OFGEM | STATUTORY CONSULTATION

Net Zero North Sea Storage Limited BOC and H2T discontinuation

Change in Scope: technical, financial and implementation assurance

Individual consultation response
25 September 2026

This response is made in a private, individual capacity, on the basis of public information.

This response considers the removal of the BOC and H2T user-specific scope, the retained CO_2 Gathering Pipeline, long-term capacity and acceptance obligations, and the proposed adjustment to construction allowances.

It provides neutral, evidence-conditioned responses to all five consultation questions, followed by detailed documentary findings, operating scenarios, numerical illustrations and proposed assurance tests. It does not claim access to the Licensee's confidential submission, contractual cost records or reservoir models.

Reading priority	Purpose
Sections 1–2	Principal conclusions and complete responses to Questions 1–5.
Sections 3–9	Source status, proposed drafting, investment options, technical assurance, financial reconciliation and implementation.
Appendices A–D	60 quantitative examples; 50 four-variant case profiles; 24 compound scenarios and 12 controls; official sources and terminology.

The analysis addresses the consultation package, not a new design or operating approval for the transport and storage system. A final economic-licence decision, a storage permit, connection arrangements and engineering acceptance perform different functions.

References [S01]–[S16] identify official public sources in Appendix D. All unsourced numerical inputs in examples are explicitly hypothetical. Proposed tests are not reports of tests executed on the project.

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The executive section and question responses may be read independently. The appendices provide the underlying numerical and practical detail without requiring the reader to treat illustrative outcomes as project evidence.

1. Executive assessment

The public account of the discontinuation of BOC and H2T provides a coherent basis for considering a Change in Scope. That does not establish, by itself, the efficiency of every proposed cost adjustment, the value of completing shared infrastructure before future users are certain, or the sufficiency of a particular acceptance strategy. The scope trigger, implementation approval, financial adjustment and retained technical obligations require separate reasons. [S02–S04; S09, E1 and J2]

The proposed amendments remove the two users and their spurlines while retaining the CO_2 Gathering Pipeline. They leave the principal numerical capacity and well-acceptance requirements unchanged, but also delete the definition of Phase 2 User and a related conditional user-interaction test. It is therefore more precise to say that **core capacity criteria are preserved while user-specific scope and conditional testing are removed**, rather than that acceptance provisions are wholly untouched. [S04, definitions, sections 3.1–3.3]

Priority	Conclusion	Action sought
Before final drafting	Annex A retains a two-pipeline description after the H2T pipeline is deleted. APDP figure colours and a system-definition noun also need reconciliation.	Issue a consistent final clean and marked set; identify the intended scope without changing retained physical rights inadvertently.
Before final drafting	Question 4 mentions Schedule 10, but the notice identifies APDP, TDD, FSD and Annex A and no Schedule 10 amendment is exhibited.	Explain whether Schedule 10 is unchanged, consequentially affected, or directly modified; provide an adequate non-sensitive account of any change.
Before financial finalisation	The headline arithmetic is coherent at published precision. The fixed FSD allowance and its separate FX formula explain the apparent difference between headline and fixed totals.	Publish the unrounded bridge and distinguish arithmetic reproduction from cost-efficiency assurance.
Before irreversible commitment	The £36.1 million figure combines sunk and committed expenditure. Scarce tunnel access may have option value, but its contractual persistence and least-cost preservation route matter.	Compare continuation with feasible pause, partial-build and cancellation alternatives using incremental costs from the decision date.
Before acceptance / first use	Construction completion, CO_2 commissioning, capacity demonstration, storage permission and future-user readiness are separate milestones.	Reconcile the Phase 1 mechanical-completion milestone with Phase 2 testing and any proposed staged investment.
Throughout delivery	Private cost, engineering and contractual evidence is unavailable to this response.	Provide sensitive evidence to the competent authorities and publish a proportionate explanation of assumptions, decisions and residual risk, not confidential technical detail.

The capacity figures 4.21, 4.20, 4.00, 3.80 and 2.55 are not interchangeable: they refer respectively to network peak obligation, a later combined well test, annual obligation or pre-COD demonstration depending on context, an individual gathering asset, and the remaining initial user's maximum flow. Likewise, a per-well ceiling is not a measured deliverability curve. Their different values do not establish an error without matching the asset boundary, averaging period and acceptance purpose. [S03–S04; S13]

The most useful financial distinction is between an **allowance**, **actual expenditure**, **regulatory asset-value additions**, an **incentive adjustment** and **revenue**. A displayed £4.9 million allowance reduction is not

evidence of an immediate £4.9 million reduction in charges. The calculation and timing must follow the applicable licence and settlement documents. [S07; S09, F4, F6 and F7]

No project-wide engineering certification or quantified net-benefit estimate is asserted. A well-supported final decision could accept the user-specific removal while requiring corrections and a clearer evidence trail for retained infrastructure, acceptance and financial treatment. Conversely, an identified drafting defect does not invalidate the existence of a scope-change event.

2. Responses to the consultation questions

Question 1 — Whether the Change in Scope grounds have occurred

The reported discontinuation of the two planned initial users, together with the proposed removal of their connection assets, is consistent with the category of cancellation or scope change described in limb (c) of the Change in Scope definition. The public documents therefore support consideration under that route. They do not allow independent verification of all the underlying evidence referred to in the question, because the full CiS Submission is not published. [S02–S04; S09, E1/J2]

Ofgem should identify, in a non-confidential chronology, the notification or withdrawal relied upon for each project, its date and legal significance, the affected Approved T&S Network elements and any surviving successor or contractual obligation. The distinction between a withdrawn development-consent application, cessation of a project and termination of a particular network contract should remain explicit. An assertion that all private evidence has been independently confirmed would not be justified by the public package.

Question 2 — Approval of the Change in Scope

Removal of user-specific definitions, spurlines and milestones is directionally consistent with the reported discontinuations. Approval should nevertheless distinguish those deletions from the separate decisions to retain the Gathering Pipeline as anticipatory investment and to retain long-term capacity and acceptance requirements. One decision should not automatically determine the others. [S03, sections 2 and 4; S04]

The final reasons should demonstrate that retained shared scope is necessary or justified on its own forward-looking case, and that no residual connection obligation, procurement credit, design right or consent has been overlooked. A staged alternative should be evaluated only where technically and contractually feasible and should include any effect on Phase 1 handover. This response does not infer that a pause or tunnel-only build is available merely because it is analytically useful.

Question 3 — Proposed SRAV Capex and Opex adjustments

The published Base Year bridge is arithmetically consistent: the three Licensee components produce a £4.05 million reduction; the further +£0.084 million indexation adjustment and −£0.926 million project-management adjustment give a net further reduction of £0.842 million. Applying these displayed operands to £2,212.8 million produces £2,207.908 million, which rounds to the proposed £2,207.9 million. This is a reconstruction from rounded published figures, not an unrounded cost-ledger balance. [S03, Tables 1–2 and paragraphs 4.26–4.31]

The proposed FSD fixed component of £2,173.7 million plus FXadj is not inconsistent with that headline: its original £34.2 million sterling reference for the USD component reproduces the displayed total. FXadj remains a formula, not a fixed £34.2 million payment. The final decision should preserve this distinction and show the relevant valuation basis. [S07, construction allowance and FXadj]

Arithmetical agreement does not establish additionality or efficiency. Ofgem should reconcile removed quantities and rates, retained £2.8 million incurred spur costs, reusable materials and credits, the £1.69 million revalidation request, and the project-management deduction without overlap. The indexation correction needs its native inputs, series, dates and rounding convention. A neutral conclusion is therefore

that the published bridge is coherent, while the underlying cost justification remains dependent on evidence not available for independent reproduction.

Question 4 — APDP, TDD, FSD and Schedule 10 modifications

The publicly exhibited amendments broadly reflect the intended removal and retention choices, but the final set should correct the residual plurality in Annex A, reconcile the APDP colour references and offshore-definition wording, and correct the Draft Determination's appendix and well-configuration references. Retained acceptance metrics, permitted model-based demonstrations and the Phase 1 mechanical/Phase 2 commissioning interface need a clear common account. [S03–S07]

The reference to Schedule 10 requires a precise explanation. No proposed text for that schedule is exhibited in the consultation package reviewed. The publicly accessible award-version schedule is substantially redacted, and the later consolidated text was not recovered in full for this response. Ofgem should confirm whether the question refers to an actual amendment, unchanged cross-references or an editorial error. If an amendment is intended, the final record should identify its authority, scope and practical effect through appropriate disclosure and consultation, while protecting confidential and security-sensitive content. This is not an assertion that the consultation is legally invalid. [S02–S03; S07–S09]

Question 5 — Other representations

The additional representations concern forward-looking investment appraisal; the difference between nominal capacity, demonstrated performance and permitted operation; the use of NZT Power as the Gathering Pipeline test source; time-dependent preservation and requalification; and financial treatment of residual assets and commitments. These are implementation consequences of the present CiS, not proposals to reopen the entire project design.

Ofgem should publish an instrument-by-instrument change schedule, an adequately explained financial bridge, the decision-relevant assumptions for retained anticipatory spend, and the evidence required at construction, commissioning, first use and later-user connection. Existing reporting and certification should be reused where sufficient. New obligations or additional independent assurance should be proportionate to a demonstrated gap rather than added solely because a new review is taking place. [S11–S12]

3. Source status, legal route and limits of the evidence

The consultation landing page records publication on 31 August 2026; the notice and Draft Determination are dated 27 August 2026. Those dates describe different publication events and need not conflict. The page was open with a 27 September 2026 response deadline when reviewed. No exact closing hour is inferred. [S01–S03]

Source layer	Use in this response	Limit
August 2026 consultation package	Primary evidence of the modifications actually proposed, their stated rationale and displayed figures.	A proposal is not an operative final determination or a licence to alter a storage permit.
Electronic Public Register listing	Identifies a consolidated NZNSSL CO_2 T&S Licence dated 15 January 2026.	The full later consolidated file was not recovered here. Listing metadata does not establish its clause-by-clause contents.
Published December 2024 award licence	Supports the documented structure of E1, J2, B27 and F4/F6/F7, read expressly as an award-version reference.	No assertion is made that every clause is unchanged in September 2026. The current notice and final instrument must establish the applicable version.

Source layer	Use in this response	Limit
Published December 2024 CS001 permit	Identifies separate storage-site, per-well, duration and commissioning conditions.	Used as a dated public permit, not a certification that no subsequent variation exists.
DESNZ selection guidance and April 2026 clarifications	Establish indicative project-selection stages and their non-guarantee character.	Indicative dates and eligibility do not demonstrate a selected, funded or technically connected future user.
Private project and regulatory evidence	Identified where necessary to resolve scope, efficiency, contract or engineering questions.	No undisclosed value, model, route design, contractual term or redacted content is reconstructed.

3.1 Modification powers and document hierarchy

The statutory notice invokes section 13 of the Energy Act 2023 and Standard Condition B27.7. It identifies APDP, TDD and FSD amendments together with Annex A of Section A and states a minimum 56-day period after publication of the decision before the modifications would take effect. This response relies on that current notice for the proposed statutory route; it does not present an independently completed consolidated-statute audit. [S02]

The award-version B27 distinguishes Project-Specific Documents from the licence itself. Its amendment routes depend on whether a condition already provides for a determination, whether a specified route applies, and whether section 13 and Schedule 11 are engaged. Award-version J2 separates a decision on grounds and implementation from assessment of impacts and adjustments. The final instrument should identify how those provisions apply in the consolidated version actually being modified. [S09, B27.3–B27.8 and J2.3–J2.13]

The reference in the Draft Determination to J2.9 when describing grounds should be checked against the current consolidation: in the award version, J2.8 addresses grounds and approval, while J2.9 addresses impacts and adjustments. Without the later text, that is a version-reconciliation request, not a verified current-licence numbering defect. [S03, paragraph 1.14; S09, J2.8–J2.9]

Schedule 10 and Schedule 11 should not be conflated. The first contains project-specific conditions, including references relevant to financial settlement; the award-version B27 amendment route refers separately to Schedule 11 for Project-Specific Document changes. A reference to a schedule, an amendment to it and a consequential change in how it operates are three different matters.

3.2 Proportionate treatment of protected evidence

The absence of a public contract or reservoir model is not evidence that Ofgem lacks it. Equally, a statement that a specialist adviser reviewed a submission does not enable a public respondent to reproduce its conclusion. An appropriate public record could disclose the question examined, evidence date and maturity, alternatives considered, sensitivity range, conclusion and residual condition without publishing sensitive designs, commercial rates or network vulnerabilities.

For Schedule 10, the minimum useful public account is the identity of the affected provision or subject, whether its operative effect changes, which published document depends on it, the applicable statutory process and confirmation that the protected review found no unintended residual obligation. Where law requires more disclosure or a further process, that requirement cannot be displaced by an informal assurance statement. No attempt should be made to infer redacted text from pagination, blank space or neighbouring figures.

4. Proposed clean state and documentary corrections

The observations below refer to the intended state after applying visible deletions and insertions. The occurrence of BOC or H2T in the searchable layer of a marked PDF is not evidence of a surviving obligation. Figures are inspected as figures, not inferred solely from extracted colour words. [S04–S07]

Location	Change or retained state	Implementation consequence
APDP definitions	BOC, BOC Spurline, H2T, H2T Spurline and Phase 2 User definitions are deleted. The Tranche B reference in the Phase 2 Acceptance Punchlist definition is also deleted; retained A/C terminology remains.	Check all uses of deleted defined terms, not only the user table.
APDP onshore scope	The Gathering Pipeline is retained; BOC/H2T spurlines and related proximity references are removed.	Separate shared assets, support elements and future tie-ins from user-specific deletions.
APDP pre-COD election	The conditional election for earlier Phase 2 commissioning associated with available Phase 2 Users is deleted.	Explain the effect on timing when NZT Power now supplies Tranche A tests.
APDP System Acceptance	Core rate, outage, volume and duration criteria remain, but the conditional Phase 2 User interaction-testing paragraph is deleted.	Do not describe all acceptance text as unchanged; explain why the removed test is obsolete and what future interface assurance remains.
APDP Phase 2	The activity count changes from three tranches to two; Tranche B/H2T is removed and A/C are retained.	Non-contiguous labels are acceptable if definitions and dependent certificates remain consistent.
APDP Tranche A	NZT Power replaces BOC as CO_2 source; BOC-specific tests are removed and relevant surviving tests renumbered.	Source availability, path, agreements and metering need competent confirmation.
APDP Tranche C and capacity	Later four-online-well 4.20 Mtpa combined average, ONCi and ONCa remain.	Do not convert NZT's initial demand into the long-term network obligation.
Annex A, section 6	H2T and user-specific locations are deleted while the Gathering Pipeline, retained AGI and terminal arrival remain.	Residual two-pipeline/plural wording should be corrected.
TDD	Tranche B certifier, reporting, handover and acceptance block is deleted; Gathering Pipeline mechanical completion remains in Phase 1 handover scope.	Phase 2 CO_2 testing does not mean all physical construction can be deferred without changing Phase 1.
FSD	Construction fixed allowance changes from £2,178.6m to £2,173.7m; +FXadj and associated formula remain.	No unannounced alteration to FX denominators, pass-through treatment or other settlement components.
Schedule 10	No exhibited proposed amendment permits a clean replacement text to be reconstructed.	Obtain an explicit no-change or change explanation; do not infer content.

4.1 Verified drafting points and bounded corrections

ID / location	Observation	Requested correction or clarification
D01 — Annex A 6.2–6.3	The retained description says two pipelines and subsequently uses a plural, although the H2T element is deleted.	Use a singular description matching the retained Gathering Pipeline. Preserve terminal-arrival scope and valid references.
D02 — APDP figure / definitions	Section 2.1 changes the common-infrastructure colour to blue. The displayed legend assigns blue to Power and Capture Plant and green to HP Compression; the PCC definition refers to orange.	Provide consistent labels and legend. Because the diagrams are illustrative, this alone does not establish a changed legal ownership boundary.
D03 — APDP offshore definition	The offshore-system definition points to subsection 3.1(a)(iii) but describes Onshore Transportation System elements.	Confirm intended referent and correct the noun without changing physical scope. No claim is made that this wording was newly introduced by the CiS.
D04 — Draft 4.21	The TDD discussion points to Appendix 1 although TDD is Appendix 3.	Correct the appendix reference.
D05 — Draft 3.7	The justification contains two offline/one offline rather than the two-online/one-offline proposal stated in the surrounding account.	Correct the configuration description; do not treat the typo as engineering evidence.
D06 — Draft 3.6	MPTAi appears instead of MTPAi.	Apply a consistent unit notation and define its time basis.
D07 — Privacy references	The Draft points to Appendix 4 for privacy although that appendix is the FSD; the notice points to Appendix 5, not exhibited with the package.	Point to the actual privacy section or stable notice. This is an access/traceability issue, not evidence of unlawful processing.
D08 — Question 4	Schedule 10 appears in the question without an exhibited change, while Annex A is separately identified by the notice.	Reconcile the question, notice, exact instrument targets and protected dependencies. Avoid assuming either an omitted amendment or a legally invalid process.

