

Project Name	OFFSHORE WIND & CCS COLOCATION FORUM 10th PLENARY MEETING
Meeting Venue	12 Charles II Street, London
Date & Time of Meeting	14:00 – 16:00 on Wednesday 6 th March 2024

Chair of the Meeting	Adrian Topham, The Crown Estate (TCE)	
Names of the Attendees	<u>Forum Members</u>	<u>Forum Guests</u>
	Beth Hebditch, CCSA Tom Mallovs, CES Wael Khatib, DESNZ Nia Hunjan, DESNZ Paddy Dowey, DESNZ Tom Hewitt, DESNZ Jerome Malhotra, DEFRA Fiona Munro, Marine Scotland Nick Richardson, NSTA Jo Bagguley, NSTA Ajai Ahluwalia, RUK Michael Blair, TCE Elen King, Welsh Government Ross McWilliams, Secretariat Natasha Hall, Secretariat Kate Taylor, Secretariat	Gordon Walker, NECCUS Elle Lashko, T&S Taskforce Amy Bloomfield-Clarke, TCE Charles Green, TCE Farhad Zaidi, TCE Helen Hallsworth, TCE Abby Haines, TCE Amy Fitzgibbon, TCE Mary Thorogood, TCE Chris Gent, TCE John Underhill, University of Aberdeen Sam Head, University of Aberdeen <u>Apologies</u> Sarah Knight, CES Scott Ross, CES Viana Iancu, NSTA Georgie Sutton, MMO Luke Eatough, OREC Max Musing, CCSA

Item	Notes
	AGENDA (see Plenary Meeting Presentation) <ul style="list-style-type: none"> • Matters Arising – Secretariat • Project Colocate – John Underhill and Sam Head, University of Aberdeen • Project Anemone – Gordon Walker, NECCUS • Interplay between the Forum and other bodies – Adrian Topham, Chair • T&S Taskforce – Elle Lashko, T&S Taskforce, MMV Subgroup • Developer event – Secretariat • Norway visit – Adrian Topham, Chair • Next Plenary Dates – Secretariat
1.0	UPDATE TO ACTIONS FROM PREVIOUS PLENARY Action 1) Share further information on new technical innovations in the OW industry. <ul style="list-style-type: none"> • Closed – Innovations to be explored in Monitoring 101 developer event taking place in the evening of 6 March. Action 2) Workshop / roundtable to present technical data used to inform Project Colocate. <ul style="list-style-type: none"> • Closed – Session took place on 22 January.

	<p>Action 3) Refresh and recirculate Forum communications protocol with members.</p> <ul style="list-style-type: none"> • Closed – Communications protocol circulated as pre-reading ahead of plenary. <p>Action 4) Project Colocate advisory group meeting.</p> <ul style="list-style-type: none"> • Update required – due to take place before next Plenary with advisory group members. <p>Action 5) Recirculate deck on key deliverables, real-world impact and next steps of Forum workstreams.</p> <ul style="list-style-type: none"> • Closed – Deck re-circulated with draft Plenary #9 minutes. <p>Action 6) Share map showing all OW agreements / CCS license overlap maps with recent commercial agreements.</p> <ul style="list-style-type: none"> • Closed – See appendix of Plenary #10 presentation. <p>Action 7) Explore how the Forum can quantify / categorise decarbonisation contribution of colocation.</p> <ul style="list-style-type: none"> • Update required – TCE to quantify the decarbonisation impact of offshore wind and carbon capture stores and the potential loss of decarbonisation benefits if the colocation of OW and CCS sites that overlap do not take place. <p>Action 8) Share 2024 Forward Calendar of external conferences and events.</p> <ul style="list-style-type: none"> • Closed – Calendar circulated with Forum members as part of Plenary #10 pre-reading.
<p>2.0</p>	<p>Project Colocate – presentation from Professor John Underhill and Dr. Sam Head, University of Aberdeen</p> <p>UoA began by reminding the Forum that it was looking to identify the technical potential of colocation, and to assess the geological areas where colocation is viable, and where monitoring of carbon stores may be compatible with an array of windfarm turbines. UoA restated that the initial case study for Project Colocate was located in the East Irish Sea, with support from TCE, and a second parallel case study would be investigated in the Outer Moray Firth, with support from CES. UoA highlighted that Project Colocate is focused on technical compatibility and solutions, instead of marine spatial planning. UoA also highlighted that the project was looking into the different types of monitoring required for different geological conditions, to provide an exemplar to developers to consider future projects in similar geologies.</p> <p>UoA then gave a progress report on the East Irish Sea (EIS) research project, explaining the rationale for site selection and the reasons why the EIS was a good case study for colocation. UoA outlined the work programme and detailed the conflicts, risks and potential mitigations associated with the typical monitoring programme of an offshore storage site if it was on the same site as a wind farm.</p> <p>UoA finished their update on Project Colocate by saying that UoA had identified a Project Development Research Areas (PDRA) candidate to appoint to the Outer Moray Firth project, and that an update on its progress would be provided in Plenary #11.</p> <p>The Forum discussed how risk evaluation would evolve throughout the project lifecycle, due to the different monitoring techniques and technological development.</p> <p>UoA discussed the absence of fishing data in the East Irish Basin, which had led to gaps in data for Project Colocate. The Forum established that new fishing data in the EIS would be published within the next year.</p>
<p>3.0</p>	<p>Project Anemone – update from Gordon Walker from NECCUS</p> <p>NECCUS began by outlining the objectives of Project Anemone, and the project's synergy with Project Colocate. NECCUS gave an overview of the project's programme of work, highlighting that the ultimate goal was to identify the opportunities and synergies for colocation, to inform a best practice guide for future reference and use. NECCUS explained that potential partners for the project would be meeting in March 2024 and</p>

