Making a positive difference for energy consumers

Appendix 1 – Updated Approved Project Development Plan

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Approved Project Development Plan relating to the carbon dioxide transport and storage licence granted to Net Zero North Sea Storage Limited (company number 12473084) (the "Licensee") pursuant to section 7 (as modified by section 16 and Schedule 1) of the Energy Act 2023, relating to the "NEP CO2 Network" 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:

"BC 36" means the mapped structure of Bunter Sandstone Formation of Triassic geological age which has been given the name BC 36 in the CS007 Storage Licence;

"BC 36 Storage Site" means the Storage Site at BC 36;

"BC 37" means the mapped structure of Bunter Sandstone Formation of Triassic geological age which has been given the name BC 37 in the CS007 Storage Licence;

"BC 37 Storage Site" means the Storage Site at BC 37;

"BC 39" is defined as the mapped structure of Bunter Sandstone Formation of Triassic geological age which has been given the name BC 39 in the CS006 Storage Licence;

"BC 39 Storage Site" means the Storage Site at BC 39;

"BC 40" is defined as the mapped structure of Bunter Sandstone Formation of Triassic geological age which has been given the name BC 40 in the CS006 Storage Licence;

"BC 40 Storage Site" means the Storage Site at BC 40;

~~**"BOC"** means the Planned Initial User included in row 2 of the table at section 4.1(c);~~

~~**"BOC Spurline"** means the spurline described in section 3.1(a)(ii)(A)(bb);~~

"CO_2 Gathering Pipeline" means the pipeline described in section 3.1(a)(ii)(A)(aa);

"COD Readiness Punchlist Items" means any minor defects, deficiencies, or omissions which:

(a) would not have an adverse effect on the performance of any Commissioning Activities which are performed following the initial introduction of CO_2 into the Phase 1 Systems and/or operation of the Phase 1 Systems if not rectified, resolved or completed prior to the introduction of CO_2 into the T&S Network; and

(b) have been confirmed in writing as COD Readiness Punchlist Items by the relevant Independent Certifier (acting in accordance with the relevant IC Deed of Appointment);

"Commissioning Plan" means the document produced by the Licensee defining the activities required, their expected timing and progress against the plan prior to Mechanical Completion and System Acceptance;

"Completions Management Database" means the collection of documents, certificates, data and/or other materials related to the systematic recording of the completion of the construction, commissioning and start-up of the T&S Network which are:

(a) maintained by the Licensee;

(b) arranged in a systematic or methodical way; and

(c) individually accessible by electronic or other means;

"CS001 (Endurance) Storage Licence" means the Storage Licence in respect of the Endurance Storage Site granted on 6 November 2012;

"CS006" is the boundary offered by NSTA in the CS006 Storage Licence;

"CS006 Storage Licence" means the Storage Licence in respect of CS006 granted on 3 May 2022;

"CS006 Storage System" means the system, structure and components described in section 5.3(a) of this APDP;

"CS007" is the boundary offered by NSTA in the CS007 Storage Licence;

"CS007 Storage Licence" means the Storage Licence in respect of CS007 granted on 3 May 2022;

"CS007 Storage System" means the system, structure and components described in section 5.3(b) of this APDP;

"Endurance Offshore Storage System" means the system, structure and components described in section 3.1(a)(iv) of this APDP;

"Endurance Storage Site" has the meaning given to the term "Storage Site" in the Storage Permit granted under CS001 (Endurance) Storage Licence;

"Endurance Subsea Distribution and Injection System" means the Endurance subsea distribution and injection system described in section 3.1(a)(iv)(A)(cc);

"Environmental Statement" has the meaning given to that term in the Offshore EIA Regulations (2020) Guidance;

"Expansion User" means a User of the Approved T&S Network, other than a Planned Initial User, whose connection to the Approved T&S Network forms part of a Change in Scope;

"ESIA" has the meaning given to the term "Environmental Impact Assessment" in the Offshore EIA Regulations (2020) Guidance;

~~**"H2T"** means the Planned Initial User included in row 3 of the table at section 4.1(c);~~

~~**"H2T Spurline"** means the pipeline described in section 3.1(a)(ii)(A)(cc);~~

"Handover Punchlist Items" means any minor defects, deficiencies, or omissions which:

(a) would not have an adverse effect on the safe performance of the Commissioning Activities and/or safe operation of the Phase 1 Systems if not rectified, resolved or completed prior to Handover; and

(b) have been confirmed in writing as Handover Punchlist Items by the relevant Independent Certifier (acting in accordance with the relevant IC Deed of Appointment);

"HAZOP" means a relevant hazard and operability analysis;

"Hedon Interface" is the interface point between CO_2 from relevant Users in south of River Humber and north of River Humber;

"Humber Offshore Transportation System" means the offshore transportation system described in section 5.2(b);

"Humber Onshore and Offshore Transportation System" means the Humber Offshore Transportation System and the Humber Onshore Transportation System;

"Humber Onshore Transportation System" means the onshore transportation system described in section 5.2(c);

"Humber Pumping System" means the elements of the Humber Offshore Transportation System described in section 5.2(b)(i);

"Land Agreements" means side agreements, option agreements and lease agreements for the CO_2 easements and compounds required to construct and operate the T&S Network;

"Licence" means the licence granted to the Licensee by the Secretary of State, pursuant to section 7 of the Act;

"Mechanical Completion" is achieved when:

(a) excluding any Handover Punchlist Items:

(i) construction of the Phase 1 Systems is complete in accordance with the requirements of this APDP and any other relevant licence or Project-related requirements; and

(ii) all inspections and testing of the Phase 1 Systems undertaken in accordance with the requirements of this APDP (which do not form part of the Commissioning Activities) have been satisfactorily completed; and

(b) 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;

"NSTA Appraisal Term" means the period in respect of a Development Project which corresponds to the period of a carbon dioxide storage project described as the 'Appraisal term' in paragraph 1(d)16 of the NSTA Guidance on the Application for a Carbon Dioxide Appraisal and Storage Licence;

"NSTA Assess and Define Stage" means the stage of a NSTA Appraisal Term referred to as such and as described in paragraphs 2(e)90(III) and (IV) of the NSTA Guidance on the Application for a Carbon Dioxide Appraisal and Storage Licence;

"NSTA Assess Stage" means the stage of a NSTA Appraisal Term referred to as 'Assess' and described in paragraph 2(e)90(III) of the NSTA Guidance on the Application for a Carbon Dioxide Appraisal and Storage Licence, which forms part of the relevant NSTA Assess and Define Stage;

"NSTA Define Stage" means the stage of a NSTA Appraisal Term referred to as 'Define' and described in paragraph 2(e)90(IV) of the NSTA Guidance on the Application for a Carbon Dioxide Appraisal and Storage Licence, which forms part of the relevant NSTA Assess and Define Stage and, for the avoidance of doubt, includes submission of the relevant Storage Permit;

"NSTA Early Risk Assessment" means the stage of a NSTA Appraisal Term referred to as 'Early Risk Assessment' and described in paragraph 2(e)90 of the NSTA Guidance on the Application for a Carbon Dioxide Appraisal and Storage Licence, which forms part of the relevant NSTA Exploration and Appraisal Stage;

"NSTA Exploration and Appraisal Stage" means the stage of a NSTA Appraisal Term referred to as such and as described in paragraphs 2(e)90(I) and (II) of the NSTA Guidance on the Application for a Carbon Dioxide Appraisal and Storage Licence;

"NSTA Guidance on the Application for a Carbon Dioxide Appraisal and Storage Licence" means the guidance issued by the NSTA entitled 'NSTA Guidance on the application for a Carbon Dioxide Appraisal and Storage Licence (Rev 1.1)' and dated February 2023;

"NZT Power" means the Planned Initial User included in row 1 of the table at section 4.1(c);

"Offshore EIA Regulations (2020) Guidance" means the guidance entitled 'The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020 – A Guide (Rev. 3)' dated July 2021 and issued by BEIS Offshore Petroleum Regulator for Environment and Decommissioning;