4.2 Deletion must not erase history or silently change future assurance

A final clean document can correctly omit BOC/H2T operational obligations while an historical cost, consent, procurement or reporting record continues to identify them. Removing a live requirement is not authority to delete the evidence that explains expenditure already incurred. Historical identifiers should remain retrievable and linked to their successor or closed status.

Conversely, a database field or reporting template should not continue to demand a live H2T acceptance date after the obligation is deleted. A suitable implementation distinguishes not applicable, cancelled, unknown and not yet achieved. It should not substitute a fabricated date or zero value solely to satisfy a validation rule. This is a proposed reporting control, not an assertion about an existing Licensee system.

The same principle applies to future-user testing. Deleting a test expressed solely in terms of discontinued Phase 2 Users may be appropriate. A new user with a materially different composition, pressure or

intermittency cannot, however, be deemed accepted simply because its predecessor-specific test disappeared. The current network-code, permit and connection processes must supply the relevant future route, without inventing a replacement requirement through editorial change.

5. Scope decisions, residual rights and delivery sequencing

5.1 A severable decision record

Decision	Question to resolve	Evidence and accountable function
Trigger	What event changed the Approved T&S Network?	Dated discontinuation evidence and scope map; Ofgem's determination under the applicable J2.
User-specific deletion	Which physical, contractual, programme and reporting items end?	Asset/work-package inventory, contracts and certifier schedule; Licensee with competent regulatory approval.
Retained shared infrastructure	What forward benefit justifies remaining expenditure?	Incremental options appraisal and dependency map; Licensee evidence and Ofgem cost assessment.
Long-term capability	Which obligation remains and how will it be demonstrated?	APDP criteria, validated models, tests and current permit; relevant technical and regulatory owners.
Financial adjustment	Which allowance, actual cost or credit changes, and when?	Unrounded reconciled financial bridge; cost and regulatory-finance owners.
Legal implementation	What text changes and from what date?	Final notice, clean/marked documents, schedule treatment and version identifiers; competent decision-maker.

The award-version J2.12 provides a specific power concerning rights and assets of certain cancelled development activities funded through Ongoing Devex. Its scope should not be assumed to cover every asset involved here. The broader question of preserving data, designs, permissions, materials and recoverable value remains relevant, but its legal basis must be identified for the particular asset and action. [S09, J2.12; S11–S12]

5.2 Rights, materials and cost consequences

The residual inventory should identify title, location, condition, warranty, intellectual-property licence, transfer restrictions, storage cost and alternative use. A pipe already purchased may remain useful for a later spur, be saleable only at a discount, or have no economic reuse after qualification. Those are different outcomes. No automatic credit equal to original cost, book value or an optimistic future sale should be assumed.

An asset retained in a regulated pool and later reused needs a transparent transfer treatment: the original project should not recover the same cost twice, but it should not be debited with a speculative value that cannot be realised. Transaction costs, inspection and adaptation may reduce any credit. Disposal and transfer effects should be mapped to the relevant SRAV and allowance provisions rather than booked in whichever line most conveniently closes the bridge.

5.3 Mechanical completion is not CO_2 commissioning

The TDD retains the Gathering Pipeline mechanical-completion milestone MS-1020 within the Phase 1 handover works. Tranche A CO_2 commissioning remains in Phase 2, and the TDD does not identify an

additional Tranche A handover-works set. The resulting distinction is material: the pipeline can be built and handed over before its CO_2 commissioning and future commercial use. [S06, Project Programme and Phase 1/Phase 2 Tranche A entries]

Accordingly, a proposal to preserve only the tunnel crossing or to postpone surface sections must assess whether Phase 1 handover, System Acceptance, milestone certificates or payment conditions would change. The present analysis identifies such options for evaluation; it does not assume they fit the unchanged programme. A nominally cheaper staged design could become more expensive if it delays the rest of the network or creates an unapproved interface.

For every proposed hold point, the appraisal should state what is complete, what remains isolated, whether temporary measures are safe and authorised, who owns preservation, what later works are required and whether the existing certifier can issue the relevant certificate. An administrative milestone cannot certify an incomplete physical obligation merely because future demand is uncertain.

6. Gathering Pipeline: anticipatory investment and options

6.1 Decision-date economics, not sunk-cost justification

Ofgem is minded to retain the full Gathering Pipeline as anticipatory investment. The Draft reports £36.1 million in 2024 real terms as sunk or committed, approximately 31% of the original pipeline allowance, and identifies cancellation/restart, land-rights and tunnel-access concerns. These are relevant reported considerations, not a publicly reproducible cost-benefit analysis. [S03, paragraphs 3.4–3.5 and 4.6–4.11]

Sunk expenditure common to all options should not determine the forward choice. A commitment matters through the cash and rights that each option would actually require or release: an invoice paid, an accrual for work delivered, a refundable advance, a cancellable purchase order and an unavoidable termination liability are not equivalent. The £36.1 million aggregate cannot be treated as all sunk, all avoidable or all the cost of preserving the route.

The comparison should use a common decision date, horizon and price basis. Each branch should contain future construction, cancellation, preservation, restart, monitoring, financing and user-delay consequences, together with recoverable value. Costs shared by all branches may be excluded from the incremental comparison, but must remain visible in the total project account.

6.2 Feasible options, with their hidden dependencies

Option	Potential value	What could make it inferior
Continue full scope	Preserves continuity, known design interfaces and earliest readiness.	Future demand absent or delayed; high avoidable spend; long idle period; better low-cost option-preservation alternative.
Pause at an authorised hold point	Buys information before further irreversible spend.	No safe hold point; loss of tunnel/land rights; contractor demobilisation; Phase 1 delay; expensive requalification.
Cancel and dispose	Avoids genuinely future spend and can release assets or commitments.	Large cancellation liabilities, little salvage, later route scarcity or major future-user delay.
Install only the scarce crossing	May preserve the most time-sensitive route while deferring other sections.	Not constructible or certifiable separately; incomplete preservation; later tie-in rework; current milestone must change.

Option	Potential value	What could make it inferior
Build only to AGI-1	Could reduce scope while retaining some network utility.	New land rights or redesign; future users located beyond the retained section; interface cost offsets saving.
Conditional staged continuation	Links commitments to observable tunnel, user and programme evidence.	Gates arrive after the irreversible decision; contracts cannot be released in stages; procurement premium.
Redesign for a different user portfolio	Can improve fit to future geography and operating profiles.	Selection has not settled; designs lock in the wrong users; common infrastructure becomes less flexible.
Restart later	Preserves present cash and allows demand to mature.	Loss of scarce access, inflation, obsolete design, damaged materials, expired consents and re-mobilisation.

A valid comparison should first remove technically or legally infeasible branches and explain why. It should not assign attractive costs to a tunnel-only option that cannot satisfy structural integrity, land rights or the unchanged Phase 1 programme. Conversely, a binary continue/cancel appraisal would be incomplete if a low-cost, enforceable reservation or safe staged build is genuinely available.

6.3 Tunnel access: evidence of a right, not just a narrative

The Draft describes the crossing as using the last available tunnel slot and discusses a design-consent requirement by 2032. The relevant contract is not published. The appraisal should distinguish scarcity of physical space, an enforceable right to that space, construction milestones, design-consent conditions and the consequences of pausing. A requirement due in 2032 does not by itself show that a short pause in 2026 causes immediate forfeiture. [S03, paragraphs 4.8–4.10]

The evidence should identify the rights holder, conditions precedent, expiry, cure periods, reservation or transfer mechanisms, the act that would actually lose the slot, alternative-crossing feasibility and a dated schedule. The public decision need disclose only enough of these features to explain why continuation or another option is efficient; the executed terms can remain within controlled regulatory review.

6.4 Future-user stages and the information they provide

DESNZ's published indicative sequence includes shortlisting in autumn 2026, a Project Negotiation List by the end of 2026, due diligence and negotiations from early 2027, FID from 2027 and COD from 2030. The application process requires operational delivery by the end of 2032 within its stated eligibility conditions. Its April clarification expressly declines to give guaranteed or project-specific dates. Thus an indicative timetable was available before the Draft Determination, even though actual selection and connection timing remained uncertain. [S14–S16, guidance Table 3 and clarification Q068]

The Draft's broad reference to an unknown selection timeline should be qualified accordingly. This is not proof that any user will connect on schedule. A project's application, shortlist, PNL entry, access negotiation, FID, mechanical completion and successful commissioning supply progressively different evidence. DESNZ may take forward a portfolio exceeding available capacity because some projects will not proceed, and PNL inclusion does not guarantee network access or support. [S16, Q066 and Q068]

The end-2032 selection criterion is not a universal expiry date for the network, nor a guarantee that the Gathering Pipeline is needed by every selected user. Location, connection routing and simultaneous operating profile matter. A later 2034 user can be examined as a long-term sensitivity, but cannot be represented as an eligible 2032-process project without an applicable change to that process.

6.5 Avoid double counting option value

For each feasible option j, compare expected discounted user and system benefits with future construction, holding, cancellation and risk costs, less recoverable value, on the same boundary. An avoided alternative tunnel cost may already be part of the user benefit estimate. Adding it again as an independent route-option benefit would overstate continuation's value. Equally, the value of learning before committing is not the same as the value of retaining physical access.

Where probabilities cannot be supported, present switching values: the user probability, delay cost, cancellation exposure or preservation cost at which the preferred option changes. These are conditional mathematical thresholds, not forecasts. Several correlated potential users cannot be treated as independent opportunities merely to inflate the probability that at least one proceeds.

A social appraisal and a financing appraisal should be reported separately. Transfers between an initial user, future users, the Licensee and public support arrangements are not automatically additional resource benefits or costs. Any proposed allocation requires its own contractual and regulatory basis. Carbon-abatement benefits must not be counted once in a capture-project case and again in full in a network case without a coherent incremental boundary.

6.6 Practical review gates

Gate	Evidence	Decision consequence
Commitment gate	Paid/accrued amounts, cancellation rights, uncommitted scope, material recoverability and remaining procurement deadlines.	Define what can still change; refresh the baseline if commitment maturity shifts.
Route gate	Tunnel right, design-consent requirement, land permissions, alternatives and safe hold points.	Remove unsupported route-loss assumptions; compare the least-cost feasible preservation options.
Delivery gate	Actual construction status, Phase 1 handover dependencies, certifier position, preservation and restart schedule.	Do not rely on an obsolete first-half-2026 construction plan as proof of present status.
User gate	Shortlist/PNL status, location, access conditions, quality/flow envelope, FID and connection readiness.	Update the probability and timing of relevant demand, not merely the count of names.
Economic gate	Updated incremental costs, benefits, overlap controls and switching values.	Reconsider only when the new evidence can change the decision or its conditions.
First-use gate	Integrity, model validity, permissions, commissioning, data and operating readiness.	A completed idle asset is not automatically ready for a future user.

These are proposed governance checkpoints, not self-executing powers to cancel contracts or amend licence obligations. The final decision should specify the competent actor, available action and escalation route. A review should not require repetition of already adequate evidence merely because a calendar date has passed.

7. Capacity, wells and acceptance: the operational detail

7.1 Units and capacity boundaries

For a 365-day convention, 1 million tonnes per year corresponds to 1,000,000,000 kilograms divided by 31,536,000 seconds, or 31.7098 kg/s. Reporting tonnes per second as kilograms per second creates a factor-of-1,000 error before rounding. All conversions in Appendix A use the explicit kilograms numerator. A leap-year calculation is a separate sensitivity, not a unilateral change to a contractual conversion convention.

Measure	Published expression	What it does not establish
Network peak obligation, ONCi	4.21 MTPA instantaneous; 133.50 kg/s.	An unrestricted annual quantity or storage-permit amendment.
Annual network obligation, ONCa	4.00 $MtCO_2$ annual quantity.	That every instantaneous flow and interruption pattern is achievable.
Pre-COD acceptance capability	4.00 MTPA equivalent rate in the specified outage configuration.	That 4.00 MTPA must be physically injected continuously throughout every test activity.
Phase 2 Tranche C combined test	At least 4.20 MTPA average across four online wells including the Non-activated Well.	That the earlier acceptance or permit requirements disappear.
NZT maximum	2.55 MTPA instantaneous; approximately 80.86 kg/s.	The design obligation for all future users over the network life.
Gathering Pipeline	3.80 MTPA instantaneous; approximately 120.50 kg/s.	The capacity of the whole network, every tie-in or the storage site.
Minimum flow	0.20 MTPA instantaneous; 6.34 kg/s in the APDP.	The minimum assured stable flow for every future user configuration without verification.
Dated storage permit	4 MTPA average gross stream; 1.5 MTPA maximum per well; 100 Mt CO_2 authorised quantity.	An automatic averaging convention matching ONCa, or measured well deliverability.

The APDP and permit quantities above are source-derived; their legal and engineering purposes differ. The permit's gross-stream rate and its CO_2 quantity should not be equated using a molar CO_2 purity percentage as though it were a mass fraction. A reconciliation must state measurement boundary, composition basis, standardisation, averaging period and metering uncertainty. No composition or pressure operating instruction is proposed here. [S04, sections 3 and 6; S13, Annex 4]

7.2 Well inventory and outage sequence

The APDP describes five injection wells, alongside a distinct observation-well function. The normal pre-COD acceptance configuration concerns four activated injection wells: three online and one offline. A further Non-activated Well is preserved unless used through the stated optional route. The Licensee's proposal to use two online and one offline should therefore not be described as simply removing one well from the entire physical project. [S03, paragraphs 3.6–3.7; S04, offshore system and System Acceptance]

Acceptance includes individual-well capability work, a three-online/one-offline configuration with the largest demonstrated well offline, and a separate largest-online-well trip and restoration requirement. Where the optional Non-activated Well is activated before COD to meet the criteria, the APDP provides a four-online/one-offline configuration at the 4.00 MTPA capability. The separate trip test requires restoration

of 4.00 MTPA injection capacity within three hours. The later Tranche C test is different again: four online wells including the Non-activated Well at a combined average of at least 4.20 MTPA. [S04, System Acceptance and Phase 2 Tranche C]

Simple arithmetic can show that two wells with a 1.5 MTPA ceiling each have a 3.0 MTPA aggregate ceiling. It does not show that the wells deliver 2.55 MTPA under the relevant pressure, share load safely, recover from a trip or remain available during washing. A capacity sum becomes a system demonstration only when the individual curves, common constraints, controls and outage sequence support it.

7.3 Models, actual flow and the limits of inference

The APDP's technical basis permits, where relevant, appropriately calibrated well and fluid models to demonstrate capacity under future conditions. That must be distinguished from activities requiring actual injected volume, physical response, sustained flow or specific witnessed tests. A remaining user with a 2.55 MTPA maximum does not, by itself, prove that every 4.00 MTPA capability demonstration is impossible. Nor does a model automatically replace a specified physical test. [S04, section 6.3 and System Acceptance]

The evidence matrix should mark each criterion as physically demonstrated, model-supported or combined, with calibration range, validation data, extrapolation, uncertainty, independent review and acceptance authority. A model calibrated to steady low flow may not justify high-flow transients or a different future mixture without further evidence. The same applies when an individual well's performance changes after intervention.

7.4 Volume and duration are separate tests

The APDP combines a minimum injected volume of 180,000 tonnes with the specified uninterrupted or interrupted flow-duration criteria. The clock rules include pausing for unavailable user CO_2 and resuming after the required period of restored steady-state flow. A pause is not automatically a reset, and elapsed wall-clock time is not automatically qualifying test time. The accepted procedure should identify exactly which counter starts, pauses, resumes or resets for each cause. [S04, System Acceptance]

At a constant 4.00 Mtpa-equivalent rate, seven days produce about 76,712 tonnes; 180,000 tonnes would take about 16.43 days. At 2.55 Mtpa it would take about 25.76 days. These are illustrative mass/time calculations only: they do not override the APDP's prescribed sequence, define the actual rate that will be available or establish that qualifying days must all occur at 4.00 Mtpa. Appendix A also tests interruptions and measurement uncertainty.

