

Approved Project Development Plan relating to the carbon dioxide transport and storage licence granted to Liverpool Bay CCS Limited (company number 13194018) (the "**Licensee**") pursuant to section 7 (as modified by section 16 and schedule 1) of the Energy Act 2023, relating to the "Liverpool Bay T&S" T&S Network (the "**Licence**")

1. **ACRONYMS AND DEFINITIONS**

1.1 In this APDP, where capitalised terms are also defined in the Licence, they will have the same meaning in this APDP and, unless otherwise defined within this APDP or the context otherwise requires, capitalised terms used in this APDP which are not also defined in the Licence shall have the following meaning:

"AGI"	means an above ground installation;
"BVS"	means a block valve station;
"Douglas CCS Platform"	means the surface facilities providing heating, pressure control and distribution of the full CO ₂ flow and utilities support to Hamilton Main, Hamilton North and Lennox;
"EET HPP1"	means the Planned Initial User identified in row 4 of the Planned Initial Users table at section 4.1(b);
"Encyclis Protos ERF"	means the Planned Initial User identified in row 2 of the Planned Initial Users table at section 4.1(b);
"Environmental Statement AGI Location Plan"	means the Environmental Statement (Volume III) Above Ground Installations Location Plan HyNet Carbon Dioxide Pipeline DCO (Planning Act 2008; The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulations 5(2)(o); Document Reference Number D.2.10; Applicant: Liverpool Bay CCS Limited; Inspectorate Reference: EN070007);
"Environmental Statement BVS Location Plan"	means the Environmental Statement (Volume III) Block Valve Stations Location Plan HyNet Carbon Dioxide Pipeline DCO (Planning Act 2008; The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulations 5(2)(o); Document Reference Number D.2.7; Applicant: Liverpool Bay CCS Limited; Inspectorate Reference: EN070007);
"First Group of Phase 2D Devex Activities"	has the meaning given to it in section 3.2(l)(ii);
"Flint AGI"	means the multi-junction AGI at the location shown on drawing EN070007-D.2.10-LAY-Sheet 4 of the Environmental Statement AGI Location Plan where the new 36" pipeline connects to the 24" repurposed and extended P852 pipeline;
"Flint-PoA Pipeline"	has the meaning given in section 3.1(d)(i)(D);

"Hamilton Main" or "HM"	means the offshore wellhead platform receiving CO ₂ for injection into the Hamilton Carbon Store (of which the jacket is repurposed);
"Hamilton North" or "HN"	means the offshore wellhead platform receiving CO ₂ for injection into the Hamilton North Carbon store (of which the jacket is repurposed);
"Hanson Padeswood"	means the Planned Initial User identified in row 3 of the Planned Initial Users table at section 4.1(b);
"Ince AGI"	means the multi-junction AGI at the location shown on drawing EN070007-D.2.10-LAY-Sheet 1 of the Environmental Statement AGI Location Plan where CO ₂ enters the T&S Network from the Runcorn Spurline ;
"Lennox"	means the offshore wellhead platform receiving CO ₂ for injection into the Lennox Carbon Store (of which the jacket is repurposed);
"Licence"	means the licence granted to the Licensee pursuant to section 7 of the Act;
"Mechanical Completion"	<p>is achieved when:</p> <p>(a) excluding any relevant Handover Punchlist Items:</p> <p style="padding-left: 40px;">(i) construction of:</p> <p style="padding-left: 80px;">(A) the Phase 1 Systems; or</p> <p style="padding-left: 80px;">(B) any of the Phase 2 Systems</p> <p style="padding-left: 80px;">(as the case may be), is complete in accordance with the requirements of this APDP and any other relevant Licence or Project-related requirements; and</p> <p style="padding-left: 40px;">(ii) all inspections and testing undertaken in accordance with the requirements of this APDP of (as the case may be):</p> <p style="padding-left: 80px;">(A) the Phase 1 Systems (which inspections and testing do not form part of the Commissioning Activities); or</p> <p style="padding-left: 80px;">(B) any of the Phase 2 Systems (which inspections and testing do not form part of the relevant Phase 2 Commissioning Activities),</p> <p style="padding-left: 40px;">have been satisfactorily completed; and</p>

- (b) in the case of:
- (i) the Phase 1 Systems, there are no construction related elements of the Phase 1 Systems which are outstanding which would have an adverse effect on the performance of the Commissioning Activities; and
 - (ii) any Phase 2 Systems, there are no construction related elements of such Phase 2 Systems which are outstanding which would have an adverse effect on the performance of the relevant Phase 2 Commissioning Activities;

"NESO"	means National Energy System Operator Limited (company number 11014226), which body is designated by the SoS as the ISOP (as such term is defined in the Act) in accordance with section 162(1) of the Act;
"Northop Hall AGI"	means the multi-junction AGI at the location shown on drawing EN070007-D.2.10-LAY-Sheet 3 of the Environmental Statement AGI Location Plan where CO ₂ enters the T&S Network from the Padeswood Spurline;
"Operations Readiness and Assurance Plan"	means the operational readiness and assurance plan with document reference 000593_DV_CD.OPS.0274.000_00 CD01 provided by the Licensee prior to Licence Award;
"Padeswood AGI"	means the one-system entry AGI at the location where CO ₂ enters the T&S Network from Hanson Padeswood shown at Exhibits C and D of Appendix A (<i>Phase 2B and 2C pipeline routes</i>) to schedule 10 (<i>Project-specific conditions</i>) of the Licence;
"Padeswood Spurline"	means the CO ₂ pipeline connecting the Padeswood AGI to Northop Hall AGI;
"Phase 1 Offshore Systems"	means the elements of the Offshore Transportation and Storage System which form part of the Phase 1 Systems;
"Phase 1 User"	means a User that is scheduled in the Project Programme to supply CO ₂ prior to the Commercial Operations Date;
"Phase 2 Acceptance Punchlist Items"	means, in respect of each of the Phase 2 Tranche A Commissioning Activities, Phase 2 Tranche B Commissioning Activities, <i>Phase 2 Tranche C Commissioning Activities</i> , Phase 2 Tranche D Commissioning Activities and Phase 2 Tranche E Commissioning Activities, any minor defects, deficiencies, or omissions which:

- (a) would not have an adverse effect on the operation of the relevant Phase 2 Systems if not rectified, resolved or completed prior to the relevant Phase 2 Acceptance; and
- (b) have been confirmed in writing as Phase 2 Acceptance Punchlist Items by the relevant Independent Certifier (acting in accordance with the relevant IC Deed of Appointment);

"Phase 2 Handover Punchlist Items"

means, in respect of each of the Phase 2 Tranche A Handover Works, Phase 2 Tranche B Handover Works, **Phase 2 Tranche C Handover Works**, and Phase 2 Tranche D Handover Works, any minor defects, deficiencies, or omissions which:

- (a) would not have an adverse effect on the safe performance of the relevant Phase 2 Commissioning Activities and/or safe operation of the relevant Phase 2 Systems if not rectified, resolved or completed prior to the relevant Phase 2 Handover; and
- (b) have been confirmed in writing as Phase 2 Handover Punchlist Items by the relevant Independent Certifier (acting in accordance with the relevant IC Deed of Appointment);

"Phase 2 User"

means a User that is listed as a Planned Initial User but is not a Phase 1 User;

"Phase 2D Devex Activities"

means any and all of the development-related activities included in the First Group of Phase 2D Devex Activities, the Second Group of Phase 2D Devex Activities and the Third Group of Phase 2D Devex Activities as more particularly described in section 3.2(l);

"PLANC Register"

means the relevant register of permits, licences, authorisations, notifications and consents;

"PoA Terminal" or "PoA"

means the compression plant that exports the CO₂ offshore to the Douglas CCS Platform distribution hub (of which the gas reception terminal is repurposed);

"Protos AGI"

means the multi-junction AGI (Planning Application reference 24/00777/FUL as decided and amended or as per any future Planning Applications which move the site to the west of the Encyclis Protos ERF site) where CO₂ enters the T&S Network from Encyclis Protos ERF;

"Runcorn AGI"

means the multi-entry AGI at the location where CO₂ enters the T&S Network from Viridor (Runcorn) **shown at Exhibits A and B of Appendix A (Phase 2B and 2C pipeline routes) to schedule 10 (Project-specific conditions) of the Licence**;

"Runcorn Spurline"	means the CO ₂ pipeline connecting the Runcorn AGI to the Ince AGI;
"Safety Instrument Functions"	means logic driven operations built into the control of equipment that takes the equipment from a hazardous situation to a safe state;
"Second Group of Phase 2D Devex Activities"	has the meaning given to it in section 3.2(l)(iii);
"SPEN"	means ScottishPower Energy Networks;
"Stanlow AGI"	means the multi-junction AGI at the location shown on drawing EN070007-D.2.10-LAY-Sheet 2 of the Environmental Statement AGI Location Plan where CO ₂ enters the T&S Network from EET HPP1;
"Third Group of Phase 2D Devex Activities"	has the meaning given to it in section 3.2(l)(iv);
"Track 1 Expansion Users"	means the potential Future Users to be identified as part of the CCUS deployment track 1 expansion referred to in the notice entitled " <i>Carbon capture, usage and storage (CCUS) deployment: Track-1 expansion: HyNet cluster</i> " ¹ issued on 20 December 2023;
"Transferred Assets"	has the meaning given to that term in the Asset Transfer Agreement;
"T&S Network Portal"	has the meaning given to that term in the CCS Network Code; and
"Viridor (Runcorn)"	means the <u>Planned Initial User identified in row 1 of the Planned Initial Users table at section 4.1(b). User referred to by DESNZ as the Runcorn Carbon Capture Project, Viridor, which has been classified as a 'Standby' project in DESNZ's "HyNet expansion: project negotiation list" published 5 August 2025 as part of the Track-1 expansion process.</u>

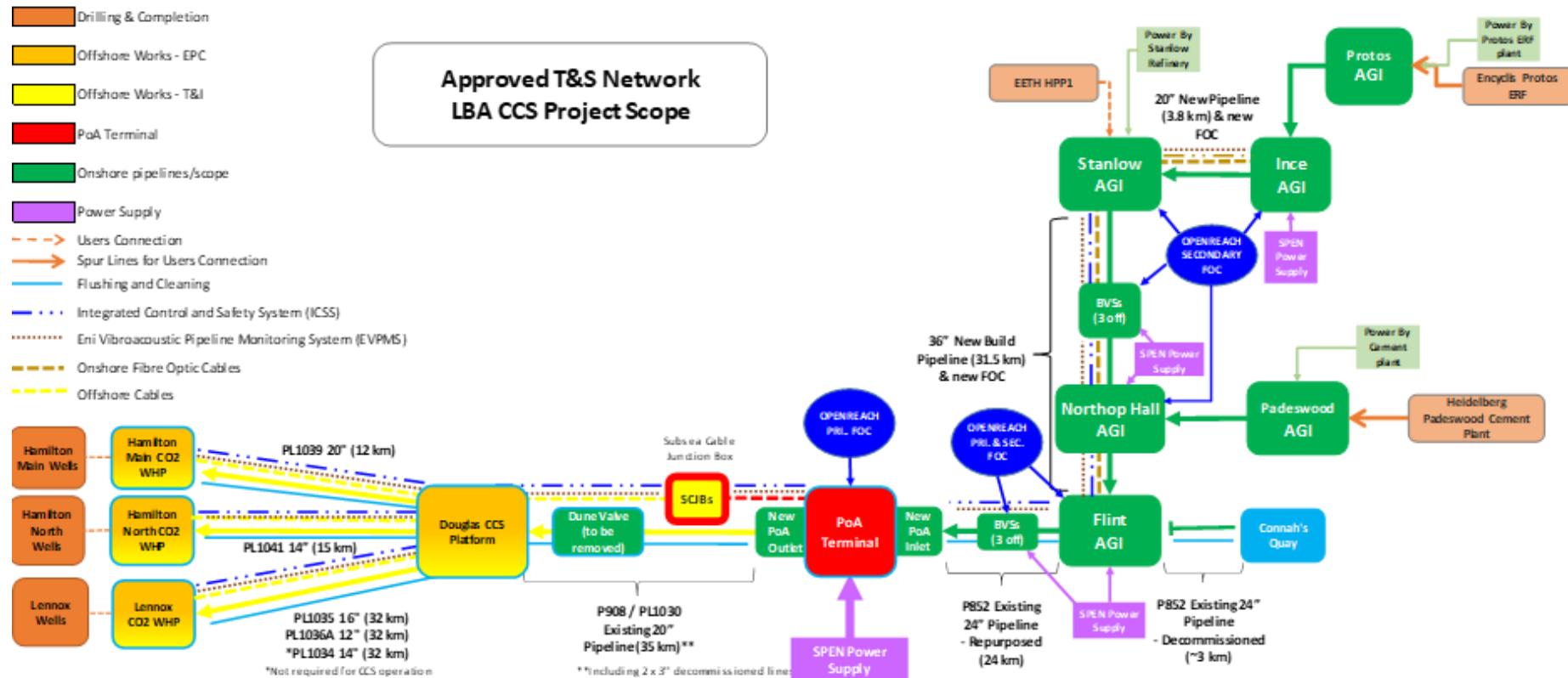
2. OVERVIEW OF THE PROJECT

- 2.1 The Project includes all works and activities being undertaken by the Licensee to deliver the T&S Network required for the geological storage of the CO₂ captured by the Users of the T&S Network.
- 2.2 The T&S Network provides for the transportation and storage of 4.74 MTPA (150.30 kg/s) of CO₂ required for the Planned Initial Users and the Track 1 Expansion Users.