"**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~~ and Phase 2 Tranche C Commissioning Activities, any minor defects, deficiencies, or omissions which:

(a) would not have an adverse effect on the continued operation of the Phase 1 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 Commissioning Activities" has the meaning given to it in section 3.2(a)(ii), which activities form part of the Phase 2 Activities;

~~"**Phase 2 User"** means a User that is listed as a Planned Initial User but is not a Phase 1 User;~~

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

"Power Capture and Compression Plot" or **"PCC"** means the power and capture plant and HP compression facilities located at the Teesworks Site as identified in orange on Figure 1 at section 2.1 of this APDP;

"Sub-System Mechanical Completion Dossier" means the collation of documented evidence demonstrating that all relevant construction activity relating to a portion of the work (each a **"Sub-system"**) has been carried out such that the relevant Sub-system is ready for commissioning, including energisation and further testing;

"System Acceptance Punchlist Items" means any minor defects, deficiencies, or omissions which:

(a) would not have an adverse effect on the operation of the Phase 1 Systems if not rectified, resolved or completed prior to System Acceptance; and

(b) have been confirmed in writing as System Acceptance Punchlist Items by the relevant Independent Certifier (acting in accordance with the relevant IC Deed of Appointment);

"System Completions Dossier" means the collation of documented evidence demonstrating that all relevant commissioning activity relating to a portion of the work (each a **"System"**), has been carried out such that the relevant System is ready for operations**;**

"Teesside Compression System" means the elements of the Offshore Transportation and Storage System described in section 3.1(a)(iii)(A) of this APDP;

"Teesside Offshore Pipeline Infrastructure" means the elements of the Offshore Pipeline Infrastructure described in section 3.1(a)(iii)(B) of this APDP;

"Teesside Offshore Transportation and Storage System" means the elements of the Onshore Transportation System described in section 3.1(a)(iii) of this APDP;

"Teesside Onshore Transportation System" means the elements of the Onshore Transportation System described in section 3.1(a)(ii) of this APDP; and

"Teesworks Site" is an industrial area to the south of the River Tees in the north east of England.

2. Scope of the Project and Cluster Overview

2.1 The anticipated delivery outcome of the Phase 1 Activities and Phase 2 Activities is presented in the illustrative schematics below including the location of assumed User scenario. "Areas of NEP common infrastructure" highlighted in ~~yellow~~ blue below outlines the location of Licensee owned supporting infrastructure (see below for description) which will be utilised by third parties.

Figure 1* amended as part of the BOC & H2T Discontinuation Determination

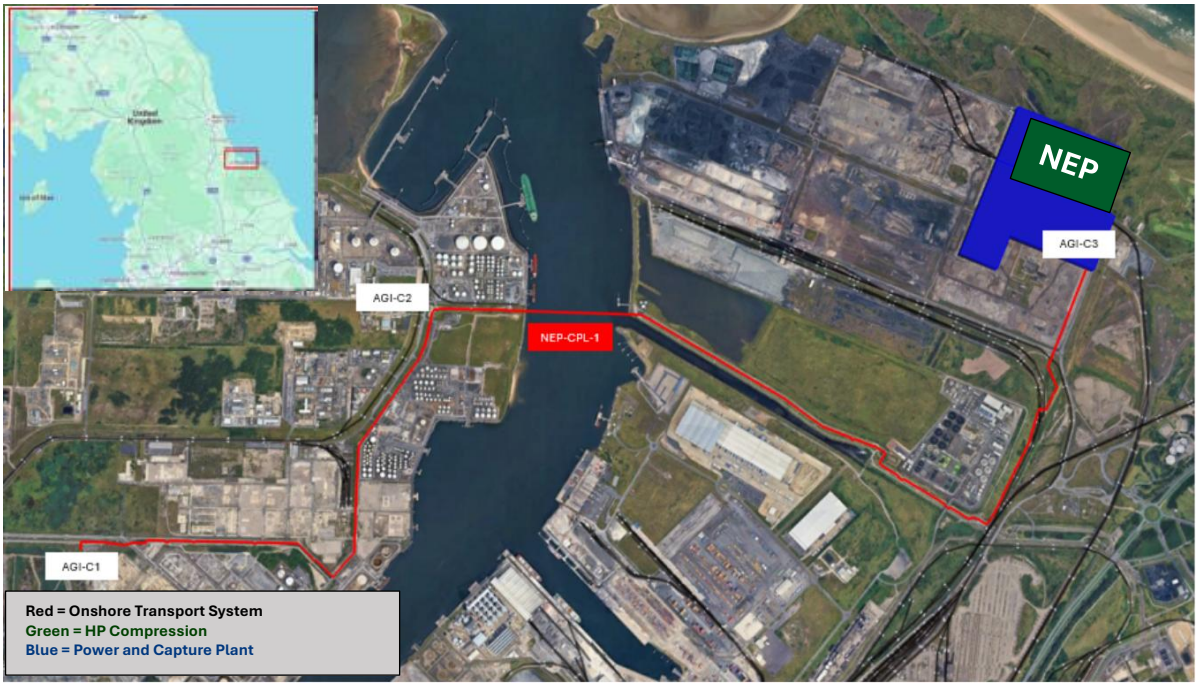
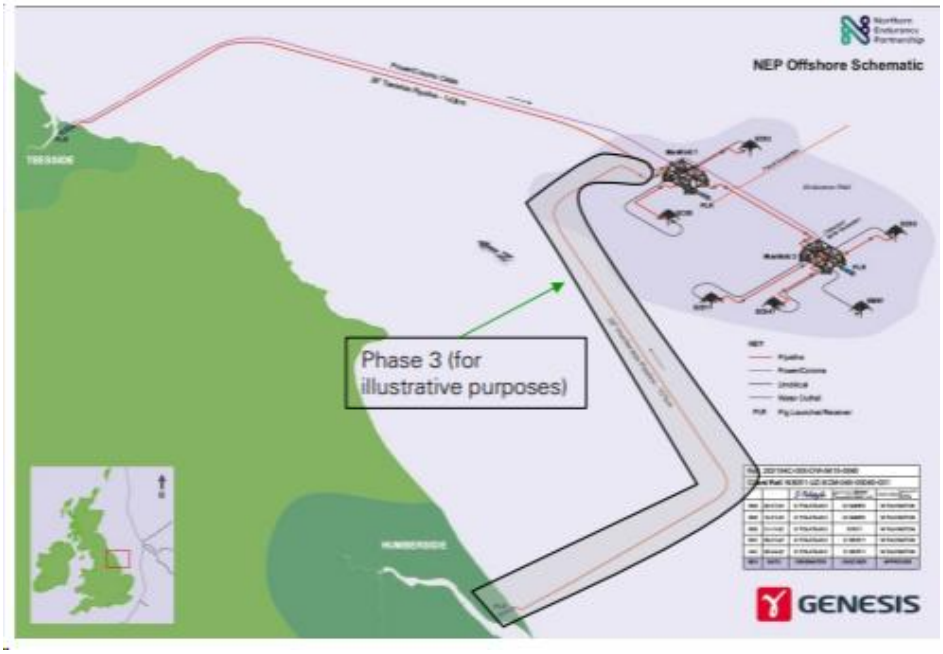