7.5 Halite, cycling, washing and preservation

The Draft attributes concerns about halite precipitation, injectivity, cyclic fatigue and washing requirements to the Licensee and records Ofgem's assessment. No project-specific model outputs or validated damage probabilities are supplied publicly. The appropriate comparison is between configurations under matched user-flow, exposure-duration, pressure, maintenance and future-demand assumptions, not an unqualified statement that exposing more wells is either safe or harmful. [S03, paragraphs 3.7, 3.15 and 4.14–4.18]

Ofgem's view that an NZT-only scenario was known when the original criteria were set does not eliminate the need to check whether the expected duration or intermittency of that scenario has materially changed. A short bridging period and many years of NZT-only operation can use the same scenario label while producing different cumulative exposure, maintenance and readiness consequences. Equally, a longer duration is not proof of unacceptable degradation without a validated mechanism.

A protected well may preserve option value but still requires surveillance and requalification. A wash may restore performance but consume downtime, water, intervention capacity and cost; recovery should be evidenced rather than presumed. Failed recovery should trigger the applicable engineering, permit and contractual process, not a silent reduction of the acceptance threshold. Exposure reduction and future assurance deferral must be compared on a common lifetime basis.

7.6 Gathering Pipeline testing with NZT Power

The proposed Tranche A text replaces BOC with NZT Power as the CO_2 source. That is a verified textual substitution. It does not reveal the physical flow path, isolation arrangement, metering, source agreement, temporary configuration or emissions treatment. Those should be established by the approved commissioning design and relevant consents, not invented from a network diagram. [S04, Phase 2 Tranche A]

Three matters require explicit reconciliation: whether the test source can supply the required profile; how the deleted pre-COD election affects timing; and whether the continuing Phase 1 mechanical-completion obligation remains compatible with the proposed commissioning route. Any alternative test or later-user demonstration needs a competent approval and a statement of the remaining unproven property. Calling a pipeline future-ready while a material test is deferred would be misleading unless the qualification is clear.

7.7 Permit clocks and later users

The publicly available December 2024 permit includes an earliest injection date of 1 October 2027, a latest commencement point 24 months after that date and an injection period measured from actual commencement. Its Annex 4 also distinguishes a maximum average gross-stream site rate, per-well limits and the total authorised CO_2 quantity. The permit also requires reassessment of tubing-inspection and integrity requirements where the maximum per-well rate is sustained for more than 90 days. These are dated permit conditions, not a determination of the present unamended permit or of commercial COD. [S13]

A later user connecting by the end of 2032 is not the same event as first injection into the store. Delay scenarios should maintain separate clocks for project handover, System Acceptance, COD, first permitted injection, later-user connection and permit duration. Any variation belongs with the competent authority and cannot be achieved merely by changing APDP language. The same principle applies to updated commissioning plans and the permit's separate procedural conditions.

7.8 Minimum technical evidence for finalisation and later use

Topic	Evidence sufficient to answer the issue	Boundary
Capacity and outage	Per-well curves, largest-well selection, common-network constraints, dynamic recovery and uncertainty.	Nominal sum or a per-well ceiling is not a test result.
Model-assisted proof	Calibration data, validated envelope, extrapolation, sensitivities and certifier/regulator acceptance.	Simulation cannot silently displace a required physical test.
Volume and clocks	Meter uncertainty, injected-mass ledger, cause-coded interruptions and restart sequence.	Wall-clock duration and cumulative qualifying counters are not interchangeable.
Halite / cycling	Scenario duration, flow profile, model validation, degradation sensitivities, washing and recovery data.	General mechanisms do not establish project-specific failure likelihood.
Idle assets	Preservation owner, inspection, consent validity, monitoring, warranty and requalification triggers.	No exposure is not equivalent to no deterioration.
New user interface	Quality, pressure, ramp, maximum/minimum flow, simultaneity, route and access agreement.	PNL status does not demonstrate hydraulic fit or an allocated capacity right.

8. Financial reconciliation and regulatory consequences

8.1 The published construction allowance bridge

Step	£ million, Base Year	Interpretation
Existing headline	2,212.800	Published starting value, already displayed to one decimal place.
Remove BOC scope	−1.270	Published scope deduction; detailed cost lines not disclosed.
Remove H2T scope	−4.470	Published scope deduction; retained incurred costs considered separately.
Engineering / revalidation	+1.690	Published requested additional work.
Reconstructed Licensee request	2,208.750	Rounds to £2,208.8m; not a claimed unrounded ledger amount.
Indexation correction	+0.084	Ofgem's published adjustment; underlying index calculation not reproducible from the package.
Project-management deduction	−0.926	Ofgem's further published reduction.
Reconstructed proposed headline	2,207.908	Rounds to £2,207.9m.
FSD fixed component	2,173.700 + FXadj	At the £34.2m original FX reference, gives £2,207.9m.

The original fixed component is £2,178.6 million, so the displayed fixed reduction is £4.9 million. The reconstructed component bridge reduces the displayed headline by £4.892 million. Their £0.008 million difference is within the precision lost when publishing the fixed components to £0.1 million. It does not, without unrounded inputs, establish an £8,000 overcharge, undercharge or unexplained saving. [S03; S07]

8.2 FXadj: formula, weighting and cash are not the same object

The FSD defines the construction FX component using USD46.2 million divided by an efficient USD/GBP rate R, with GBP as one. It sets out market-rate and efficient-hedging comparisons, weighted treatment of multiple transactions, transaction-cost evidence, and a particular USD-weighted rule for partly hedged and partly unhedged expenditure. The separate development-activity FXadj1 should not be confused with the construction FXadj merely because the symbols and method are similar. [S07, construction allowance and adjacent development allowances]

An arithmetic weighted average of two USD/GBP rates and the sum of the actual sterling cash paid for two fixed USD amounts generally differ. For equal USD halves of USD46.2 million at 1.25 and 1.45, the simple rate average is 1.35, giving £34.2222 million when used as the denominator. Actual cash computed as 23.1/1.25 + 23.1/1.45 is £34.4110 million. This illustrates why the final application should explain the prescribed weighting and treatment of costs; it is not a finding that the FSD is erroneous or that the Licensee used either method incorrectly.

The regulatory formula must not be silently replaced by a generic accounting average, nor should a formula output be labelled actual expenditure without reconciliation to transaction records. Ofgem should show one worked example of the greater-of comparison, multiple-transaction weighting and partly hedged expenditure using clearly stated weights, units and transaction-cost conventions. Any currency exposure

associated with removed scope should be mapped before changing either the fixed GBP component or USDoby, to avoid double adjustment.

8.3 Price-base and commitment controls

The Draft distinguishes Base Year 2021/22 figures from 2024/25 real amounts, and describes the Gathering Pipeline commitment separately in 2024 real terms. The component ratios 1.50/1.27, 5.30/4.47 and 2.00/1.69 are close but not identical because their published operands are rounded. They do not establish inconsistent indexation. A reliable line-item bridge uses the original unrounded values, correct index period and one explicit rounding convention. [S03]

The retained £2.8 million of incurred spur expenditure and the £36.1 million Gathering Pipeline sunk/committed amount should not be combined: their asset scopes, dates and price bases differ. Nor should an invoice paid after the decision automatically be classified as newly avoidable expenditure if it relates to work already delivered. Equally, a contract commitment is not automatically a completed asset or an admissible actual cost.

8.4 Additionality, management costs and asset credits

The engineering request should identify the deliverables that change because of BOC/H2T discontinuation, their baseline contractual obligations, necessary new modelling, hours and rates, approval and acceptance evidence. Work can be technically necessary but already funded; work can also be genuinely additional even though total project scope shrinks. Necessity, additionality and price efficiency are separate tests. [S03; S11–S12]

For project management, distinguish dedicated spur-package hours, embedded contractor overhead and shared management that remains necessary. A deduction should not remove hours already included in another scope reduction, but retained common management should not be accepted solely because it was in the original budget. Revalidation management and reduced construction supervision may move in opposite directions; an unambiguous work-breakdown and time-code mapping is preferable to netting them in an unexplained total.

Credits from cancellation, supplier rebates, resale or transfer should be recognised through the applicable rules and evidence of realisability. A contingent insurance recovery is not the same as an unconditional credit; an asset transferred to a later project may require a transfer value, not necessarily an external cash sale. The costs of inspection, transport and adaptation must be treated once, with clear ownership.

8.5 SRAV, incentives and revenue timing

In the award-version licence, F6 governs actual construction SRAV Capex and Opex, F7 contains construction incentive calculations, and F4 includes relevant additions and adjustments to SRAV. The award-version F7 distinguishes overspend treatment during construction from an underspend amount recognised in the final construction period. The current consolidated clauses and parameters should be confirmed before applying that structure to an actual monetary outcome. [S09, F4/F6/F7]

A CiS allowance reduction can change an incentive comparison even if recorded expenditure has not yet changed. Conversely, avoided future cost changes the actual-cost path, and a later asset credit may require another adjustment. Equal, below-allowance and above-allowance states must each be tested using the applicable period and sign convention. No incentive-sharing percentage or current revenue amount is invented in this response.

The final financial explanation should therefore trace: removed and retained work → allowance change → actual-cost recognition → credit/disposal treatment → construction incentive → SRAV addition → relevant return/reconciliation and later revenue. A construction allowance table alone cannot quantify the complete downstream effect. Existing commissioning, operating, pass-through, financing and uncertain-cost-event items should remain unchanged unless a separate, reasoned adjustment is identified.

8.6 Public versus controlled financial evidence

Item	Controlled evidence to examine	Useful public output
Removed work	Quantities, rates, contract scope, milestone and cancellation status.	Reconciled category-level bridge with explanations of retained costs.
Engineering uplift	Baseline duties, new deliverables, hours, rates and technical approval.	Additionality rationale and scope, without commercially sensitive rate cards.
Management saving	Dedicated/shared roles, embedded overhead, duration and overlap checks.	Method and net adjustment with an explicit no-double-count explanation.
Indexation / FX	Original operands, price bases, dates, rate sources, weights and costs.	Replicable formula and a non-confidential worked reconciliation.
Assets and rights	Title, residual use, realisable value and transfer/disposal terms.	Treatment policy and aggregate credited or retained value.
SRAV / incentive	Applicable consolidated clauses, periods, cumulative actuals and parameters.	Direction and timing of regulatory effects, with limits on any indicative headline.

9. Delivery, reporting and proportionate decision conditions

9.1 The final implementation package

A robust final package should identify the existing instrument version, final clean and marked replacement, each effective date and any dependency on a further approval. The legal decision is not replaced by an administrative register; the register should point to the decision. Historical records should preserve which obligations applied before and after commencement. [S02; S09, B27/J2]

Stage	Required reconciliation	Failure that should be prevented
Decision publication	Reasons, exact amendment targets, Schedule 10/11 treatment, clean text and statutory timing.	A correct appendix is linked to the wrong licence version or is treated as effective immediately.
Contract / procurement change	Affected packages, release notices, residual rights, cancellation credits and retained shared work.	Cancellation of a user spur also releases a shared material or consent needed for the Gathering Pipeline.
Programme / certification	Phase 1 MS-1020, Tranche A source, deletion of Tranche B and retained C criteria.	H2T dates remain mandatory in a return, or Phase 1 handover is certified against an altered scope without authority.
Finance	Allowance, actuals, price-base conversions, FX, management overlap and asset credits.	The same item is removed from both fixed allowance and FX without evidence, or a credit is recovered twice.
Preservation / first use	Responsible owner, inspections, permissions, calibration and requalification.	Idle infrastructure is described as ready based solely on its construction certificate.

Stage	Required reconciliation	Failure that should be prevented
Future user	Selection, connection agreement, live Network Code, quality/flow match and capacity allocation.	An indicative PNL or technical fit is mistaken for a granted access right.

DESNZ's clarification states that projects are expected to accede to the live CCS Network Code at FID and should not assume they can modify it to suit project-specific preferences. The exact future-user arrangements remain subject to the applicable live documents. That provides a practical interface for this decision: retained infrastructure must be compatible with future connection assessment, but the CiS should not purport to allocate access or pre-approve a new user. [S16, Q064]

9.2 Triggered rather than indiscriminate re-testing

Material triggers include a changed future-user flow or composition, prolonged lay-up beyond validated preservation assumptions, significant injectivity loss, a workover, a failed recovery intervention, a route-right change, or a substantial remaining-cost revision. Each trigger should identify the property no longer demonstrated and the least sufficient reassessment. Unchanged, valid evidence should be reused. This avoids both stale acceptance and unnecessary repetition.

The Ofgem guidance supports proportionate evidence and assessment pathways; it should not be read as requiring all stages of a large re-opener process to be repeated for every narrow cancellation adjustment. The additional work proposed here concerns specific unresolved dependencies and decision-changing evidence. Financial or technical findings should have a named resolution owner and a public or controlled closure record appropriate to their sensitivity. [S11–S12]

9.3 Prioritised requests and conclusion

Priority	Requested outcome
Publication corrections	Correct residual pipeline plurality, figure/definition alignment, appendix/unit/configuration references and privacy navigation; publish consistent clean and marked text.
Instrument certainty	Name the current consolidation and exact amendment route. Resolve Schedule 10's inclusion in Q4 and any Schedule 11 entry without inferring protected content.
Decision-changing investment evidence	Disaggregate £36.1m, update actual construction status, verify tunnel-right conditions and compare feasible alternatives with the Phase 1 critical path included.
Technical acceptance	Show which criteria use physical evidence or calibrated models; preserve distinct volume, clock, outage and later-user tests; confirm NZT-supplied Tranche A feasibility.
Financial closure	Provide the unrounded fixed/headline/FX bridge, indexation method, cost additionality, management overlap checks and residual-asset treatment.
Continuing assurance	Define proportionate re-evaluation, preservation and requalification triggers; distinguish projected demand from actual network access and first-use readiness.

The final decision should make user-specific deletions exact, justify retained infrastructure prospectively, distinguish capacity and acceptance duties and show the financial chain. The following examples identify relevant evidence and sensitivities; they are not a substitute for project, safety or regulatory approvals.

Appendix A. Quantitative examples and decision sensitivities

The 60 examples below distinguish published operands from illustrative assumptions. Monetary values are £ million unless another unit is stated. A calculated result does not verify cost efficiency, an operating envelope or a legal entitlement. The conversions use 365 days unless expressly varied. Display precision is not a claim about the precision of the underlying project data.

A1. Capacity, mass and time

Q01 — 0.20 Mtpa to kilograms per second

Basis and inputs. Published magnitude; derived conversion [S04/S13]. 0.20 million tonnes per year; 1 tonne = 1,000 kg; 365 × 24 × 3,600 seconds per year.

Calculation. 0.20 × 1,000,000,000 / 31,536,000. **Result:** 6.3420 kg/s

Decision use and limit. The kilogram numerator is essential. This rate equivalent does not convert a site average, user maximum or test criterion into the same obligation.

Q02 — 1.50 Mtpa to kilograms per second

Basis and inputs. Published magnitude; derived conversion [S04/S13]. 1.50 million tonnes per year; 1 tonne = 1,000 kg; 365 × 24 × 3,600 seconds per year.

Calculation. 1.50 × 1,000,000,000 / 31,536,000. **Result:** 47.5647 kg/s

Decision use and limit. The kilogram numerator is essential. This rate equivalent does not convert a site average, user maximum or test criterion into the same obligation.

Q03 — 2.55 Mtpa to kilograms per second

Basis and inputs. Published magnitude; derived conversion [S04/S13]. 2.55 million tonnes per year; 1 tonne = 1,000 kg; 365 × 24 × 3,600 seconds per year.

Calculation. 2.55 × 1,000,000,000 / 31,536,000. **Result:** 80.8600 kg/s

Decision use and limit. The kilogram numerator is essential. This rate equivalent does not convert a site average, user maximum or test criterion into the same obligation.

Q04 — 3.80 Mtpa to kilograms per second

Basis and inputs. Published magnitude; derived conversion [S04/S13]. 3.80 million tonnes per year; 1 tonne = 1,000 kg; 365 × 24 × 3,600 seconds per year.

Calculation. 3.80 × 1,000,000,000 / 31,536,000. **Result:** 120.4972 kg/s

Decision use and limit. The kilogram numerator is essential. This rate equivalent does not convert a site average, user maximum or test criterion into the same obligation.

Q05 — 4.00 Mtpa to kilograms per second

Basis and inputs. Published magnitude; derived conversion [S04/S13]. 4.00 million tonnes per year; 1 tonne = 1,000 kg; 365 × 24 × 3,600 seconds per year.

