS Limited (“NATS”)*

23. NATS does not operate infrastructure within 10km of the Development and anticipated no impact from the Application.

*Natural England (“NE”)*

24. NE considered that the proposed changes would not have significant adverse impacts and had no objection. NE was satisfied that the changes were non-material and no new air quality, noise, vibration, ecology or ground condition impacts would arise and there would be no significant additional greenhouse gas emissions. NE was satisfied that its previous advice continued to apply to this amendment proposal. NE stated that it would expect appropriate Best Available Techniques to be implemented to prevent pollution incidence and it understood that a surface and ground water management plan was included within the Construction Environmental Management Plan (“CEMP”). NE confirmed its previous advice regarding the requirements for pre-construction surveys in regard to European Protected Species still applied. NE was satisfied by the Applicant’s approach to best and most versatile agricultural land and soils, to be outlined in the CEMP. However, NE stated it would require further consultation should the proposal require future amendment to develop further pipelines or expansion (including further storage facilities) in addition to those specified.

Nick Jones

25. Mr Jones raised a number of questions relating to safety concerns regarding the proposed changes. Mr Jones raised that the Application documents concluded generically that hydrogen gas can be safely stored in underground caverns but asked about the specific considerations for safe storage of hydrogen at this facility. Mr Jones raised that the risks presented from storage of hydrogen must be greater than that of natural gas due to lower flammable limits, lower ignition energy required, propensity for hydrogen to search out leak pathways and the higher energy density of hydrogen compared to natural gas. Mr Jones asked:

- I. to be provided with the key hazards and hazard management strategies for the storage of hydrogen at this specific site for all phases of the development,
- II. for a summary of how the safe operation and maintenance of the development would be regulated and demonstrated, and
- III. for a summary of why the risks posed to the public, workforce and environment are as low as reasonably practicable ("ALARP").

26. The Applicant responded that hydrogen has been stored safely underground in other salt caverns in the UK and USA and that INEOS Inovyn and predecessor companies have been producing and handling hydrogen for over 100 years and have expertise in underground storage in salt caverns, including storage of natural gas and ethylene. The Applicant agreed that hydrogen is flammable, and must be managed appropriately, but explained that the caverns will contain considerably less total energy with hydrogen storage compared to natural gas, due to a smaller total volume being stored.

27. In response to Mr Jones' questions:

- I. The Applicant responded that "*the facility has been designed and will be operated to the highest standards to minimise the likelihood of accidents or loss of containment, and to limit the harmful effects of such an accident throughout the life of the facility*". The Applicant explained that many design and operational measures have been or will be put in place to achieve this objective. Appropriate Inherent, Preventative, Detection and Control and Mitigation safety measures will be put in place to manage the risk to a level which is ALARP. The Applicant gave examples of inherent safety considerations, including site selection; site layout; minimising hydrogen inventory, process temperatures and pressures; designing plant and equipment for the maximum foreseeable temperatures and pressures; material selection and technology selection to eliminate or minimise the use of other hazardous materials. Examples of preventative safety measures included appropriate design and construction of the vessels and pipework; planned preventative maintenance of the pipelines and associated equipment; protection against impact damage; safe systems of work procedures; and competency assurance for operators. Examples of detection and control measures included automated fire and gas detection; regular operator site walk around; operator monitoring of process parameters; control systems with executive actions; emergency shutdown procedures; automatic shutdown and depressurisation systems; mechanical isolation;

pressure relief systems and safety instrumented systems. Examples of mitigation measures include active fire suppression systems; passive fire protection arrangements; ignition control measures; emergency response procedures; secondary containment; and minimising the number of personnel and vehicles onsite.

- II. The Applicant explained that in England regulation is by the HSE and the EA as the competent authority. The Applicant stated the initial planning assessment included an assessment by HSE of the suitability of the proposed location for the storage of hydrogen. Relevant regulations include the Control of Major Accidents and Hazard (“COMAH”) Regulations and the Borehole Safety and Operations Regulations.
  - III. The Applicant explained that the ALARP demonstration is made to the competent authority using the safety report and considers (but is not limited to) the types of safety measures described above. Significant hazards are identified and modelled to determine safety and environmental consequence, frequency analysis is carried out to determine the residual risk to people (workers and the public) and the environment and the acceptability of the risk is then assessed against company norms and by the competent authority to prove that the risk to people and environment is indeed ALARP.
28. The further information provided by the Applicant in response to Mr Jones has been taken into account by the Secretary of State in her consideration of the Application.