Figure 2

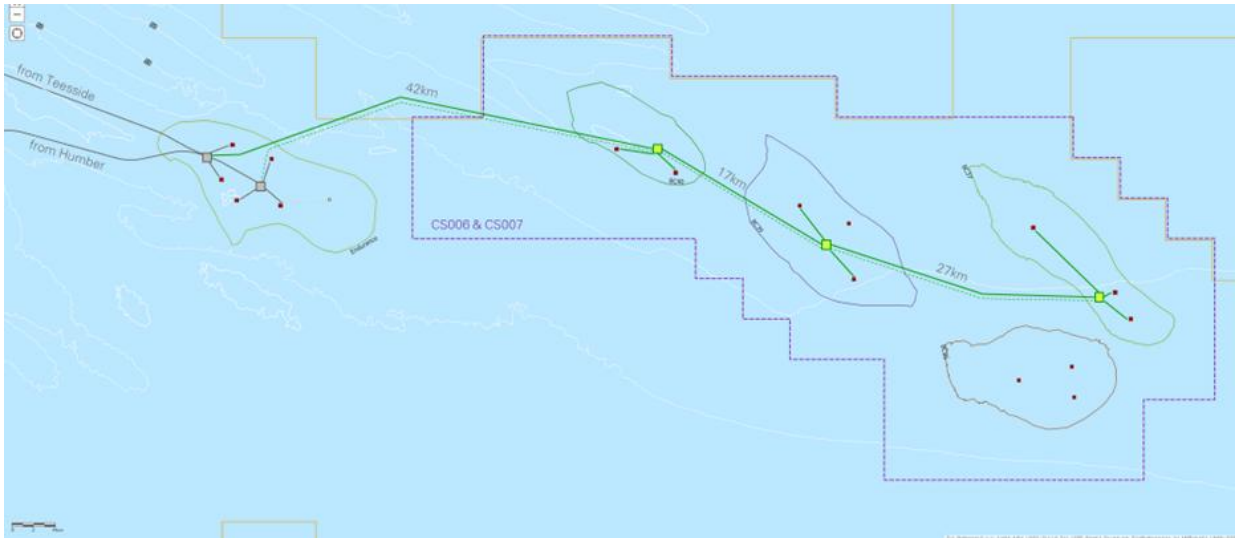


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(Images for illustration purposes only)

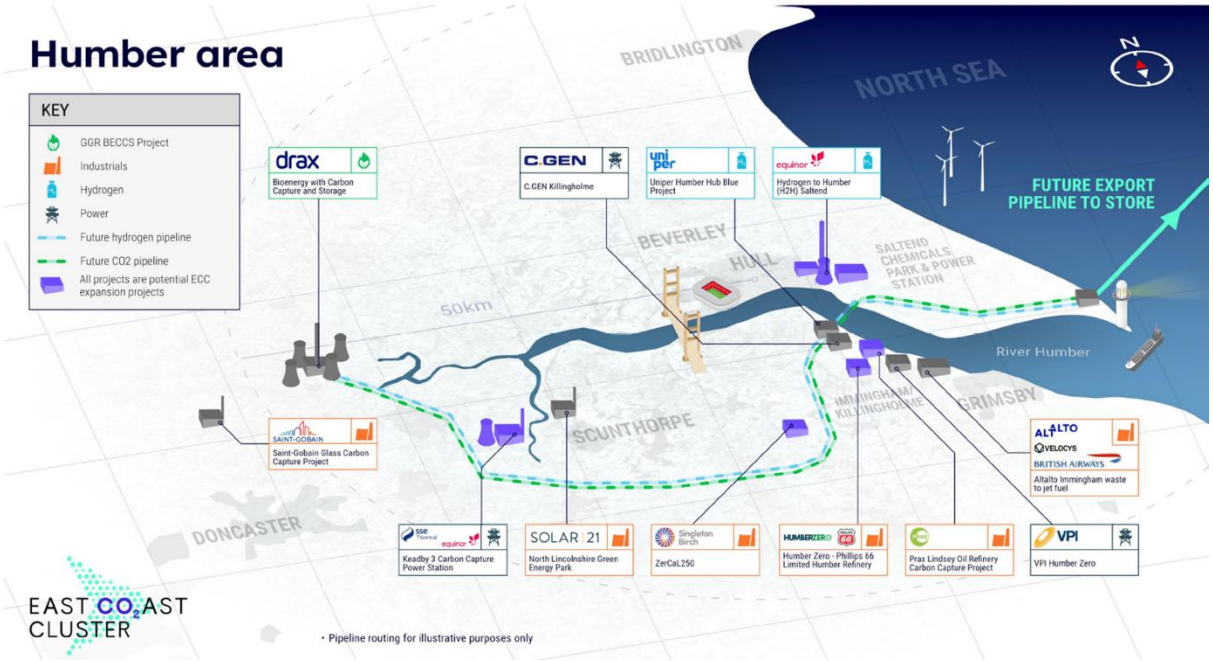
2.2 The anticipated delivery outcome of Development Activities is presented in the illustrative schematics below for the Humber Onshore and Offshore Transportation System, CS006 Storage System and CS007 Storage System. The optimum development of offshore storage system (e.g. numbers of wells and which stores) will be informed by appraisal across CS006 and CS007, and in line with User demand.

Figure 3



(Image for illustration purposes only)

Figure 4



(Image for illustration purposes only)

3. Approved T&S Network

3.1 Phase 1 Activities

(a) **Phase 1 Systems**

(i) The following parts of the Approved T&S Network will be designed, constructed, completed and commissioned as part of the Phase 1 Activities (the **"Phase 1 Systems"**):

(A) the Teesside Onshore Transportation System;

(B) the Teesside Offshore Transportation and Storage System, which includes the Teesside Compression System and the Teesside Offshore Pipeline Infrastructure; and

(C) the Endurance Offshore Storage System.

(ii) **Teesside Onshore Transportation System**

(A) The Teesside Onshore Transportation System includes the following system, structure and components:

(aa) **CO_2 Gathering Pipeline:** a 22" pipeline with a capacity of 3.80 MTPA instantaneous (120.50 kg/s) for gaseous phase CO_2 located north of the River Tees connecting an above ground installation (an **"AGI"**) ~~near BOC~~ near co-ordinates (54.605058, -1.192595) from the north bank of the River Tees to the high-pressure compression station at the PCC. The AGI will allow for tie-in of a future pipeline connecting Expansion Users~~upstream of BOC~~. The pipeline will also have provisions for future User spurline connections around the Seal Sands area to tie in future Users north of the River Tees;

~~(bb) **BOC Spurline:** an 8" spurline connecting the BOC boundary to the AGI near BOC with a capacity of 0.40 MTPA instantaneous (12.68 kg/s);~~

(cc) ~~**H2T Spurline:** a 22" pipeline from an AGI within H2T plot to PCC with a capacity of 3.60 MTPA instantaneous (114.16 kg/s) to allow future expansion of H2T and other users on the Teesworks Site via a tie-in point at the AGI~~; and

(dd) **support elements:** infrastructure providing support to the Licensee's and third parties' pipelines (hydrogen, nitrogen and oxygen), which infrastructure consists of low-level pipeline foundations/sleepers with minor structural steel and new build pipe bridges and strengthening of existing pipe bridges.

(B) Whilst the Teesside Onshore Transportation System is included as part of the Phase 1 Systems, it is not anticipated that any CO_2 shall be introduced into it prior to the Commercial Operations Date, and the relevant commissioning activities with CO_2 relating to the Teesside Onshore Transportation System shall be those Phase 2 Commissioning Activities set out in section 3.2(a)(iii)(A) (the **"TOTS Phase 2 Commissioning Activities"**).

(C) Notwithstanding section 3.1(a)(ii)((B), where Expansion User(s) are available to supply CO_2 to the Licensee prior to the Commercial Operations Date, the Licensee (acting reasonably) may elect to commence the TOTS Phase 2 Commissioning Activities prior to the Commercial Operations Date, in which case such TOTS Phase 2 Commissioning Activities may be performed by the Licensee prior to the Commercial Operations Date.

(iii) **Teesside Offshore Transportation and Storage System**

The Teesside Offshore Transportation and Storage System includes the following system, structure and components:

(A) the **Teesside Compression System**, which includes the following system, structure and components:

(aa) an electrically driven high-pressure compression station located within the PCC (consisting of two compressor trains and a spare compressor train, all three of approximately equal capacity) for the compression of gaseous CO_2 and discharge into the Teesside Offshore Pipeline Infrastructure. Each of the compressor trains shall have a capacity of 2.00 MTPA instantaneous (63.42 kg/s) with the minimum turndown of 0.20 MTPA instantaneous (6.34 kg/s). The minimum suction pressure of the high pressure (**"HP"**) compressors is 15 barg with a maximum outlet pressure of approximately 150 barg for the installed compression bundle during the Phase 1 Activities. (Note: these pressure values provide a range based on FEED studies and will be finalised following compressor selection during EPC to satisfy User requirements);

(bb) a control room able to monitor all operational data for, and control all appropriate elements of, the Approved T&S Network; and

(cc) metering equipment: plant / allocation metering located at the arrival of each onshore pipeline within the PCC, the outlet of the HP compression system, and at each wellhead. Dual redundant analysers (including CO_2 concentration analysers) are located at the inlet to HP compression system.