Calculation. 4.00 × 1,000,000,000 / 31,536,000. **Result:** 126.8392 kg/s

Decision use and limit. The kilogram numerator is essential. This rate equivalent does not convert a site average, user maximum or test criterion into the same obligation.

Q06 — 4.20 Mtpa to kilograms per second

Basis and inputs. Published magnitude; derived conversion [S04/S13]. 4.20 million tonnes per year; 1 tonne = 1,000 kg; 365 × 24 × 3,600 seconds per year.

Calculation. 4.20 × 1,000,000,000 / 31,536,000. **Result:** 133.1811 kg/s

Decision use and limit. The kilogram numerator is essential. This rate equivalent does not convert a site average, user maximum or test criterion into the same obligation.

Q07 — 4.21 Mtpa to kilograms per second

Basis and inputs. Published magnitude; derived conversion [S04/S13]. 4.21 million tonnes per year; 1 tonne = 1,000 kg; 365 × 24 × 3,600 seconds per year.

Calculation. 4.21 × 1,000,000,000 / 31,536,000. **Result:** 133.4982 kg/s

Decision use and limit. The kilogram numerator is essential. This rate equivalent does not convert a site average, user maximum or test criterion into the same obligation.

Q08 — Peak versus 4.00 reference

Basis and inputs. Published magnitudes; derived comparison [S04]. Network peak 4.21; annual/test numerical reference 4.00, with their different meanings retained.

Calculation. 4.21 − 4.00 = 0.21; 0.21 / 4.00 × 100. **Result:** 0.21 Mtpa-equivalent difference; 5.25%.

Decision use and limit. A percentage difference is not evidence of a contradiction. The legal quantity, averaging interval and measurement boundary must first agree.

Q09 — Hypothetical annual scheduling ceiling

Basis and inputs. Hypothetical constant-rate schedule. Assume 4.21 Mtpa-equivalent instantaneous flow and a separate annual 4.00 Mt mass limit over 365 days.

Calculation. 365 × 4.00 / 4.21. **Result:** 346.79 full-rate days; 95.01% duty fraction.

Decision use and limit. This is a mass-budget illustration, not the permit's averaging rule. Ramps, downtime, mixture and rate restrictions may further constrain the schedule.

Q10 — Two future users exceed a gathering constraint

Basis and inputs. Hypothetical simultaneous profiles. User A peak 2.20; user B peak 1.90; assumed shared Gathering Pipeline limit 3.80 Mtpa-equivalent.

Calculation. 2.20 + 1.90 − 3.80. **Result:** 0.30 Mtpa-equivalent excess.

Decision use and limit. Adding annual capture plans can conceal coincident peaks. Diversified operation, allocation or expansion needs evidence; selection of both users does not resolve the constraint.

Q11 — Two-well nominal headroom and one-well outage

Basis and inputs. Published ceilings; hypothetical full deliverability [S03/S13]. Two wells each at 1.50; NZT maximum 2.55 Mtpa-equivalent.

Calculation. 2 × 1.50 − 2.55; 2.55 − 1.50. **Result:** 0.45 headroom with both; 1.05 shortfall with one.

Decision use and limit. The first sum does not demonstrate redundancy. Neither ceiling is evidence of actual injectivity at the required pressure or of dynamic switching.

Q12 — Three-well ceiling against acceptance

Basis and inputs. Published magnitudes; hypothetical equal availability. Three wells each able to reach 1.50 against a 4.00 requirement.

Calculation. 3 × 1.50 − 4.00. **Result:** 0.50 Mtpa-equivalent nominal headroom.

Decision use and limit. The remaining wells may share a common bottleneck or have unequal curves. Gross headroom is not independent assurance of the prescribed largest-well-outage condition.

Q13 — Four-well equal distribution

Basis and inputs. Illustrative distribution of a published aggregate. Four online wells provide a combined 4.20 Mtpa-equivalent.

Calculation. 4.20 / 4. **Result:** 1.05 Mtpa-equivalent per well.

Decision use and limit. This is one possible distribution, not a project design. A combined average does not establish individual pressure, flow or fatigue compliance.

Q14 — Aggregate success masks a well-level exceedance

Basis and inputs. Hypothetical well allocation. Four flows of 1.60, 1.00, 0.90 and 0.70; illustrative comparison to a 1.50 per-well ceiling.

Calculation. 1.60 + 1.00 + 0.90 + 0.70; 1.60 − 1.50. **Result:** 4.20 total; first well 0.10 above the ceiling.

Decision use and limit. The aggregate criterion is met numerically while an individual constraint fails. Increasing the network aggregate cannot legitimise a well-level exceedance.

Q15 — Seven days of constant 4.00 flow

Basis and inputs. Hypothetical constant rate; APDP volume comparator. 4 million tonnes/year-equivalent maintained continuously for seven days.

Calculation. 4,000,000 × 7 / 365. **Result:** 76,712.33 tonnes.

Decision use and limit. This is below 180,000 tonnes. Minimum-duration and cumulative-volume tests remain separate; the calculation does not prescribe the actual acceptance flow.

Q16 — Time to 180,000 tonnes at 4.00

Basis and inputs. Hypothetical constant rate. 180,000 tonnes; uninterrupted 4.00 million tonnes/year-equivalent.

Calculation. 180,000 / (4,000,000 / 365). **Result:** 16.425 days.

Decision use and limit. Volume can bind beyond a seven-day period. Actual qualification still follows the APDP sequence, minimum flow and evidence requirements.

Q17 — Time to 180,000 tonnes at 2.55

Basis and inputs. Hypothetical constant rate. 180,000 tonnes; uninterrupted 2.55 million tonnes/year-equivalent.

Calculation. 180,000 / (2,550,000 / 365). **Result:** 25.7647 days.

Decision use and limit. A lower available feed lengthens mass accumulation. It does not prove that every higher-capacity demonstration is impossible where the APDP permits model-supported evidence.

Q18 — Wall-clock duration versus qualifying days

Basis and inputs. Hypothetical counter classification. Fourteen qualifying days, three days without feed and one additional day assumed non-qualifying for re-establishment.

Calculation. 14 + 3 + 1. **Result:** 18 elapsed days for 14 qualifying days.

Decision use and limit. The approved procedure must determine which recovery time qualifies. This example does not replace the APDP pause/resume rules or assume every interruption resets the count.

Q19 — Meter uncertainty near the volume boundary

Basis and inputs. Hypothetical assurance tolerance. Recorded mass 180,200 tonnes; assume an illustrative conservative downward uncertainty adjustment of 0.2%.

Calculation. 180,200 × (1 − 0.002). **Result:** 179,839.6 tonnes.

Decision use and limit. A nominal total above 180,000 need not demonstrate a conservative lower bound above it. The actual uncertainty rule requires approved metrology; 0.2% is not a specified project tolerance.

Q20 — Leap-year conversion sensitivity

Basis and inputs. Alternative convention, not a proposed contractual change. 4.00 million tonnes/year-equivalent divided by 366 rather than 365 days.

Calculation. 4,000,000,000 / (366 × 86,400). **Result:** 126.4926 kg/s.

Decision use and limit. A contractual conversion convention should remain stable unless lawfully changed. Different calendar conventions can cause small differences, not a factor-of-1,000 error.

A2. Allowances, FX and cost attribution

Q21 — Licensee scope components

Basis and inputs. Published Base Year operands [S03]. BOC −1.27; H2T −4.47; revalidation +1.69.

Calculation. −1.27 − 4.47 + 1.69. **Result:** −£4.05m.

Decision use and limit. This reproduces the component sum. The scope, additionality and efficiency of each component still require the cost evidence.

Q22 — Requested headline before Ofgem adjustments

Basis and inputs. Published rounded operands [S03]. Starting headline 2,212.8; reconstructed change −4.05.

Calculation. 2,212.8 − 4.05. **Result:** £2,208.75m → £2,208.8m at one decimal place.

Decision use and limit. Do not describe the intermediate as a verified unrounded balance. It is generated from publicly rounded source values.

Q23 — Net further adjustment

Basis and inputs. Published Base Year operands [S03]. Index correction +0.084; project management −0.926.

Calculation. 0.084 − 0.926. **Result:** −£0.842m.

Decision use and limit. The two changes have opposite signs. Their sum alone does not test the native index calculation or overlapping management costs.

Q24 — Final reconstructed headline

Basis and inputs. Published rounded operands [S03]. Reconstructed 2,208.750 less 0.842.

Calculation. 2,208.750 − 0.842. **Result:** £2,207.908m → £2,207.9m at one decimal place.

Decision use and limit. The display reconciles. An apparent £0.008m difference from another one-decimal presentation is not itself an error.

Q25 — Fixed reduction versus reconstructed change

Basis and inputs. Published displays [S03/S07]. Fixed components 2,178.6 and 2,173.7; component-derived reduction 4.892.

Calculation. 2,178.6 − 2,173.7 = 4.9; 4.9 − 4.892. **Result:** £4.9m displayed reduction; £0.008m precision difference.

Decision use and limit. Final unrounded operands and rounding rules are needed before alleging an £8,000 discrepancy. Publication precision can explain it.

Q26 — Original FX reference explains both headlines

Basis and inputs. Published original sterling reference [S07]. FX reference £34.2m added to old/new fixed components.

Calculation. 2,178.6 + 34.2; 2,173.7 + 34.2. **Result:** £2,212.8m and £2,207.9m.

Decision use and limit. This reconciles the displayed reference case. It does not freeze the future FX adjustment at £34.2m.

Q27 — Separate 2024/25 real component bridge

Basis and inputs. Published 2024/25 real operands [S03]. BOC −1.50; H2T −5.30; revalidation +2.00.

Calculation. −1.50 − 5.30 + 2.00; 4.80 / 4.05. **Result:** −£4.80m; implied aggregate ratio 1.185185.

Decision use and limit. The ratio is derived from rounded components, not an official index factor. It must not be applied indiscriminately to every scope line.

Q28 — Illustrative conversion of a later-price cost

Basis and inputs. Hypothetical price index. Cost 50.0 in a later real price base; stipulated later/Base Year factor 1.18.

Calculation. 50.0 / 1.18. **Result:** £42.3729m in the assumed Base Year.

Decision use and limit. The factor is hypothetical. Multiplying instead of dividing would reverse the conversion. The correct project indices and periods must come from the source data.

Q29 — Lower USD/GBP rate increases FXadj

Basis and inputs. Published USD amount; hypothetical rate. USD46.2m; R = 1.20 USD per GBP.

Calculation. 46.2 / 1.20. **Result:** £38.50m.

Decision use and limit. A lower denominator means more sterling. This is not a forecast exchange rate or a statement that this rate qualifies under the FSD rule.

Q30 — Higher USD/GBP rate and unchanged CiS delta

Basis and inputs. Published USD amount; hypothetical rate. USD46.2m; R = 1.50; new fixed component 2,173.7.

Calculation. 46.2 / 1.50 = 30.8; 2,173.7 + 30.8. **Result:** FXadj £30.8m; illustrative headline £2,204.5m.

Decision use and limit. The headline changes with FX, while the fixed old/new difference remains £4.9m if the same FX assumption applies to both.

Q31 — Greater-of rate selection

Basis and inputs. Illustration of the stated rule, not transaction evidence [S07]. Assume eligible market comparison 1.30 and eligible net efficient hedge rate 1.40 USD/GBP.

Calculation. R = max(1.30, 1.40); 46.2 / 1.40. **Result:** R = 1.40; £33.00m.

Decision use and limit. Whether a transaction and its costs qualify must be evidenced. Choosing the greater sterling cost instead of the greater rate would invert the rule.

Q32 — Rate-weighted formula versus two cash purchases

Basis and inputs. Hypothetical equal USD halves. USD23.1m at 1.25; USD23.1m at 1.45. Compare a stipulated USD-weighted rate formula with actual cash summation.

Calculation. 46.2 / 1.35 versus 23.1 / 1.25 + 23.1 / 1.45. **Result:** £34.2222m versus £34.4110m; difference £0.1888m.

Decision use and limit. The difference is mathematical, not proof of an FSD defect. Apply the prescribed weighting and explain why its regulatory result may differ from actual cash.

Q33 — Transaction cost changes a net effective rate

Basis and inputs. Hypothetical transaction-cost convention. USD13.5m purchased at 1.35 costs £10.0m; add £0.1m eligible sterling cost for this illustration.

Calculation. 13.5 / (10.0 + 0.1). **Result:** 1.336634 USD/GBP net effective rate.

Decision use and limit. The assumed cost must be efficient and admissible under the actual rule. Recording the fee in both the rate and another allowance line would duplicate it.

Q34 — Hours and rates in a management deduction

Basis and inputs. Hypothetical cost evidence. 8,000 genuinely avoidable management hours; £90/hour.

Calculation. 8,000 × 90 / 1,000,000. **Result:** £0.720m.

Decision use and limit. This is not an estimate of the project's £0.926m deduction. Hours must be avoidable and not already removed in a contract package.

Q35 — Management overlap control

Basis and inputs. Hypothetical overlap, using a published total only as scale. Assume £0.926m gross management reduction, of which £0.200m is already included in another deletion.

Calculation. 0.926 − 0.200. **Result:** £0.726m additional distinct deduction.

Decision use and limit. The overlap is not asserted to exist. A cost-owner and work-breakdown reconciliation is needed before deducting both amounts.

Q36 — Necessary engineering already partly funded

Basis and inputs. Hypothetical work allocation. New study budget £2.0m; £0.5m of identical work demonstrably included in the baseline.

Calculation. 2.0 − 0.5. **Result:** £1.5m potentially additional work.

Decision use and limit. Additionality is not efficiency: the distinct £1.5m still requires necessary scope, reasonable rates and accepted deliverables. This is not a revision of the actual £1.69m request.

Q37 — Net material recovery

Basis and inputs. Hypothetical disposal economics. Gross realisable resale £0.8m; inspection, transport and sale cost £0.1m.

Calculation. 0.8 − 0.1. **Result:** £0.7m net recovery.

Decision use and limit. Ownership and the applicable regulatory credit mechanism remain separate. Neither gross original cost nor an unevidenced future sale should be credited automatically.

Q38 — Allowance reduction differs from cost reduction

Basis and inputs. Hypothetical outcome. Allowance falls £4.9m; actual expenditure subsequently falls £3.0m on the same scope and price basis.

Calculation. 4.9 − 3.0. **Result:** £1.9m change in the allowance-versus-actual comparison.

Decision use and limit. This is not a £1.9m incentive or revenue amount. The applicable sharing rule, cumulative period and SRAV treatment are still needed.

Q39 — Boundary crossing after an allowance change

Basis and inputs. Hypothetical cumulative values. Allowance 125.0; actual 120.0; allowance falls 4.9 to 120.1. Compare actual of 120.0, 120.1 and 120.2.

Calculation. 120.1 − actual. **Result:** +£0.1m, £0 and −£0.1m allowance headroom.

Decision use and limit. The three states must not share the same branch. An equality boundary and the correct construction period matter; no sharing factor is assumed.

Q40 — Commitment versus avoidable expenditure

Basis and inputs. Hypothetical cancellation clause. Remaining contractual payments £5m; valid cancellation would leave £1m unavoidable termination cost, with no other fees.

Calculation. 5 − 1. **Result:** £4m avoidable incremental payment.

Decision use and limit. The commitment is neither fully sunk nor fully avoidable. Work already delivered and separate refundable advances must be classified on their own facts.

A3. Investment options, timing and uncertainty

Q41 — Implied pipeline allowance from a rounded percentage

Basis and inputs. Published £36.1m and approximately 31% [S03]. Treat the displayed 31% as exact only for an illustrative reverse calculation.

Calculation. 36.1 / 0.31. **Result:** £116.4516m implied total.

Decision use and limit. This is not an audited pipeline allowance. The numerator's mixed sunk/committed status and rounding prevent a precise remaining-cost inference.

Q42 — Percentage rounding range

Basis and inputs. Hypothetical nearest-percentage-point convention. If 31% denotes a true share between 30.5% and 31.5%, use the displayed £36.1m numerator.

Calculation. 36.1 / 0.315 to 36.1 / 0.305. **Result:** Approximately £114.60m to £118.36m.

Decision use and limit. Even this interval ignores numerator rounding and scope uncertainty. It is a precision demonstration, not a recovered confidential allowance.

Q43 — Continuation compared with a net recovery on stopping

Basis and inputs. Hypothetical decision-date branches. Future continuation cost £80m; stop costs £8m and yields £12m recovery. All are already present values.

