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**Our ref:** SO/2023/123043/03-L01
**Your ref:** EN070007 – Deadline 3

**Date:** 23 May 2023

Dear Mr Butler

**APPLICATION BY LIVERPOOL BAY CCS LIMITED FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE HYNET CARBON DIOXIDE PIPELINE SCHEME**

**ENVIRONMENT AGENCY DEADLINE 3 (23RD MAY 2023) SUBMISSION:**

- **RELEVANT SUBMISSIONS MADE BY THE APPLICANT UNDER EXAMINATION DEADLINE 1 AND DEADLINE 2**

**NATIONALLY SIGNIFICANT INFRSTRUCTURE PROJECT – HYNET CARBON DIOXIDE PIPELINE**

Thank you for the opportunity to provide comments under Deadline 3 of the Hynet Carbon Dioxide Pipeline Development Consent Order (DCO) Examination. Following on from the Environment Agency's (EA) representation at Deadline 1 [REP1-062] [REP1-084], we note the applicant has submitted the following information:

- Applicant's Comments on Responses to ExA's First Written Questions. Date: May 2023. [REP2-038]
- Applicant's Response to Deadline 1 Submissions. Date: May 2023. [REP2-039]
- Applicant's Responses to Written Representations. Date: May 2023. [REP2-041]
- Outline Operational and Maintenance Environmental Management Plan. Date: May 2023 [REP2-036]
- Other Consents and Licences. Date: April 2023 [REP1-011]
- Register of Environmental Actions and Commitments (REAC). Date: May 2023 [REP2-017]
- Draft Development Consent Order. Date: March 2023 [REP1-004]
- Book of Reference. Date: May 2023. [REP-012]

We have undertaken a review of the above and would like to provide the following clarifications / updates on the EA's position on matters considered to be of key importance to aid in the Examination process.

**Applicant's Responses [REP2-038] [REP2-041] to EA's Comments on Water Framework Directive Assessment and Biodiversity Related Matters**

We welcome and acknowledge the applicant's responses with regards to our comments on Water Framework Directive (WFD) and Biodiversity related matters.

We would highlight to the Examining Authority (ExA) that we will be discussing WFD related matters with the applicant in the near future (anticipated for early June 2023). We are also currently reviewing the applicant's responses with regards to the impacts of noise and vibration during the construction of the proposed scheme on the aquatic environment, with particular reference to fish species.

Therefore, we would welcome an opportunity to update the ExA on our position with regards to the above matters as part of a future Deadline submission.

**Applicant's Responses [REP2-038] [REP2-041] to the EA's Comments on Environmental Statement Chapter 11 – Land and Soils**

We acknowledge the applicant's decision to undertake further ground investigation work along the length of the proposed pipeline and would welcome further engagement with the applicant on land contamination and groundwater protection matters as included in the SoCG [REP1-024].

We recognise that the desk-based study shows that the majority of the corridor has not been used for industrial purposes or other land uses that may have introduced adverse contamination to the ground. However, we advise the series of irregularly spaced historic maps presented are indicative and cannot reveal true ground conditions as this is an iterative process based on ground investigation works. Many unknown or restricted land uses are not necessarily recorded on maps for national and public security reasons. To date, we do not believe sufficient information is available to make any assessment on the remedial works that may be required, and therefore, additional investigation / assessment is critical to this process.

We advise that the additional characterisation and further understanding of ground conditions will directly influence the detailed design stage. Given the natural / artificial geology (and associated ground conditions) there is a possibility that preferential pathways could be created to allow for migration of liquids to occur; be that natural groundwaters, leachate or polluting matter between geological units and sources to receptors. In addition to establishing remedial requirements where necessary, the additional ground investigation will support the assessment of potential preferential pathways and inform the depth to which the pipeline can be installed whilst establishing additional protective or preventative measures, where necessary, to stop / limit migration pathways.