¹ Carbon capture, usage and storage (CCUS) deployment: Track-1 expansion: HyNet cluster - GOV.UK (www.gov.uk)

- 2.3 CO₂ captured and metered by the Users will be transported to the PoA Terminal through an Onshore Transportation System that includes a main trunkline system and spurlines originating from the Users.
- 2.4 From the PoA Terminal, the CO₂ will be transported offshore through the Offshore Pipeline Infrastructure and distributed to the injection facilities.
- 2.5 The CO₂ will be injected into, and stored in, three T&S Storage Sites, as described in Annex A to Section A of the Licence.
- 2.6 The Project will be delivered as described in this APDP, including:
- (a) Phase 1 Activities which are set out in section 3.1; and
 - (b) Phase 2 Activities which are set out in section 3.2, and will be divided into **five four** Phase 2 Tranches as described further in section 3.2(b).
- 2.7 As at Licence Award, there are no Development Activities.
- 2.8 The development of the Approved T&S Network is planned in phases (with tranches of work/activities within each phase), and is premised on an equal re-pressurisation of the three reservoirs within the T&S Storage Sites over the Project operational life:
- (a) CO₂ will initially flow directly into the reservoirs within the T&S Storage Sites whilst reservoir pressures and flow rates are low.
 - (b) Subsequently, intermediary compression at PoA is required.
 - (c) At a later stage it may be necessary for the facilities to be upgraded to allow the offshore section of the Approved T&S Network to be converted to dense phase flow. The timing of this upgrade will be dependent on a number of factors, including reservoir pressure.
 - (d) The conversion to dense phase forms Phase 2 Tranche D, which is further described in section 3.2(b)(iv).

Figure 1: Approved T&S Network* **as amended by the Phase 2C Supervening Event Re-opener**



* This diagram is illustrative only

Note: Consolidated documents are not formal Public Register documents and should not be relied on. Carbon Dioxide Transport and Storage Licence for Liverpool Bay CCS Limited - Consolidated to 15 January 2026

- 2.9 The Phase 2 Activities will be undertaken in ~~five~~ **four** tranches, as more particularly described in section 3.2.
- 2.10 There are ~~four~~ **three** Planned Initial Users, which Users are located in Cheshire or Northeast Wales.
- 2.11 As at Licence Award, it is anticipated that, once connected to the Approved T&S Network, the Planned Initial Users will have flow rates as follows:

User	Anticipated average flow rate (MTPA)
Viridor (Runcorn)	1.04
Encyclis Protos ERF	0.43 0.49*
Hanson Padeswood	1.01 1.05*
EET HPP1	0.66 0.68**

*** As reflected in signed Connection Agreements**

**** As updated by the User**

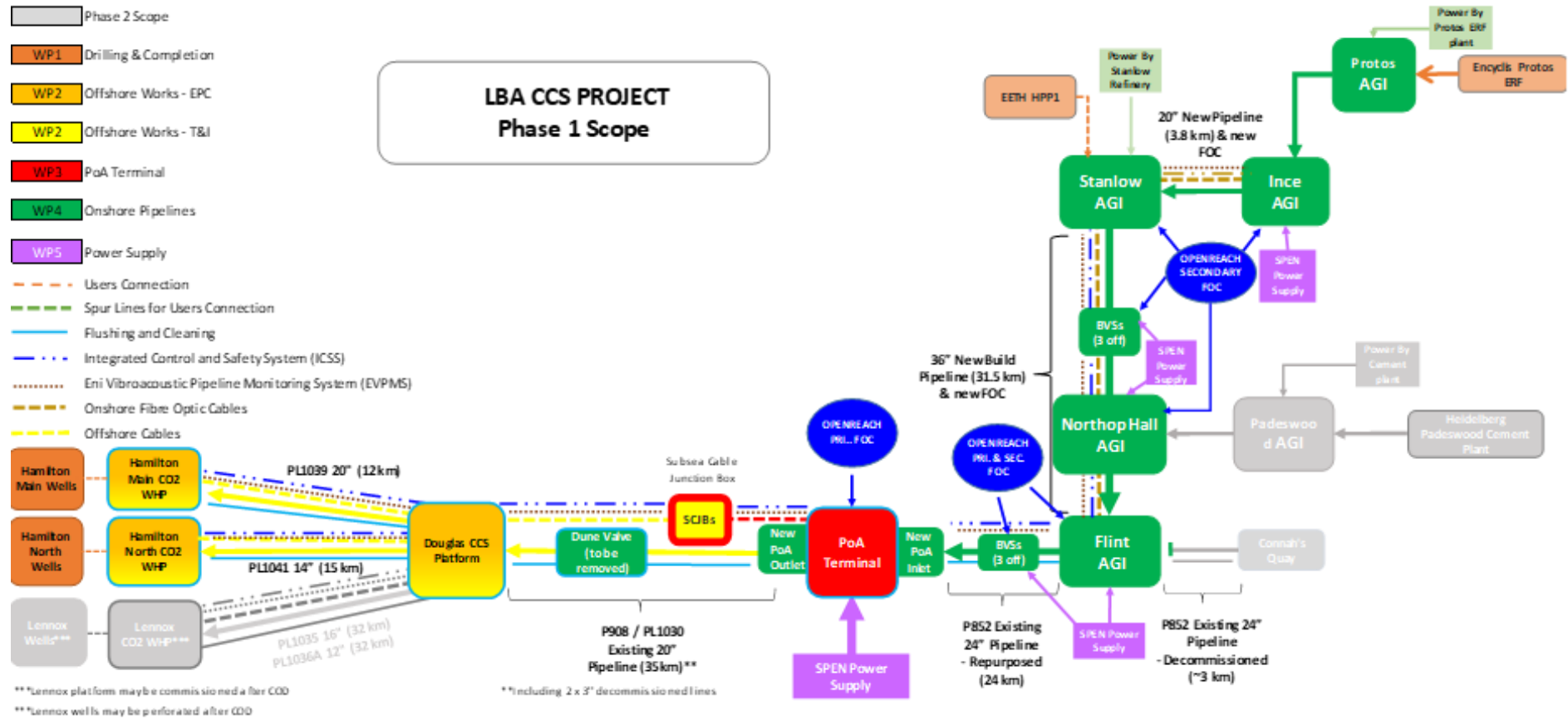
3. SCOPE OF THE APPROVED T&S NETWORK

The Approved T&S Network comprises the works and activities required for the transportation and storage of 4.74 MTPA (150.30 kg/s) of CO₂ from the Planned Initial Users as set out in this section 3.

3.1 Phase 1 Activities

- (a) Phase 1 Activities comprise the Handover Works and the Commissioning Activities, being in each case works and activities which are scheduled in the Project Programme to be carried out during the Construction Period and/or Commissioning Period, with associated SRAV Capex relating to the Approved T&S Network.
- (b) The Licensee's Phase 1 Activities scope is shown in the following diagram:

Figure 2: Phase 1 Scope* **as amended by the Phase 2C Supervening Event Re-opener**



*This diagram is illustrative only

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- (c) Any references to operating conditions, performance standards, specified design, Project requirements and design flow assurance models in this section 3.1 where parameters are not fully defined at Licence Award will be further defined through the detailed design process and the fully developed requirements (as approved by the Regulator in accordance with Special Condition J3.10 (*Independent Certifier*) of the Licence) will apply following the conclusion of detailed design, and the provisions of this section 3.1 will be construed accordingly.
- (d) The **"Phase 1 Systems"**, being the systems forming part of the Approved T&S Network to which the Phase 1 Activities relate, are as follows:
- (i) Onshore Transportation System:
- (A) onshore 36" pipeline from Stanlow AGI to Flint AGI suitable to convey a flow rate of 10.50 MTPA (332.95 kg/s);
- (B) onshore 20" pipeline from Ince AGI to Stanlow AGI suitable to convey a flow rate of 2.50 MTPA (79.27 kg/s);
- (C) onshore 20" pipeline from Protos AGI to Ince AGI suitable to convey a flow rate of 2.50 MTPA (79.27 kg/s);
- (D) onshore 24" pipeline from Flint AGI to PoA Terminal suitable to convey a flow rate of 4.74 MTPA (150.30 kg/s) (P852 repurposed and extended) (the **"Flint-PoA Pipeline"**);
- (E) fibre optic cable (**"FOC"**) along the 36" and 20" pipelines;
- (F) five AGIs, being Ince AGI, Stanlow AGI, Northop AGI, Flint AGI and Protos AGI, and all ancillary support systems;
- (G) three BVSs in the pipeline between Stanlow AGI and Northop Hall AGI, being:
- (aa) the BVS at the location shown on the drawing entitled "Rock Bank BVS Location Plan" (drawing number EN070007-D.2.7-LAY-Sheet 1) on sheet 1 of the Environmental Statement BVS Location Plan;
- (bb) the BVS at the location shown on the drawing entitled "Mollington BVS Location Plan" (drawing number EN070007-D.2.7-LAY-Sheet 2) on sheet 2 of the Environmental Statement BVS Location Plan; and
- (cc) the BVS at the location shown on the drawing entitled "Aston Hill BVS Location Plan" (drawing number EN070007-D.2.7-LAY-Sheet 3) on sheet 3 of the Environmental Statement BVS Location Plan;
- (H) three BVSs in the Flint-PoA Pipeline, being:
- (aa) the BVS at the location shown on the drawing entitled "Cornist Lane BVS Location Plan" (drawing number EN070007-D.2.7-LAY-Sheet 4) on sheet 4 of the Environmental Statement BVS Location Plan;