Calculation. 80 − (8 − 12). **Result:** Continuation costs £84m more than stopping before benefits.

Decision use and limit. Common sunk cost is excluded from the difference. Comparing £80m with zero would omit the stopping branch's £4m net recovery.

Q44 — Single-user break-even probability

Basis and inputs. Hypothetical one-period appraisal. Continuation incremental cost £90m; benefit if the relevant user arrives £150m; no benefit otherwise; stop value zero.

Calculation. 90 / 150. **Result:** 60%.

Decision use and limit. The threshold depends on the simplified benefit boundary and timing. It is not the probability that a Teesside applicant will succeed.

Q45 — Larger incremental benefit changes the threshold

Basis and inputs. Hypothetical sensitivity to Q44. Same £90m cost; now £250m benefit in the successful-user branch.

Calculation. 90 / 250. **Result:** 36%.

Decision use and limit. The extra benefit must be genuine and incremental. Avoided crossing costs already counted elsewhere cannot simply be added again.

Q46 — A feasible staged option with all costs included

Basis and inputs. Hypothetical branch comparison. Assume a staged option's full incremental present cost is £45m and delivers the same £150m successful-user benefit.

Calculation. 45 / 150. **Result:** 30% break-even probability.

Decision use and limit. This comparison is valid only if £45m includes later completion, preservation, timing and interface effects. A crossing-only first instalment cannot stand for the whole option.

Q47 — Delay saves financing but adds restart cost

Basis and inputs. Hypothetical common-price, decision-date values. Deferral saves £20m present value; additional remobilisation costs £35m present value.

Calculation. 35 − 20. **Result:** £15m net cost of delay before other effects.

Decision use and limit. Nominal future remobilisation must be discounted before this subtraction. User delays or lost access are not included in the example.

Q48 — Six years of idle preservation

Basis and inputs. Hypothetical real annual cost and discount rate. £1m at each year-end for six years; illustrative 3.5% real rate.

Calculation. Σ 1 / 1.035^t, t = 1…6. **Result:** £5.3286m present cost.

Decision use and limit. The rate is an analytical assumption, not a prescribed project financing or appraisal rate. Constant real costs and year-end timing are explicit.

Q49 — Future restart cost

Basis and inputs. Hypothetical real cost. £25m paid four years after the decision; 3.5% illustrative real discount rate.

Calculation. 25 / 1.035^4. **Result:** £21.7861m present cost.

Decision use and limit. Use the same time and price convention as the continuation branch. Do not compare this present value with an undiscounted nominal alternative.

Q50 — Three-year benefit delay

Basis and inputs. Hypothetical delay sensitivity. £150m successful-user benefit delayed three years; immediate cost £90m; 3.5% real rate.

Calculation. Benefit PV = 150 / 1.035^3; threshold = 90 / benefit PV. **Result:** Benefit PV £135.2914m; threshold 66.52%.

Decision use and limit. Timing can reverse a marginal case without changing the nominal benefit. This assumes the benefit is not lost altogether through missed access or eligibility.

Q51 — Correlated future users

Basis and inputs. Hypothetical probabilities. Two alternative relevant users, each with 40% probability; one is sufficient for £150m benefit; cost £90m.

Calculation. Independent arrival: $1 - 0.6^2 = 0.64$; perfectly aligned: 0.40.. **Result:** Expected net value +£6m if independent; −£30m if perfectly aligned.

Decision use and limit. Independence is a substantive assumption. Shared funding, network or industrial dependencies can materially change the portfolio value.

Q52 — Upper bound on the value of information

Basis and inputs. Hypothetical perfect-information benchmark. Cost £90m; successful-user benefit £150m; probability 60%; decision can wait costlessly before committing.

Calculation. 0.6 × (150 − 90) + 0.4 × 0. **Result:** £36m expected value with perfect information versus £0 now.

Decision use and limit. £36m is an upper bound under artificial assumptions, not the value of an actual shortlist or PNL. Delay costs, imperfect signals and route loss reduce it.

Q53 — Double counting an avoided crossing cost

Basis and inputs. Hypothetical appraisal error control. Benefit £150m already includes £20m avoided crossing cost; cost £90m.

Calculation. Correct 90/150; double-counted 90/(150+20). **Result:** Correct 60%; erroneous threshold 52.94%.

Decision use and limit. Adding the same avoided cost as separate option value biases continuation. Source each benefit to a unique causal consequence before aggregation.

Q54 — Idle period begins at readiness, not today

Basis and inputs. Hypothetical schedule. Decision in 2026; construction and readiness in 2028; first relevant use in 2034.

Calculation. 2034 − 2028 versus 2034 − 2026. **Result:** Six years idle, not eight.

Decision use and limit. Construction expenditure and financing during 2026–28 still matter, but should not also be labelled idle-asset preservation unless those costs actually arise.

Q55 — Large cancellation cost does not alone justify completion

Basis and inputs. Hypothetical no-user branch. Continue costs £24m; stop costs £20m; no further user benefit or salvage in either branch.

Calculation. 24 − 20. **Result:** Stopping costs £4m less.

Decision use and limit. Near-equality of continuation and cancellation expenditure can strengthen an option case but does not create a benefit when none exists.

Q56 — Common sunk cost cancels from the choice

Basis and inputs. Hypothetical no-effect control. Both options include £30m already irrecoverably spent; forward option costs £50m and £40m.

Calculation. (30+50) − (30+40). **Result:** £10m difference, identical to 50 − 40.

Decision use and limit. The accounting record must retain the sunk cost. The incremental choice should not change merely by adding that same historical amount to both branches.

Q57 — Expected intervention cost is not a certain loss

Basis and inputs. Hypothetical probability and cost. Assumed 5% chance of a £40m intervention; ignore discounting for this one-period illustration.

Calculation. 0.05 × 40. **Result:** £2m expected cost.

Decision use and limit. Neither parameter is project evidence. Compare exposure, mitigation and correlated outages; do not describe £40m as an inevitable cost or £2m as a validated forecast.

Q58 — Two projects recover the same asset cost

Basis and inputs. Hypothetical double-recovery control. One £2.8m asset is charged in full to an original and a successor project, with no offset or lawful separate charge.

Calculation. 2.8 + 2.8 − 2.8. **Result:** £2.8m duplicated recovery in the illustration.

Decision use and limit. The actual transfer should follow ownership, valuation and applicable rules. A simple identity check detects duplication without determining the correct transfer value.

Q59 — PNL volume is not allocated operating capacity

Basis and inputs. Hypothetical project portfolio. Projects on a negotiation list total 6 Mtpa of plans; available relevant capacity is assumed 4 Mtpa.

Calculation. 6 − 4. **Result:** 2 Mtpa excess planned volume.

Decision use and limit. A negotiation portfolio may deliberately exceed capacity because projects may not proceed. The difference is not automatically an error, an allocation or evidence that all benefits can occur simultaneously. [S16, Q066]

Q60 — Expected staged expenditure requires a full branch model

Basis and inputs. Hypothetical commitment strategy. Pay £10m now to preserve an option; pay a further £80m only if a relevant user arrives, assumed probability 40%.

Calculation. 10 + 0.40 × 80. **Result:** £42m expected expenditure before other costs.

Decision use and limit. This is not a proof that staging beats a £90m full build. Compare the same user benefits, delay, rights, preservation and failure states, and verify that contingent procurement is feasible.

Appendix B. Detailed practical cases and four-variant assurance profiles

The 50 profiles contain 200 explicitly stated variants. O denotes ordinary operation, B a boundary or adverse condition, R recovery or a feasible alternative, and P a positive or no-effect control. These are proposed analytical specifications, not evidence of an operating incident or reports of tests executed on the Licensee's systems. Each profile identifies the source context, the state that changes and the evidence needed for closure.

The profiles deliberately include situations in which the correct conclusion is no defect, no additional cost, no new test or no policy effect. A successful assurance approach should not penalise valid unusual configurations or infer harm from every change.

B1. Legal identity, evidence and change control

C01 — Discontinuation with a possible successor connection

Context and link. Q1–Q2; S02–S04, award-version E1/J2 in S09. Ofgem is considering deletion of a user-specific spur after a project discontinuation. The Licensee identifies a possible successor use of the same assets.

C01-O. Final cessation evidence and an asset map support removal of the original user obligation. The shared network remains separately assessed.

C01-B. A withdrawn planning application is treated as proof that all contracts and successor rights have ended. The deletion could remove a still-relevant right or cost obligation.

C01-R. Separate project status, contract status and successor scope; resolve only the affected deletion rather than reopening unrelated completed work.

C01-P. A speculative future enquiry without contractual or technical maturity need not prevent justified removal of the original spur.

Evidence and limit. Dated notifications, contract-status schedule, asset identifiers and a reasoned treatment of successor use. No probability of successor delivery is assumed.

C02 — Submission chronology and continuing commitments

Context and link. Q1–Q3; S03, award-version J2 in S09. Between a reported discontinuation and the CiS application, the Licensee continues some procurement and engineering.

C02-O. A chronology links when the event became sufficiently certain, when its effects were understood and what prudent work continued.

C02-B. Every commitment after the first warning is called efficient, or every such commitment is rejected, without considering when cancellation became possible.

C02-R. Examine each decision using information available at that time, termination windows and mitigation opportunities; distinguish hindsight from avoidable delay.

C02-P. Safety or preservation expenditure genuinely required during uncertainty may remain justified even after the user later withdraws.

Evidence and limit. Dated decision records, contract windows and mitigation logs. This case cannot establish a breach of the submission timing requirement without the actual applicable clause and facts.

C03 — Later consolidation and amendment authority

Context and link. Q4–Q5; S02, S08–S10. The public register identifies a January 2026 consolidation, while the accessible full licence text is the December 2024 award version.

C03-O. The final notice specifies the current version and reconciles the relevant clauses with the amendments being made.

C03-B. An award-version clause number is presented as current law without checking intervening modifications, or listing metadata is treated as the full instrument.

C03-R. Obtain the authoritative current text through the competent channel and qualify any interim analysis by its actual source date.

C03-P. An unchanged clause can retain the same substantive interpretation once continuity is demonstrated; a newer cover date alone does not create a substantive difference.

Evidence and limit. Consolidated text, modification history, effective dates and clause-level concordance. A public access limitation is not proof of a defect in Ofgem's own records.

C04 — Schedule 10 is mentioned but not exhibited

Context and link. Q4; S02–S03, S07–S09. Question 4 names Schedule 10, the financial document retains references to it, and no proposed Schedule 10 text is exhibited.

C04-O. Ofgem confirms no textual change and explains any consequential relationship to the revised FSD.

C04-B. A protected provision is actually altered but the public explanation implies no change, or an analyst invents its content from redaction shapes.

C04-R. Identify the affected subject, authority and effect through controlled review and legally sufficient disclosure; correct the question or undertake further process where required.

C04-P. A valid unchanged reference to an unchanged protected provision need not be deleted merely because its full text is not public.

Evidence and limit. Exact controlled comparison and adequate non-sensitive explanation. No conclusion of legal invalidity follows solely from the missing standalone appendix.

C05 — Prospective change and historical obligations

Context and link. Q2, Q4–Q5; S02/S09. A final modification removes future H2T milestones, but expenditure, reports and notices already refer to the old tranche.

C05-O. New operational records apply the amended scope from its effective date and preserve the historical basis of earlier decisions.

C05-B. A bulk update deletes all H2T records, including the evidence needed to explain retained expenditure or an existing contractual dispute.

C05-R. Restore historical lineage and mark the live obligation cancelled or superseded without manufacturing a new legal effective date.

C05-P. An archived H2T reference with a clearly historical purpose is not a surviving live duty.

Evidence and limit. Effective-dated change log, historical reports and final instrument. The case concerns record integrity, not a rule that every historical document must be republished.

B2. Redline and programme interfaces

C06 — Searchable redline text and false defects

Context and link. Q4; S04–S07. A text search finds BOC and H2T in a proposed appendix even though the corresponding text is struck through.

C06-O. The review first applies the visible deletion and insertion markings, then tests the intended clean text.

C06-B. A search hit is reported as an orphaned live obligation, or a coloured but unstruck insertion is accidentally discarded.

C06-R. Reconcile the relevant page image, proposed clean wording and dependent references before retaining the finding.

C06-P. Deleted text may remain in the PDF's searchable layer without changing the intended instrument.

Evidence and limit. Clause-level clean reconstruction and visual comparison. A text-extraction issue is not evidence that the regulatory drafting failed.

C07 — Deleted Phase 2 User and future interface testing

Context and link. Q2, Q4–Q5; S04 definitions and System Acceptance. The proposed APDP deletes Phase 2 User terminology and the related conditional interaction-testing paragraph.

C07-O. The obsolete user-specific test is removed consistently with the discontinued connections, while numerical capacity criteria remain.

C07-B. The deletion is described as no acceptance change whatsoever, or later users are treated as exempt from all interface testing because the old paragraph disappeared.

C07-R. Explain the exact removed property and identify the competent future-user connection and acceptance route without silently inserting new obligations.

C07-P. A user already demonstrably within a valid accepted envelope may not require repetition of unrelated tests.

Evidence and limit. Clean APDP, current connection/code requirements and a property-level test map. This case does not establish what an unknown future user will require.

C08 — Residual plurality and illustrative map colours

Context and link. Q4; S04–S05. After deleting one pipeline, Annex A retains plural wording, while APDP colour references and its illustrative legend are not aligned.

C08-O. Text and legend identify the same retained asset and clearly distinguish illustrative depiction from binding scope.

C08-B. A singular-word correction accidentally removes the terminal arrival, or a colour mismatch is treated as conclusive proof that ownership changed.

C08-R. Reconcile the asset description, retained arrival and legend together; obtain confirmation of the intended boundary.

C08-P. A cosmetic colour change with unambiguous labels and unchanged legal boundaries need not have a substantive effect.

Evidence and limit. Final clean/marked pair, authoritative scope description and corrected legend. The review should not reproduce sensitive route detail merely to establish a wording correction.

C09 — Non-contiguous tranche and paragraph labels

Context and link. Q4–Q5; S04–S06. Removing Tranche B leaves A and C, while removing subparagraphs can leave gaps in alphabetical labels.

C09-O. Stable retained labels continue to resolve in certificates, reports and linked contracts.

C09-B. Cosmetic renumbering makes an external reference point to a different obligation, or a template assumes every intermediate tranche must exist.

C09-R. Choose retention or renumbering deliberately and reconcile every affected reference before release.

C09-P. A/C or aa/dd labels are valid if the remaining definitions and references are clear.

Evidence and limit. Reference inventory, certifier confirmation and reporting-schema mapping. A numbering gap alone is not a drafting defect.

C10 — Mechanical completion precedes CO_2 commissioning

Context and link. Q2, Q4–Q5; S04/S06. The Gathering Pipeline remains in the Phase 1 mechanical-completion works, while its CO_2 commissioning is Tranche A in Phase 2.

C10-O. Separate certificates record physical handover, later CO_2 testing and eventual commercial readiness.

C10-B. A staged-build option is costed as though Phase 1 handover were unaffected, although required sections would remain unbuilt.

C10-R. Include handover, acceptance, payment and programme consequences and seek a competent change where needed.

C10-P. Delayed CO_2 commissioning does not necessarily mean mechanical handover is defective if the governing criteria expressly distinguish them.

Evidence and limit. MS-1020 scope, approved programme, certifier requirements and staged-option feasibility. This interface can change the economic ranking of otherwise attractive options.

B3. Investment optionality and future users

C11 — Sunk, committed and cancellable cost

Context and link. Q2–Q3; S03/S11–S12. An aggregate cost report combines completed engineering, paid advances and future purchase commitments.

C11-O. Every line is classified by delivery, payment, cancellation and recoverability before the options comparison.

C11-B. The whole £36.1m reported aggregate is treated as sunk, or subtracted from another price-base allowance to calculate avoidable spend.

C11-R. Rebuild the decision-date cash and rights position by contract, retaining common historical cost outside the incremental difference.

C11-P. A genuinely unavoidable liability common to all branches should not change their ranking, although it remains a financing obligation.

Evidence and limit. Ledger, delivery/accrual record, cancellation terms and consistent price base. The public mixed aggregate does not provide this classification.

C12 — Tunnel rights depend on specific conditions

Context and link. Q2, Q5; S03. The reported final tunnel slot has a design-consent or other milestone condition, and construction might be paused.

C12-O. The appraisal records what specific action or missed condition would cause loss of the right.

C12-B. A 2032 condition is treated as proof that pausing now immediately forfeits access, or the right is assumed secure indefinitely.

