

 North Sea Transition Authority	CONSULTATION ON PROPOSED REGULATIONS FOR DISCLOSURE OF CARBON STORAGE INFORMATION AND SAMPLES												
To: NSTA CS Data Disclosure Consultation													
YOUR DETAILS Name: Company/Organisation: Position: E-mail address: Address: Representing:	Dr Jonathan Pearce British Geological Survey BGS CO2 Storage team leader BGSPolicy@bgs.ac.uk jmpe@bgs.ac.uk British Geological Survey Nicker Hill Keyworth Nottinghamshire NG12 5GG												
CONFIDENTIALITY Please tick below if you consider any part of your response is confidential, giving your reasons why:													
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If there is no separate annex, which parts?													
If you want any part of your response, your name or your organisation to be kept confidential, can the NSTA still publish a reference to the contents of your response including (for any confidential parts) a general summary that does not disclose the specific information or enable you to be identified?													
YES ☒ NO ☐													
DECLARATION I confirm that the correspondence supplied with this coversheet is a formal consultation response that the NSTA can publish, except as indicated above. However, in supplying this response, I understand that the NSTA may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, the NSTA can disregard any standard e-mail text about not disclosing email contents and attachments. Name: _____ Signed (if hard copy): _____													

Call for Evidence questions

You should read the full call for evidence and review the guidance for respondents (above in this document) before completing your response.

Well Information

1. Do you agree that well information may be disclosed two years following the date on which the well information was due to be reported to the NSTA (as described above)?

a) Please answer yes or no.

b) Please explain your answer.

Introductory British Geological Survey (BGS) comments in response to this consultation:

BGS is the UK's premier provider of objective, impartial, and authoritative geoscientific data. As the UK's national geological survey, we are responsible for managing geoscientifically valuable samples, information, and datasets for the long-term public good and wider scientific interest. We store and manage physical samples and cores (UK's National Geological Repository) as well as digital data and records (UK's National Geoscience Data Centre) that are of national interest.

We also have statutory obligations (under the Mining Industry Act 1926, the Water Resources Act 1991 and the Water (Scotland) Act 1980), and the NSTA's Petroleum Operations Notice (PON) 9b) to receive data from boreholes drilled for the exploration or extraction of minerals, water and hydrocarbons, respectively.

As operator of the National Geoscience Data Centre, we consider it within our role to support UK regulators by hosting data and information acquired under exploration and operation licences for a range of subsurface activities, including CCS. We wish to highlight this as part of our response to this consultation and would welcome further dialogue with the NSTA on how BGS can support its activities in this area.

Furthermore, whilst BGS is generally supportive of the non-release periods, as the UK's national geological survey, we consider it appropriate for BGS to have access to undisclosed information in order for it to fulfil its survey and national advisory roles.

Specific response to Question 1:

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have further additional comments:

Consider explicitly mentioning all well types including sidetracked wells

Other types of data not explicitly mentioned include:

- List of data should explicitly apply to well workovers, and the repurposing of existing wells for new purposes (inter alia: injection, pressure management, monitoring etc)
- Well integrity assessments, including caliper and cement bond logs

Testing is mentioned but this could include explicit mention of pump tests, injection tests and other analyses to confirm the hydrogeological regimes encountered.

Well information should include historical information (i.e. information gathered for other reasons, such as oil and gas exploration and production, prior to consideration as a storage site) gathered by the licence- or permit-holder during licence and permit applications.

Not only should data relating to the analysis of any samples (fluid or rock, including sidewalls, drill cuttings as well as core) be disclosed, but also the samples themselves should be made available.

Data and information, including plans, on the tie-backs and related information on control infrastructure and surface well-head configurations should be included.

Consider scenarios where other Regulatory Completion Dates are triggered by other events:

- Licence revocation by the Licence Holder might occur prior to Permit application. In this scenario valuable data and samples may have been acquired which may benefit other potential licence holders and the wider public. For example, if the ERA indicates that, after investigation, a well presents a too high-risk to containment, then it would be valuable information to understand the technical reasons for this (future innovation may be able to de-risk such wells, or it may serve to derisk other similar wells in other licences).