#### *Santander*

29. Santander requested further information on the properties affected by the proposals as it was unable to locate the mortgage account number. The Applicant confirmed that it responded to Santander, providing details of the individual and relevant property.

#### *United Utilities (“UU”)*

30. UU has assets within and adjacent to the order limits and did not raise any specific comments or an objection. UU raised the close proximity of the site to HS2 High Speed Rail. The Applicant confirmed it was aware of the location of UU assets and was familiar with the proposed routing and safeguarding of HS2, further confirming it will continue to liaise with both UU and HS2 Limited as appropriate.

#### **Guidance relating to the materiality of the proposed changes**

31. There is no statutory definition of what constitutes a 'material' or 'non-material' amendment for the purposes of Schedule 6 to the PA2008 and Part 1 of the 2011 Regulations.
32. The Secretary of State has considered whether the elements of the Application are material or non-material changes. In doing so, the Secretary of State has had regard to paragraph 2(2) of Schedule 6 to the PA2008 which requires the Secretary of State to consider the effect of the change on the Order as originally made.
33. Guidance produced by the Department for Communities and Local Government (now the Department for Levelling Up, Housing and Communities (“DLUHC”)), entitled “Planning Act

2008: Guidance on Changes to Development Consent Orders” (December 2015) (“the Guidance”)<sup>3</sup>, makes the following points in relation to whether a proposed change is likely to be material or non-material:

- (a) given the range of infrastructure projects that are consented through the PA2008, and the variety of changes that could possibly be proposed for a single project, the Guidance cannot, and does not attempt to, prescribe whether any particular types of change would be material or non-material;
- (b) however, there may be certain characteristics that indicate that a change to a consent is more likely to be treated as a material change. Four examples are given in the Guidance as a starting point for assessing the materiality of a proposed change, namely:
  - (1) whether an update would be required to the Environmental Statement (“ES”) (from that at the time the Order was made) to take account of new, or materially different, likely significant effects on the environment;
  - (2) whether there would be a need for a Habitats Regulations Assessment (“HRA”), or a need for a new or additional licence in respect of European Protected Species (“EPS”);
  - (3) whether the proposed change would entail compulsory acquisition of any land that was not authorised through the Order; and
  - (4) whether the proposed change would have a potential impact on local people and business (for example, in relation to visual amenity from changes to the size and height of buildings; impacts on the natural and historic environment; and impacts arising from additional traffic).
- (c) although the above characteristics indicate that a change to a consent is more likely to be treated as a material change, these only form a starting point for assessing the materiality of a change. Each case must depend on thorough consideration of its own circumstances.

### **Consideration of the materiality of the proposed changes to the Order relating to hydrogen**

- 34. The Secretary of State has considered the change proposed by the Applicant to amend the definition of ‘gas’ in Part 1, Article 2 of the Order to include ‘hydrogen’, and further changes contingent on this, as outlined in Paragraph 4 above.
- 35. The Secretary of State is not satisfied on the basis of the information provided by the Applicant, both in the Application documents and during the consultation process, that the changes relating to hydrogen are non-material, against the four matters set out in (1), (2), (3) and (4) in Paragraph 33 above and paragraph 2(2) of Schedule 6 to the PA2008. Her reasons for this conclusion are set out below.