C12-R. Obtain the executed conditions, cure periods, reservation options and alternative-route evidence, then update only the affected branch.

C12-P. A pause that leaves an enforceable right unchanged has no route-loss cost during that interval; other costs may remain.

Evidence and limit. Controlled legal review and a non-sensitive explanation of operative conditions. Physical scarcity and contractual entitlement are distinct.

C13 — A cheap, enforceable slot reservation

Context and link. Q2, Q5; analytical option informed by S03/S11. Assume the tunnel owner offers a legally effective reservation at a cost below immediate full construction.

C13-O. The reservation preserves sufficient access while the user portfolio becomes clearer.

C13-B. A non-binding letter is valued as if it guarantees access, or the reservation excludes the capacity or duration actually needed.

C13-R. Verify enforceability, milestone obligations, expiry and future completion cost before retaining the option in the appraisal.

C13-P. If no such reservation is available, the model should remove it rather than recommend an imaginary alternative.

Evidence and limit. Executed terms or a reliable offer, constructability and cost. The case tests an alternative; it does not assert that the tunnel owner offers one.

C14 — Tunnel-only construction affects the critical path

Context and link. Q2, Q4–Q5; S04/S06/S11. A partial build would install the scarce crossing and defer other pipeline sections.

C14-O. It is safely separable, preserved and compatible with approved handover and later tie-in requirements.

C14-B. Apparent savings omit temporary works, recertification, land constraints or delay to Phase 1 completion.

C14-R. Compare the full branch cost and obtain any necessary programme or scope approval before commitment.

C14-P. If verified interfaces allow staging without delay or extra risk, it should remain a genuine alternative rather than be rejected because it differs from the original plan.

Evidence and limit. Constructability, preservation, certificates, programme and contracts. Technical feasibility cannot be inferred from the option’s financial attractiveness.

C15 — AGI-1 redesign and new land rights

Context and link. Q2–Q3; S03/S11. The Licensee considers a shorter pipeline ending at AGI-1 instead of the retained full scope.

C15-O. Redesign and land requirements are quantified alongside avoided construction.

C15-B. Shorter length is assumed proportionately cheaper although tie-ins, mobilisation or a new right dominate cost.

C15-R. Compare engineering changes, permission timing, future-user geography and all additional interfaces on the same price basis.

C15-P. Land rights already valid and unchanged should not be charged again simply because a redesign option is considered.

Evidence and limit. Rights map, design scope, cost estimates and schedule. The Draft's reported concern is not a complete cost comparison.

C16 — No relevant user emerges

Context and link. Q2, Q5; S14–S16 and analytical downside. The selection process produces no project that needs the north-bank Gathering Pipeline within the near-term horizon.

C16-O. The investment case explicitly retains a no-relevant-user branch with preservation, financing and alternative-use costs.

C16-B. All shortlisted projects are counted as pipeline beneficiaries regardless of location or access requirements.

C16-R. Re-estimate only the relevant demand, review remaining commitments and assess permitted alternative use or continued preservation.

C16-P. Absence of a 2032 user does not prove that the asset has no longer-term option value; any such value still needs an evidence-based horizon.

Evidence and limit. Selection results, route needs and updated appraisal. A downside branch is not a forecast that selection will fail.

C17 — A credible user arrives after 2032

Context and link. Q2, Q5; S14–S16. Assume a later project requires the pipeline in 2034, with pipeline readiness in 2028.

C17-O. The model includes six years of idleness and treats the user as a long-term sensitivity outside the stated 2032 eligibility assumption.

C17-B. Eight years from the 2026 decision are labelled idle, or the user is represented as an eligible participant despite a missed process condition.

C17-R. Separate construction, idle and operating periods, and establish any alternative lawful access/selection route.

C17-P. A later connection may still create value over the network life; it should not be excluded merely because it is beyond the present selection window.

Evidence and limit. Dated readiness and user programme, preservation plan and applicable process. Dates in this case are illustrative.

C18 — Several users with coincident peaks

Context and link. Q2, Q5; S04/S16. Two prospective users share the gathering asset but have different ramps, quality and peak schedules.

C18-O. Capacity and benefits use a joint time profile with relevant minimum, maximum and simultaneous flows.

C18-B. Separate annual capture totals fit on paper but simultaneous peaks exceed the gathering asset or storage constraint.

C18-R. Examine operational scheduling, allocation, connection design or expansion through the competent process; recalculate user benefits for curtailment.

C18-P. Non-overlapping verified operating profiles can reduce coincidence without requiring unnecessary capacity expansion.

Evidence and limit. User profiles, validated hydraulic/quality analysis and access terms. Selection alone supplies none of these guarantees.

C19 — Correlated project failure and shared dependencies

Context and link. Q2, Q5; analytical portfolio test. Several potential users depend on a common funding decision, electricity connection or industrial sponsor.

C19-O. The demand model represents shared dependencies and their timing rather than multiplying independent success probabilities.

C19-B. Adding applicants mechanically makes the probability of a user appear close to certain.

C19-R. Present dependence sensitivities, common-delay branches and switching values where probabilities cannot be estimated reliably.

C19-P. Truly independent projects with demonstrated different dependencies can justify diversification; correlation should not be assumed maximal without evidence.

Evidence and limit. Dependency map and calibrated probability assumptions. The case identifies what would change option value, not actual project success rates.

C20 — Information arrives before or after commitment

Context and link. Q2, Q5; S11/S14–S16. A shortlist or PNL may clarify demand, but a procurement or tunnel commitment becomes irreversible beforehand.

C20-O. Each information event is compared with the last decision date at which it can alter cost or scope.

C20-B. A later review gate is presented as controlling expenditure already irrevocably committed.

C20-R. Move the decision earlier where feasible, limit commitments, or explain why waiting destroys more value than information can add.

C20-P. A review after completion can still improve preservation and connection decisions, even when it cannot recover sunk construction cost.

Evidence and limit. Commitment windows, information maturity and action rights. The value of a gate comes from decisions it can change, not its existence on a timetable.

B4. Technical acceptance and operational readiness

C21 — Known NZT-only scenario with a longer duration

Context and link. Q2, Q5; S03/S04. The original design considered NZT-only operation, but removal of other users may extend that state substantially.

C21-O. Revalidation compares the original and revised duration, duty cycle and maintenance assumptions.

C21-B. An identical scenario name is used to conclude there is no new risk, or a longer duration is treated as certain damage without a model.

C21-R. Test cumulative exposure and future readiness with uncertainty, distinguishing a changed premise from a previously accepted risk.

C21-P. If the revised duration remains within the original validated envelope, repetition of the same study may add no decision value.

Evidence and limit. Original/revised design assumptions and validated model. No project-specific degradation rate is assumed.

C22 — Unit conversion passes through multiple records

Context and link. Q3–Q5; S04/S13; Appendix A Q01–Q20. Capacity moves from a Mtpa field to a kg/s report and then into a test plan.

C22-O. The conversion uses 10^9 kg per million tonnes and an explicit time convention.

C22-B. The calculation produces tonnes per second but labels kilograms per second, or a rounded result is used to redefine the legal threshold.

C22-R. Correct the unit mapping, recompute dependent totals and identify every decision that relied materially on the error.

C22-P. A small difference caused solely by declared rounding or year convention need not be treated as a changed capacity obligation.

Evidence and limit. Dimensional formula, source units and dependency trace. This test concerns arithmetic and interpretation, not actual flow capability.

C23 — Largest-well outage with unequal deliverability

Context and link. Q2, Q5; S04 System Acceptance. Individual well tests identify one well with greater demonstrated capability than the others.

C23-O. The prescribed largest-well-offline and separate trip/recovery tests use the measured configuration.

C23-B. An average well is removed in the model, making the remaining aggregate look stronger than the prescribed outage case.

C23-R. Re-run the applicable demonstration with the correct well and common-system limits; preserve the unresolved criterion until evidence is accepted.

C23-P. Equal demonstrated wells can make the selection immaterial, but equality must come from evidence rather than convenient averaging.

Evidence and limit. Per-well curves, configuration, dynamic response and certification. Sum-of-ceilings calculations are insufficient.

C24 — Optional activation of the fifth injection well

Context and link. Q2, Q5; S04. The Non-activated Well is considered before COD because the ordinary cohort does not meet acceptance.

C24-O. The APDP's optional route and four-online/one-offline demonstration are followed with applicable approvals.

C24-B. Activating the well is treated as automatic evidence of capacity or as leaving future redundancy and Tranche C treatment unchanged without examination.

C24-R. Update the well-state register, test evidence, remaining protected capacity and later-stage obligations.

C24-P. If the original cohort meets the criteria, preserving the optional well can remain consistent with the APDP.

Evidence and limit. Decision to activate, test records and a coherent later-stage map. The optional route does not create a universal entitlement to change any well or permit condition.

C25 — Model-supported capability versus physical acceptance

Context and link. Q2, Q5; S04 section 6.3 and System Acceptance. Available initial feed is below a future capability figure, while some criteria permit calibrated-model support.

C25-O. Each criterion is mapped to physical, model-assisted or combined proof and the model is validated for the relevant range.

C25-B. Low feed is used to declare the whole programme impossible, or a model is used to replace a required physical injected-volume test.

C25-R. Define the missing demonstrated property, acceptable evidence and any lawful alternative before claiming completion.

C25-P. Valid model-supported extrapolation can be appropriate where the governing requirement expressly permits it.

Evidence and limit. Criterion map, calibration data, uncertainty and competent acceptance. Neither a simulation output nor a physical observation answers every criterion.

C26 — Test interruptions and cause-coded counters

Context and link. Q2, Q5; S04. A qualifying flow period is interrupted because user CO_2 is unavailable and then restored.

C26-O. The procedure applies the prescribed pause and restart requirements to the correct counter, keeping cumulative mass separately.

C26-B. All elapsed time counts as qualifying flow, or every interruption resets every counter even when the APDP distinguishes the causes.

C26-R. Reconstruct a time-stamped cause log, recalculate the affected counter and repeat only the unproven requirement.

C26-P. An authorised pause does not erase previously valid test evidence unless the applicable rule requires that result.

Evidence and limit. Feed availability, steady-state recovery, mass totals and accepted clock rules. Illustrative elapsed-day arithmetic is not the procedure itself.

C27 — Measurement uncertainty at an acceptance boundary

Context and link. Q2, Q5; S04; analytical metrology case. A measured mass or flow is very close to its acceptance threshold.

C27-O. Instrument uncertainty, calibration and the approved acceptance decision rule are reported with the result.

C27-B. A rounded reading at the threshold is called an unequivocal pass, or an arbitrary safety margin is imposed without authority.

C27-R. Apply the approved uncertainty treatment, obtain additional evidence or seek a specific technical determination.

C27-P. Evidence clearly inside the accepted envelope should not be rejected solely because all measurements have non-zero uncertainty.

Evidence and limit. Calibration records, uncertainty budget and criterion-specific decision rule. No numerical project tolerance is invented in this response.

C28 — Washing restores performance at a cost

Context and link. Q2–Q3, Q5; S03/S13. Assume an authorised water-wash intervention restores injectivity after a decline.

C28-O. Before/after performance, downtime, resource use and permit compliance demonstrate the recovery.

C28-B. Restoration is assumed permanent, or the cost is omitted because the intervention is described as routine.

C28-R. Define requalification, monitoring and recurring-cost treatment, and reassess the remaining operating envelope.

C28-P. Demonstrated effective mitigation can support continued use; a maintenance intervention is not necessarily evidence of a failed overall design.

Evidence and limit. Authorised procedure, measured recovery and cost ledger. The assumed successful wash is not a reported project event.

C29 — Washing fails or an idle well loses readiness

Context and link. Q2, Q5; S03/S04/S13. A well remains below the relevant criterion after mitigation, or a protected well cannot be brought into service as expected.

C29-O. The contingency recognises unresolved capability and uses only available, authorised alternatives.

C29-B. A presumed protected well is counted as immediately available, or an acceptance threshold is silently reduced to match the remaining performance.

C29-R. Escalate engineering and permit decisions, identify remediation and disclose the effect on user service and future readiness.

C29-P. A well not exposed to CO_2 may retain readiness where surveillance confirms it; the scenario does not presume deterioration.

Evidence and limit. Integrity and injectivity records, intervention results and competent decisions. Absence of initial exposure is neither proof of failure nor proof of availability.

C30 — NZT Power as Tranche A CO_2 source

Context and link. Q2, Q4–Q5; S04/S06. The revised APDP uses NZT Power rather than BOC for Gathering Pipeline commissioning.

C30-O. An approved physical and contractual plan establishes supply, route, metering, isolation, receiving state and lawful timing.

C30-B. The name substitution is treated as proof of feasible flow, or an analyst invents reverse-flow, venting or temporary arrangements.

C30-R. Obtain the competent test design and agree the consequence of unavailable feed before finalising the commitment.

C30-P. If the existing approved design already supports the source, a wording change need not require unnecessary new hardware.

Evidence and limit. Commissioning plan, connection agreement, permissions and certifier basis. Public source substitution alone cannot establish these matters.

B5. Financial lineage and cost attribution

C31 — Rounded financial values appear inconsistent

Context and link. Q3; S03/S07. The fixed FSD delta is £4.9m, while displayed component arithmetic produces £4.892m.

C31-O. The comparison identifies publication precision and asks for the native unrounded bridge.

C31-B. The £0.008m difference is reported as a verified overcharge, or each rounded line is re-indexed and rounded again.

C31-R. Reconcile original operands, calculation order, price base and final rounding, then assess any remaining difference.

C31-P. A difference fully explained by declared rounding should close without alleging cost inefficiency.

Evidence and limit. Reproducible unrounded table and rounding policy. Arithmetic agreement still does not certify the efficiency of the underlying costs.

C32 — Weighted FX formula and actual sterling expenditure

Context and link. Q3; S07; Appendix A Q32. Several USD payments have different net rates and the FSD prescribes a weighted-rate calculation.

C32-O. Regulatory formula output and actual sterling cash are separately calculated and reconciled.

C32-B. A simple arithmetic average is silently substituted for the stipulated rule, or the formula result is described as actual cash despite a difference.

C32-R. Confirm weights, currency basis, rate selection and transaction costs with Ofgem and show a worked reconciliation.

C32-P. Equal rates can make the two methods coincide; agreement in that special case does not validate an incorrect general formula.

Evidence and limit. Transaction schedule and correct instrument interpretation. This test does not assert that the published FSD's weighting is unlawful or mistaken.

C33 — Efficient hedge comparison and transaction costs

Context and link. Q3; S07/S12. A market ask rate and a net hedged rate are available, with documented transaction costs.

C33-O. The greater-of comparison uses comparable USD/GBP conventions and eligible efficient costs.

C33-B. The selected rate maximises sterling reimbursement rather than follows the rule, or a fee is included in both the rate and a separate cost line.

C33-R. Reconcile gross/net rates, weighting and each cost once, with evidence of efficiency and the relevant transaction date.

C33-P. A genuinely efficient qualifying hedge can be used as the instrument provides; hedging should not be rejected simply because market rates later differ.

Evidence and limit. Hedging and cash records, fee allocation and rate-source dates. No live market rate is inferred from illustrative values.

C34 — Indexation across multiple price bases

Context and link. Q3; S03/S07/S12. Spur deletions are shown in Base Year and 2024/25 real terms, while the Gathering Pipeline commitment uses a 2024 real description.

C34-O. Each line retains its original price basis and a verified conversion to the comparison basis.

C34-B. £2.8m and £36.1m are added or subtracted as if they were contemporaneous values of the same scope, or rounded ratios are assumed to be exact indices.

C34-R. Rebuild the native-value schedule with index series, period and rounding history.

C34-P. Slightly different ratios from rounded components need not indicate multiple inconsistent index methods.

Evidence and limit. Unrounded inputs and exact conversion. The +£0.084m correction cannot be independently reproduced from headline figures alone.

C35 — Management savings deducted twice

Context and link. Q3; S03/S12. A deleted construction package includes embedded management cost and a separate management reduction is proposed.

C35-O. Dedicated, shared and embedded roles reconcile to one net saving for each activity.

C35-B. The same supervisor or overhead appears in both deductions while new revalidation management is added elsewhere.

C35-R. Map work packages, time codes, role duration and rates, correcting only the actual overlap.

C35-P. Distinct construction supervision and new engineering management can legitimately move in opposite directions.

Evidence and limit. Contract breakdown and management ledger. This is a risk test, not a finding that the published £0.926m adjustment duplicates another line.

C36 — Engineering additionality in a shrinking project

Context and link. Q3; S03/S11–S12. Removing users requires new cycling, flow-assurance or other engineering analysis.