(B) the **Teesside Offshore Pipeline Infrastructure**, being an offshore pipeline system comprising a 28" nominal pipeline diameter connecting the Teesside Compression System to the Endurance Subsea Distribution and Injection System with a design capacity of 10.00 MTPA instantaneous (317.10 kg/s), which includes the following key elements:

(aa) pig launch facility and control valves located onshore within the PCC;

(bb) onshore pipeline section from pig launcher downstream of compression to landfall;

(cc) landfall for offshore CO_2 pipeline; and

(dd) offshore pipeline section from the landfall to subsea manifolds including tie-in spools to manifolds; and

(C) a single electrical power and fibre optic communication cable, sized for 30 offshore wells, connecting the control room to the Endurance Subsea Distribution and Injection System;

(iv) **Endurance Offshore Storage System**

(A) The Endurance Offshore Storage System includes the following system, structure and components:

(aa) five subsea injection wells located on the Endurance Storage Site;

(bb) one observation well located on the Endurance Storage Site; and

(cc) the Endurance Subsea Distribution and Injection System, which includes the following system, structure and components:

(a) (Manifold 1) one subsea co-mingling manifold combining dense phase CO_2 from the Teesside Offshore Transportation and Storage System and a potential future Humber Offshore Transportation System for onward distribution and injection at the Endurance Storage Site. Manifold 1 allows for two 8" nominal slots to allow tie-in of two of the injection wells (which form part of the Endurance Offshore Storage System) and two 28" nominal outlet connections to allow tie in of the 28" nominal pipeline to Manifold 2 and connection of the subsea pig receiver or connection to future stores. Manifold 1 is located at surface location to northwest of the Endurance Storage Site. The pig receiver connection must be able to be used to tie in additional manifold for future expansion. Manifold 1 will accommodate instantaneous capacity of 27.00 MTPA (856.16 kg/s) (combined injection at Manifold 1 and onward transportation

rate to Manifold 2 and future expansion manifolds);

(b) (Manifold 2) a four-slot injection manifold with four 8" slots allowing tie in of three of the other injection wells which form part of the Endurance Offshore Storage System, one monitoring well, and a spare slot to allow tie in of a future well. One 28" outlet connection must allow connection of the subsea pig receiver or connection of future stores. Manifold 2 will be located at a surface location near the centre of the Endurance Storage Site and will accommodate a peak capacity of 15.00 MTPA instantaneous (475.65 kg/s) injection at Manifold 2;

(c) one short 28" nominal infield pipeline between Manifold 1 and Manifold 2 including tie-in spool pieces;

(d) five 8" nominal infield flowlines and associated tie-in spool piece connections from the manifolds to the subsea injection Xmas trees with design capacity of 1.50 MTPA instantaneous (47.56 kg/s) per well;

(e) an all-electrical control system inclusive of infield power and communications distribution cables to each well including the monitoring well;

(f) local subsea closed-loop hydraulic power units controlling surface controlled subsurface safety valves; and

(g) a subsea Xmas tree on each of the monitoring and injections wells together with access points for water washing.

(B) One of the subsea injection wells forming part of the Endurance Offshore Storage System (the **"Non-activated Well"**) shall be non-activated until the Licensee (acting reasonably) determines that such Non-activated Well is required to be brought into operation in order to maintain Availability at or above the Availability Target.

(C) Start-up of the Non-activated Well shall form part of the Phase 2 Commissioning Activities as described in section 3.2(a)(ii)(B), save where the Licensee (acting reasonably) determines that the Non-activated Well is required to be brought into operation during the Commissioning Period as part of the Commissioning Activities to enable the Licensee to achieve the System Acceptance criteria set out in section 3.1(c)(U), in which case start-up of the Non-activated Well shall form part of the Commissioning Activities as described in section3.1(c)(W).

(b) **Handover Works**

The **"Handover Works"** include the activities set out below relating to the Phase 1 Systems:

(i) obtaining all permits, consents and regulatory and/or statutory approvals and all relevant Land Agreements required to, at a minimum, install and construct the Phase 1 Systems as detailed in the PLANC Register;

(ii) design and engineering including release to the Regulator of detailed engineering drawings (e.g. Civils, P&IDs, SLDs, loop drawings);

(iii) completion of all required HAZOPs and tracking of actions;

(iv) purchase orders for long lead items placed and tracked;

(v) factory acceptance test executed successfully, and equipment delivered to site;

(vi) systemisation of facilities; breakdown into sub systems and systems to enable efficient completion;

(vii) validation of key engineering information and loading of the same into the Completions Management Database;

(viii) Mechanical Completion of all Phase 1 Systems including:

(A) onshore construction activities (e.g. piling, civil works, structural steel erection, piping and equipment installation); and

(B) offshore construction activities (e.g. landfall construction, pre-lay trenching, pipeline and flowline installation, subsea structure installation, pipeline cleaning, flooding, gauging and hydrotesting, and cable laying);

(ix) verification of successful non-energised testing aligned with the Mechanical Completion schedule including insulation resistance checking, cold loop checks and cold machinery alignments; hydrotesting and reinstatement works. This will be recorded on inspection and test records (**"ITRs"**) and recorded in the Completions Management Database;

(x) organisational readiness:

(A) personnel recruitment and training relating to the Phase 1 Activities are in progress and aligned with the Operations Readiness Plan (NS051-OP-PLN-000-00002 revB01, including any updated version of this document and related documents provided to the Regulator by the Licensee); and

(B) development and approval processes of operating procedures relating to the Phase 1 Activities are in progress and aligned with the Operations Readiness Plan (NS051-OP-PLN-000-00002 revB01 including any updated version of this document

and related documents provided to the Regulator by the Licensee);

(xi) all drawings and documentation (including manuals and training materials) required for performance of the Commissioning Activities are modified to red line mark-up and included in Sub-System Mechanical Completion Dossiers, in hard or soft copy, to as-built status; and

(xii) preparation of a punchlist containing the proposed Handover Punchlist Items.

(c) **Commissioning Activities**

The **"Commissioning Activities"** include:

(i) the activities set out in sections 3.1(c)(ii)(A) to 3.1(c)(ii)(P) relating to the Phase 1 Systems;

(ii) the activities set out in sections 3.1(c)(ii)(Q) to 3.1(c)(ii)(W) relating to the Phase 1 Systems but excluding the Teesside Onshore Transportation System;

in each case as follows:

(A) the rectification, resolution and/or completion of all Handover Punchlist Items;

(B) preparation of a punchlist containing the proposed System Acceptance Punchlist Items; and

(C) energised testing of equipment including static checks recorded on ITR and integrated functional testing carried out using detailed commissioning procedures as set out in the Commissioning Plan;

(D) successful completion of site acceptance test (**"SAT"**) activities as set out in the Commissioning Plan;

(E) successful completion of integrated control and safety system (**"ICSS"**) testing including process automation, safety instrumented systems and fire and gas system testing as set out in the Commissioning Plan;

(F) successful completion of analyser and metering testing as set out in the Commissioning Plan;

(G) pipeline and injection facilities draining, drying to specification and preservation in readiness for introduction of CO_2;

(H) proving integrity of bolted joints and equipment and demonstrating the leak tightness of the pressure boundary in readiness for introduction of CO_2;

(I) organisational readiness:

(aa) personnel recruitment and training relating to the Phase 1 Activities are in progress and aligned with the Operations Readiness Plan (NS051-OP-PLN-000-00002 revB01), including any updated version of this document and related documents provided to the Regulator by the Licensee; and

(bb) development and approval processes of operating procedures relating to the Phase 1 Activities are in progress and aligned with the Operations Readiness Plan (NS051-OP-PLN-000-00002 revB01) including any updated version of this document and related documents provided to the Regulator by the Licensee;