### Consideration of the Environmental Statement for proposed changes relating to hydrogen

- 36. The Applicant supplied a document entitled Non-material Change Application - Environmental Report (“Environmental Report”) which provides updated environmental information to support the Application, concluding that the proposed changes in respect of

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<sup>3</sup> <https://www.gov.uk/government/publications/changes-to-development-consent-orders>



natural gas to hydrogen will not have any new significant environmental impacts beyond those already assessed in the original ES for the Order. The Applicant provided supporting documents in the form of three technical reports by Geostock:

- (i) KGSP Geophysical Interpretation of Seismic Lines IEL13-01, IEL-13-02, IEL-13-03 and IEL-13-04 (Extract),
  - (ii) KGSP Assessment of Geological Suitability, Preliminary Design and Safety (the “Geostock Safety Report”), and
  - (iii) KGSP Preliminary Study of Gas Cavern Storage Design Capacity.
37. The Secretary of State has fully considered the Environmental Report and the supporting documents. She considers that the Geostock Safety Report is of particular relevance to her consideration of the Application. The Geostock Safety Report briefly evaluates impermeability based on existing cavern operations elsewhere in the UK such as Teesside [Geostock Safety Report 3.1]. However, the Secretary of State notes that Teesside is operated as a slow cycling cavern used to supply industrial processes, with smaller changes in pressure and temperature than are proposed here. As such, the Secretary of State does not consider Teesside an appropriate comparison in this case. The Secretary of State considers that the potential consequences of leakage have not been sufficiently discussed in the Environmental Report: there is some discussion of risks to ecology and impacts on greenhouse gas emissions, but possible impacts of increased diffusivity, potential leakage and emissions are not considered in the context of these areas of concern [Environmental Report 4; 6; 9]. The Secretary of State considers that these are key issues which needed to be addressed in order for the Secretary of State to have been satisfied that the proposed change could be made as a non-material change. She concludes that the Environmental Report does not address these issues in sufficient detail to enable the conclusion that changes relating to hydrogen are non-material.
38. The Secretary of State notes that the proposed change to the wording of the Order to amend the definition of ‘gas’ within Part 1, Article 2 of the Order to include ‘hydrogen’ gas in addition to ‘natural’ gas would give the Applicant the option to store only hydrogen gas, both hydrogen gas and natural gas or only natural gas. The Secretary of State has assessed the Application on the basis that any of these outcomes is possible, but notes that the supporting documents suggest that only hydrogen would in fact be stored, for example, “*the proposed amendment is for the storage of hydrogen gas rather than natural gas*” [Environmental Report 1] and “*operating the site as a hydrogen storage facility instead of a natural gas storage facility*” [Environmental Report 4.5]. The Secretary of State considers that if the Applicant’s intention is to store only hydrogen gas, as indicated by the supporting documents, it would be preferable if this was reflected in the amendments to the Order.
39. The Secretary of State has not been provided with information by the Applicant on whether there are different chemical and physical properties between natural gas and hydrogen gas, whether such differences may give rise to an increased risk of gas leakage, or any modelling of the proposed method of storing and emptying gas caverns using hydrogen gas. The

Secretary of State concludes that consideration of leakage and permeability is lacking in the Application documents, that the risk of hydrogen leakage cannot be discounted and that this risk, and associated environmental impacts, needs to be taken into account within the Environmental Report. She considers that this information is essential in order for the safety implications of the proposed changes to be fully understood. Due to the novel nature of the proposed changes relating to hydrogen she does not consider that it would be appropriate to defer safety matters to subsequent control regimes (e.g. COMAH).

40. The Geostock Safety Report outlines safety measures which will be included in future written documents [Geostock Safety Report 6; 7]. The Secretary of State further notes the Applicant's response to Mr Jones during the consultation on the Application where the Applicant briefly listed measures it intends to put in place to minimise the risk of accidents or loss of containment. Given the extent of the uncertainties and complexities associated with the proposed changes relating to hydrogen, the Secretary of State considers that these matters should have been addressed in the documentation submitted to her with this Application in order to fully inform consultees and to inform the Secretary of State's consideration of the materiality of the proposed changes relating to hydrogen. In addition, the additional information provided in response to Mr Jones is not of itself sufficient to persuade the Secretary of State that the proposed change is non-material.
41. In addition to considering the information provided by the Applicant, the Secretary of State has noted recent research by the International Energy Agency's Hydrogen Technology Collaboration Programme-Task 42 (2023), "Underground Hydrogen Storage: Technology Monitor Report"<sup>4</sup> ("IEA Report"). The IEA Report indicates that hydrogen has different reaction pathways to natural gas and is more likely to undergo different biogeochemical and microbial reactions, particularly in a fast-cycling cavern where changes in pressure and temperature during injection can induce these reactions [IEA Report 1.2.2; 2.2.1]. The IEA Report indicates that permeability and leakage should be considered with regard to storage conditions, geological properties and operational design of a specific site [IEA Report 2.2.2] and suggests ways to monitor risk such as monitoring hydrogen purity as an indicator of biogeochemical reactions, monitoring leakage above and below ground, monitoring groundwater, induced seismicity and material degradation [IEA Report 2.5]. The Secretary of State notes the differences between natural gas and hydrogen and considers that these issues have not been sufficiently addressed in the Application documents provided so as to assure her that the change proposed in the Application would not be material.
42. The Secretary of State has carefully considered whether it would be appropriate to conduct further consultation to address these points. However, she is mindful that non-material change applications are intended to be minor changes that do not require extensive amounts of new information to be gathered once the application has been submitted. The Secretary of State considers that the gaps in information highlighted above, and the quantity of