C36-O. The new deliverable is necessary, outside baseline duties and reasonably costed.

C36-B. An existing change-management obligation is funded again, or all new work is rejected solely because the physical scope became smaller.

C36-R. Compare baseline contract duties with changed assumptions, deliverables, hours and acceptance criteria.

C36-P. A genuinely distinct efficient study can justify a positive allowance even when the net CiS is a reduction.

Evidence and limit. Contractual additionality and technical/cost approval. The need for a study does not establish the price of that study.

C37 — Incurred spur costs and later material reuse

Context and link. Q3, Q5; S03/S09/S12. Some of the retained incurred spur expenditure produces materials or designs later used by another connection.

C37-O. Ownership, condition and transfer value are recorded and the applicable regulatory account is adjusted once.

C37-B. The original project retains full recovery and the later project is charged the same original cost without a justified offset.

C37-R. Determine a lawful transfer or disposal credit net of adaptation and transaction costs, preserving both histories.

C37-P. An asset with no economic resale or reuse value need not generate an invented credit.

Evidence and limit. Asset register, transfer terms and SRAV/allowance mapping. Retained £2.8m incurred cost is not automatically either waste or a reusable asset.

C38 — Invoice date versus work and commitment date

Context and link. Q3; S11–S12. A contractor invoices after the discontinuation for work delivered earlier, while a separate advance relates to cancelled future work.

C38-O. Accrual, payment, work completion and contractual recoverability are separately classified.

C38-B. Both amounts are treated as post-decision avoidable expenditure because the payment dates match, or the refundable advance is treated as a completed asset.

C38-R. Reconcile delivery evidence, accrual ledger, contract rights and actual refunds before changing the cost account.

C38-P. A late invoice for efficient completed work can remain properly incurred; timing alone does not disallow it.

Evidence and limit. Invoice, milestone acceptance and contract. This case prevents cash accounting from silently replacing the applicable regulatory cost definition.

C39 — Allowance variance and incentive timing

Context and link. Q3; award-version F4/F6/F7 in S09. An allowance reduction changes the relationship between cumulative allowance and actual expenditure near a period boundary.

C39-O. The current applicable incentive formula uses the right cumulative values, sign and construction period.

C39-B. The allowance delta is called an immediate revenue reduction or an underspend reward is recognised in every interim period by default.

C39-R. Confirm consolidated clauses and parameters, recalculate the affected incentive branch and trace the SRAV consequence.

C39-P. At exact equality, no variance should be invented merely to force an overspend or underspend outcome.

Evidence and limit. Applicable instrument, cumulative cost and period-specific calculation. No actual sharing percentage or revenue outcome is supplied by this scenario.

C40 — Construction changes with continuing commissioning and opex

Context and link. Q3–Q5; S03/S07. User-specific construction is removed while shared commissioning, preservation or monitoring continues.

C40-O. Each cost is mapped to its activity, period and governing allowance rather than automatically netted into construction.

C40-B. A construction saving is applied a second time to commissioning or opex without analysing the remaining work, or future washing costs are implicitly funded by the CiS uplift.

C40-R. Identify actual scope changes and the appropriate adjustment mechanism for each period.

C40-P. Unchanged commissioning or operating allowances can be consistent with a narrow construction adjustment where their scope is unchanged.

Evidence and limit. Activity/period map and operative adjustment powers. This case does not pre-judge a future operating-cost assessment.

B6. Delivery, continuity and finalisation

C41 — Idle pipeline integrity and warranty

Context and link. Q2–Q3, Q5; S03/S11–S13. The Gathering Pipeline is mechanically complete but unused for several years.

C41-O. An accountable owner maintains an approved preservation regime, consent validity, condition records and requalification plan.

C41-B. Construction certification is treated as perpetual readiness, or warranty limitations and later inspection costs are omitted from the investment case.

C41-R. Inspect the affected property, revalidate the user envelope and obtain the necessary acceptance before first use.

C41-P. Adequate preservation can maintain readiness without replacing sound assets or repeating unrelated construction tests.

Evidence and limit. Lay-up assumptions, inspections, warranty and first-use criteria. No specific degradation mechanism or rate is asserted for this project.

C42 — First injection, commercial COD and later-user clocks

Context and link. Q2, Q5; S04/S13–S16. A future user's connection is delayed, while the initial network and store may begin service earlier.

C42-O. The schedule separately tracks handover, acceptance, COD, first injection and later-user connection against their governing instruments.

C42-B. End-2032 user eligibility is treated as the store's first-injection deadline, or a permit period is restarted whenever a new user joins.

C42-R. Confirm the current permit and project dates, seeking variation only through the competent process where required.

C42-P. A later-user delay need not delay first injection when the initial user and all relevant conditions are satisfied.

Evidence and limit. Current permits, milestone definitions and user programmes. The dated 2024 permit is not a substitute for checking any subsequent variation.

C43 — Future CO_2 quality and operating profile

Context and link. Q2, Q5; S04/S13/S16. A selected future user has different composition, pressure, ramp and intermittency from NZT.

C43-O. The connection assessment demonstrates compatibility with the accepted network and storage envelope.

C43-B. Equal annual tonnage is treated as complete technical equivalence, or a molar purity percentage is used as a mass fraction in capacity accounting.

C43-R. Use the appropriate quality and flow specifications, validated models and permits; obtain only the additional evidence needed for the changed envelope.

C43-P. A genuinely equivalent, validated profile may use existing evidence without a full redesign.

Evidence and limit. Authenticated user data, composition basis, acceptance route and interface assessment. No proprietary operating limits are invented here.

C44 — Direct-pipeline eligibility versus future transport modes

Context and link. Q2, Q5; S16 Q063–Q064. A possible future capture project expects to bring CO_2 through a route that differs from the present selection process's direct-pipeline premise.

C44-O. The appraisal identifies whether the project fits the actual process and which infrastructure it would use.

C44-B. A hypothetical non-pipeline project is counted as a guaranteed beneficiary of the Gathering Pipeline under present eligibility.

C44-R. Treat it as a separate future-policy or connection scenario and establish the necessary decisions before counting its near-term benefit.

C44-P. Legitimate longer-term alternatives can be analysed without implying they are currently admitted.

Evidence and limit. Current selection, access and technical requirements. The case preserves optionality without importing future sector changes into today's decision.

C45 — PNL, Network Code and connection rights

Context and link. Q2, Q5; S14–S16. A project enters negotiations but has not completed access, financing or connection arrangements.

C45-O. Each stage supplies only the evidence and rights that it actually creates; live Code and connection requirements remain explicit.

C45-B. PNL inclusion is treated as a booked flow commitment or permission to amend the Code for that project's preferences.

C45-R. Update the demand case after due diligence, access and FID, with a clear distinction between plans and enforceable commitments.

C45-P. A mature project can materially strengthen the pipeline case before operation, without becoming a certainty.

Evidence and limit. Stage status, access terms and technical readiness. The public process explicitly does not guarantee support or access from PNL status alone.

C46 — Contract variation, novation and residual liability

Context and link. Q2–Q3, Q5; analytical implementation case. The regulated scope is reduced, but procurement and service contracts still contain the original user-specific deliverables.

C46-O. Authorised contract changes reconcile deliverables, cancellation liabilities, rights and dates with the regulatory decision.

C46-B. An economic-licence amendment is assumed to terminate a third-party contract or transfer intellectual property automatically.

C46-R. Determine required notices, consents and negotiations, preserving existing legal claims while resolving the scope mismatch.

C46-P. A contract already containing an effective applicable change mechanism may require only the prescribed notice, not unnecessary renegotiation.

Evidence and limit. Actual contractual process and executed amendments. No private termination or novation right is inferred from the public licence decision.

C47 — Independent Certifier scope and evidence reuse

Context and link. Q2, Q4–Q5; S04/S06/S11. Tranche B is deleted and Tranche A's test source changes while some acceptance evidence remains valid.

C47-O. The certifier's scope and evidence map identify the deleted work, new interface and retained demonstrations.

C47-B. A certificate for an old source or configuration is used as proof of the revised interface, or all prior evidence is discarded without a material reason.

C47-R. Obtain targeted reassessment of the affected properties and align reporting dates and handover criteria.

C47-P. Valid unchanged evidence should remain usable where the governing requirements and conditions still match.

Evidence and limit. Certification mandate, evidence scope, version and accepted exceptions. A recent certificate is not necessarily a relevant certificate.

C48 — Correction after a partial implementation

Context and link. Q4–Q5; S02/S04–S09. A corrected appendix is published after contract or reporting changes have begun under the earlier final version.

C48-O. The correction identifies its legal effect and any prospective implementation changes, preserving earlier records.

C48-B. Restoring an old document version silently revives deleted H2T duties or removes an already accrued contractual right.

C48-R. Reconcile legal effective dates, affected actions and lawful correction remedies; do not equate document rollback with reversal of external consequences.

C48-P. A purely typographical correction with no substantive effect can be handled proportionately once that conclusion is justified.

Evidence and limit. Final legal correction, event history and impact map. The case does not prescribe a general power to backdate or unwind decisions.

C49 — Reporting system restores stale tranche fields

Context and link. Q4–Q5; analytical reporting resilience case. After a system recovery, the regulatory reporting template again requires the deleted H2T acceptance milestone.

C49-O. Restored configurations are reconciled to the effective instrument and preserve historical H2T records separately.

C49-B. Staff insert a false date to clear the form, or the stale template is treated as authority to reinstate the obligation.

C49-R. Correct the schema through the approved route, record the issue and resubmit only affected data with a clear revision history.

C49-P. Historical returns can retain old fields where their reporting period genuinely predates the amendment.

Evidence and limit. Rule/version mapping, data validation and correction record. These are proposed defensive controls, not allegations about the Licensee's systems.

C50 — Final decision conditions and proportionate closure

Context and link. Q1–Q5; S02/S11–S12. Most public drafting issues are corrected, but one cost or technical dependency remains subject to controlled evidence.

C50-O. The decision states what is settled, what is conditional, who decides the remaining issue and which activity may proceed.

C50-B. Every issue is labelled complete because a document exists, or a minor residual issue blocks all unrelated progress indefinitely.

C50-R. Resolve the material dependency through a targeted condition, reasoned restriction or further process, with a clear closure criterion.

C50-P. An immaterial formatting correction should not require redoing an otherwise competent appraisal or acceptance programme.

Evidence and limit. Decision reasons, materiality assessment and accepted evidence. Completeness of a consultation response is not certification of all future project performance.

Appendix C. Combined failures and positive controls

These 24 scenarios combine dependencies that should not be assumed independent. They are proposed tests of the decision and implementation arrangements, not predictions or project incident reports. Their recovery passages identify decision and evidence requirements, not instructions to operate, alter or intervene in physical infrastructure.

X01 — Tunnel access, delayed selection and Phase 1 handover

Combined state. A pause is considered before the PNL, but the tunnel contract may impose a time-sensitive condition and the unchanged TDD still requires Gathering Pipeline mechanical completion at Phase 1 handover. [S03–S06; S14–S16]

Interaction and consequence. The apparent benefit of learning about demand can be offset by lost access or delay to the initial network. A tunnel-only branch is relevant only if it is physically separable and its milestone consequences are included.

Resolution and evidence. Compare enforceable reservation, partial and full-build alternatives with the same dates and rights. Require contract conditions, safe hold points, certifier scope and a dated cost/programme comparison. Do not assume either immediate forfeiture or costless delay.

X02 — No north-bank user, completed asset and preservation liability

Combined state. Full construction is completed, no selected near-term user needs the north-bank route, and warranties or land obligations continue during idleness. [S03–S04; S11–S16]

Interaction and consequence. Construction is now sunk, but preservation, later qualification and alternative-use decisions remain live. The earlier choice cannot be retrospectively justified merely because the asset exists.

Resolution and evidence. Refresh the remaining-cost and future-use case, identify the least-cost lawful preservation state and disclose material residual risk. Required evidence is an asset-condition plan, rights schedule and realistic demand horizon, not an invented perpetual option value.

X03 — Multiple selected users and simultaneous operating constraints

Combined state. Two users enter negotiations, and their combined annual plans appear within a headline capacity number, but their simultaneous peaks or mixture exceed a shared asset envelope. [S04/S13/S16]

Interaction and consequence. PNL entry and aggregate annual tonnage do not demonstrate deliverability. Counting full benefits from both users can overstate the Gathering Pipeline's value.

Resolution and evidence. Use correlated time profiles, quality and pressure constraints, metering boundaries and access arrangements. Assess scheduling or expansion only through competent engineering and regulatory decisions. The closure condition is an achievable joint profile, not simply two signed expressions of interest.

X04 — Prolonged NZT-only operation, low flow and cycling exposure

Combined state. Other users are absent for longer than the original scenario assumed, while NZT operates intermittently and well switching becomes more frequent. [S03–S04]

Interaction and consequence. The scenario label is unchanged but cumulative exposure may differ. A theoretical benefit from preserving wells must be weighed against deferred proof and the cost of later activation.

Resolution and evidence. Compare matched duration and duty-cycle cases, validated halite/cycling evidence and uncertainty. Retain a no-material-change branch if the existing validated envelope already covers the longer period. No specific degradation or washing rate is assumed.

X05 — Reduced initial proof and weak-well discovery at later connection

Combined state. Assume a competent future decision allows reduced initial proof. A preserved well is activated years later and cannot support the new user as expected. [S03–S04; S11]

Interaction and consequence. Short-term avoidance of exposure may have transferred discovery and remediation risk to a later, less flexible period. The initial saving and later delay are part of the same option.

Resolution and evidence. Before accepting a reduced programme, identify requalification, remedies, responsible cost bearer and any user-service consequences. Later failure must not be resolved by silently changing the original acceptance record. This is a sensitivity, not the proposal currently retained by Ofgem.

X06 — Broad well exposure, ineffective washing and common maintenance outage

Combined state. Several wells have been tested, an injectivity-restoration intervention does not achieve the required result, and the expected alternative shares an unavailable maintenance resource. [S03–S04/S13]

Interaction and consequence. Nominal spare-well count overstates available redundancy. Independent technical capacity and independence of intervention resources are separate.

Resolution and evidence. Use condition-specific performance, common-dependency analysis and authorised contingency routes. Preserve the actual failed criterion and current permit limits. Public reporting should explain unresolved service capability without publishing exploitable engineering detail or speculative failure rates.

X07 — Price-base mismatch with repeated rounding

Combined state. A rounded 2024/25 real component is converted to Base Year, rounded again and then compared with an already rounded headline. [S03/S07/S12]

Interaction and consequence. A false inconsistency can arise even when the native cost schedule is correct. An index correction cannot be replicated by treating displayed ratios as exact indices.

Resolution and evidence. Recover the native values and index chronology, convert once and round only as prescribed. Reconcile the final display separately from ledger precision. Do not turn the £0.008m displayed-versus-derived difference into a finding of consumer loss without supporting evidence.

X08 — Embedded management saving and new engineering management

Combined state. A contract deletion contains management hours, a separate project-management deduction is made, and new revalidation work includes its own coordination cost. [S03/S11–S12]

Interaction and consequence. Both duplicate deductions and duplicate additions are possible. A net total may look reasonable while individual work is counted twice or essential shared work is removed.

Resolution and evidence. Reconcile deliverables, cost owners, embedded overhead, role duration and time codes. Require a distinct additionality decision for new work and a distinct avoidability decision for deleted work. Numerical netting alone is not adequate closure.

X09 — USD-denominated removed scope and two financial adjustments

Combined state. An equipment line associated with removed scope is reflected in a fixed GBP deduction while the USD exposure base is also considered for revision. [S03/S07]

Interaction and consequence. Changing both components may be correct only if they represent distinct original allocations. Otherwise the same saving or exposure can be removed twice.

Resolution and evidence. Map original currency, allowance location, hedging, cancellation and credit treatment before modifying USDoby or the fixed component. Retain the published FX formula unless a separate reasoned change is made. No assertion is made that the actual removed spurs change the rig-rate USD amount.

X10 — Protected Schedule 10 and an unchanged FSD reference

Combined state. A protected uncertain-cost event may refer to an asset or trigger affected by the user deletion, while the FSD continues to refer to the schedule. [S02–S03/S07–S09]

Interaction and consequence. Unchanged public wording does not establish an unchanged economic effect, but redaction does not establish a defect either.

Resolution and evidence. Ofgem should compare the exact protected clauses and publish a non-sensitive explanation of textual and consequential effects, using the statutory process required for any real change. The response should not infer a hidden event definition or request unnecessary disclosure of sensitive amounts.