Summary Well Information

2. Do you agree that the above summary well information may be disclosed immediately after it has been obtained by the NSTA?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have further additional comments.

The immediate disclosure of information on wells that are to be used, and for what purposes, or abandoned, as part of the licence development is very important to building confidence by the public in CCS. Furthermore, the release of injection and production test results would enable other storage licence holders and researchers, to understand and assess subsurface behaviour during CO₂ injection, again greatly enhancing the knowledge of CCS. Reports describing the type of test, volumes, associated monitoring data and relevant subsurface responses would be very beneficial.

We recommend also considering the release of historical well data including any past hydrocarbon production data (time-based volumes, rates etc) as this would be particularly useful for evaluating future storage potential. This is required to enable reservoir engineers to history-match past performance in simulations thereby providing greater robustness in subsequent predictions of future reservoir behaviour during and following CO₂ injection.

Well samples

3. Do you agree with the proposal above that samples may be disclosed two years following the date on which they were due to be reported (as defined above)?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have further additional comments.

Well samples could also include samples of well completion materials.

Geophysical survey information

4. Do you agree that all geophysical survey information acquired under a CS Licence may be disclosed five years after the date the acquisition is complete as stated during the summary information submission process?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have further additional comments.

As is stated in the consultation, high-quality geophysical survey data is fundamental to our understanding of the subsurface and can provide the foundation for subsequent prediction of long-term containment and capacity. The proposed period of five years may mean that, in some cases, the survey will have been obtained during appraisal in support of a storage permit application, and its disclosure may therefore occur before or at the start of the injection period. Furthermore, it may serve as a baseline for subsequent repeat surveys acquired for the purposes of monitoring. Therefore, consideration may be required to ensure proposed plans for disclosure of monitoring data may support this disclosure.

Pre- and post-stack data should be released, to allow future re-processing and integration with other datasets.

5. Do you agree with the proposal that geophysical survey information acquired under an exploration licence be subject to the time periods set out above?

a) Please answer yes or no.

b) If your answer is no please comment on when you think geophysical survey information acquired under an exploration licence should be disclosed.

*BGS **disagrees** with the proposed disclosure period and types of information to be disclosed. We have further additional comments.*

Whilst accepting that surveys acquired for the purpose of exploration will have both commercial value for longer and may require longer periods for interpretation by prospective storage licence holders, the period of up to ten years is considered too long. Given the need to rapidly scale up CO₂ storage in the UK to meet its Net Zero targets (as well as contributing to European decarbonisation) such long periods of up to 15 years prior to disclosure, may hamper exploration significantly. We consider 8 years from point of acquisition to be a reasonable period prior to disclosure.

6. Do you agree that the above summary geophysical survey information may be disclosed immediately after the NSTA has obtained the information?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have additional comments.

It should be ensured that the immediate disclosure of summary information by NSTA, does not lead to delays in handing such information to the NSTA nor in the NSTA's systems for making the information available.

Injection information

7. Do you agree with the proposal that, prior to the end of the Operational Term, injection information may be disclosed after two months from the end of the month to which the injection information relates?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed.

Information should also be aggregated on a per storage licence basis, as well as on an individual well basis.

8. Do you agree with the proposal that, prior to the end of the Operational Term injection information should be disclosed at a high granularity (e.g. by total per day and per wellbore)?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have no further comments.

9. Do you agree that, after the end of the Operational Term of a CS Licence, injection information of any granularity may be disclosed at any time?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have no further comments.

Summary storage site information

10. Do you agree that the above summary storage site information may be disclosed immediately?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed immediate disclosure and types of information to be disclosed. We have additional comments.

In addition to the date of entry to the Post-Closure period, we propose that the Date of entry for all periods, i.e. Initial/Appraisal and Operational, should be published. This would help build confidence in the availability of storage for future emitters.