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<sup>4</sup> UHS: Technology Monitoring Report <https://www.ieahydrogen.org/task/task-42-underground-hydrogen-storage/>

information required to address them, are such that this Application does not fit within the tests set out in guidance and referred to above.

43. To conclude, it is not possible to be satisfied that the changes relating to hydrogen would not result in new, or materially different, likely significant effects on the environment. Given the absence of this information, and other considerations as outlined above, the Secretary of State concludes that the Environmental Report is insufficient to support a conclusion that the amendment of the definition of 'gas' to include 'hydrogen' is non-material. The Secretary of State concludes that an updated ES (from that at the time the original Order was made) would be required to take account of potential new, or materially different, likely significant effects on the environment.

#### Consideration of Habitats Regulation Assessment for proposed changes relating to hydrogen

44. The Secretary of State notes that the HRA for the original Order concluded that there were no likely significant effects on any Special Area of Conservation ("SAC") or Special Protection Area ("SPA") or Ramsar site. In deciding whether the change to amend the definition of 'gas' to include 'hydrogen', and changes contingent on this, is non-material, the Secretary of State must consider the nature and impact of the changes proposed and be satisfied that there is no change to the conclusions of the HRA as a result of the proposed changes relating to hydrogen and therefore that a new HRA is not required. The Secretary of State notes that the Environmental Report does not explicitly reassess the potential for different impacts on protected sites which may result from changes relating to hydrogen. Consequently, the Secretary of State cannot say with certainty that the conclusions of the original HRA still apply and that any impacts of the proposed changes relating to hydrogen would not be material.
45. The Secretary of State notes the conclusion on EPS in the Environmental Report. The Applicant acknowledges that the Biodiversity Mitigation Plan ("BMP") and the licensing situation with regard to great crested newts needs to be reviewed given that the BMP refers only to Phase 1 of the project, and acknowledges NE must be satisfied with the licencing and mitigation proposed for the new scheme. The Secretary of State notes NE's consultation response which states that they do not foresee any new ecology impacts and that their previous advice can still apply to the project, if amended as proposed by the Applicant. The Secretary of State notes that the Environmental Report does not explicitly reassess the potential for different impacts on EPS which may result from changes relating to hydrogen. Consequently, the Secretary of State cannot say with certainty that the proposed changes relating to hydrogen do not bring about the need for a new or additional licence in respect of EPS.

#### Consideration of compulsory acquisition for proposed changes relating to hydrogen

46. In respect of compulsory acquisition, the Secretary of State notes that the change to amend the definition of 'gas' to include 'hydrogen', and changes contingent on this, does not require any additional compulsory purchase of land. Consequently, this question does not raise issues of materiality.

## Consideration of impact on local people and businesses for proposed changes relating to hydrogen

47. In respect of impacts on local people and businesses, the Secretary of State notes that no changes are anticipated by the Applicant compared to the impacts already assessed in the ES. The Secretary of State does not consider that this question raises issues of materiality.