We note ES ref. D-WR-039 of the REAC [REP2-017] includes the use of trench breakers at regular intervals along the pipeline to avoid preferential pathways being created. We advise this includes reference 'to avoid preferential flow pathways for contamination or contaminated groundwater to migrate and impact groundwater and / or surface water receptors'. Trench breakers will also be required where the pipeline may act as a preferential pathway for groundwater flow which could lead to a lowering of the water table up hydraulic gradient (passively dewatering the aquifer).

We welcome the intended inclusion of Per and polyfluorinated alkyl substances (PFAS) within the list of determinands for investigation at the Stanlow Manufacturing

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Complex. We advise that PFAS contamination is an important and strongly suspected issue in this area. Without this additional information, we would consider the ground investigation and characterisation to be incomplete and, therefore, inadequate. General testing suites are usually acceptable, however, where historic maps indicate novel land use types (i.e. landfilling and other storage depots / areas) then more bespoke testing suites are necessary. We would refer the applicant to the DoE Industrial Profile series for initial information to inform further investigative works.

**Applicant's response [REP2-039] to the EA's Deadline 1 Submission [REP1-084]**

For clarity, our concern regarding the end-of-life process for the redundant pipeline post-operation is not in reference to continued agricultural use. We advise the pipeline and the surrounding area may continue to act as preferential pathway for the migration of contamination in sensitive environmental receptors without a sufficient ongoing maintenance and monitoring programme that would have identified and rectified such problems during the operational lifetime of the pipeline. We acknowledge since our Deadline 1 submission [REP1-084] the applicant has submitted an Outline Operational and Maintenance Environmental Management Plan [REP2-036] (see EA comments below under 'Outline Operational and Maintenance Environmental Management Plan [REP2-036]').

We advise that retaining the pipeline in the ground post-operation has a number of difficulties as it will become unmanaged after a point of decommissioning. Therefore, any problems associated with the development or the area around it will be ownerless, unless there is a post-operations management arrangement (we would welcome clarification from the applicant on this matter). We understand a Decommissioning and Environment Management Plan will be produced as part of the CEMP. This will need to consider and propose measures to ensure that the pipeline does not provide a preferential pathway for the migration of pollutants / contamination post-decommissioning of the pipeline network.

As raised in our additional Deadline 1 submission response [REP1-084], additional ground investigation / assessment work will be necessary to determine the acceptability of the decommissioning proposals post-operation. We would, however, consider the removal of the pipeline is desirable or at least partial removal when or where in close proximity to sensitive receptors (source removal approach), if feasible.

**Applicant's Responses [REP2-038] [REP-041] to the EA's Comments on the Outline Construction Environmental Management Plan [APP-225] and Other Consents and Licenses [APP-046] Document**

<u>Contaminated Land Related Matters</u>

We request further clarification on the applicant's intentions with regards to the additional ground investigation work that is required to support the proposed development. In the applicant's response [REP-041], ref. 2.4.37 of Table 2.4, it is acknowledged that further ground investigation is required to inform the OCEMP but then contradicts this by stating the additional work will occur at the detailed design stage (as also recognised in the REAC [REP2-017]).

It is important that the additional investigation / assessment work is undertaken, to ensure all issues are identified and resolved, prior to commencement of the scheme. As highlighted in our Deadline 1 Written Representation [REP1-062], we would advocate such additional ground investigation work is undertaken to support the DCO

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examination to identify areas where remedial works and potential consenting / permitting requirements will be necessary. This information can also be utilised to refine the commitments under the REAC and considerations for the forthcoming CEMP.

If such further ground investigation works are not undertaken at this time, we advise the additional investigation / assessment on PFAS is reflected, initially, in the REAC as a stand-alone issue to ensure subsequent CEMP / OMEMP documents include this consideration as part of any first; second; or third stage iterations. This will ensure the contents of associated management plans of the CEMP at the detailed design stage (i.e. (but not limited to) Material Management Plan; Soil Management Plan; Waste Management Plan; and Dewatering Management Plan) will reflect the ground investigation works; risk assessments; and, where necessary, remedial activities required. As previously highlighted, if PFAS is found to be present, in certain circumstances, specialist treatment and additional permitting requirements may need to be considered.