- (bb) the BVS at the location shown on the drawing entitled "Pentre Halkyn BVS Location Plan" (drawing number EN070007-D.2.7-LAY-Sheet 5) on sheet 5 of the Environmental Statement BVS Location Plan; and
 - (cc) the BVS at the location shown on the drawing entitled "Barbell BVS Location Plan" (drawing number EN070007-D.2.7-LAY-Sheet 6) on sheet 6 of the Environmental Statement BVS Location Plan; and
 - (l) support elements, being infrastructure providing support to Encyclis Protos ERF's pipelines that connect to the Protos AGI, which infrastructure consists of pipe racks with minor structural steel and new build pipe bridges.
- (ii) PoA Terminal:
- (A) gas filtration;
 - (B) metering;
 - (C) three electrically driven two-stage centrifugal gas compressor trains suitable to reliably manage 4.74 MTPA (150.30 kg/s) in given operating conditions including 50% spare capacity;
 - (D) control room and integrated control and safety system;
 - (E) venting system;
 - (F) utilities (including emergency power generation, and compressor instrument air package); and
 - (G) electrical substation and new 33kV connection from SPEN;
- (iii) repurposed offshore pipelines:
- (A) 20" PoA Terminal to Douglas CCS Platform (P908/P1030) repurposed with confirmed achievable flow of 4.74 MTPA (150.30 kg/s) (and achievable flow of 10.53 MTPA (333.90 kg/s) in dense phase operation subject to the appropriate compression at PoA);
 - (B) 20" Douglas CCS Platform to HM (PL1039) repurposed with confirmed achievable flow of 4.25 MTPA (134.77 kg/s); and
 - (C) 14" Douglas CCS Platform to HN (PL1041) repurposed with confirmed achievable flow of 2.00 MTPA (63.42 kg/s);
- (iv) new subsea power and communications cables (1 x 33kV integrated with FOCs):
- (A) PoA Terminal to Douglas CCS Platform;
 - (B) Douglas CCS Platform to HM; and
 - (C) Douglas CCS Platform to HN;

- (v) Douglas CCS Platform including:
 - (A) helideck;
 - (B) two heaters performing a combined heating duty of 2.9 MW;
 - (C) pressure control;
 - (D) power transformers and electrical distribution; and
 - (E) risers;
- (vi) Hamilton Main:
 - (A) new topsides including:
 - (aa) helideck;
 - (bb) two heaters performing a combined heating duty of 2.3 MW;
 - (cc) filtration;
 - (dd) metering;
 - (ee) power transformers and electrical distribution; and
 - (ff) riser; and
 - (B) four injection wells and one monitoring well (including drilling and completion, perforation and Xmas trees installation);
- (vii) Hamilton North:
 - (A) new topsides including:
 - (aa) helideck;
 - (bb) one heater performing a heating duty of 0.8 MW;
 - (cc) filtration;
 - (dd) metering;
 - (ee) power transformers and electrical distribution; and
 - (ff) riser; and
 - (B) two injection wells, one monitoring well and one sentinel well (including drilling and completion, perforation and Xmas tree installation); and
- (viii) Approved T&S Network-wide leak detection system (e-VPMS - Eni Vibroacoustic Pipeline Monitoring System).
- (e) The **"Handover Works"** include the following works and activities which relate to the Phase 1 Systems:
 - (i) design and engineering of the Phase 1 Systems;

- (ii) execution planning of the Phase 1 Systems, including producing the construction and Mechanical Completion plans and procedures and compiling the associated dossiers, each in line with the detailed engineering deliverables and performance standards;
- (iii) permitting the Phase 1 Systems - securing the approvals required to, as a minimum, construct and install the Phase 1 Systems, including any and all licences, permits, consents and approvals, including any regulatory and statutory approvals;
- (iv) fabrication, construction and installation of the Phase 1 Systems to the point of Mechanical Completion, including ensuring that fabrication, construction, erection, installation, testing, cleaning, gauging and hydrotesting of any assemblies or equipment forming part of the Phase 1 System have been satisfactorily completed and documented in accordance with specified design and Project requirements;
- (v) **organisational readiness:**
 - (A) personnel recruitment and training relating to Phase 1 Activities are in progress and aligned with the Operations Readiness and Assurance Plan; and
 - (B) development and approval processes of operating procedures relating to Phase 1 Activities are in progress and aligned with the Operations Readiness and Assurance Plan;
- (vi) all drawings and documentation required for performance of the Commissioning Activities are modified in red-line mark-up;
- (vii) successful completion of the Mitigation Measures Preparatory Activities, being:
 - (A) the preparation of applications to the NSTA to amend (i) the Storage Permit relating to the Hamilton Carbon Store; and (ii) the Storage Permit relating to the Hamilton North Carbon Store to permit the Licensee to implement the Mitigation Measures, together with preparation and submission of all relevant studies, documents or other Supporting Information required by the NSTA, including the following activities:
 - (aa) flow assurance evaluation of proposed Mitigation Measures Systems and definition of maximum injection rate over time without exceeding facility and store pressure and temperature limits;
 - (bb) uncertainty analysis update for increased injection profiles;
 - (cc) geomechanical modelling;
 - (dd) fault stability analysis and reporting; and
 - (ee) agreement of a Carbon Storage Development Plan for each of the Hamilton Carbon Store and the Hamilton North Carbon Store with the NSTA;

- (B) submission of the Hamilton Storage Permit Addendum Application and the Hamilton North Storage Permit Addendum Application to the NSTA; and
- (C) all activities required to prepare (i) the draft Mitigation Measures Plan; and (ii) all other Supporting Information to be submitted to the Regulator accordance with paragraphs 3.3(c)(v) and 3.3(c)(vi) of schedule 10 (*Project-specific conditions*) of the Licence, including the following activities:
 - (aa) FEED to incorporate an additional injection well on each of the Hamilton Carbon Store and the Hamilton North Carbon Store:
 - (a) flowline design;
 - (b) weight assessment of each of the Hamilton Carbon Store and the Hamilton North Carbon Store, each with an additional injection well;
 - (c) layout definition in detailed design of Phase 1 Systems;
 - (d) preliminary quantitative risk assessment in detailed design of Phase 1 Systems;
 - (e) definition of long lead items; and
 - (f) update of detailed design of Phase 1 Systems, e.g. electrical load, I/O count to include additional injection well on each of the Hamilton Carbon Store and the Hamilton North Carbon Store;
 - (bb) preparation of draft drilling programme for the Hamilton Carbon Store fifth injection well and the Hamilton North Carbon Store third injection well;
 - (cc) procurement:
 - (a) initiate sourcing process for long lead items required before a Phase 2 Tranche A Uncertain Cost Event occurs; and
 - (b) initiate preliminary negotiations of variation orders with main contractors for Mitigation Measures Plan activities;
 - (dd) permitting requirements:
 - (a) where necessary, expansion of permits relating to the Phase 1 Systems to include an additional injection well on each of the Hamilton Carbon Store and Hamilton North Carbon Store; and
 - (b) identification of additional permits required in the event implementation of the Mitigation Measures Plan is required; and

- (ee) MMP schedule preparation:
 - (a) based on earliest forecast Phase 2 Tranche A Uncertain Cost Event; and
 - (b) based on 300-day longstop Phase 2 Tranche A Uncertain Cost Event; and
 - (viii) preparation of a punchlist containing the Licensee's proposed Phase 1 Handover Punchlist Items.
- (f) Subject to section 3.1(g), the "**Commissioning Activities**" include the following works and activities which relate to the Phase 1 Systems:
 - (i) achievement of Handover, as determined by the Regulator under Special Condition F3.6(a) (*Handover Date*) of the Licence;
 - (ii) the rectification, resolution and/or completion of all Phase 1 Handover Punchlist Items and, where applicable, COD Readiness Punchlist Items;
 - (iii) the transfer to the Licensee of all Transferred Assets in accordance with the Asset Transfer Agreement, and securing that all assets relating to the Phase 1 Systems are in the ownership of the Licensee;
 - (iv) pre-commissioning of the Phase 1 Systems prior to the introduction of CO₂, including:
 - (A) successful completion of site acceptance testing to the extent not completed as part of the Handover Works;
 - (B) successful completion of functional testing of all equipment forming part of the Phase 1 Systems including successful operational testing of utilities and of the process systems in closed loop with inert fluids;
 - (C) preparatory activities for CO₂ introduction into the Phase 1 Systems including dewatering, gauging, cleaning and pipeline drying, process lines leak testing and inerting, well barriers testing, first fill of pipelines and equipment with nitrogen;
 - (D) calibration of fiscal and allocation metering;
 - (E) successful completion of testing of all CO₂ specification monitoring systems, including shutdown of systems on detection of out of specification CO₂;
 - (F) successful completion of testing of all venting facilities and other safety systems;
 - (G) energisation (where appropriate) of the Phase 1 Systems; and
 - (H) well perforation, installation and successful completion of testing of Xmas trees, and flowline hook-up in respect of the Phase 1 Systems;
 - (v) securing the following approvals required to, as a minimum, commission and operate the Phase 1 Systems, including any and all:
 - (A) licences;

- (B) permits;
 - (C) consents;
 - (D) approvals, including any and all regulatory and statutory approvals; and
 - (E) all relevant land agreements
- (vi) the following commissioning of the Phase 1 Systems:
- (A) super drying of the Phase 1 Systems (for pressure containing equipment) to dew point specification (indicatively -30 to -40 degrees Celsius);
 - (B) first fill of pipelines and equipment forming part of the of the Phase 1 Systems with CO₂;
 - (C) successful completion of functional testing of all equipment forming part of the Phase 1 Systems with CO₂;
 - (D) successful completion of testing of all venting and safety systems and achieving confirmation in respect of the functionality of the same from a qualified independent certification body; and
 - (E) commissioning of process systems with process fluid;
- (vii) **organisational readiness:**
- (A) personnel recruitment and training relating to Phase 1 Activities are in progress and aligned with the Operations Readiness and Assurance Plan; and
 - (B) development and approval processes of operating procedures relating to Phase 1 Activities are in progress and aligned with the Operations Readiness and Assurance Plan;
- (viii) all drawings and documentation required for operations are modified in red-line mark-up;
- (ix) procurement, implementation and successful completion of testing of the information technology (IT) applications, databases and communication systems, including that of the T&S Network Portal in line with the requirements under the CCS Network Code;
- (x) successful completion of performance testing of the Phase 1 Systems to demonstrate at a minimum the following:
- (A) **wells:** well performance testing will include multi-rate testing on each well including start-up and shutdown with CO₂. The performance testing is required to demonstrate that the wells which form part of the Phase 1 Systems:
 - (aa) can, in aggregate, accept the Planned Initial Users' peak instantaneous flow volumes; and

- (bb) are predicted to accept sufficient capacity of CO₂ to enable the Licensee to achieve the Availability Target in each Operational Charging Year, i.e. across six wells are:
 - (a) proven by physical injection to be able to inject a minimum of 0.58 MTPA (18.39 kg/s) per well on average (i.e., not all wells tested at the same time, and some wells may be injecting at lower rates) and at least 0.20 MTPA (6.34 kg/s) per well; and
 - (b) predicted based on calibrated well models to be able to inject a minimum of 0.85 MTPA (26.95 kg/s) per Hamilton Carbon Store well on average and 0.50 MTPA (15.85 kg/s) per Hamilton North Carbon Store wells on average (i.e., not all wells tested at the same time, and some wells may be injecting at lower rates) and at least 0.20 MTPA (6.34 kg/s) per well when the store conditions are 48bara at Hamilton Carbon Store and 51bara at Hamilton North Carbon Store;

- (B) **compression:** compression capacity of two online trains is at least 4.74 MTPA (150.30 kg/s) (this applies to all combinations, i.e. testing all three trains in different combinations). As part of the site acceptance testing, the compressor performance map shall be verified across the complete range of operating conditions. Control system shall be tested to demonstrate capacity of control. The performance testing is required to demonstrate the following:
 - (aa) performance testing to verify the complete compressor performance map, including 10% intervals between speed covering minimum turndown and max flow rate on ramp-up, ramp-down and for a warm ramp-up, in each case in recycle-mode:
 - (a) shutdown and retest of capacity tests to verify repeatability and no hysteresis; and
 - (b) running: 72hrs continuous test period;
 - (bb) operating performance:
 - (a) unpressurised condition start-up duration (i.e. replicating a cold start), re-start from the suction pressure based on normal operating procedures (i.e. replicating a warm/hot start);
 - (b) unit changeover tests to demonstrate ability to perform changeover of compressor trains without trip; and
 - (c) verifying functionality of Safety Instrument Functions within the control system performs the intended functions and tasks according to the design specifications and functional requirements with varying User flow rate;

provided that, where there is sufficient back pressure available within the Phase 1 Offshore Systems the compression tests

under this section 3.1(f)(x)(B)(bb) will be performed with forward-flow instead of full recycle-mode;