	<p>that following that meeting there would be a further round of discussions to finalise work packages and roles and responsibilities.</p> <p>The Chair highlighted that Project Anemone’s partners would be evenly divided between OW and CCS developers to allow for equal input from the two industries. UoA noted that there would be a symbiotic relationship between Project Colocate’s second PDRA and Project Anemone, due to both projects being located in Scotland. UoA emphasised the importance of sharing learnings and knowledge between the two projects to maximise value. The Chair reminded the Forum that the ultimate output of both Project Colocate and Project Anemone would be to inform the best approach to test and demonstrate the colocation of OW and CCS activities in the future.</p>
<p>4.0</p>	<p>Interplay between the Forum and other bodies – update from the Chair</p> <p>The Chair began by explaining how the different bodies working on colocation-related content were related to one another and how they are collectively seeking to address the possibility of OW & CCS colocation. The Chair noted that this interplay had evolved since Plenary #9 in December 2023 and that TCE was engaging with developers and the NSTA in parallel with the Forum’s workstreams to build knowledge on colocation. The Chair then reminded the Forum of the developers impacted by the NSTA’s spatial characterisation report published in 2023.</p> <p>The Forum explored the commercial and financial challenges of making colocation a reality, including securing insurance. The Chair discussed the potential of early projects giving feedback on the financial challenges and opportunities of colocation and the Forum explored adding a commercial, financial and insurance workstream into its work programme. Forum members raised that an upcoming report from the Geneva Association on the CCS sector would include an insurance readiness framework for the lifecycle of projects. The Chair asked for this report to be shared with Forum members for their awareness, once published.</p> <p>The Forum explored the need to address wind farm design if colocation was going to become a reality, and whether the Forum should further address potential obstacles and solutions from the perspective of OW.</p>
<p>5.0</p>	<p>CCS T&S Taskforce: MMV Subgroup – update from Elle Lashko representing TSTF</p> <p>TSTF started by outlining the objectives and real-world impact of the MMV Subgroup, highlighting that the subgroup had been working on identifying alternative monitoring technologies beyond seismic.</p> <p>TSTF explained the five different technologies identified by the Subgroup and outlined the advantages and disadvantages of each technology depending on different stores, noting variables such as store depth, development type and seismic signal. The next steps of the Subgroup would next be looking at a feasibility assessment, before moving on to field trials.</p> <p>TSTF confirmed that the Subgroup was exploring technical solutions for different stores, and the NSTA would agree on the monitoring proposal, which would include how often a store would need to be monitored, and would keep this under review throughout the project’s life cycle.</p> <p>The Forum discussed the monitoring frequency and whether injection rates for each project had been accounted for. TSTF replied that was for a later stage of work. Adding that recommendations for each store were subject to further Developer consideration.</p> <p>Discussion of the need to assess the environmental impacts of the different monitoring techniques confirmed that while monitoring methods outlined in the presentation are</p>

	unlikely to offer significantly less impact on the local marine environment, they might reduce survey times in the areas.
6.0	<p>“Monitoring 101” Developer Event – update from the Chair</p> <p>The Chair reminded Forum members of the panel event taking place that evening (Wednesday 6 March 2024) for an audience of developers and CCS and OW experts. The Chair explained that the panel would be comprised of four individuals – an OW industry expert, a CCS industry representative, an OW expert and a CCS academic. The Chair encouraged all members who could attend to do so, and recapped the key target outcomes of the event.</p>
7.0	<p>Norway visit – Equinor “Northern Lights” CCS site</p> <p>The Chair introduced the intention to hold Plenary #11 in Norway at the “Northern Lights” CCS site in Øygarden, near Bergen, Norway, to give Forum members a “real world” insight into an operational CCS site and strengthen cross-sectoral understanding of the challenges and opportunities of colocation. The Chair confirmed that the Secretariat would be following up with further information on the visit, once plans were finalised.</p>
8.0	<p>Next Plenary Dates and AOB</p> <p>The Chair confirmed the next plenary session would take place on Wednesday 5th June 2024, likely in Bergen, Norway, as part of the trip to the “Northern Lights” CCS site.</p> <p>The Chair encouraged members to read the “terms of reference” of the Forum. The Chair suggested that each Forum member considers what they would like the Forum to cover, to bring to the next plenary meeting.</p> <p>The Forum agreed to hold a webinar led to engage developers on the key learnings and developments of the Forum to date. The Chair encouraged members to refer to the Forum website and share information with developers to signpost the Forum’s work.</p>
	<p>ACTIONS FROM PLENARY #10</p> <p>2.1 UoA & TCE to schedule Project Colocate advisory group meeting.</p> <p>2.2 UoA to provide a status update on the Project Colocate project in the Outer Moray Firth with second PDRA.</p> <p>4.1 Secretariat to circulate Geneva Association CCS insurance framework report with Forum members, once published.</p> <p>6.1 RUK and TCE to hold webinar to engage developers on a summary of work of the Forum to date.</p> <p>7.1 Secretariat to circulate formal invitation with Forum members to the “Northern Lights” site visit for Plenary #11.</p>
	<p>USEFUL DOCUMENT LINKS</p> <p>OW & CCS Colocation Forum plenary meeting documents and publications: https://www.thecrownestate.co.uk/our-business/marine/offshore-wind-and-ccus-colocation-forum-archive</p>