Materials Management

With regards to the re-use of materials, we note the applicant has updated ES ref. D-LS-022 in the REAC [REP2-017], however, the EA do not consider the proposed wording to be acceptable as the position on the suitability of materials re-use is entirely dependent on the current ground investigation undertaken to date. We have already identified that the work currently undertaken is not sufficient to fully characterise the length of the proposed pipeline. Therefore, this entry needs to reflect the position in ES ref. D-LS-020, where there is a need to undertake additional ground investigation with additional testing to inform materials management and re-use. As above, we advise site-specific determinands are added to the laboratory analysis suite based on historic and / or current land uses within given locations. The additional details that will be provided from the further ground investigation work that is / will be undertaken will be essential to the soils / waste narrative and the approach taken for re-use.

Emergency Plan

We acknowledge the applicant's response in ref. 2.4.7 of Table 2.4 [REP2-041] with regards to producing an Emergency Plan within the Construction Environmental Management Plan (CEMP) and Operational and Maintenance Environmental Management Plan (OMEMP) under DCO Requirements 5 and 17 respectively of the draft DCO [REP1-004]. We would advise submitting a separate Emergency Plan document as an Annex of the CEMP for ease, however, if included within the details of the CEMP and the OMEMP, direction to the Emergency Plan needs to be clear. We welcome the inclusion to develop an emergency procedure in consultation with the emergency services to ensure all potential eventualities are addressed within the Emergency Plan (Section 3.4 of the OCEMP [REP2-022]).

Outline Dewatering Management Plan and Outline Groundwater Management and Monitoring Plan

We welcome the applicant's intention to submit an Outline Dewatering Management Plan and Outline Groundwater Management and Monitoring Plan to inform the DCO examination [REP2-038]. Whilst we expect that these plans will provide the general framework for assessing the impacts of dewatering activities on dependant receptors, we would highlight the subsequent Hydrogeological Impact Assessments will need to include site-specific data and evidence to support any forthcoming abstraction licence applications. We would welcome an opportunity to review these documents once

available.

Other Consents and Licences Document [REP1-011]

We welcome the revisions made to 'Other Consents and Licences' document [REP1-011] as part of the Applicant's Deadline 1 submission, which provides an overview of the permits / consents / licences that will likely be required to be obtained from relevant authorities.

We advise if the applicant is intending to carry out any test pumping to investigate aquifer properties to inform the detailed Dewatering Management Plan; Groundwater Management and Monitoring Planning; and Hydrogeological Impact Assessments, the applicant will need to apply for a Groundwater Investigation Consent under Section 32(3) of the Water Resources Act 1991 in advance if abstraction rates are in excess of 20$m^3$/day during the tests. The requirement for a Section 32(3) Groundwater Investigation Consent should be included in a future revision of the 'Other Consents and Licences' document.

If water supply required for the purposes of hydrotesting is to be supplied from a groundwater source, the applicant will need to apply for a Groundwater Investigation Consent to drill and test pump the source aquifer prior to applying for an abstraction licence. Further advice and guidance is available from Apply for consent to investigate a groundwater source - GOV.UK (www.gov.uk).

We also advise the applicant makes suitable provision of space for attenuation ponds to attenuate the 1 in 30 year rainfall event for temporary site compounds where necessary. We understand the drainage details for construction activities will be determined at the detailed design stage, however, we recommend the applicant considers this at the earliest opportunity to ensure this is factored into the DCO Limits / Work Plans, particularly if required for consenting / permitting purposes.

We welcome the confirmation from the applicant that a groundwater risk assessment will be undertaken as part of any application for an Environmental Permit to determine if a potential discharge will be acceptable. This approach is acceptable, however, the risk assessment process should be for all discharges to relevant receptors (groundwater and / or surface waters). Failure to undertake this work may lead to polluting discharges to ground, groundwater and / or surface waters which could be considered an offence under relevant environmental legislation.