## Conclusion on materiality for proposed changes relating to hydrogen

48. While the Applicant has submitted updated environmental information within the Environmental Report and accompanying supporting documents, the Secretary of State considers this information to be insufficient for the reasons outlined above. Further, the Secretary of State considers that the additional information required is of such a nature and extent that it would represent a significant change to the original ES, and consequently this strongly indicates that the amendment applied for is not a non-material change. The Secretary of State concludes that an updated ES (from that at the time the original Order was made) would be required to take account of potential new, or materially different, likely significant effects on the environment.
49. The Secretary of State has also considered the fact that hydrogen gas storage was not considered during the examination of the original application: the examination proceeded on the basis of storage of natural gas in the caverns. Further, the Secretary of State notes that the application for the original Order was considered by reference to s104 of the PA2008, which sets out the considerations which the Secretary of State must have regard to when considering an application in relation to which one or more National Policy Statements (“NPS”) has effect. In this case, the application fell to be determined in accordance with the 2011 NPSs EN-1 and EN-4 – for example when considering the need for natural gas storage which was clearly established in 2011 NPS EN-1 – except to the extent that other specified considerations indicated otherwise. Hydrogen storage is not covered by any of the 2011 NPSs so it is likely that an application, or part of an application, for hydrogen storage would have been considered by reference to s105 of the PA2008, which sets out the factors to which the Secretary of State must have regard when no NPS applies. The Secretary of State notes that the decision-making process and relevant considerations would have been informed by whether s104 or s105 was engaged. For the avoidance of doubt, it is noted that the need for hydrogen storage is established in the 2024 NPS EN-1 and that, as a result, any new application for hydrogen storage is likely to be considered under s104, taking into account the generic impacts set out in EN-1, although it is also noted that the 2024 NPS EN-4 is clear that it “*has effect only in relation to natural gas infrastructure*” and “*does not have effect for hydrogen infrastructure*”. The absence of any specific NPS policy on hydrogen storage at the time when the original Order was made, in contrast to the clear policy in place in relation to natural gas storage, and the consequent difference in the legal basis for decision-making that would have applied if the original application was for hydrogen storage, provides a further indication to the Secretary of State that the proposed change to amend the definition of ‘gas’ to include ‘hydrogen’ is not non-material.

50. Taking all of the above into account, the Secretary of State concludes that certain indicators in the Guidance, and other relevant considerations as outlined above, are such that she concludes that the change to amend the definition of 'gas' to include 'hydrogen' is **not** a non-material change.
51. Having reached this conclusion, the Secretary of State has gone on to consider other changes applied for by the Applicant, the purpose of which are to facilitate the proposed amendment to the definition of 'gas'. The Secretary of State concludes that these changes also cannot be dealt with under the procedure for non-material changes. The changes are addressed in turn below.
52. The Applicant requested an amendment to the reference to 'National Grid's national gas transmission system' to 'gas transmission system pipeline' in Work No.12 within Schedule 1 of the Order [Application Statement 2.4.15]. This has been requested by the Applicant to "*allow for the utilisation of either natural gas and/or hydrogen gas*" [Application Statement 2.4.15]. The Secretary of State notes that this change has been requested in order to facilitate the proposed change to storage of hydrogen instead of, or as well as, natural gas, which, as noted above, the Secretary of State concludes is not a non-material change. The Secretary of State considers that this part of the Application could only be consented if the change to the definition of 'gas' to include hydrogen had also been consented. The effect of this proposed change on the Order as originally made, as per paragraph 2(2) of Schedule 6 to the PA2008, in the absence of consent to store hydrogen, would exceed the parameters of the original Order considerably (in facilitating the utilisation of an unauthorised gas) and therefore is not a non-material change.
53. The Applicant further requested amendment of wording from 'national transmission system compound' to 'transmission system compound' in the description of Work No.5D, Work No.7 and Work No.13 within Schedule 1 of the Order and the title of Table 11 within Requirement 2 and the description of Requirement 4(1)(a)(iii) of Schedule 2 of the Order [Application Statement 2.4.16]. This has been requested by the Applicant "*following the change to the wording of the description of Work No.12*" [Application Statement 2.4.16]. The Secretary of State notes that this change has been requested in order to facilitate the proposed change to storage of hydrogen instead of, or as well as, natural gas. As above, the Secretary of State considers that the effect of these proposed changes, in the absence of consent to store hydrogen and the proposed change to the wording of Work No.12 above not being made, would exceed the parameters of the original Order considerably (in facilitating the utilisation of an unauthorised gas) and therefore is not a non-material change.
54. The Applicant further requested an amendment to Requirement 22 of Schedule 2 of the Order to include natural gas 'or hydrogen' gas in the context of conveyance of gas from the authorised development [Application Statement 2.4.13]. The Applicant is clear that this amendment is a direct "*consequence of this proposed change*", referring to the change to the definition of 'gas' to include 'hydrogen' [Application Statement 2.4.13]. The Secretary of State considers this change would enable the option to convey hydrogen gas to or from the Development by pipeline. In the absence of consent to store hydrogen, for the reasons stated