- (C) **onshore pipelines:** none of the onshore pipelines has blockages and the observed pressure and temperatures are in line with design flow assurance modelling for the actual flow rates;
- (D) **offshore pipelines:**
 - (aa) PoA Terminal to Douglas CCS Platform offshore pipeline has no blockages and the observed pressure and temperatures are in line with design flow assurance modelling for the actual flow rates and composition;
 - (bb) Douglas CCS Platform to HM offshore pipeline has no blockages and the observed pressure and temperatures are in line with design flow assurance modelling for the actual flow rates and composition; and
 - (cc) Douglas CCS Platform to HN pipeline has no blockages and the observed pressure and temperatures are in line with design flow assurance modelling for the actual flow rates and composition;
- (E) **the Approved T&S Network is capable of handling the expected flow perturbations and the control system operates within the operating envelope of the Approved T&S Network:**
 - (aa) **Phase 1 User shutdown/start-up:** no adverse impact on other Phase 1 User(s);
 - (bb) **loss of half injection capacity:** no constraint on Users beyond 3 hours;
 - (cc) **loss of one User:** no constraint on other User(s) beyond 3 hours;
 - (dd) **minimum injected volume required:** 31,000 tonnes; and
 - (ee) **minimum continuous flow:** 7 days injecting at least 0.20 MTPA (6.34 kg/s); and
- (F) successful completion of any such performance and operational testing as required to comply with Schedule 4 or Schedule 6 of the Construction Agreement(s) for the First User(s) and any other Phase 1 Users that will connect to the Approved T&S Network prior to the Commercial Operations Date; and
- (xi) preparation of a punchlist containing the proposed System Acceptance Punchlist Items.
- (g) Where the Licensee evidences to the Regulator's satisfaction that only one User is available to supply CO₂, "**Commissioning Activities**" shall be construed to include:
 - (i) all works and activities which relate to the Phase 1 Systems and are set out in sections 3.1(f)(i) to 3.1(f)(viii) and section 3.1(f)(xi);

- (ii) successful completion of performance testing of the Phase 1 Systems to demonstrate at a minimum the requirements set out in section 3.1(f)(x), save that:
 - (A) **wells:** section 3.1(f)(x)(A)(bb)(a) shall be adjusted such that the wells, i.e. across six wells, are proven by physical injection to be able to inject a minimum of:
 - (aa) 0.58 MTPA instantaneous (18.39 kg/s) per well on average (i.e., not all wells tested at the same time, and some wells may be injecting at lower rates); or
 - (bb) the maximum flow rate contributed by the relevant User and at least 0.20 MTPA instantaneous (6.34 kg/s) per well,

provided that if at the time of testing User flows are not capable of providing 0.58 MTPA instantaneous (18.39 kg/s):

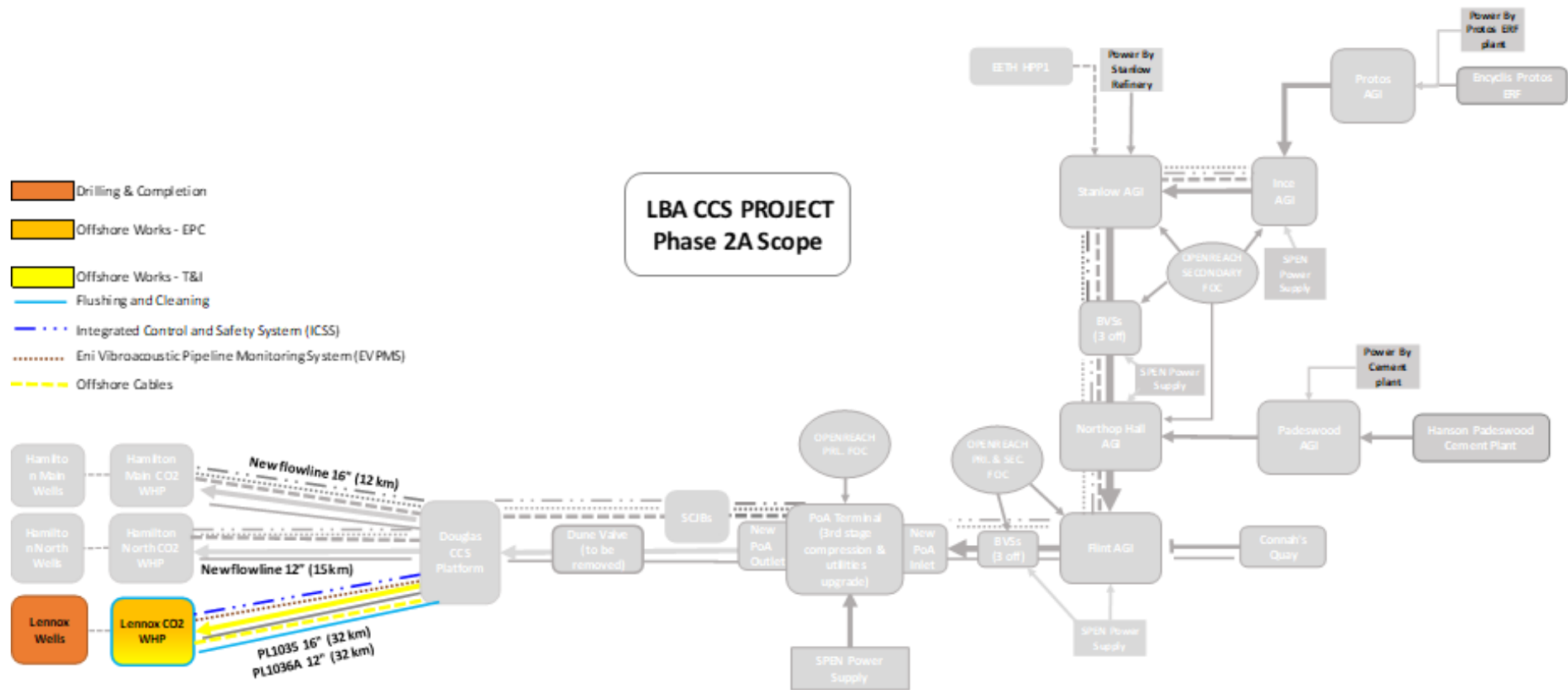
 - (aa) section 3.1(f)(x)(A)(bb)(a) shall be adjusted such that the wells are proven by physical injection to be able to inject the actual instantaneous flow rates delivered by the User(s); and
 - (bb) section 3.1(f)(x)(A)(bb)(b) shall be adjusted such that the wells are predicted based on calibrated well models to be able to inject a minimum of 0.58 MTPA (18.39 kg/s);
 - (B) **compression:** section 3.1(f)(x)(B) shall be adjusted such that all compression tests will be performed in recycle; and
 - (C) **the Approved T&S Network is capable of handling the expected flow perturbations and the control system operates within the operating envelope of the Approved T&S Network:** section 3.1(f)(x)(E) shall be adjusted such that:
 - (aa) section 3.1(f)(x)(E)(aa) is disapplied such that the Phase 1 User shutdown/start-up test is not required; and
 - (bb) section 3.1(f)(x)(E)(cc) is disapplied such that the loss of one User test is not required.
- (h) The **"COD Readiness Activities"** comprise:
 - (i) the works and activities which relate to the Phase 1 Systems which are set out in sections 3.1(f)(i), 3.1(f)(iii) and 3.1(f)(iv)(A) to 3.1(f)(iv)(G);
 - (ii) the rectification, resolution and/or completion of all Phase 1 Handover Punchlist Items;
 - (iii) the works and activities which relate to the Phase 1 Systems which are set out in section 3.1(f)(v) to the extent that CO₂ is not required in order to obtain such licences, permits, consents and approvals;
 - (iv) the works and activities which relate to the Phase 1 Systems which are set out in section 3.1(f)(vi); and

- (v) successful operational testing of utilities and of the process systems in closed loop with inert fluids under conditions as close as possible to standard operation of the Approved T&S Network.

3.2 Phase 2 Activities

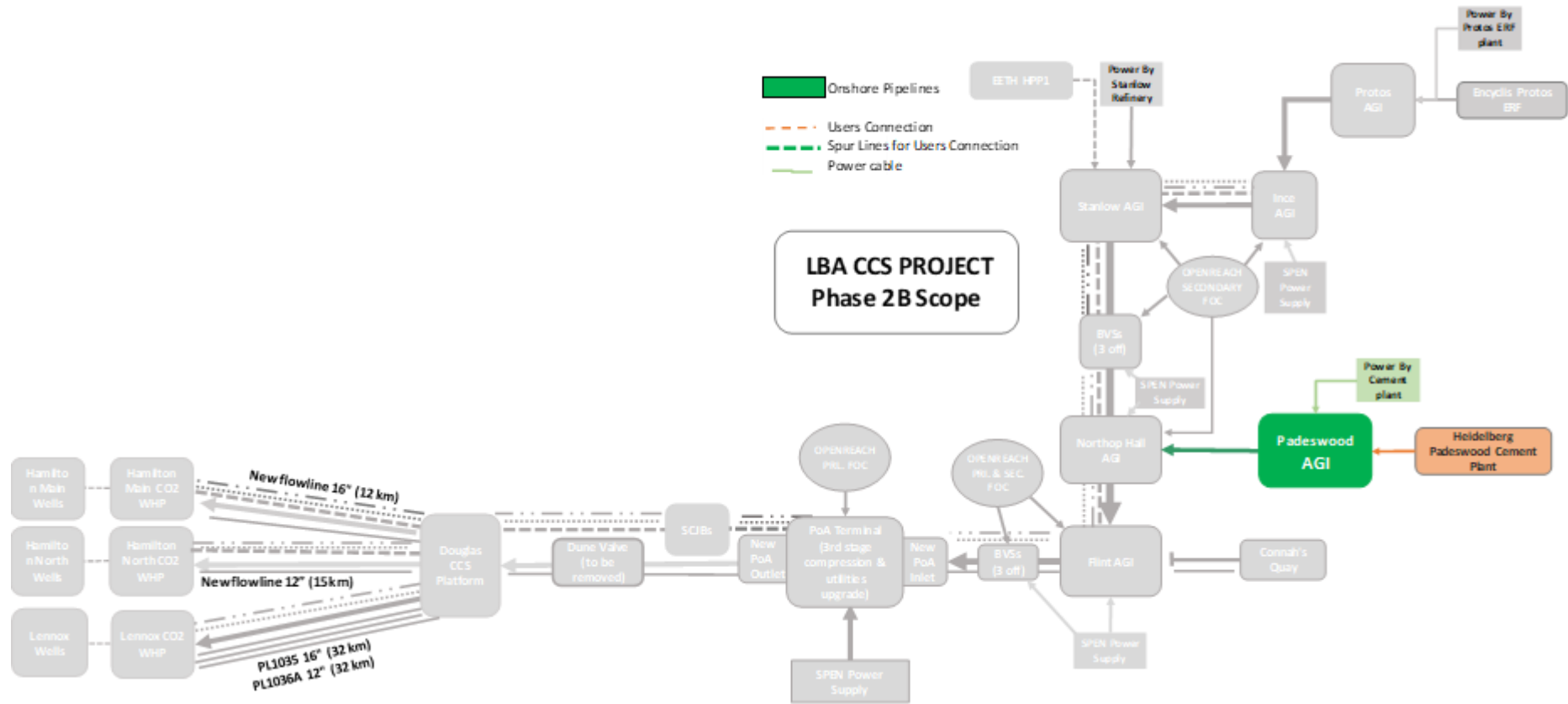
- (a) The Phase 2 Activities comprise the Phase 2 Handover Works and the Phase 2 Commissioning Activities, being in each case works and activities relating to the Approved T&S Network which shall secure the 4.74 MTPA (150.30 kg/s) long term capacity.
- (b) The Phase 2 Activities are divided into **five four** Phase 2 Tranches, as follows:
 - (i) **"Phase 2 Tranche A"**, being works and activities related to the Lennox Carbon Store, as more particularly described in sections 3.2(j)(ii) and 3.2(k)(ii);
 - (ii) **"Phase 2 Tranche B"**, being works and activities related to the Padeswood Spurline, as more particularly described in sections 3.2(j)(iii) and 3.2(k)(iii);
 - (iii) **~~NOT USED - "Phase 2 Tranche C", being works and activities related to the Runcorn Spurline, as more particularly described in sections 3.2(j)(iv) and 3.2(k)(iv);~~**
 - (iv) **"Phase 2 Tranche D"**, being the conversion of the Offshore Transportation and Storage System to operate in dense phase at 4.74 MTPA (150.30 kg/s) design capacity, as more particularly described in sections 3.2(j)(v) and 3.2(k)(v); and
 - (v) **"Phase 2 Tranche E"**, being works and activities related to Planned Initial Users other than the (i) First User(s) and (ii) Phase 2 Users to whom Phase 2 Tranche B **or Phase 2 Tranche C** applies ("**Other User(s)**"), as more particularly described in section 3.2(k)(vi).
- (c) The Licensee's Phase 2 Activities scope (excluding Phase 2 Activities which relate to Phase 2 Tranche E) is shown in the following diagrams:

Figure 3: Phase 2A Scope* **as amended by the Phase 2C Supervening Event Re-opener**



*This diagram is illustrative only

Figure 4: Phase 2B Scope* **as amended by the Phase 2C Supervening Event Re-opener**

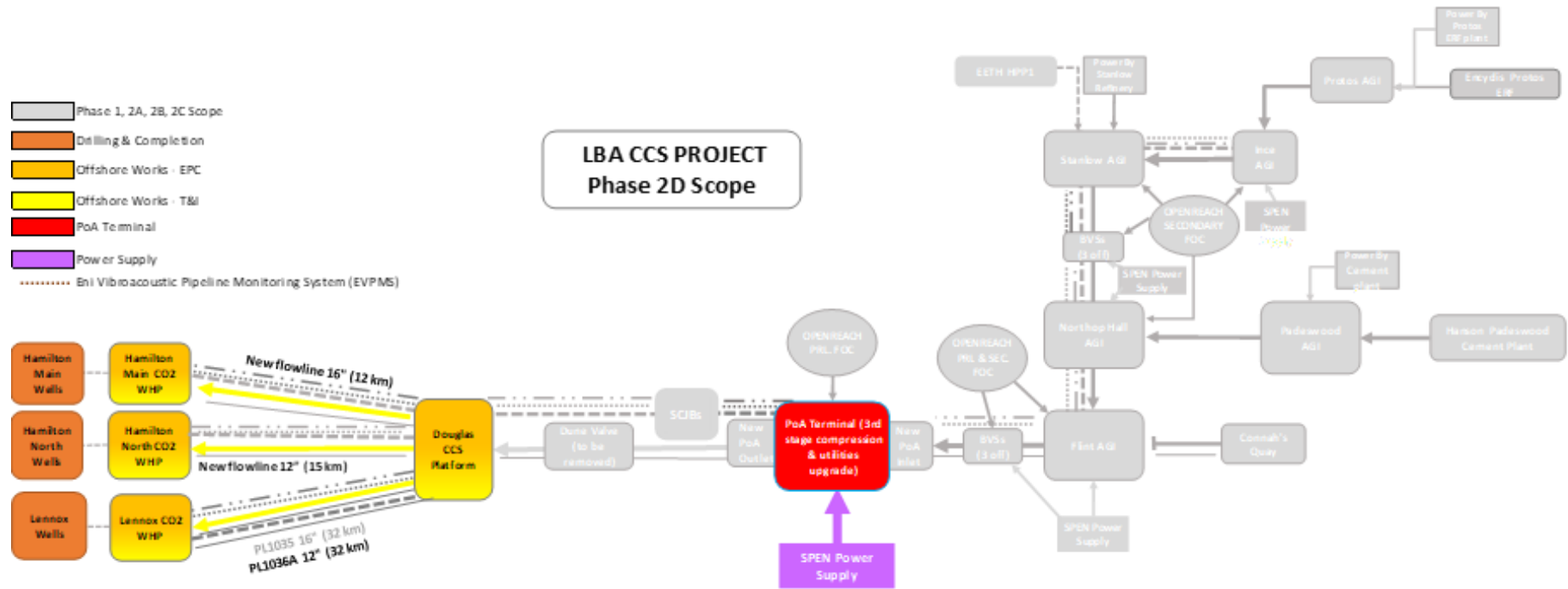


*This diagram is illustrative only

Figure 5: Phase 2C Scope*

*This diagram is illustrative only

Figure 6: Phase 2D Scope* **as amended by the Phase 2C Supervening Event Re-opener**



*This diagram is illustrative only

Note: Consolidated documents are not formal Public Register documents and should not be relied on. Carbon Dioxide Transport and Storage Licence for Liverpool Bay CCS Limited - Consolidated to 15 January 2026

- (d) Any references to operating conditions, performance standards, specified design, Project requirements and design flow assurance models in this section 3.2 where parameters are not fully defined at Licence Award will be further defined through the detailed design process and the fully developed requirements (as approved by the Regulator in accordance with Special Condition J3.10 (*Independent Certifier*) of the Licence) will apply following the conclusion of detailed design, and the provisions of this section 3.2 will be construed accordingly.
- (e) The **"Phase 2 Systems"** are any and all of the Phase 2 Tranche A Systems, the Phase 2 Tranche B Systems, ~~the Phase 2 Tranche C Systems~~ and the Phase 2 Tranche D Systems.
- (f) The **"Phase 2 Tranche A Systems"**, being the Phase 2 Systems forming part of the Approved T&S Network to which the Phase 2 Activities forming part of Phase 2 Tranche A relate, are as follows:
- (i) Lennox platform new topsides including:
 - (A) helideck;
 - (B) two heaters performing a combined heating duty of 4.8 MW;
 - (C) filtration;
 - (D) metering;
 - (E) power transformers and electrical distribution; and
 - (F) riser;
 - (ii) a new subsea power and communications cable (1 x 33kV integrated with FOC) from Douglas CCS Platform to Lennox;
 - (iii) offshore pipelines suitable to convey a combined flow rate of 2.50 MTPA instantaneous (79.27 kg/s), as follows:
 - (A) repurposed 16" Douglas CCS Platform to Lennox (PL1035); and
 - (B) repurposed 12" Douglas CCS Platform to Lennox (PL1036A); and
 - (iv) two injection wells, one sentinel well and one monitoring well.
- (g) The **"Phase 2 Tranche B Systems"**, being the Phase 2 Systems forming part of the Approved T&S Network to which the Phase 2 Activities forming part of Phase 2 Tranche B relate, are as follows:
- (i) onshore 16" pipeline from Padeswood AGI to Northop Hall AGI suitable to convey a flow rate of 2.30 MTPA (72.93 kg/s), including an FOC along the route;
 - (ii) Padeswood AGI and ancillary support systems; and
 - (iii) upgrades of Northop Hall AGI to allow connection of the new 16" pipeline from Padeswood AGI.

(h) **NOT USED** The "**Phase 2 Tranche C Systems**", being the Phase 2 Systems forming part of the Approved T&S Network to which the Phase 2 Activities forming part of Phase 2 Tranche C relate, are as follows:

(i) onshore 20" pipeline from Runcorn AGI to Ince AGI suitable to convey a flow rate of 3.00 MTPA (95.13 kg/s), including an FOC along the route;

(ii) Runcorn AGI and ancillary support systems; and

(iii) upgrades of Ince AGI.

(i) The "**Phase 2 Tranche D Systems**", being the Phase 2 Systems forming part of the Approved T&S Network to which the Phase 2 Activities forming part of Phase 2 Tranche D relate, are as follows:

(i) PoA Terminal infrastructure upgrade to dense phase operations:

(A) third stage compressors;

(B) upgrade of utility system;

(C) new vent package; and

(D) power connection upgrade to 132 kV;

(ii) offshore pipelines:

(A) new 16" flowline from Douglas CCS Platform to Hamilton Main specified for dense phase flow with a design capacity of 4.25 MTPA (134.77 kg/s);

(B) new 12" flowline from Douglas CCS Platform to Hamilton North specified for dense phase flow with a confirmed capacity of 2.00 MTPA (63.42 kg/s); and

(C) repurposed 12" flowline from Douglas CCS Platform to Lennox (PL1036A) with a design capacity of 1.66 MTPA (52.64 kg/s); and

(iii) offshore platforms:

(A) riser connections and piping connections required for the new offshore pipelines described in section 3.2(i)(ii);

(B) upgrade of metering instrumentation for dense phase flow; and

(C) downhole fixed orifice chokes (or such other technology as it may be appropriate to use in their place) in each of the wells to provide backpressure to maintain dense phase flow.

(j) **Phase 2 Handover Works**

- (i) The "**Phase 2 Handover Works**" are any and all of the Phase 2 Tranche A Handover Works, Phase 2 Tranche B Handover Works, **Phase 2 Tranche C Handover Works** and Phase 2 Tranche D Handover Works.
- (ii) The "**Phase 2 Tranche A Handover Works**" include the following works and activities which relate to the Phase 2 Tranche A Systems:
- (A) design and engineering of the Phase 2 Tranche A Systems;
 - (B) execution planning of the Phase 2 Tranche A Systems, including producing the construction and Mechanical Completion plans and procedures and compiling the associated dossiers, each in line with the detailed engineering deliverables and performance standards;
 - (C) permitting the Phase 2 Tranche A Systems – securing the approvals required to, as a minimum, construct and install the Phase 2 Tranche A Systems, including any and all licences, permits, consents and approvals, including any regulatory and statutory approvals and all relevant land agreements;
 - (D) fabrication, construction and installation of the Phase 2 Tranche A Systems to the point of Mechanical Completion, including ensuring that fabrication, construction, erection, installation, testing, cleaning, gauging and hydrotesting of any assemblies or equipment forming part of the Phase 2 Tranche A Systems have been satisfactorily completed and documented in accordance with specified design and Project requirements (wells will be constructed without Xmas tree installation and no perforation of the wells);
 - (E) **organisational readiness:** development and approval processes of operating procedures relating to Phase 2 Tranche A are in progress and aligned with the Operations Readiness and Assurance Plan;
 - (F) all drawings and documentation required for performance of the Phase 2 Tranche A Commissioning Activities are modified in red-line mark-up; and
 - (G) preparation of a punchlist containing the Licensee's proposed Phase 2 Handover Punchlist Items relating to Phase 2 Tranche A.
- (iii) The "**Phase 2 Tranche B Handover Works**" include the following works and activities which relate to the Phase 2 Tranche B Systems:
- (A) design and engineering of the Phase 2 Tranche B Systems;
 - (B) execution planning of the Phase 2 Tranche B Systems, including producing the construction and Mechanical Completion plans and procedures and compiling the associated dossiers, each in line with the detailed engineering deliverables and performance standards;
 - (C) permitting the Phase 2 Tranche B Systems – securing the approvals required to, as a minimum, construct and install the Phase 2 Tranche B Systems, including any and all licences, permits, consents and

approvals, including any regulatory and statutory approvals and all relevant land agreements;

- (D) fabrication, construction and installation of the Phase 2 Tranche B Systems to the point of Mechanical Completion, including ensuring that fabrication, construction, erection, installation, testing, cleaning, gauging and hydrotesting of any assemblies or equipment forming part of the Phase 2 Tranche B Systems have been satisfactorily completed and documented in accordance with specified design and Project requirements;
- (E) **organisational readiness:** development and approval processes of operating procedures relating to Phase 2 Tranche B are in progress and aligned with the Operations Readiness and Assurance Plan;
- (F) all drawings and documentation required for performance of the Phase 2 Tranche B Commissioning Activities are modified in red-line mark-up; and
- (G) preparation of a punchlist containing the Licensee's proposed Phase 2 Handover Punchlist Items relating to Phase 2 Tranche B.