We would highlight to the applicant that suitable provision is built into the scheme programme in advance to ensure sufficient time is included for applying / obtaining relevant permits / consents / licences and would welcome early engagement on such matters.

**EA Comments on the Outline Operational and Maintenance Environmental Management Plan [REP2-036]**

We acknowledge the submission of the Operational and Maintenance Environmental Management Plan (OMEMP) [REP2-036] and have the following advice for the applicant to consider with regards to certain mitigation measures presented within the Tables of the document:

Table 2.2.2. Operational and Maintenance Management and Mitigation - Consideration of Alternatives

We welcome the proposal for 24 hour monitoring of the pipeline operation to ensure leaks are detected and ensure shut down procedures are followed in a timely manner (D-CA-003). However, we would suggest the inclusion of regular on-site checks alongside the remote monitoring to ensure proactiveness in identifying potential pipeline leakages.

Table 2.7. Operational and Maintenance Management and Mitigation - Land and Soils

We consider ES ref. D-LS-015, to ensure ongoing monitoring and maintenance of temporary or permanent drainage work, reasonable as far as it places the responsibility for the ongoing operations on the applicant and their pollution prevention duties.

As above, the EA raised concerns with the potential decommissioning approach to retain the pipeline in-situ post-operation. Whilst we welcome the intention to produce a Decommissioning Environmental Management Plan (Es ref. D-LS-023), we advise the above comments under 'Applicant's response to the Environment Agency's Deadline 1 Submission [REP1-084]' are considered.

Table 2.11. Operational and Maintenance Management and Mitigation – Water Resources and Flood Risk

We welcome the intention to undertake regular water sampling before, during and after the construction works (ES ref. D-WR-070) as part of the Surface Water Management and Monitoring Plan. We advise including regular water sampling throughout the construction phase to assist in the early detection of changes in water quality.

**Applicant's Response [REP2-041] to the EA's Comments on Environmental Statement Chapter 18 – Water Resources and Flood Risk [APP-070]**

Dewatering Management Plan

We note the applicant's response [REP2-041] in ref. 2.4.22 of Table 2.4. We advise where RPS 261 has been referred to within Chapter 18 of the ES (paragraph 18.10.6), that this relates to the discharge of abstracted water. Where the abstracted water is wholly or mainly groundwater, then an Environmental Permit will be required to authorise the discharge of water to the environment, and not an abstraction licence. To clarify, paragraph 18.10.7 refers to the exemption requirements outlined by the Water Abstraction and Impounding Regulations 2017. It should be acknowledged by the applicant that this exemption only applies to abstractions from a sump or excavation as outlined in the Regulations and any other dewatering methods will not meet this requirement of the exemption.

Whilst we appreciate paragraphs 18.10.6 and 18.10.7 have been included for guidance, we would request the applicant ensures these statements are clarified within any future revision of Chapter 18 of the ES.

Flood Risk

We welcome the applicant's comments [REP2-041] with regards to the Ince Pumping Station as in ref. 2.4.23 in Table 3.4. We acknowledge the principal flood protection measure, included in the Flood Risk Assessment (FRA), for the Ince AGI is to raise the

slab level sufficiently to prevent the ingress of floodwater into the installation which is considered acceptable. Our comments within our Written Representation [REP1-062] with regards to the land drainage function of the Ince Pumping Station was made to ensure that its limited capacity in dealing with residual flow rates only is noted and recognised in the FRA.