above, this proposed change would have the effect of exceeding the parameters of the original Order considerably (in facilitating the conveyance of an unauthorised gas) and is therefore not a non-material change.

55. The Applicant further requested the option to include an alternative location for the proposed gas connection compound in Work No.12 within Schedule 1 of the Order [Application Statement 2.4.14]. The Applicant states the reason for this change is because “*The proposed amendment is for the storage of hydrogen gas as an alternative to natural gas. The inclusion of hydrogen gas storage on site necessitates the inclusion of an option for an alternative gas connection compound (Work No. 12).*” [Application Statement 2.4.14]. The Applicant indicates that this change is only necessary in the event that the definition of gas is amended to include hydrogen to facilitate the utilisation of hydrogen gas. In the absence of consent to store hydrogen, for the reasons stated above, this proposed change would have the effect of exceeding the parameters of the original Order considerably (in facilitating the utilisation of an unauthorised gas) and is therefore not a non-material change.

### **Consideration of the proposed changes to the Order not relating to hydrogen**

56. The Secretary of State, having removed from consideration the change to amend the definition of ‘gas’ to include ‘hydrogen’ and the changes which would facilitate or are contingent on this, as outlined in Paragraph 4 above, moves on to consider the changes not relating to hydrogen as outlined in Paragraph 5 above.
57. The Secretary of State has considered the changes not relating to hydrogen against the four matters set out in (1), (2), (3) and (4) above:
- (a) The Secretary of State notes that the Environmental Report supports the Applicant’s conclusions that there are no new, or materially different, likely significant effects in respect of the changes not relating to hydrogen from those assessed in the ES. Considering the analysis supplied by the Applicant and responses to the consultation, the Secretary of State has concluded that no update is required to the ES in respect of the changes not relating to hydrogen.
  - (b) The Secretary of State has concluded that, given the nature and impact of the changes not relating to hydrogen, there is not likely to be a significant effect on any European site. Therefore, the Secretary of State is satisfied that a new HRA is not required. Furthermore, in respect of EPS, the Secretary of State is satisfied that the changes not relating to hydrogen do not bring about the need for a new or additional licence as the amendments sought are not anticipated to give rise to any new or different effects from an ecological perspective.
  - (c) The Secretary of State notes that the changes not relating to hydrogen do not require any additional compulsory purchase of land.
  - (d) The Secretary of State notes that the impacts on local people and businesses from the changes not relating to hydrogen are no greater than those arising from the development permitted by the Order.

58. The Secretary of State concludes that none of the specific indicators referred to in the Guidance, or other relevant considerations, suggests that the changes not relating to hydrogen constitute a material change. The Secretary of State has had regard to the effect of the changes not relating to hydrogen together with the previous change made to the Order in the Keuper Underground Gas Storage Facility (Correction) Order which came into force on 8 August 2017 and concludes that the changes not relating to hydrogen **are** non-material.

### **Environmental Impact Assessment**

59. The Secretary of State has considered whether the Application would give rise to any new significant or materially different effects when compared to the effects set out in the ES for the development authorised by the Order.
60. The Secretary of State is satisfied that the information provided by the Applicant in support of the changes not relating to hydrogen, as identified in Paragraph 5 above, is sufficient to allow her to make a determination on those elements of the Application.
61. The Secretary of State has considered all relevant information provided and the comments of consultees. The Secretary of State agrees with the Applicant's conclusions that, for the changes not relating to hydrogen, there will not be any new or materially different likely significant effects when compared to the effects set out in the ES for the development authorised by the Order and as such considers that the ES is sufficient.
62. As there are no new significant environmental impacts as a result of the changes not relating to hydrogen, the Secretary of State does not consider that there is any need for consultation on likely significant transboundary effects in accordance with Regulation 32 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended).