(iv) ~~NOT USED~~ The "~~Phase 2 Tranche C Handover Works~~" include the following works and activities which relate to the Phase 2 Tranche C Systems:

- ~~(A) design and engineering of the Phase 2 Tranche C Systems;~~
- ~~(B) execution planning of the Phase 2 Tranche C Systems, including producing the construction and Mechanical Completion plans and procedures and compiling the associated dossiers, each in line with the detailed engineering deliverables and performance standards;~~
- ~~(C) permitting the Phase 2 Tranche C Systems — securing the approvals required to, as a minimum, construct and install the Phase 2 Tranche C Systems, including any and all licences, permits, consents and approvals, including any regulatory and statutory approvals and all relevant land agreements;~~
- ~~(D) fabrication, construction and installation of the Phase 2 Tranche C Systems to the point of Mechanical Completion, including ensuring that fabrication, construction, erection, installation, testing, cleaning, gauging and hydrotesting of any assemblies or equipment forming part of the Phase 2 Tranche C Systems have been satisfactorily completed and documented in accordance with specified design and Project requirements;~~
- ~~(E) **organisational readiness:** development and approval processes of operating procedures relating to Phase 2 Tranche C are in progress and aligned with the Operations Readiness and Assurance Plan;~~
- ~~(F) all drawings and documentation required for performance of the Phase 2 Tranche C Commissioning Activities are modified in red-line mark-up; and~~
- ~~(G) preparation of a punchlist containing the Licensee's proposed Phase 2 Handover Punchlist Items relating to Phase 2 Tranche C.~~

- (v) The **"Phase 2 Tranche D Handover Works"** include the following works and activities which relate to the Phase 2 Tranche D Systems:
 - (A) design and engineering of the Phase 2 Tranche D Systems;
 - (B) execution planning of the Phase 2 Tranche D Systems, including producing the construction and Mechanical Completion plans and procedures and compiling the associated dossiers, each in line with the detailed engineering deliverables and performance standards;
 - (C) permitting the Phase 2 Tranche D Systems – securing the approvals required to, as a minimum, construct and install the Phase 2 Tranche D Systems, including any and all licences, permits, consents and approvals, including any regulatory and statutory approvals and all relevant land agreements;
 - (D) fabrication, construction and installation of the Phase 2 Tranche D Systems to the point of Mechanical Completion, including ensuring that fabrication, construction, erection, installation, testing, cleaning, gauging and hydrotesting of any assemblies or equipment forming part of the Phase 2 Tranche D Systems have been satisfactorily completed and documented in accordance with specified design and Project requirements;
 - (E) **organisational readiness:**
 - (aa) personnel training relating to Phase 2 Tranche D are in progress and aligned with the Operations Readiness and Assurance Plan; and
 - (bb) development and approval processes of operating procedures relating to Phase 2 Tranche D are in progress and aligned with the Operations Readiness and Assurance Plan;
 - (F) all drawings and documentation required for performance of the Phase 2 Tranche D Commissioning Activities are modified in red-line mark-up; and
 - (G) preparation of a punchlist containing the Licensee's proposed Phase 2 Handover Punchlist Items relating to Phase 2 Tranche D.
- (vi) Phase 2 Tranche E does not include any Phase 2 Handover Works.

(k) **Phase 2 Commissioning Activities**

- (i) The **"Phase 2 Commissioning Activities"** are any and all of the Phase 2 Tranche A Commissioning Activities, the Phase 2 Tranche B Commissioning Activities, ~~the Phase 2 Tranche C Commissioning Activities~~, the Phase 2 Tranche D Commissioning Activities and the Phase 2 Tranche E Commissioning Activities.
- (ii) The **"Phase 2 Tranche A Commissioning Activities"** include the following works and activities which relate to the Phase 2 Tranche A Systems:
 - (A) achievement of the relevant Phase 2 Handover, as determined by the Regulator under Special Condition I2.19 (*T&S Network expansion and*

additional construction, commissioning and operational periods) of the Licence;

- (B) the rectification, resolution and/or completion of all Phase 2 Handover Punchlist Items relating to Phase 2 Tranche A;
- (C) to the extent not previously transferred as part of the Commissioning Activities, the transfer to the Licensee of all Transferred Assets which relate to the Phase 2 Tranche A Systems in accordance with the Asset Transfer Agreement, and securing that all assets relating to the Phase 2 Tranche A Systems are in the ownership of the Licensee;
- (D) pre-commissioning of the Phase 2 Tranche A Systems prior to the introduction of CO₂, including:
 - (aa) successful completion of site acceptance testing to the extent not completed as part of the Phase 2 Tranche A Handover Works;
 - (bb) successful completion of functional testing of all equipment forming part of the Phase 2 Tranche A Systems including successful operational testing of utilities and of the process systems in closed loop with inert fluids;
 - (cc) preparatory activities for CO₂ introduction into the Phase 2 Tranche A Systems including dewatering, gauging, cleaning and pipeline drying, process lines leak testing with inert medium, well barriers testing, first fill of pipelines and equipment with nitrogen;
 - (dd) calibration of allocation metering;
 - (ee) successful completion of testing of all safety systems;
 - (ff) energisation (where appropriate) of the Phase 2 Tranche A Systems; and
 - (gg) well perforation, installation and successful completion of testing of Xmas trees, and flowline hook-up in respect of the Phase 2 Tranche A Systems;
- (E) securing the following approvals required to, as a minimum, commission and operate the Phase 2 Tranche A Systems, including any and all:
 - (aa) licences;
 - (bb) permits;
 - (cc) consents;
 - (dd) approvals, including any and all regulatory and statutory approvals; and
 - (ee) all relevant land agreements;

- (F) the following commissioning of the Phase 2 Tranche A Systems:
 - (aa) super drying of the Phase 2 Tranche A Systems (for pressure containing equipment) to dew point specification (indicatively -30 to -40 degrees Celsius);
 - (bb) first fill of pipelines and equipment forming part of the of the Phase 2 Tranche A Systems with CO₂;
 - (cc) successful completion of functional testing of all equipment forming part of the Phase 2 Tranche A Systems with CO₂;
 - (dd) successful completion of testing of all safety systems and achieving confirmation in respect of the functionality of the same from a qualified independent certification body; and
 - (ee) commissioning of process systems with process fluid;
- (G) all drawings and documentation required for operations are modified in red-line mark-up;
- (H) to the extent applicable procurement, implementation of the updates to, and subsequent successful completion of testing of, the information technology (IT) applications, databases and communication systems, including that of the T&S Network Portal in line with the requirements under the CCS Network Code;
- (I) successful completion of performance testing of the Phase 2 Tranche A Systems to demonstrate at a minimum the following:
 - (aa) **wells:** well performance testing will include multi-rate testing on each well including start-up and shutdown with CO₂. The performance testing is required to demonstrate that the two wells which form part of the Phase 2 Systems (the "**Phase 2 Wells**"):
 - (a) can, in aggregate across the wells which form part of the Phase 1 Systems (the "**Phase 1 Wells**") and the Phase 2 Wells, accept the 4.74 MTPA instantaneous (150.30 kg/s) peak instantaneous flow volumes (with such testing to be based on the data obtained as part of the well performance testing in respect of the Phase 1 Wells as detailed in section 3.1(f)(ix)(A)); and
 - (b) across all eight injection wells (being the Phase 1 Wells and the Phase 2 Wells) are predicted to accept sufficient capacity of CO₂ to enable the Licensee to achieve the Availability Target in each Operational Charging Year:
 - (i) proven by physical injection to be able to inject a minimum of:
 - (A) 0.58 instantaneous MTPA (18.39 kg/s) per well on average (i.e., not all wells tested at the same time, and some wells may be injecting at lower rates); and

- (B) at least 0.20 MTPA instantaneous (6.34 kg/s) per well,

save where, at the time of testing, User flows are not capable of providing 0.58 MTPA instantaneous (18.39 kg/s), in which case the Phase 2 Wells:

- (A) must be proven by physical injection to be able to inject the actual flow rates delivery by the User(s); and
- (B) must be predicated based on calibrated well models to be able to inject a minimum of 0.58 MTPA instantaneous (18.39 kg/s),

(with such testing to be based on the data obtained as part of the well performance testing in respect of the Phase 1 Wells as detailed in section 3.1(f)(ix)(A)); and

- (c) across the two Lennox injection wells are predicted to accept sufficient capacity of CO₂ to enable the Licensee to achieve the Availability Target in each Operational Charging Year:
 - (i) predicted based on calibrated well models to be able to inject a minimum of 0.75 MTPA (23.78 kg/s) per Lennox well on average (i.e., not all wells tested at the same time, and some wells may be injecting at lower rates) and at least 0.20 MTPA (6.34 kg/s) per well when the store conditions are 45bara at the Lennox Carbon Store;

- (bb) **offshore pipelines:** Douglas CCS Platform to Lennox offshore pipelines PL1035 and PL1036A have no blockages and the observed pressure and temperatures are in line with design flow assurance modelling for the actual flow rates and composition; and

- (cc) **the Approved T&S Network is capable of handling the expected flow perturbations and the control system operates within the operating envelope of the Approved T&S Network:**

- (a) **minimum injected volume required:** 31,000 tonnes injected into Lennox Carbon Store; and
- (b) **minimum continuous flow:** 7 days injecting into Lennox Carbon Store at least 0.20 MTPA (6.34 kg/s); and

- (J) preparation of a punchlist containing the Licensee's proposed Phase 2 Acceptance Punchlist Items relating to Phase 2 Tranche A.

- (iii) The "**Phase 2 Tranche B Commissioning Activities**" include the following works and activities which relate to the Phase 2 Tranche B Systems:
- (A) achievement of the relevant Phase 2 Handover, as determined by the Regulator under Special Condition I2.19 (*T&S Network expansion and additional construction, commissioning and operational periods*) of the Licence
 - (B) the rectification, resolution and/or completion of all Phase 2 Handover Punchlist Items relating to Phase 2 Tranche B;
 - (C) to the extent not previously transferred as part of (i) the Commissioning Activities; or (ii) any other Phase 2 Commissioning Activities, the transfer to the Licensee of all Transferred Assets which relate to the Phase 2 Tranche B Systems in accordance with the Asset Transfer Agreement, and securing that all assets relating to the Phase 2 Tranche B Systems are in the ownership of the Licensee;
 - (D) pre-commissioning of the Phase 2 Tranche B Systems prior to the introduction of CO₂, including:
 - (aa) successful completion of site acceptance testing to the extent not completed as part of the Phase 2 Tranche B Handover Works;
 - (bb) successful completion of functional testing of all equipment forming part of the Phase 2 Tranche B Systems including successful operational testing of the process systems in closed loop with inert fluids;
 - (cc) preparatory activities for CO₂ introduction into the Phase 2 Tranche B Systems including dewatering, gauging, cleaning and pipeline drying, process lines leak testing and inerting, first fill of pipelines and equipment with nitrogen;
 - (dd) successful completion of testing of all CO₂ specification monitoring systems, including shutdown of systems on detection of out of specification CO₂;
 - (ee) successful completion of testing of all safety systems; and
 - (ff) energisation (where appropriate) of the Phase 2 Tranche B Systems;
 - (E) securing the following approvals required to, as a minimum, commission and operate the Phase 2 Tranche B Systems, including any and all:
 - (aa) licences;
 - (bb) permits;
 - (cc) consents;
 - (dd) approvals, including any and all regulatory and statutory approvals; and

- (ee) all relevant land agreements;
- (F) the following commissioning of the Phase 2 Tranche B Systems:
 - (aa) super drying of the Phase 2 Tranche B Systems (for pressure containing equipment) to dew point specification (indicatively -30 to -40 degrees Celsius);
 - (bb) first fill of pipelines and equipment forming part of the of the Phase 2 Tranche B Systems with CO₂;
 - (cc) successful completion of functional testing of all equipment forming part of the Phase 2 Tranche B Systems with CO₂;
 - (dd) successful completion of testing of all safety systems and achieving confirmation in respect of the functionality of the same from a qualified independent certification body; and
 - (ee) commissioning of process systems with process fluid;
- (G) all drawings and documentation required for operations are modified in red-line mark-up;
- (H) successful completion of performance testing of the Phase 2 Tranche B Systems to demonstrate at a minimum the following:
 - (aa) **onshore pipelines:** none of the onshore pipelines has blockages and the observed pressure and temperatures are in line with design flow assurance modelling for the actual flow rates;
- (I) successful completion of any such performance and operational testing as required to comply with Schedule 4 or Schedule 6 of the Construction Agreement(s) for the relevant Phase 2 User(s); and
- (J) preparation of a punchlist containing the Licensee's proposed Phase 2 Acceptance Punchlist Items relating to Phase 2 Tranche B.