Total storage resources information

11. Do you agree with the proposal that total storage resources information should be disclosed upon granting of a Storage Permit, at the end of the Operational Term, and at the end of the Post-Closure Period of a CS Licence?

a) Please answer yes or no.

b) Please explain your answer and include any comments on the frequency of disclosure you might have.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have some additional comments.

We note this proposal would link directly with the proposal to disclose well injection data on a monthly basis (with a two-month lag).

The methods by which storage resources are calculated may require further consideration and standardisation.

In addition to the total storage resources and associated probability ranges, the methodology for calculating the estimates should also be included.

The reporting of this information is key to enabling stakeholders to monitor the storage availability and the efficiency of its exploitation. It would therefore benefit from a standardised approach. BGS would be happy to work with NSTA and industry and DESNZ to formulate a standardised approach to reporting.

Data should be disclosed in a manner that enables easy inclusion in CO₂ Stored. CO₂ Stored provides free access to world-leading overview data for over 500 potential CO₂ storage sites around offshore UK (www.co2stored.co.uk).

Another trigger for disclosure could be the revocation or termination of a licence by the licence holder (if before the closure term ends). We propose that this trigger is included in the list of trigger points at which this information is released.

12. Do you agree with the proposal that total storage resources information should be disclosed upon determination of the licence?

a) Please answer yes or no.

b) Please explain your answer and include any comments on the frequency of disclosure you might have.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have no further comments.

Geotechnical storage site development information

13. Do you agree that geotechnical information contained within Storage Permit Applications may be disclosed five years after the date of first injection?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have some additional comments.

The site appraisal is driven by the Early Risk Assessment which identifies knowledge gaps, uncertainties, and risks to the long-term containment. Whilst the ERA in itself should remain commercially sensitive, a summary of the reasons for the specific studies that were undertaken would enhance the context of the information being disclosed.

14. Do you agree with the proposal that storage formation information may only be disclosed following the determination of the subject licence?

a) Please answer yes or no.

b) Please explain your response.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have an additional comment.

Information on computerised models and their parameterisation would also be very beneficial.

15. Do you agree that the proposal that certain computerised model information should be disclosed upon entry into the Operational Term is an appropriate balance of the factors?

a) Please answer yes or no.

b) Please explain your response.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have an additional comment.

Summary of information providing sources of data (e.g which datasets were used) for the development of the models is needed including standardised metadata. BGS could help NSTA with defining these metadata.

Monitoring Information and Samples

16. Do you agree that the monitoring report should be disclosed as soon as it is obtained by the NSTA?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have some additional comments.

Again standardised reporting may be beneficial including a pre-agreed metadata sets.

17. Do you agree that all monitoring information discussed in a monitoring report should be disclosed alongside the monitoring report?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have no additional comments.

18. Do you agree that geophysical survey information that is part of a succession of multiple surveys (4D) should be disclosed alongside the monitoring report in which it is discussed?

a) Please answer yes or no.

b) If you answered no, please provide any suggestions for the disclosure of geophysical survey information created or acquired for monitoring.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have no additional comments.

Carbon Storage Installations

19. Do you agree that the above summary information on offshore installations may be disclosed immediately?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have no additional comments.

20. Do you agree that the proposal that any more detailed information about offshore installations may only be disclosed after decommissioning is an appropriate balance of the factors?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have no additional comments.

General disclosure proposals for information and samples

21. Do you agree that the proposal that any licence information or sample be able to be disclosed immediately after any of the licence events listed above is an appropriate balance of the factors?

a) Please answer yes or no.

b) Please explain your answer.

BGS agrees with the proposed disclosure period and types of information to be disclosed. We have no additional comments.

22. Are there any other pieces of information or samples that have not been discussed in this document that you think there should be provision for the NSTA to disclose?

a) Please answer yes or no.

b) If your answer is yes, please detail what you think should be included and provide proposals for the time period after which disclosure may take place.

We have provided examples of some additional information that NSAT should disclose throughout our responses.