### **The Habitats Regulations**

63. The Secretary of State has considered the relevant requirements as set out in the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations"). The Habitats Regulations require the Secretary of State to consider whether the Development would be likely, either alone or in combination with other plans and projects, to have a significant effect on any site within the UK national site network, known as "protected sites". The Secretary of State also considers it relevant to consider whether there could be significant effects on protected sites in other European Economic Area states. If likely significant effects cannot be ruled out, then an Appropriate Assessment must be undertaken by the Secretary of State, pursuant to Regulation 63(1) of the Habitats Regulations, "*to make an appropriate assessment of the implications of the plan or project for that site in view of that site's conservation objectives*". The Secretary of State may only agree to the Application (subject to Regulation 64) if she has ascertained that it will not adversely affect the integrity of the protected site concerned.

64. The Secretary of State has considered the information submitted in the Application and the comments of consultees and is satisfied that the changes not relating to hydrogen, either alone or in combination with other plans and projects, do not alter the conclusions set out in the Secretary of State's HRA for the Order, and therefore a new HRA is not required.

## **Other Considerations**

### *Transboundary Impacts*

65. Under Regulation 32 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended), the Secretary of State has considered whether the Development is likely to have a significant effect on the environment in another European Economic Area ("EEA") State. The Secretary of State has considered whether the changes not related to hydrogen will have any potential impacts on another EEA State and has concluded that there is no change in the environmental impacts assessed within the existing ES for the project. Consequently, the Secretary of State has concluded that there would not be likely significant effects on the environment of any other EEA state whether the changes not related to hydrogen are considered of themselves or cumulatively with the environmental effects already considered for the Order.

66. The Secretary of State has also considered whether there may be potential impacts on protected sites in EEA States, known as "transboundary sites". Noting that the Secretary of State has reached a conclusion that there will be no likely significant effects on protected sites, the Secretary of State has also concluded that there are no realistic impact pathways whereby transboundary sites may be impacted by the changes not related to hydrogen.

67. The Secretary of State therefore concludes there is no need for transboundary consultation with other EEA States.

### *Equality Act 2010*

68. The Equality Act 2010 includes a public sector equality duty. This requires a public authority, in the exercise of its functions, to have due regard to the need to (a) eliminate discrimination, harassment and victimisation and any other conduct prohibited by or under the Act; (b) advance equality of opportunity between persons who share a relevant protected characteristic (e.g. age; sex, sexual orientation, gender reassignment; disability; marriage and civil partnerships;<sup>5</sup> pregnancy and maternity; religion or belief; and race) and persons who do not share it; and (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

69. The Secretary of State has had due regard to the need to achieve the statutory objectives referred to in s149 of the Equality Act 2010 and is satisfied that there is no evidence that

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<sup>5</sup> In respect of the first statutory objective (eliminating unlawful discrimination etc.) only.



granting the changes not related to hydrogen will affect adversely the achievement of those objectives.

#### *Human Rights Act 1998*

70. The Secretary of State has considered the potential infringement of human rights in relation to the European Convention on Human Rights. The Secretary of State considers that granting the changes not relating to hydrogen would not violate any human rights as enacted into UK law by the Human Rights Act 1998.

#### *Natural Environment and Rural Communities Act 2006*

71. The Secretary of State notes the “general biodiversity objective” to conserve and enhance biodiversity in England, section 40(A1) of the Natural Environment and Rural Communities Act 2006, and considers the application consistent with furthering that objective whilst having also had regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992, when granting development consent. The Secretary of State is of the view that, for the changes not relating to hydrogen, biodiversity has been considered sufficiently for the amendments to accord with this duty.