(iv) **NOT USED The "Phase 2 Tranche C Commissioning Activities"**

~~include the following works and activities which relate to the Phase 2 Tranche C Systems:~~

~~(A) — achievement of the relevant Phase 2 Handover, as determined by the Regulator under Special Condition 12.19 (T&S Network expansion and additional construction, commissioning and operational periods) of the Licence;~~

~~(B) — the rectification, resolution and/or completion of all Phase 2 Handover Punchlist Items relating to Phase 2 Tranche C;~~

~~(C) — to the extent not previously transferred as part of (i) the Commissioning Activities; or (ii) any other Phase 2 Commissioning Activities, the transfer to the Licensee of all Transferred Assets which relate to the Phase 2 Tranche C Systems in accordance with the Asset Transfer Agreement, and securing that all assets relating to the Phase 2 Tranche C Systems are in the ownership of the Licensee;~~

- (D) pre-commissioning of the Phase 2 Tranche C Systems prior to the introduction of CO₂, including:
 - (aa) successful completion of site acceptance testing to the extent not completed as part of the Phase 2 Tranche C Handover Works;
 - (bb) successful completion of functional testing of all equipment forming part of the Phase 2 Tranche C Systems including successful operational testing of the process systems in closed loop with inert fluids;
 - (cc) preparatory activities for CO₂ introduction into the Phase 2 Tranche C Systems including dewatering, gauging, cleaning and pipeline drying, process lines leak testing and inerting, first fill of pipelines and equipment with nitrogen;
 - (dd) successful completion of testing of all CO₂ specification monitoring systems, including shutdown of systems on detection of out of specification CO₂;
 - (ee) successful completion of testing of all safety systems; and
 - (ff) energisation (where appropriate) of the Phase 2 Tranche C Systems;
- (E) securing the following approvals required to, as a minimum, commission and operate the Phase 2 Tranche C Systems, including any and all:
 - (aa) licences;
 - (bb) permits;
 - (cc) consents;
 - (dd) approvals, including any and all regulatory and statutory approvals; and
 - (ee) all relevant land agreements;
- (F) the following commissioning of the Phase 2 Tranche C Systems:
 - (aa) super drying of the Phase 2 Tranche C Systems (for pressure containing equipment) to dew point specification (indicatively -30 to -40 degrees Celsius);
 - (bb) first fill of pipelines and equipment forming part of the of the Phase 2 Tranche C Systems with CO₂;
 - (cc) successful completion of functional testing of all equipment forming part of the Phase 2 Tranche C Systems with CO₂;
 - (dd) successful completion of testing of all safety systems and achieving confirmation in respect of the functionality of the same from a qualified independent certification body; and

- ~~(ee) commissioning of process systems with process fluid;~~
 - ~~(G) all drawings and documentation required for operations are modified in red line mark-up;~~
 - ~~(H) successful completion of performance testing of the Phase 2 Tranche C Systems to demonstrate at a minimum the following:~~
 - ~~(aa) onshore pipelines: none of the onshore pipelines has blockages and the observed pressure and temperatures are in line with design flow assurance modelling for the actual flow rates;~~
 - ~~(I) successful completion of any such performance and operational testing as required to comply with Schedule 4 or Schedule 6 of the Construction Agreement(s) for the relevant Phase 2 User(s); and~~
 - ~~(J) preparation of a punchlist containing the Licensee's proposed Phase 2 Acceptance Punchlist Items relating to Phase 2 Tranche C.~~
- (v) The **"Phase 2 Tranche D Commissioning Activities"** include the following works and activities which relate to the Phase 2 Tranche D Systems:
- (A) achievement of the relevant Phase 2 Handover, as determined by the Regulator under Special Condition I2.19 (*T&S Network expansion and additional construction, commissioning and operational periods*) of the Licence;
 - (B) the rectification, resolution and/or completion of all Phase 2 Handover Punchlist Items relating to Phase 2 Tranche D;
 - (C) to the extent not previously transferred as part of (i) the Commissioning Activities; or (ii) any other Phase 2 Commissioning Activities, the transfer to the Licensee of all Transferred Assets which relate to the Phase 2 Tranche D Systems in accordance with the Asset Transfer Agreement, and securing that all assets relating to the Phase 2 Tranche D Systems are in the ownership of the Licensee;
 - (D) pre-commissioning of the Phase 2 Tranche D Systems prior to the introduction of CO₂, including:
 - (aa) successful completion of site acceptance testing to the extent not completed as part of the Phase 2 Tranche D Handover Works;
 - (bb) successful completion of functional testing of all equipment forming part of the Phase 2 Tranche D Systems including successful operational testing of utilities and of the process systems in closed loop with inert fluids;
 - (cc) preparatory activities for CO₂ introduction into the Phase 2 Tranche D Systems including dewatering, gauging, cleaning and pipeline drying, process lines leak testing and inerting, well barriers testing, first fill of pipelines as described in section 3.2(k)(iv)(F)(bb) and relevant well head platform equipment with nitrogen;

- (dd) calibration of allocation metering;
 - (ee) successful completion of testing of all venting facilities and other safety systems; and
 - (ff) energisation (where appropriate) of the Phase 2 Tranche D Systems;
- (E) securing the following approvals required to, as a minimum, commission and operate the Phase 2 Tranche D Systems, including any and all:
- (aa) licences;
 - (bb) permits;
 - (cc) consents;
 - (dd) approvals, including any and all regulatory and statutory approvals; and
 - (ee) all relevant land agreements;
- (F) the following commissioning of the Phase 2 Tranche D Systems:
- (aa) super drying of the Phase 2 Tranche D Systems (for pressure containing equipment) to dew point specification (indicatively -30 to -40 degrees Celsius);
 - (bb) first fill of pipelines and equipment forming part of the of the Phase 2 Tranche D Systems with CO₂;
 - (cc) successful completion of functional testing of all equipment forming part of the Phase 2 Tranche D Systems with CO₂;
 - (dd) successful completion of testing of all venting and safety systems and achieving confirmation in respect of the functionality of the same from a qualified independent certification body; and
 - (ee) commissioning of process systems with process fluid;
- (G) organisational readiness:
- (aa) personnel training relating to Phase 2 Tranche D dense phase operations are in progress and aligned with Operations Readiness and Assurance Plan; and
 - (bb) development and approval processes of operating procedures relating to Phase 2 Tranche D are in progress and aligned with the Operations Readiness and Assurance Plan;
- (H) all drawings and documentation required for operations are modified in red-line mark-up;

- (I) to the extent applicable procurement, implementation of the updates to, and subsequent successful completion of testing of, the information technology (IT) applications, databases and communication systems, including that of the T&S Network Portal in line with the requirements under the CCS Network Code;
- (J) successful completion of performance testing of the Phase 2 Tranche D Systems to demonstrate at a minimum the following:
 - (aa) **compression:** compression capacity of two online trains is at least 4.74 MTPA (150.30 kg/s) (this applies to all combinations, i.e. testing all three trains in different combinations). As part of the site acceptance testing, the compressor performance map shall be verified across the complete range of operating conditions. Control system shall be tested to demonstrate capacity of control. The performance testing is required to demonstrate the following:
 - (a) performance testing to verify the complete compressor performance map, including 10% intervals between speed covering minimum turndown and max flow rate on ramp-up, ramp-down and for a warm ramp-up;
 - (i) shutdown and retest of capacity tests to verify repeatability and no hysteresis; and
 - (ii) running: 72hrs continuous test period; and
 - (b) operating performance:
 - (i) unpressurised condition start-up duration (i.e. replicating a cold start), re-start from the suction pressure based on normal operating procedures (i.e. replicating a warm/hot start);
 - (ii) unit changeover tests to demonstrate ability to perform changeover of compressor trains without trip; and
 - (iii) verifying functionality of Safety Instrument Functions within the control system performs the intended functions and tasks according to the design specifications and functional requirements with varying User flow rate;
 - (bb) **offshore pipelines:**
 - (a) Douglas CCS Platform to HM offshore pipeline has no blockages and the observed pressure and temperatures are in line with design flow assurance modelling for the actual flow rates and composition; and
 - (b) Douglas CCS Platform to HN pipeline has no blockages and the observed pressure and temperatures are in line with design flow assurance modelling for the actual flow rates and composition; and

- (cc) **the Approved T&S Network is capable of handling the expected flow perturbations and the control system operates within the operating envelope of the Approved T&S Network:**
 - (a) **User shutdown/start-up:** no adverse impact on other User(s);
 - (b) **loss of half injection capacity:** no constraint on Users beyond 3 hours;
 - (c) **loss of one User:** no constraint on other User(s) beyond 3 hours;
 - (d) **minimum injected volume required:** all Users minimum flow rates for 30 days; and
 - (e) **minimum continuous flow:** 7 days injecting at least 0.20 MTPA (6.34 kg/s); and
- (K) preparation of a punchlist containing the Licensee's proposed Phase 2 Acceptance Punchlist Items relating to Phase 2 Tranche D.
- (vi) The **"Phase 2 Tranche E Commissioning Activities"** include the following works and activities in respect of any Other User(s):
 - (A) successful completion of any such performance and operational testing as required to comply with Schedule 4 or Schedule 6 of the Construction Agreement(s) for such Other User(s).
- (l) **Phase 2D Devex Activities**
 - (i) The Phase 2D Devex Activities are divided into three Groups of Phase 2D Devex Activities, in respect of which paragraph 3.6 (*Uncertain Cost Events*) of schedule 10 (*Project-specific conditions*) of the Licence applies.
 - (ii) The **"First Group of Phase 2D Devex Activities"** shall include the following Phase 2D Devex Activities:
 - (A) procurement and supervision of feasibility studies and offer creation in respect of the PoA power connection upgrade (as referred to in section 3.2(i)(i)(D)) by NESO (or local electrical distributor);
 - (B) concept select of:
 - (aa) offshore pipelines (as referred to in section 3.2(i)(ii));
 - (bb) riser connections (as referred to in section 3.2(i)(iii)(A)); and
 - (cc) any other pipeline works required from a safety, integrity, efficiency, or economic perspective;