(J) all drawings and documentation (including operation and maintenance manuals) required for operations are modified to green line mark-up and included in the System Completions Dossiers, in hard or soft-copy, to as-built status;

(K) procurement, implementation and testing of the Information Technology (**"IT"**) applications, databases and communication systems, including that of the T&S Network Portal;

(L) wells are complete and ready to operate;

(M) completion of pre-start-up readiness review prior to CO_2 introduction;

(N) successful completion of testing of functionality of venting facilities;

(O) obtaining all permits, consents and regulatory or statutory approvals and all relevant Land Agreements required to, at a minimum, commission and operate the Phase 1 Systems as detailed in the PLANC Register;

(P) functional testing of the HP compressors with CO_2 including running each compressor in full recycle, compressor loop clean up, shutdown testing and anti-surge system tuning as set out in the Commissioning Plan;

(Q) functional testing and calibration of analysers and metering with CO_2 as set out in the Commissioning Plan; and achieving confirmation from an independent verifier, that such systems are functional and have been successfully tested;

(R) initial line fill of the Teesside Offshore Pipeline Infrastructure from a User via the onshore HP compressors;

(S) first injection of CO_2 into the Endurance Storage Site;

(T) performance testing of the Phase 1 Systems to verify the performance of the Phase 1 Systems using CO_2 from a User as set out in the Commissioning Plan. Activities to performance

test the entire Phase 1 Systems focus on HP compression system capacity, full system control architecture and wells injectivity capacity only;

(U) Testing activities in table below will be carried out:

System Acceptance criteria	Testing activities
HP compressor capacity and efficiency	Each compression train passes vendor site integration test, including the following criteria: • demonstrate functionality of safety instrument functions (**SIFs**) in line with required performance criteria; • demonstrate functionality of compressor control system including anti-surge control system, performance control and load sharing; • demonstrate compressor train operates within normal operating limits at: ○ minimum turndown forward flow (as set out in section 3.1(a)(iii)(A)(aa)); ○ maximum capacity (as set out in section 3.1(a)(iii)(A)(aa)); and ○ three intermediate forward flows; and • demonstrate compressor train changeovers can be made within normal operating limits, one each of each possible compressor train changeover combination (six in total)
Approved T&S Network response to loss of compression capacity does not constrain Users	One online compressor train tripped and T&S system compression capacity of 4.00 MTPA (126.84 kg/s) is reinstated within three hours. 4.00 MTPA (126.84 kg/s) capacity will be available across two compression trains.
Approved T&S Network	One online well tripped and system injection capacity of 4.00 MTPA

System Acceptance criteria	Testing activities
response to loss of injection capacity does not constrain Users	(126.84 kg/s) is reinstated within three hours. The tripped well shall be the well with largest demonstrated injection capacity.
Approved T&S Network control maintains T&S system within normal operating envelope	1. Phase 1 User controlled start/stop; 2. Phase 1 User unplanned trip; 3. HP compressor changeover; 4. Well controlled start/stop; and 5. Well unplanned trip. Approved T&S Network normal operating envelope will be maintained in the above scenarios. The tripped well shall be the well with largest demonstrated injection capacity. If Expansion Users are available during the commissioning window, tests 1 and 2 above will be performed for the relevant Users and repeated for Phase 1 User with Expansion Users exporting to NEP.
Sufficient injection capacity is available for Phase 1 User	In a three online and one offline well configuration there is injection capacity of at least 4.00 MTPA (126.84 kg/s). The offline well shall be the well with largest demonstrated injection capacity as demonstrated during individual well CO_2 injection capacity testing. *Note: the Non-activated Well is assumed non-activated based on Phase 1 Users configuration base case. However, the Non-activated Well may be activated if required to demonstrate a 4.00 MTPA (126.84 kg/s) injection capacity, as per section 3.1(c)(W) and in such circumstances the above test shall apply to all of (i) the three online wells; (ii) the one*

System Acceptance criteria	Testing activities
	offline well; and (iii) the Non-activated Well.
Minimum injected volume of CO_2	Flowmeters demonstrate at least 180,000 tonnes of CO_2 have been injected into the Endurance Storage Site.
Minimum continuous injection flow	Flowmeters demonstrate CO_2 has been continuously injected into the Endurance Storage Site for a minimum of seven days uninterrupted or fourteen days interrupted where continuous duration counter resumes from previous position after one day of CO_2 flow. Minimum flowrate through the period is at least the NZT Power minimum turndown into NEP. *Note: During interrupted flow, non-availability of CO_2 from Phase 1 User(s) pauses the continuous duration counter. Once CO_2 is available from Phase 1 user(s) and steady state is achieved (assumed to be 1 day after flow restart), the continuous duration counter resumes from the previous position.*
Teesside Offshore Pipeline Infrastructure Hydraulic Capacity	Offshore transportation system verified as built as per engineering requirements: • pipeline/flowlines profile; • pipeline/flowlines length; and • pipeline/flowlines internal diameter.
Teesside Onshore Transportation System Hydraulic Capacity	Onshore pipelines verified as built as per engineering requirements: • pipeline profile; • pipeline length; and • pipeline internal diameter. *Note: these activities will be performed without the introduction of CO_2.*

(V) any such performance and operational testing as required to comply with Schedule 4 or Schedule 6 of the Construction Agreement(s) (as applicable) for Phase 1 Users; and

(W) where the Licensee (acting reasonably) determines that the Non-activated Well is required to be brought into operation during the Commissioning Period as part of the Commissioning Activities to enable the Licensee to achieve the System Acceptance criteria set out in section 3.1(c)(U):

(aa) first CO_2 injection with the Non-activated Well;

(bb) testing activities as set out in the Commissioning Plan to establish that the Non-activated Well has a minimum turn down of 0.20 MTPA (6.34 kg/s) and an injection capacity such that in a four online and one offline well configuration there is injection capacity of at least 4.00 MTPA (126.84 kg/s). The offline well shall be the well with largest demonstrated injection capacity as demonstrated during individual well CO_2 injection capacity testing; and

(cc) commissioning activities with CO_2 in respect of the Non-activated Well as set out in the Commissioning Plan, including:

(a) obtaining all additional permits, consents and regulatory or statutory approvals required to, at a minimum, commission and operate the Phase 1 System post-relevant Phase 2 Acceptance as detailed in the PLANC Register; and

(b) performance testing of the Non-activated Well using CO_2 from the Users as per the table below:

Criteria for System Acceptance relating to the Non-activated Well	**Testing Activities**
Approved T&S Network control maintains T&S system within normal operating envelope	1. Well controlled start/stop; and 2. Well unplanned trip; Approved T&S Network normal operating envelope will be maintained in the above scenarios.

(d) **COD Readiness Activities**

The **"COD Readiness Activities"** comprise the activities set out below relating to the Phase 1 Systems:

(i) the rectification, resolution and/or completion of all Handover Punchlist Items;

(ii) preparation of a punchlist containing the proposed COD Readiness Punchlist Items; and

(iii) energised testing of equipment including static checks recorded on ITR and integrated functional testing carried out using detailed commissioning procedures as set out in the Commissioning Plan;

(iv) SAT activities as set out in the Commissioning Plan;

(v) ICSS testing including process automation, safety instrumented systems and fire and gas system testing as set out in the Commissioning Plan;

(vi) analyser and metering testing without CO_2 as set out in the Commissioning Plan;

(vii) pipeline and injection facilities draining, drying to specification and preservation in readiness for introduction of CO_2;

(viii) proving integrity of bolted joints and equipment and demonstrating the leak tightness of the pressure boundary in readiness for introduction of CO_2;

(ix) completion of all operational readiness activities aligned with the Operations Readiness Plan (NS051-OP-PLN-000-00002 revB01 including any updated version of this document and related documents provided to the Regulator by the Licensee);

(x) wells are complete and ready to operate; and

(xi) completion of pre-start-up readiness review prior to CO_2 introduction.

(e) 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*)) will apply following the conclusion of detailed design, and the provisions of this section 3.1 will be construed accordingly.