### **Summary of the Secretary of State’s Conclusions and Decision**

72. For the reasons given in this letter, the Secretary of State considers that the changes relating to hydrogen, as identified in Paragraph 4 above, are **not** non-material changes and cannot therefore be dealt with under the procedure for non-material changes.
73. For the reasons given in this letter, the Secretary of State is satisfied that the changes not relating to hydrogen do not result in any further environmental impacts and will remain within the parameters of the ES that accompanied the original Keuper Underground Gas Storage Facility application. The Secretary of State concludes that none of the specific indicators referred to in guidance, or other relevant considerations, suggest that the changes not relating to hydrogen are material changes.
74. The Secretary of State has considered the ongoing need for the Development and considers that the project, amended with the changes not relating to hydrogen, continues to conform with the policy objectives outlined in 2011 EN-1 (Overarching National Policy Statement for Energy) and 2011 EN-4 (National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines), along with the newly designated 2024 versions of these National Policy Statements. The need for the Development as a natural gas underground storage facility remains as set out in the Secretary of State’s letter of 15 March 2017.
75. The Secretary of State has decided, under paragraph 2(1) of Schedule 6 to the PA2008 to make non-material changes to the Order so as to authorise the changes not relating to hydrogen. This letter is notification of the Secretary of State’s decision in accordance with Regulation 8 of the 2011 Regulations.

76. For the reasons given in this letter, the Secretary of State considers that, for the changes not relating to hydrogen, there is a compelling case for authorising changes to Part 6, Article 35; Part 1, Article 2 and; Schedule 1, Work No.15 of the Order. The Secretary of State is satisfied that the changes not relating to hydrogen are not material changes to the Order and has decided under paragraph 2(1) of Schedule 6 to the PA2008 to make a non-material change to the Order to authorise the changes not relating to hydrogen, as identified in Paragraph 5 above.
77. The Secretary of State notes the following certified plans referred to in Article 35 within Part 6 of the Order:
- 35(1)(e) Works plans 13-03-01/HOL/24/504-B2 and 13-03-01/HOL/24/510-B3;
  - 35(1)(i)(ii) Elevation drawings 13-03-01/HOL/24/274-B2 and 13-03-01/HOL/24/270-B5; and
  - 35(1)(m) Landscape plans 13-03-01/HOL/24/263-B2, 13-03-01/HOL/24/264-B2 and 13-03-01/HOL/24/266-B2
78. The Secretary of State notes that these plans show changes to the location of the proposed gas connection compound (which is not being consented as part of this Application) and changes to the location of the proposed office building (which is being consented as part of this Application). The Secretary of State therefore requests that the Applicant sends updated plans to certify following the receipt of this decision which include only the changes consented in this letter, and that no works in relation to the non-material changes consented is to commence until the updated plans have been approved and certified by the Secretary of State.

### **Modifications to the draft Order proposed by the Applicant**

79. The proposed changes relating to the amendment of the definition of 'gas' in the draft Order to include 'hydrogen' (see Paragraph 4), which have not been consented, have been removed from the Order.

### **Challenge to decision**

80. The circumstances in which the Secretary of State's decision may be challenged are set out in the note attached at the Annex to this letter.

### **Publicity for decision**

81. The Secretary of State's decision on this Application is being notified as required by Regulation 8 of the 2011 Regulations.

Yours sincerely,



Victoria Dawe

Director of Energy Development

## ANNEX A

### LEGAL CHALLENGES RELATING TO APPLICATIONS FOR DEVELOPMENT CONSENT ORDERS

Under section 118 (5) of the Planning Act 2008, a decision under paragraph 2(1) of Schedule 6 to the Planning Act 2008 to make a change to an Order granting development consent can be challenged only by means of a claim for judicial review. A claim for judicial review must be made to the Planning Court during the period of 6 weeks beginning with the day after the day on which the Order is published. The Amendment Order as made is being published on the date of this letter on the Planning Inspectorate website at the following address:

<https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN030002>

These notes are provided for guidance only. A person who thinks they may have grounds for challenging the decision to make the Order referred to in this letter is advised to seek legal advice before taking any action. If you require advice on the process for making any challenge you should contact the Administrative Court Office at the Royal Courts of Justice, Strand, London, WC2A 2LL (0207 947 6655)