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19th December 2025

F.A.O: Alex Cowell - Water Resources Permitting Officer
Natural Resources Wales (NRW)
Email: alex.Cowell@Cyfoethnaturiolcymru.gov.uk
Telephone: 0300 065 3888

**Ref: PAN-030979: Point of Ayr Gas Terminal, Liverpool Bay - Groundwater Abstraction Licence Application**

Dear Alex

Further to your letter of 10th December 2025 with confirmation that the existing abstraction licence application is deemed invalid. We respond to the points raised and information required as follows:

## 1. Hydrogeological Impact Assessment (HIA)

**a). Pumping Test**
We appreciate your comments regarding the short-term abstraction of the pumping test and how this relates to the larger and longer abstraction periods required during construction phase. It would not be reasonably practicable for the pumping test to be undertaken for the same duration of the proposed dewatering, which is approximately 12 weeks per structure. We consider that the pumping test generated reliable data that informed the subsequent modelling, which is suitable and reflects the anticipated flow rates and impacts of the proposed construction dewatering.

The pumping test was undertaken in accordance with the GIC and in accordance with BS ISO14686:2003. With the duration greater than minimum durations for given anticipated flow rates (Table 1 of BS ISO 14686:2003). An average flow rate of 5.34 l/s (461 $m^3$/d) was maintained during the pumping test, which Table 1 stipulates a minimum duration of 1 day is required. Please note that due to travellers getting onto the site during the test, we were unable to gain access to the pumping well, and as an unforeseen consequence the pumping test was extended to 7 days.

The pumping test was undertaken under a GIC issued by NRW. Should a longer duration pumping test been preferable for NRW, it would have been useful if this was mentioned during correspondence prior to the submission of the GIC, within the GIC itself, or during the site visit where two NRW representatives attended site to discuss the proposed works.

**b. Comments on number of abstraction wells**
For your information the Liverpool Bay Carbon Capture Scheme is a major UK net-zero infrastructure project that involves extensive demolition and construction works. Saipem have undertaken extensive construction design work to minimise subsoil construction, however there are limitations and the work areas that require dewatering has been reduced and limited to that outlined in our Temporary Dewatering Design (Table 3.3.4).

Please note to reduce potential impacts from dewatering further. A construction programme has been developed to ensure that any dewatering would be undertaken and limited to one excavation at any one time to:

- Minimise the wider environmental impacts of dewatering in terms of flow and drawdown impacts on surrounding water features.
- To minimise the amount of drawdown on-site to reduce the risk of any dewatering-related settlement.
- To minimise scour effects and discharge related risks.
- To minimise flow and ensure that any contaminated abstracted groundwater can be adequately treated through the GAC system, prior to discharge, and in compliance with NRW discharge permit requirements.

**c. Comments on potential risk associated with pumping contaminated groundwater and modelling**

Please note that a remediation strategy has been developed alongside NRW and will be implemented to reduce risks from groundwater contamination. This includes extensive site investigation works to identify areas of soil contamination with all contaminated soils being removed prior to any abstraction. In addition, all abstracted groundwater will pass through a GAC system capable of dealing with the modelled peak abstraction of 17.6 l/s. A GAC pilot trial will be undertaken to confirm influent concentrations, assess variability, and determine the optimal EBCT under anticipated site conditions. This is to ensure and demonstrate to all parties that the treatment system is robust, can achieve required betterment and that groundwater quality is compliant with NRW discharge licence conditions. For your information an application for a variation to the existing site discharge permit, to incorporate the dewatering and treatment, has been submitted to NRW. The whole approach and strategy are to reduce uncertainties.

Regarding modelling, we comment that established numerical modelling has been undertaken to determine potential distances of influence of each dewatering system and dewatering flow rates using and in accordance with procedures and guidance given in CIRIA C750 Groundwater Control: design and practice. With equivalent well and superpositional sensitivity analysis undertaken using key input parameters and distance drawdown data gained from the pumping test.

In addition to this, the HIA undertaken considers a distance of influence of dewatering of 660 m (the distance to the furthest receptor identified), however, calculations using the methods of Sichardt's suggest the largest distance of influence for any of the structures may be in the order of 340m. Therefore, we consider that the submitted the HIA is conservative in its approach and that the modelling we have undertaken is appropriate and reflects the anticipated affects the proposed construction dewatering will have.

**d. Application type**

We apologise; this is our misunderstanding. We clarify that the dewatering process will envolve a boost or transfer pumping system from the exit of the GAC treatment system to the discharge point and mistakenly considered that this transfer was not an intervening use.

We have no issues with applying and operating under a full abstraction licence remit. However, we ask for clarification on how we change the existing application. Are you able to change the application type at your end? Do we resubmit the application? What happens to the application cost we have already paid?

**e. Areas of abstraction**

For clarification all structures requiring dewatering are within the National Grid References (NGR's) area provided and detailed in the application: SJ 12157 84084, SJ 12426 84085, SJ 12509 83852, SJ 12149 83859.

However, for further detail. The table below details National Grid References (NGR's) area for each abstraction area.

| Structure | Corner 1 | Corner 2 | Corner 3 | Corner 4 |
|---|---|---|---|---|
| Cooling Tower | SJ 12434 83967 | SJ 12492 83967 | SJ 12492 83925 | SJ 12433 83924 |
| Pig Receiver | SJ 12433 83914 | SJ 12492 83912 | SJ 12492 83893 | SJ 12432 83895 |
| Gas Inlet Facility | SJ 12432 83882 | SJ 12490 83881 | SJ 12491 83852 | SJ 12434 83856 |
| Compression station | SJ 12279 83996 | SJ 12400 83994 | SJ 12398 83932 | SJ 12274 83933 |
| Oily Water Collection Tank | SJ 12206 84105 | SJ 12233 84106 | SJ 12233 84088 | SJ 12206 84093 |
| Knock Out Drums | SJ 12437 84132 | SJ 12447 84133 | SJ 12446 84120 | SJ 12437 84120 |
| Propane Tank | SJ 12412 84114 | SJ 12422 84114 | SJ 12423 84096 | SJ 12414 84098 |

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**f. Legal right of access to the point of abstraction**

Please find attached the following:

- A copy of the appointment letter between Liverpool Bay CCS Limited (the client) and Saipem Limited (Design & Principal Contractor)
- Drawing 70070865-APP-ES-15.1 - Study Areas and Noise Monitoring Locations, that detailed CDM site boundary (red) and extent of monitoring boundary.

We trust that as this response is within 10 working days from the date of your letter, our application will not be returned to us and the additional information provided is sufficient and adequate for you to continue with the processing of our application.

Should you have any further queries or wish to discuss matters further please feel free to contact me directly. Alternatively, should you like to arrange a site meeting to discuss and see what we propose, we would be happy to organise something.

Kind Regards

David Wright CGeol
Managing Director - For & behalf of **Stuart Wells Limited**