3.2 Phase 2 Activities

(a) **Phase 2 Activities**

The **"Phase 2 Activities"** comprise the Phase 2 Handover Works and the Phase 2 Commissioning Activities, as set out in this section 3.2:

(i) There are no Phase 2 Systems and no Phase 2 Handover Works.

(ii) The **"Phase 2 Commissioning Activities"** are divided into ~~three~~two Phase 2 Tranches, as follows:

(A) **"Phase 2 Tranche A"**, being works and activities related to the commissioning of the CO_2 Gathering Pipeline, as more particularly described in section 3.2(a)(iii);and

(B) ~~**"Phase 2 Tranche B"**, being works and activities related to the commissioning of the H2T Spurline, as more particularly described in section 3.2(a)(iv); and~~

(C) **"Phase 2 Tranche C"**, being works and activities related to the commissioning of the Non-activated Well, as more particularly described in section 3.2(a)(v).

(iii) The Phase 2 Commissioning Activities relating to Phase 2 Tranche A (the **"Phase 2 Tranche A Commissioning Activities"**) include the activities set out in this section 3.2(a)(iii) and are anticipated to be completed by the Scheduled Phase 2 Acceptance Date for Phase 2 Tranche A (the **"Scheduled Phase 2 Tranche A Acceptance Date"**):

(A) commissioning activities with CO_2 in respect of the relevant part(s) of the Teesside Onshore Transportation System, being the CO_2 Gathering Pipeline, including:

(aa) obtaining all additional permits, consents and regulatory or statutory approvals required to, at a minimum, commission and operate the Phase 1 System post-relevant Phase 2 Acceptance as detailed in the PLANC Register;

(bb) initial line fill of the relevant part(s) of the Teesside Onshore Transportation System, being the CO_2 Gathering Pipeline;

(cc) performance testing of the relevant part(s) of the Teesside Onshore Transportation System, being the CO_2 Gathering Pipeline, using CO_2 from ~~BOC~~ an Expansion User as per the table below:

Criteria for Phase 2 Acceptance relating to Phase 2 Tranche A	**Testing Activities**
Approved T&S Network control maintains T&S system within normal operating envelope	~~1. BOC controlled start/stop;~~ ~~2. BOC unplanned trip;~~ 1. Expansion User controlled start/stop; 2. Expansion User unplanned trip; 3. Phase 1 User controlled start/stop; 4. Phase 1 User unplanned trip. Approved T&S Network normal operating envelope will be maintained in the above scenarios

(B) any such performance and operational testing as required to comply with the Connection Agreement(s) (as such term is defined in the CCS Network Code) for ~~BOC~~ the Expansion User used in 3.2(a)(iii)(A)(cc);and

(C) preparation of a punchlist containing the proposed Phase 2 Acceptance Punchlist Items for the Phase 2 Tranche A Commissioning Activities.

~~(iv) The Phase 2 Commissioning Activities relating to Phase 2 Tranche B (the **"Phase 2 Tranche B Commissioning Activities"**) include the activities set out in this section 3.2(a)(iv) and are anticipated to be completed by the Scheduled Phase 2 Acceptance Date for Phase 2 Tranche B (the **"Scheduled Phase 2 Tranche B Acceptance Date"**):~~

~~(A) commissioning activities with CO_2 in respect of the relevant part(s) of the Teesside Onshore Transportation System, being the H2T Spurline, including:~~

~~(aa) obtaining all additional permits, consents and regulatory or statutory approvals required to, at a minimum, commission and operate the Phase 1 System post relevant Phase 2 Acceptance as detailed in the PLANC Register;~~

(bb) initial line fill of the relevant part(s) of the Teesside Onshore Transportation System, being the H2T Spurline;

(cc) performance testing of the relevant part(s) of the Teesside Onshore Transportation System, being the H2T Spurline, using CO_2 from H2T as per the table below:

Criteria for Phase 2 Acceptance relating to Phase 2 Tranche B	**Testing Activities**
Approved T&S Network control maintains T&S system within normal operating envelope	1. H2T controlled start/stop; 2. H2T unplanned trip; 3. Phase 1 User controlled start/stop; 4. Phase 1 User unplanned trip; Approved T&S Network normal operating envelope will be maintained in the above scenarios

(B) any such performance and operational testing as required to comply with the Connection Agreement(s) (as such term is defined in the CCS Network Code) for H2T; and

(C) preparation of a punchlist containing the proposed Phase 2 Acceptance Punchlist Items for the Phase 2 Tranche B Commissioning Activities.

(v) The Phase 2 Commissioning Activities relating to Phase 2 Tranche C (the "**Phase 2 Tranche C Commissioning Activities**") include the activities set out in this section 3.2(a)(v):

(A) first CO_2 injection with the Non-activated Well;

(B) testing activities to establish that the Non-activated Well has a minimum turn down of 0.20 MTPA (6.34 kg/s) and an injection capacity such that the combined average rate across four online wells, including the Non-activated Well, is at least 4.20 MTPA (133.18 kg/s).

(C) commissioning activities with CO_2 in respect of the Non-activated Well, including:

(aa) obtaining all additional permits, consents and regulatory or statutory approvals required to, at a minimum, commission and operate the Phase 1 System post-relevant Phase 2 Acceptance as detailed in the PLANC Register;

(bb) performance testing of the Non-activated Well using CO_2 from the Users as per the table below:

Criteria for Phase 2 Acceptance relating to Phase 2 Tranche C	Testing Activities
Approved T&S Network control maintains T&S system within normal operating envelope	1. Well controlled start/stop; and 2. Well unplanned trip; Approved T&S Network normal operating envelope will be maintained in the above scenarios

(D) preparation of a punchlist containing the proposed Phase 2 Acceptance Punchlist Items for the Phase 2 Tranche C Commissioning Activities.

(b) 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*)) will apply following the conclusion of detailed design, and the provisions of this section 3.2 will be construed accordingly.

3.3 Availability Target, Availability Floor & Obligated Network Capacity

(a) The Availability Target is 95%.

(b) The Availability Floor is 75%.

(c) The Obligated Network Capacity is set out in the table below:

	Obligated Network Capacity
Maximum Flow Rates	**Maximum Instantaneous Flow Rate** (ONC_I): 133.50kg/s (4.21 MTPA instantaneous)
	Maximum Annual Cumulative Flow (ONC_A): 4.00 $MtCO_2$

	Obligated Network Capacity
Minimum Flow Rate	**Minimum Instantaneous Flow Rate:** (6.34 kg/s) (0.20 MTPA instantaneous)
Overall Store Capacity	100 $MtCO_2$

4. Users

4.1 Planned Initial Users

(a) The **"Planned Initial Users"** are the potential Users identified in the table below.

(b) NZT Power will be a Phase 1 User.

(c) Planned Initial Users table:

Row no.	Planned Initial User	User Phase	Connection Location	Indicative scheduled commencement date*
1.	Net Zero Teesside Power (**"NZT Power"**)	Phase 1 User	Teesworks Site	[redacted]
2.	~~Teesside Hydrogen CO_2 Capture (**"BOC"**)~~	~~Phase 2 User~~	~~Capture plant:~~ ~~54°36'10.97" N~~ ~~1°11'34.84"W~~ ~~Proposed tie-in point is:~~ ~~54°36'11.78" N~~ ~~1°11'34.38"W~~	[redacted]
3.	~~H2Teesside (**"H2T"**)~~	~~Phase 2 User~~	~~Teesworks Site~~	[redacted]

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

5. Development Activities

5.1 The Licensee's planned development and expansion of the Approved T&S Network at Licence Award comprises the following:

(a) the Humber Onshore and Offshore Transportation System;

(b) the CS006 Storage System; and

(c) the CS007 Storage System.

5.2 Humber Onshore and Offshore Transportation System

(a) The **"Humber Onshore and Offshore Transportation System"** shall comprise the following systems and sub-systems:

(i) Humber Offshore Transportation System; and

(ii) Humber Onshore Transportation System.