- (C) concept select of PoA plant update compressor upgrade (as referred to in section 3.2(i)(i)(A)) and associated facilities (as referred to in sections 3.2(i)(i)(B) to 3.2(i)(i)(D)); and
 - (D) in respect of the offshore platforms (as referred to in section 3.2(i)(iii)):
 - (aa) well back pressure options evaluation; and
 - (bb) dense phase metering screening study.
- (iii) The **"Second Group of Phase 2D Devex Activities"** shall include the following Phase 2D Devex Activities:
- (A) procurement and supervision of PoA power connection upgrade (as referred to in section 3.2(i)(i)(D)) by NESO (or local electrical distributor), including:
 - (aa) FEED; and
 - (bb) market engagement and preparation of invitation to tender ("ITT");
 - (B) in respect of:
 - (aa) offshore pipelines (as referred to in section 3.2(i)(ii));
 - (bb) riser connections (as referred to in section 3.2(i)(iii)(A)); and
 - (cc) any other pipeline works required from a safety, integrity, efficiency, and economic perspective,
 the following:
 - (a) FEED;
 - (b) pipeline route surveys;
 - (c) preparation of submissions for environmental and other relevant approvals; and
 - (d) market engagement and preparation of ITT;
 - (C) in respect of the PoA compressor upgrade (as referred to in section 3.2(i)(i)(A)) and associated facilities (as referred to in sections 3.2(i)(i)(B) to 3.2(i)(i)(D)):
 - (aa) FEED;
 - (bb) preparation of submissions for all relevant permits and approvals; and
 - (cc) market engagement and preparation of ITT; and
 - (D) in respect of offshore platforms (as referred to in sections 3.2(i)(iii)(B) and 3.2(i)(iii)(C)):
 - (aa) wells (as referred to in section 3.2(i)(iii)(C)):
 - (a) well intervention to evaluate conditions;

- (b) vendor engagement; and
 - (c) technology qualification and testing (where relevant); and
- (bb) dense phase metering (as referred to in section 3.2(i)(iii)(B)), including:
 - (a) technical specification; and
 - (b) technology qualification and testing (where relevant).
- (iv) The **"Third Group of Phase 2D Devex Activities"** shall comprise all Phase 2D Devex Activities required to enable the Licensee to progress from completion of the second Group of Phase 2D Devex Activities to a point at which the Phase 2 Tranche D Handover Works and the Phase 2 Tranche D Commissioning Activities are sufficiently certain such that the Ongoing Capex Allowance(s) can be adjusted to fully and finally reflect the same, including:
 - (A) in respect of the PoA power connection upgrade (as referred to in section 3.2(i)(i)(D)):
 - (aa) supervision and monitoring of the ITT being performed by NESO (or local electrical distributor),
 - (bb) review of bid evaluation and recommendation to award by NESO (or local electrical distributor); and
 - (cc) recommendation to proceed;
 - (B) in respect of the offshore pipelines (as referred to in section 3.2(i)(ii)) and risers (as referred to in section 3.2(i)(iii)(A)):
 - (aa) issue of ITT documents;
 - (bb) ITT bid evaluation and recommendation to award; and
 - (cc) environmental and other relevant approvals submission, review and approval;
 - (C) in respect of the PoA compressor upgrade (as referred to in section 3.2(i)(i)(A)) and associated facilities (as referred to in sections 3.2(i)(i)(B) to 3.2(i)(i)(D)):
 - (aa) issue of ITT documents; and
 - (bb) ITT bid evaluation and recommendation to award; and
 - (D) in respect of the offshore platforms (as referred to in section 3.2(i)(iii)):
 - (aa) wells (as referred to in section 3.2(i)(iii)(C)):
 - (a) issue of ITT documents; and
 - (b) ITT bid evaluation and recommendation to award; and
 - (bb) dense phase metering (as referred to in section 3.2(i)(iii)(B)):
 - (a) issue of ITT documents; and

(b) ITT bid evaluation and recommendation to award.

3.3 Availability Target and Availability Floor

- (a) The Availability Target is 95%.
- (b) The Availability Floor is 75%.

3.4 Obligated Network Capacity

	Obligated Network Capacity
Maximum Flow Rates	Maximum Instantaneous Flow Rate: 150.30 kg/s (4.74 MTPA instantaneous)
	Maximum Annual Cumulative Flow: 4.50 MtCO ₂
Minimum Flow Rate	Minimum Instantaneous Flow Rate: 6.34 kg/s (0.20 MTPA instantaneous)
Overall Store Capacity	109 MtCO ₂

4. USERS

4.1 Planned Initial Users

- (a) The "**Planned Initial Users**" are the potential Users identified within the "*Cluster sequencing Phase-2: Track-1 project negotiation list*"² issued in March 2023 as detailed in the table below.
- (b) Planned Initial Users table:

Row no.	Planned Initial User	User Phase	Connection Location	Indicative scheduled commencement date*
1.	Viridor (Runcorn)	Phase 2 User	Runcorn AGI	████████
2.	Encyclis Protos ERF	Phase 1 User	Protos AGI	████████
3.	Hanson Padeswood	Phase 2 User	Padeswood AGI	████████
4.	EET HPP1	Phase 1 User	Stanlow AGI	████████

*As such term is defined in the relevant Connection Agreements.

² Cluster sequencing Phase-2: Track-1 project negotiation list, March 2023 - GOV.UK (www.gov.uk)

5. DEVELOPMENT ACTIVITIES

5.1 Development Activities

() At Licence Award, there are no Development Activities. Accordingly, at Licence Award there are no:

() Ongoing Devex Stage Check Activities; or

(i) Tranches of Stage Check Activities.

5.2 Expansion Activities

(a) At Licence Award there are no Expansion Activities. Accordingly, at Licence Award there are no:

(i) ExpA Acceptance Punchlist Items;

(ii) ExpA Commissioning Activities;

(iii) ExpA Handover Punchlist Items; or

(iv) ExpA Handover Works.

5.3 Runcorn Spurline Development Activities

(a) The Runcorn Spurline Development Activities shall mean the development activities required to enable the Licensee to maintain and progress, on a limited and timebound basis, the planning and stakeholder engagement position for the Runcorn Spurline, comprising:

(i) Runcorn TCPA Application: supporting the progression, management and determination of each Runcorn TCPA Application (including the provision of information and engagement with relevant Competent Authorities) through to Q4 2026;

(ii) engagement with Cubico DCO process: supporting (including to provide such assistance and input as is reasonably required for) the Cubico Frodsham Solar Project Development Consent Order process through to Q4 2026;

(iii) engagement with Standby User: maintaining proportionate engagement with Viridor (Runcorn) regarding the status of its Standby classification and any implications for the Runcorn Spurline, through to end of Q4 2026; and

(iv) engagement with DESNZ: promptly responding to requests for information and/or clarification issued by DESNZ in respect of the Runcorn Spurline and the Viridor Runcorn Carbon Capture Project through to end of Q4 2026.

6. IC SCOPE

6.1 General obligations

(a) The Independent Certifier shall act as an objective and unbiased third-party who certifies that relevant works and activities have been performed in accordance with the Licence and this APDP and the relevant Legal Requirements.

(b) The Independent Certifier shall check and verify such information necessary to satisfy itself that all relevant works and activities have been satisfactorily executed in

accordance with the Licence and this APDP and the relevant Legal Requirements. Such checks and verification shall form part of a primarily desktop exercise using information provided by the Licensee, focussing on critical documentation relating to (as relevant) the Handover Works, Commissioning Activities, Phase 2 Commissioning Activities, ExpA Handover Works and/or ExpA Commissioning Activities (as the case may be), with a sample check for detailed information.

- (c) The Independent Certifier shall attend as an observer, or procure the attendance of others as observers, a selection of testing (selected by the Independent Certifier) performed and verified by others to inform its opinion on whether such tests are performed and witnessed in line with the relevant testing procedures. The Independent Certifier will not be required under an IC Deed of Appointment to perform or witness, or engage others to perform or witness, testing on any element of the T&S Network.
- (d) The Independent Certifier shall obtain records from the Licensee, verify models and interview personnel to ascertain to its own satisfaction that all aspects of relevant Project milestones have been achieved or have been demonstrated to be possible to be achieved at an appropriate future time.

6.2 In respect of (where relevant) the Handover Works and/or any Phase 2 Handover Works and/or any ExpA Handover Works:

- (a) an Independent Certifier shall review the evidence provided by the Licensee and certify whether it is satisfied that the Handover Works, any Phase 2 Handover Works and/or any ExpA Handover Works (as relevant) have been completed in accordance with the Licence and this APDP and the relevant Legal Requirements. This will include review of information related to:
 - (i) Mechanical Completion, including information relating to construction, fabrication, installation, integrity testing, functional testing cleaning, gauging, hydrotesting, leak testing, inspection, preservation, re-instatement, and record keeping activities;
 - (ii) the design and engineering verification performed by the Licensee and any independent verification bodies contracted by the Licensee;
 - (iii) permits and consents required to be in place by Handover, the relevant Phase 2 Handover and/or the relevant ExpA Handover (as relevant) as outlined in the PLANC Register; and
 - (iv) the operating organisation in-place and its training / competence status with reference to anticipated status in the relevant Operations Readiness and Assurance Plan; and
- (b) an Independent Certifier shall review and confirm (as relevant) the Phase 1 Handover Punchlist Items prior to the Handover Date, any relevant Phase 2 Handover Punchlist Items prior to the date of the relevant Phase 2 Handover and any relevant ExpA Handover Punchlist Items prior to the date of the relevant ExpA Handover.

6.3 In respect of (where relevant) the Commissioning Activities and/or any Phase 2 Commissioning Activities and/or ExpA Commissioning Activities:

- (a) an Independent Certifier shall review the evidence provided by the Licensee and certify whether it is satisfied that the Commissioning Activities, Phase 2 Commissioning Activities and/or ExpA Commissioning Activities (as relevant) have

been completed in accordance with the Licence and this APDP and the relevant Legal Requirements, which will include certifying that the relevant System Acceptance, Phase 2 Acceptance or ExpA Acceptance performance metrics (as relevant) have been demonstrated and that operations can start in accordance with the Licence and this APDP and the relevant Legal Requirements. This will include review of the following information related to the Commissioning Activities and System Acceptance and/or any Phase 2 Commissioning Activities and/or ExpA Commissioning Activities and relevant Phase 2 Acceptance and/or ExpA Acceptance (as relevant):

- (i) commissioning records proving integrity of bolted joints and equipment demonstrating the leak tightness of the pressure boundary in readiness for introduction of CO₂;
 - (ii) performance tests as detailed in this APDP; and
 - (iii) where relevant, calibrated well and fluid models demonstrating the ability of the wells to achieve the injection rates specified for future conditions as specified in this APDP; and
- (b) an Independent Certifier shall review and confirm (as relevant) the System Acceptance Punchlist Items prior to the COD and/or the relevant Phase 2 Acceptance Punchlist Items and/or the relevant ExpA Acceptance Punchlist Items prior to the date of the relevant Phase 2 Acceptance and/or the date of the relevant ExpA Acceptance (as relevant).

6.4 In respect of the COD Readiness Activities:

- (a) an Independent Certifier shall review the evidence provided by the Licensee and certify whether it is satisfied that the COD Readiness Activities have been completed and the T&S Network can receive injected CO₂ from the Users in accordance with the Licence and this APDP, the CCS Network Code and the relevant Legal Requirements. This will include review of the following information related to the COD Readiness Activities:
- (i) commissioning records including leak test records for all pressure containing equipment; and
- (b) an Independent Certifier shall review and confirm the COD Readiness Punchlist Items prior to COD Readiness.

6.5 Notwithstanding any other provision of this section 6, if the Licensee has notified the Regulator that it has completed the Mitigation Measures Preparatory Activities under paragraph 3.3(a)(i)(D)(aa) of schedule 10 (*Project-specific conditions*) of the Licence, the Independent Certifier will deem the Mitigation Measures Preparatory Activities to have been completed.

7. STORAGE LICENCES

7.1 The following are the Storage Licences:

- (a) the Storage Licence in respect of the Hamilton Carbon Store (with reference CS004A);
- (b) the Storage Licence in respect of the Hamilton North Carbon Store (with reference CS004B); and

(c) the Storage Licence in respect of the Lennox Carbon Store (with reference CS004C).