**Applicant's Responses [REP2-041] to the EA's Comments on the Outline Surface Water Management Strategy [APP-231]**

We acknowledge the applicant is involved in ongoing discussions with Essar Oil UK, where the surface water drainage connection for the Stanlow AGI to the wider existing Stanlow Manufacturing Complex effluent network has been identified as a discussion point [REP1-032]. We would advise the applicant to make the operator aware that such connections may necessitate changes to the operator's existing permits for the site. We acknowledge further clarification on the surface water drainage proposals and connection to the existing effluent network will be provided at the detailed design and would welcome engagement from the applicant and operator at this stage.

**Applicant's Response [REP2-041] to the EA's Comments relating to Gowy Landfill**

We welcome the applicant's engagement with the Gowy Landfill operator (ref. 2.4.56 / 2.4.57 of Table 2.4 [REP2-041]) and await confirmation on whether the proposed scheme may impact the operator's ability to comply with their Environmental Permit.

**Draft Development Consent Order [REP1-004]**

<u>EA Protective Provisions – Disapplication of the North West Region Land Drainage Byelaws</u>

As raised in our Deadline 1 Response [REP1-062], Part 2 Article 8(1) of the draft Development Consent Order (DCO) includes the disapplication of the North West Region Land Drainage Byelaws. We note the applicant's responses [REP2-038] [REP2-041], where we can confirm that the EA has provided the applicant's legal team with a short set of protective provisions on this matter to consider / agree and would welcome further discussions if required.

<u>EA Response to addressing matters raised with regards to 'Limits of Deviation'</u>

We note the applicant's response [REP2-041], ref. 2.4.63 and 2.4.64 of Table 2.4, with regards to Part 2 Article 6(1) ('Limits of Deviation') within the draft DCO to deviate the upwards limit of the pipeline depth. The applicant has suggested that a set of Protective Provisions could be agreed to address the concerns where the pipeline could potentially be laid shallower than 1.2m below the channel bed at watercourse crossings / base of flood defences. We would welcome further discussions with the applicant on this matter to determine the most suitable approach to address this concern.

<u>DCO Requirement 9 – Contaminated Land and Groundwater</u>

We note the applicant's response [REP2-041] in ref. 2.4.68 of Table 2.4, where the REAC [REP2-017] includes additional ground investigation / assessment work for 'point sources' and determination of remedial requirements where necessary (ES refs. D-LS-020 and D-LS-021). The EA has identified that insufficient information has been gathered to date to form any type of assessment as to the presence of contamination and therefore, subsequent remedial requirements if necessary.

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It is therefore crucial that the additional ground investigation is undertaken to confirm ground conditions to inform the detailed design stage. We would request DCO Requirement 9 includes sufficient provision for additional ground investigation work (assuming the characterisation will not be completed as part of the DCO examination stage) and, where required, production of a remediation strategy and validation report based on the findings of the ground investigation / assessment work. In addition, we advise, where remedial works are required, a verification report will need to be produced following on from the completion of the remedial works, to demonstrate the remedial works have been successful. We note the production of a verification report has not been currently captured in the REAC / as part of DCO Requirement 9.

We advise the ExA that our position remains as previous [REP1-062] on the current wording of DCO Requirement 9 which we acknowledge addresses the management of unexpected contamination but does not recognise the additional works, as above, that are required to be undertaken to ensure the protection of controlled waters as part of the proposed development.

**Book of Reference [CR1-022]**

We welcome the applicant's response [REP2-038] and clarification provided with regards to the plots where the EA has been identified as an 'occupier or reputed occupier' as a precautionary measure, given the location includes a section of designated 'main river'. We would advise that the EA regulates proposed works to 'main rivers' under the Environmental Permitting (England and Wales) Regulations 2016 and therefore, would not be considered specifically an 'occupier' in such circumstances. We are aware the applicant has acknowledged the requirements to obtain a Flood Risk Activity Permit, where necessary, for works impacting a 'main river'.

We acknowledge that plot '6-12', within EA land ownership, has been omitted from the latest Book of Reference [CR1-022] as a result of the recent Change Request submitted.

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Should you have any queries, or wish to discuss the matters raised in this letter, then please do not hesitate to contact me.

Yours sincerely

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