(b) The **"Humber Offshore Transportation System"** shall include the following system(s), structure(s) and components:

(i) electrically driven centrifugal pump(s) with an indicative capacity of 17.00 MTPA instantaneous and sufficient redundancy to achieve the Availability Target, which are co-located at the site of the gas terminal at Easington; and

(ii) 28" nominal pipeline and the associated tie-in spools connecting the Humber Onshore Transportation System at the Humber Pumping System and the Endurance Storage Site.

(c) The **"Humber Onshore Transportation System"** shall have an indicative capacity of 17.00 MTPA instantaneous and shall include the following system(s), structure(s) and components:

(i) a pipeline crossing at the Humber with an indicative capacity of 15.81 MTPA instantaneous (501.33 kg/s) (the **"Humber Crossing"**);

(ii) a 26" nominal diameter pipeline from the pig trap installation at the Hedon Interface to a pig trap arrangement on the Humber Pumping System, with an indicative capacity of 17.00 MTPA instantaneous (539.07 kg/s);

(iii) a 26" nominal diameter pipeline connecting relevant Future Users south of the Humber from a pig trap installation located at the Hedon Interface crossing the Humber in the Humber Crossing to a pig trap installation close to the southern entrance of the Humber Crossing, with an indicative capacity of 15.81 MTPA instantaneous (501.33 kg/s);

(iv) a 26" nominal diameter pipeline connecting relevant Future Users south of the Humber, from a pig trap installation close to the southern entrance of the Humber Crossing to an AGI located north west of Keadby, via the north of Scunthorpe, with an indicative capacity of 11.61 MTPA instantaneous (368.15 kg/s);

(v) a 26" nominal diameter pipeline connecting relevant Future Users south of the Humber, from an AGI located north west of Keadby to a pig trap installation close to Drax, with an indicative capacity of 9.20 MTPA instantaneous (291.73 kg/s);

(vi) two block valve stations one located to the north east of the village of Winterton in the county of Lincolnshire and one located to the south of the village of Withernsea in the East Riding of Yorkshire; and

(vii) six AGIs including block valve isolation, monitoring equipment and instrumentation located:

(A) at Drax in the county of North Yorkshire;

(B) at Swinefleet and Reedness Pasture to the south of Goole in the East Riding of Yorkshire;

(C) near Burnham in the county of Lincolnshire;

(D) to the north of Killingholme in the county of Lincolnshire;

(E) to the south of Hedon in the East Riding of Yorkshire; and

(F) at the gas terminal at Easington in the East Riding of Yorkshire.

(d) The Development Activities in respect of the Humber Onshore and Offshore Transportation System (**"Humber Development Activities"**) shall comprise all development activities required to enable settlement to be reached in respect of Capex for the construction and commissioning of the Humber Onshore and Offshore Transportation System, including:

(i) Humber Onshore Transportation System: pre-FEED and FEED completion;

(ii) Humber Offshore Transportation System: FEED revalidation;

(iii) engineering and supporting work for interface with the Endurance Offshore Storage System;

(iv) applying and receiving approval for all relevant licences, permits and statutory/land consents, inclusive of compulsory purchase order powers and land consents;

(v) engineering studies for procurement long lead items; and

(vi) supply chain procurement activities.

(e) The Humber Development Activities are divided into three Tranches of Stage Check Activities (each a **"Tranche of Humber Development Activities"**), in respect of which Special Condition J5 (*Ongoing Devex Re-opener*) applies.

(f) **First Tranche of Humber Development Activities:**

The first Tranche of Humber Development Activities shall comprise all development activities required to enable the Licensee to progress from Licence Award to the commencement of the second Tranche of Humber Development Activities, including the following activities in respect of the Humber Onshore Transportation System:

(i) early FEED, e.g. finalising the major scope decisions and developing the contracting strategy;

(ii) environmental surveys;

(iii) archaeological surveys;

(iv) negotiating land option agreements and procuring legal services;

(v) non-statutory consultation;

(vi) development consent order (**"DCO"**) statutory consultation preparation; and

(vii) intrusive and non-intrusive surveys in support of the DCO and design development.

(g) **Second Tranche of Humber Development Activities:**

The second Tranche of Humber Development Activities shall comprise all development activities required to enable the Licensee to progress from the conclusion of the first Tranche of Humber Development Activities to the commencement of the third Tranche of Humber Development Activities, including the following activities in respect of the Humber Onshore and Humber Offshore Transportation System (as applicable):

(i) the following activities in respect of the Humber Onshore Transportation System:

(A) DCO application, preparation and submission;

(B) ground surveys including a horizontal directional drilling trial in relation to the Humber Crossing;

(C) supply chain procurement for activities to be undertaken in the third Tranche of Humber Development Activities, including market engagement, expression of interest and request for proposal (**"RFP"**) preparation;

(D) supply chain activities, including procurement process, bid evaluation, recommendation to award and contract finalisation; and

(E) decision on Humber Crossing method;

(ii) the following activities in respect of the Humber Offshore Transportation System:

(A) environmental surveys revalidation; and

(B) supply chain activities, including market engagement, expression of interest, RFP reparation, procurement process, bid evaluation and recommendation to award and contract.

(h) **Third Tranche of Humber Development Activities:**

The third Tranche of Humber Development Activities shall comprise all development activities required to enable the Licensee to progress from the conclusion of the second Tranche of Humber Development Activities to a point at which settlement can be reached in respect of Capex for the construction and commissioning of the Humber Onshore and Offshore Transportation System, including:

(i) the following activities in respect of the Humber Onshore Transportation System:

(A) FEED (other than FEED activities undertaken in the first Tranche of Humber Development Activities);

(B) engineering studies for procurement of long-lead items;

(C) supply chain procurement for activities to be undertaken during the construction and commissioning of the Humber Onshore Transportation System, including market engagement, expression of interest and request for proposal ("RFP") preparation;

(D) DCO examination and approval process; and

(E) supply chain activities to be undertaken, including procurement process, bid evaluation, recommendation to award and contract finalisation;

(ii) the following activities in respect of the Humber Offshore Transportation System:

(A) FEED revalidation;

(B) supply chain activities, including market engagement, expression of interest, RFP reparation, procurement process, bid evaluation and recommendation to award and contract; and

(iii) the following activities in respect of the Humber Onshore and Offshore Transportation System:

(A) management and execution of legal, financial and technical due diligence (and any other related advisory activities) associated with the raising of capital in respect of the Humber Expansion.

(i) **Change in Scope – Humber Expansion**

(i) Notwithstanding Part A (Changes in Scope) of Special Condition J2 (*Supervening Events Re-openers*) of the Licence, where the Licensee has proposed pursuant to Special Condition J5.6(d) (*Ongoing Devex Re-openers*) that a Change in Scope shall apply in respect of the

Humber Expansion, paragraph 4 (*Change in Scope – Humber Expansion*) of schedule 10 (*Project-specific conditions*) of the Licence shall apply.

(ii) Paragraph 4 (*Change in Scope – Humber Expansion*) of schedule 10 (*Project-specific conditions*) of the Licence shall not apply to any other Change in Scope.

5.3 CS006 Storage System and CS007 Storage System

(a) The **"CS006 Storage System"** is anticipated to include the following systems and sub-systems:

(i) BC 40 Storage Site;

(ii) BC 39 Storage Site;

(iii) three wells on BC 39;

(iv) one well on BC 40;

(v) 28" subsea pipelines of capacity 12.25 MTPA instantaneous (388.44 kg/s) connecting two injection hubs located one on the BC 39 Storage Site and one on the BC 40 Storage Site; and

(vi) umbilical connecting the BC 40 Storage Site and the BC 39 Storage Site to the Endurance Offshore Storage System;

with each of BC 40 and BC 39 assumed to be structures suitable for CO_2 storage.

(b) The **"CS007 Storage System"** is anticipated to include the following systems and sub-systems:

(i) BC 37 Storage Site;

(ii) BC 36 Storage Site;

(iii) three wells on BC 37;

(iv) 28" subsea pipelines of capacity 12.25 MTPA instantaneous (388.44 kg/s) connecting the BC 39 Storage Site to the BC 37 Storage Site; and

(v) umbilical connecting the wells to the Endurance Offshore Storage System;

with BC 37 assumed to be a structure suitable for CO_2 storage and BC 36 assumed not to be a structure suitable for CO_2 storage.

(c) The Development Activities in respect of the CS006 Storage System (the **"CS006 Development Activities"**) and the Development Activities in respect of the CS007 Storage System (the **"CS007 Development Activities"**) shall comprise all development activities required to enable settlement to be reached in respect of Capex for the construction and commissioning of the CS006 Storage System and the CS007 Storage System respectively, including the following activities (as applicable):

(i) drilling an appraisal well into each of BC 37 and BC 39 to collect subsurface data;

(ii) remediation of two legacy wells (one on BC 36 and one on BC 37), subject to the results of the NSTA Early Risk Assessment and well remediation study performed as part of the NSTA Exploration and Appraisal Stage in respect of the CS007 Storage System;

(iii) acquiring 3D seismic on the CS007 Storage System;

(iv) carrying out pre-FEED studies in respect of each of the CS006 Storage System and the CS007 Storage System;

(v) acquisition of offshore baseline environmental survey data in respect of each of the CS006 Storage System and the CS007 Storage System;

(vi) carrying out FEED studies in respect of each of the CS006 Storage System and the CS007 Storage System;

(vii) supply chain procurement activities in respect of each of the CS006 Storage System and the CS007 Storage System; and

(viii) permitting and licensing (including Storage Permit(s)) in respect of each of the CS006 Storage System and the CS007 Storage System,

the CS006 Development Activities and the CS007 Development Activities being together the **"CS006/CS007 Storage System Development Activities"**.

(d) Subject to paragraph 5 (CS006/CS007 Development Activities) of schedule 10 (*Project-specific conditions*) of the Licence, the CS006/CS007 Storage System Development Activities are divided into five Tranches of Stage Check Activities (each a **"Tranche of CS006/CS007 Development Activities**") as set out in sections 5.3(e) to 5.3(j) in respect of which Special Condition J5 (*Ongoing Devex Re-opener*) of the Licence applies.

(e) **First Tranche of CS006/CS007 Development Activities:**

The first Tranche of CS006/CS007 Development Activities shall comprise all development activities required to enable the Licensee to progress from Licence Award to the commencement of the second Tranche of CS006/CS007 Development Activities, including the following activities in respect of the CS006 Storage System and the CS007 Storage System (as applicable):

(i) appraisal well planning statement of requirements preparation for each of BC 39 and BC 37 appraisal wells;

(ii) procurement of long lead items and rig contracting in respect of each of the CS006 Storage System and the CS007 Storage System; and

(iii) procurement of seismic survey across the CS007 Storage System.

(f) **Second Tranche of CS006 Development Activities:**

The second Tranche of CS006 Development Activities shall comprise all development activities required to enable the Licensee to progress from the conclusion of the first Tranche of CS006/CS007 Development Activities to the commencement of the third Tranche of CS006 Development Activities, including the following activities in respect of the CS006 Storage System (as applicable):

(i) pre-FEED in respect of the CS006 Storage System;

(ii) rig intake in respect of the CS006 Storage System;

(iii) drilling of appraisal well into BC 39;

(iv) initial well test, core and fluid sample analysis in respect of the CS006 Storage System;

(v) initial log interpretation in respect of each of the CS006 Storage System; and

(vi) any other activity pertaining to the NSTA Exploration and Appraisal Stage in respect of the CS006 Storage System.

(g) **Second Tranche of CS007 Development Activities:**

The second Tranche of CS007 Development Activities shall comprise all development activities required to enable the Licensee to progress from the conclusion of the first Tranche of CS006/CS007 Development Activities to the commencement of the third Tranche of CS007 Development Activities, including the following activities in respect of the CS007 Storage System (as applicable):

(i) 3D seismic survey in respect of the CS007 Storage System;

(ii) rig intake in respect of the CS007 Storage System;

(iii) drilling of appraisal well into BC37;

(iv) initial well test, core and fluid sample analysis in respect of the CS007 Storage System;

(v) initial log interpretation in respect of the CS007 Storage System; and

(vi) any other activity to progress the NSTA Appraisal Stage in respect of the CS007 Storage System.

(h) **Third Tranche of CS006 Development Activities:**

The third Tranche of CS006 Development Activities shall comprise all development activities required to enable the Licensee to progress from the conclusion of the second Tranche of CS006 Development Activities to a point at which settlement can be reached in respect of Capex for the construction and commissioning of the CS006 Storage System, including the following activities in respect of the CS006 Storage System:

(i) FEED;

(ii) the NSTA Assess Stage;

(iii) Environmental Statement preparation and submission;

(iv) the NSTA Define Stage;

(v) NSTA review of the Storage Permit application submitted as part of the NSTA Define Stage and approval;

(vi) ESIA – performing the ESIA, including preparation, submission, OPRED review, consultation and approval; and

(vii) supply chain activities, including expression of interest, RFP preparation, procurement process, bid evaluation, recommendation to award and contract finalisation.

(i) **Third Tranche of CS007 Development Activities:**

The third Tranche of CS007 Development Activities shall comprise all development activities required to enable the Licensee to progress from the conclusion of the second Tranche of CS007 Development Activities to the commencement of the fourth Tranche of CS007 Development Activities, including the following activities in respect of the CS007 Storage System:

(i) two legacy well remediations (one on BC 36 and one on BC 37);

(ii) pre-FEED; and

(iii) supply chain procurement activities, including market engagement.

(j) **Fourth Tranche of CS007 Development Activities:**

The fourth Tranche of CS007 Development Activities shall comprise all development activities required to enable the Licensee to progress from the conclusion of the third Tranche of CS007 Development Activities to a point at which settlement can be reached in respect of Capex for the construction and commissioning of the CS007 Storage System, including the following activities in respect of the CS007 Storage System:

(i) any other activity pertaining to the NSTA Assess Stage;

(ii) FEED;

(iii) the NSTA Define Stage;

(iv) NSTA review of the Storage Permit application submitted as part of the NSTA Define Stage and approval;

(v) Environmental Statement preparation and submission;

(vi) ESIA – performing the ESIA, including preparation, submission, OPRED review, consultation and approval; and

(vii) supply chain activities, including expression of interest, RFP preparation, procurement process, bid evaluation, recommendation to award and contract finalisation.

5.4 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.

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 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 (including the 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 key 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, 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 relevant PLANC; 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;

(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 relevant Phase 2 Handover Date and any relevant ExpA Handover Punchlist Items prior to the relevant ExpA Handover Date; and

(c) the supporting evidence that will be required to be provided to the Independent Certifier by the Licensee in respect of the Handover Works will be specified in the IC Deed of Appointment.

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 CO_2;

(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;

(b) an Independent Certifier shall review and confirm (as relevant):

(i) the System Acceptance Punchlist Items prior to the Commercial Operations Date;

(ii) the relevant Phase 2 Acceptance Punchlist Items prior to the relevant Phase 2 Acceptance Date; and/or

(iii) the relevant ExpA Acceptance Punchlist Items prior to the ExpA Acceptance Date; and

(c) the supporting evidence that will be required to be provided to the Independent Certifier by the Licensee in respect of the Commissioning Activities will be specified in the IC Deed of Appointment.

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 CO_2 from the Users in accordance with the Licence and this APDP, the CCUS Network Code and the relevant Legal Requirements. This will include review of the following information related to the COD Readiness Activities:

(i) commissioning records proving integrity of bolted joints and equipment and demonstrating the leak tightness of the pressure boundary in readiness for introduction of CO_2; and

(b) an Independent Certifier shall review and confirm the COD Readiness Punchlist Items prior to COD Readiness; and

(c) the supporting evidence that will be required to be provided to the Independent Certifier by the Licensee in respect of the COD Readiness Activities will be specified in the IC Deed of Appointment.

7. Storage Licences

7.1 The following are the Storage Licences:

(a) CS001 (Endurance) Storage Licence;

(b) CS006 Storage Licence; and

(c) CS007 Storage Licence.

Appendix 1- Updated Approved Project Development Plan