X11 — Pipeline plurality and uncertain map legend

Combined state. The retained text describes two pipelines after one is removed, while the figure's colour labels do not clearly match the accompanying definitions. [S04–S05]

Interaction and consequence. Correcting only one feature can leave ambiguity between asset description and depiction. Conversely, the illustrative map does not by itself define a changed ownership right.

Resolution and evidence. Align the clean asset description, retained AGI and terminal arrival with a labelled legend and confirm the authoritative boundary. Keep the correction narrow; do not use it to redesign the route or expand the licence scope.

X12 — Deleted Tranche B, surviving reporting field and old certifier scope

Combined state. The APDP and TDD remove H2T activities, but a reporting template and certifier work schedule still expect Tranche B milestones. [S04/S06]

Interaction and consequence. A false overdue milestone, fabricated completion date or unnecessary certification charge can arise even where the legal text is correct.

Resolution and evidence. Reconcile the operative obligation, reporting period and certification mandate. Mark future H2T fields not applicable through an approved schema change while preserving historical records and accrued contractual matters. Existing evidence remains usable only for its actual scope.

X13 — NZT test source and deleted pre-COD election

Combined state. NZT Power replaces BOC as Tranche A source, but the clause allowing certain pre-COD Phase 2 commissioning is deleted. [S04/S06]

Interaction and consequence. A technically possible test may still lack the intended timing or contractual route. The source substitution does not resolve the commissioning sequence automatically.

Resolution and evidence. Clarify whether early testing is unnecessary, prohibited under the amended arrangement or authorised elsewhere. Identify the actual accepted source/path and any needed decision without inventing temporary flow or emissions arrangements. Preserve the criterion if supply is delayed.

X14 — Idle construction, expired consent and a late user

Combined state. A pipeline is completed and preserved, but a necessary right or permission is no longer effective when a later user is ready. [S03/S13–S16]

Interaction and consequence. Physical condition, regulatory permission and contractual availability are separate components of readiness. The user's FID cannot cure an expired consent.

Resolution and evidence. Include renewal or variation lead times and costs in the idle branch. Escalate through the competent authority before service, and disclose any resulting connection constraint. Do not count a theoretical alternative permission as available until obtained.

X15 — Retained sunk cost, later reuse and transfer credit

Combined state. Incurred spur cost remains in the regulatory account and the material or design is subsequently transferred to a new user project. [S03/S09/S12]

Interaction and consequence. Value preservation is beneficial, but the original and later project could each recover the same economic cost. A nominal transfer at no value can also conceal a real benefit.

Resolution and evidence. Record title, realisable or transferred value, adaptation costs and the applicable regulatory adjustment once. Preserve the audit history. A proper credit need not equal original cost, and no credit should be invented for material that cannot economically be reused.

X16 — PNL entry followed by failure of due diligence or access

Combined state. A project is initially included in the PNL and strengthens the pipeline case, but later fails financing, access negotiation or technical due diligence. [S14–S16]

Interaction and consequence. An earlier stage-dependent assumption has changed; the user was never guaranteed. The effect depends on which commitments remain reversible when the failure becomes known.

Resolution and evidence. Update the relevant demand branch and remaining-cost appraisal at the next decision-capable gate. Retain other users' evidence independently and avoid retrospectively treating the original PNL as either a guarantee or worthless information.

X17 — High route value with low demand and overlapping benefits

Combined state. A scarce crossing appears valuable even with uncertain user demand, but its avoided alternative-route cost is already embedded in the user-benefit estimate. [S03/S11]

Interaction and consequence. Adding a separate route-option amount can count the same consequence twice and make continuation appear stronger than it is.

Resolution and evidence. Use a benefit ledger with unique causal pathways, compare the least-cost feasible preservation method and expose probability/timing switching values. Keep social resource benefits separate from financing transfers. Low demand does not prove zero option value, but scarcity alone does not quantify it.

X18 — Correct appendices linked to the wrong legal version

Combined state. The final clean and marked appendices are internally consistent, but the notice identifies an earlier consolidation or a mismatched effective date. [S02/S08–S10]

Interaction and consequence. Document quality does not resolve ambiguity about which obligation is amended. Contract and reporting systems may implement the wrong version.

Resolution and evidence. Reconcile the current instrument, exact replacement set, section 13 timing and any Schedule 11 entry before relying on the change. An administrative register should record the legal decision, not create a substitute commencement date.

X19 — Limited feed, extrapolated model and near-threshold measurements

Combined state. Actual feed is below a future capability figure, model support is used for permitted elements and a physical volume result lies near its threshold. [S04/S13]

Interaction and consequence. Three different questions are present: permissible model use, validity of extrapolation and metrological confidence. Success in one does not compensate for failure in another.

Resolution and evidence. Map every criterion to its allowed evidence, validate the model's future envelope and apply the approved uncertainty rule to physical measurements. Resolve the specific missing property rather than declaring either universal success or universal impossibility.

X20 — Interrupted endurance, adequate mass and insufficient qualifying time

Combined state. High flow produces enough total mass, but feed interruptions and steady-state recovery periods reduce qualifying duration. [S04]

Interaction and consequence. The volume test may pass while the duration or restart test remains incomplete. Conversely, a long elapsed period can fail the mass test.

Resolution and evidence. Maintain separate mass, qualifying-flow and interruption records using the approved counter rules. Reconcile cause and timestamps before extending the test. The remedy is not to restart or waive all criteria automatically; it is to complete the property not yet demonstrated.

X21 — First-injection timetable and later-user 2032 eligibility

Combined state. The initial store may begin injection before a future north-bank user is selected or connected. The later user faces an end-2032 process condition. [S04/S13–S16]

Interaction and consequence. Treating the user's date as the permit commencement date can conceal a real delay or invent a false deadline. The store's operating duration has its own start event.

Resolution and evidence. Prepare one schedule with separate legal and contractual clocks, source versions and responsible authorities. Any permit change must use its own process; an economic CiS cannot reset the store's authorised period by implication.

X22 — Partial hedging, rate weighting and fee allocation

Combined state. Some USD expenditure is hedged, the remainder is unhedged, and fees are embedded differently in the recorded rates. [S07/S12]

Interaction and consequence. The applicable weighted-rate formula, the cash ledger and an efficiency comparison can produce different figures. Reusing a fee in more than one component worsens the ambiguity.

Resolution and evidence. Show the prescribed weights, market/hedge rate selection and fee treatment with a separate actual-cash reconciliation. Use a worked non-confidential example. Do not amend the FSD's method silently to make it equal a preferred accounting number.

X23 — Staged build, milestone payment and financing assumption

Combined state. A tunnel-only option defers construction cost, but payment and funding assumptions depend on completing Phase 1 handover. [S04/S06–S07/S11]

Interaction and consequence. A lower nominal capex branch may lose financing availability or defer a contractual milestone. The stage's cost cannot be evaluated independently of its delivery conditions.

Resolution and evidence. Include the contractual and financial critical path, permitted funding consequences and preservation cost in the branch. Do not invent a lender waiver or treat a regulatory appraisal as approval of a changed financing plan.

X24 — A final narrow condition with unrelated work ready

Combined state. Drafting corrections and most evidence are resolved, but a discrete test-source or cost-overlap issue remains open while unrelated safe work is ready. [S02/S11–S12]

Interaction and consequence. A blanket complete label would hide the issue; a blanket stop could impose unnecessary cost. Materiality and legal separability determine the proportionate response.

Resolution and evidence. Specify the affected activity, competent decision, evidence required and permitted scope meanwhile. Close only on adequate evidence, preserving the rights and costs already accrued. A future review gate is useful only if a lawful action remains available when it occurs.

C1. Twelve positive and no-effect controls

A satisfactory review should be capable of reaching each of the following conclusions when its conditions are established. Zero effect and no additional action are legitimate analytical outcomes, not missing answers.

ID / condition	Expected result	Evidence condition
N01 — Names survive only in deleted text	No live BOC/H2T obligation is inferred from the searchable PDF layer.	Visible redline and clean reconstruction agree.
N02 — A/C and aa/dd numbering remains	No change is needed solely to fill numbering gaps.	All retained references and certificates resolve.
N03 — Only an illustrative colour changes	No ownership transfer or physical-scope modification follows from colour alone.	Authoritative text and labels remain unambiguous.
N04 — Identical FX rate for old and new fixed amounts	The fixed displayed allowance difference remains £4.9m.	Same formula, USD base and rate are used on both sides.
N05 — A future user does not need the north-bank route	No Gathering Pipeline route benefit is assigned to that user merely because it is in the cluster.	Actual connection route and system dependence are known.
N06 — Future user fits an existing validated envelope	No automatic new capacity modification or repetition of unrelated tests.	Current permissions, quality/flow and accepted evidence genuinely match.
N07 — Tunnel right survives an authorised pause unchanged	No route-loss cost is assigned to that interval.	The right and conditions remain enforceable; other delay costs are assessed separately.
N08 — A retained asset has no economic reuse or sale value	No speculative recovery credit is manufactured.	Condition, market/transfer evidence and disposal costs support the conclusion.

ID / condition	Expected result	Evidence condition
N09 — Revalidation work is already funded	No additional allowance for identical baseline work.	Contractual scope and deliverables truly overlap; necessary work still occurs.
N10 — Schedule 10 is unchanged and has no affected dependency	No amendment is fabricated simply because the question mentions it.	Competent controlled review confirms the no-change position and explains the reference.
N11 — Peak, average and cumulative quantities differ validly	Different capacity numbers do not produce an automatic inconsistency.	Asset boundary, units, time basis and authority are explicit.
N12 — No material change to the validated risk envelope	No full re-run of competent prior assurance solely because users are renamed or a review date arrives.	Scope, assumptions, evidence validity and legal conditions remain sufficient.

Appendix D. Sources, scope notes and terminology

References identify official public materials used in the analysis. Source dates, the date of review and legal effect are distinct. The August 2026 consultation documents are proposals; the December 2024 licence and permit are identified as dated instruments rather than certified current consolidations. The source review date is 25 September 2026.

S01 — Ofgem — Net Zero North Sea Storage Limited: consultation on BOC & H2T discontinuation determination

Landing page published 31 August 2026; consultation deadline recorded as 27 September 2026. Used for package identity and public submission information, not substantive licence effect.

Open official source

S02 — Ofgem — Notice of consultation for BOC & H2T Change in Scope Determination

Notice dated 27 August 2026, two pages. Used for proposed section 13/B27.7 route, amendment targets, representations and minimum effective-date period.

Open official source

S03 — Ofgem — BOC & H2T Discontinuation Draft Determination

Draft dated 27 August 2026, 21 pages. Relevant locations: sections 1–4, Tables 1–2, Questions 1–5 and privacy section. Distinguishes Ofgem's position from Licensee arguments and unpublished support.

Open official source

S04 — Ofgem — Appendix 1: Updated Approved Project Development Plan

Proposed marked APDP, 38 pages. Definitions; Figure 1; onshore/offshore scope; System Acceptance; Phase 2 tranches; capacity/user tables; section 6.3. The intended clean state is assessed using visible markings, not search hits alone.

Open official source

S05 — Ofgem — Appendix 2: Updated Licence Annex A to Section A

Proposed marked Annex A, 44 PDF pages. The relevant retained plurality and deletion appear in paragraphs 6.2–6.3 on printed page 43. Illustrative geography is not reproduced here.

Open official source

S06 — Ofgem — Appendix 3: Updated Technical Details Document

Proposed marked TDD, eight PDF pages. Project Programme, Phase 1 handover works/MS-1020, Phase 2 Tranche A and deleted Tranche B block. Redacted dates are not inferred.

Open official source

S07 — Ofgem — Appendix 4: Updated Financial Settlement Document

Proposed marked FSD, 19 PDF pages. Construction fixed allowance and FXadj on printed pages 10–11; separate development, commissioning and operating items are not silently treated as CiS changes.

Open official source

S08 — Ofgem Electronic Public Register — carbon dioxide licensing publications

Listing identifies “2026-01-15 NZNSSL Consolidated CO2 T&S Licence”. Metadata was located; the complete later consolidated file was not recovered. Used for version identification only, not as proof of every current clause.

Open official source

S09 — NZNSSL — published award-version CO_2 transport and storage licence

Published with the December 2024 award, 552 PDF pages. Used expressly as the award-version source for E1, J2, B27, F4, F6, F7 and the redacted Schedule 10 boundary. Current clause-by-clause continuity remains to be confirmed against the later consolidation.

Open official source

S10 — DESNZ — Award of carbon dioxide transport and storage licence

Official award publication identifying the licence grant and effective date of 10 December 2024. Establishes the provenance of S09, not the absence of later changes.

Open official source

S11 — Ofgem — Re-opener guidance for carbon dioxide transport and storage

December 2024 guidance, 26 pages. Proportionate application stages, alternatives, do-minimum/delay appraisal, additionality, transparent assumptions and sensitivity. Used for relevant evidence expectations, not a demand to repeat every stage for this CiS.

Open official source

S12 — Ofgem — T&SCo Cost Assessment Guidance

December 2024 guidance, 23 pages. Cost efficiency, evidence, additionality, appropriate assessment stages and FX/indexation principles. A coherent public arithmetic bridge does not replace the underlying cost assessment.

Open official source

S13 — NSTA — CS001 deed of amendment and storage permit

Deed dated 9 December 2024, including public permit; particularly Annexes 4–5. Used for dated storage rate, quantity, duration and commissioning conditions. No certification is made that the permit has not subsequently been varied.

Open official source

S14 — DESNZ — CCUS East Coast Cluster: Teesside selection process

Official landing page published 19 November 2025 and showing an 8 April 2026 update. Used for process identity, published materials and update chronology.

Open official source

S15 — DESNZ — ECC Teesside Selection Process Application Guidance

Published guidance, 137 PDF pages. Table 3 gives indicative selection, negotiation, FID and COD timing. Eligibility and portfolio considerations do not confer a network access right.

Open official source

S16 — DESNZ — CCUS ECC Teesside selection process clarification questions

Official clarification text updated 8 April 2026. Relevant examples include Q063–Q064 on eligibility/Network Code, Q066 on portfolio and access, and Q068 on indicative timing. The date in the URL is not the current page's update date.

Open official source

D1. Evidence limitations relevant to the conclusions

The confidential CiS Submission, underlying contracts, detailed cost model, tunnel agreement and project-specific engineering studies were not available to this response. No private probability, price, loss rate, test result, agreement or protected schedule content has been inferred. Their absence limits independent replication of the project decision; it does not establish that the Licensee or Ofgem lacks the evidence.

The later consolidated licence was identified through register metadata but not recovered in full. The legal architecture is therefore stated by reference to the current statutory notice and the dated award-version licence, with current-version confirmation requested where material. The publicly available permit is likewise identified by its December 2024 date. These qualifications should not be read as a claim that a particular intervening amendment exists or does not exist.

The numerical illustrations are deterministic arithmetic under declared assumptions. The practical profiles and compound scenarios specify how an implementation or decision could be tested. They are not hydraulic modelling, a reservoir simulation, an audit of the Licensee's cost workbook, an executed test programme, a legal opinion on private contracts or a certification of project readiness.

D2. Terminology

Term	Meaning in this response
APDP	Approved Project Development Plan: the project-specific scope and development/acceptance description.
TDD / FSD	Technical Details Document / Financial Settlement Document. Their amendment route and relation to the licence require the relevant conditions.
CiS	Change in Scope. The trigger, approval, impact and adjustment decisions are related but distinct.
BOC / H2T	The discontinued planned initial user projects as identified in the consultation; names alone do not identify every residual contractual or asset right.
NZNSSL / Licensee	Net Zero North Sea Storage Limited. NEP refers to the Northern Endurance Partnership context used in the source documents.
NZT Power	The remaining Planned Initial User and the proposed source for the revised Tranche A CO_2 tests.
AGI / PCC	Above-ground installation / Power Capture and Compression Plot as used in the project documents; the exact defined scope governs.
ONCi / ONCa	Obligated Network Capacity expressed respectively as an instantaneous maximum and an annual quantity; not interchangeable.
Mtpa / MTPA / MTPAi	Million tonnes per annum. Source-specific "instantaneous" or averaging qualifications are retained; rate equivalents do not confer quantity permissions.

Term	Meaning in this response
COD / FID	Commercial Operations Date / Final Investment Decision, subject to each document's definition and conditions.
PNL	Project Negotiation List. Inclusion is not a guarantee of support, access or completion.
SRAV	Shadow Regulatory Asset Value, as defined in the relevant economic licence. Allowance, actual cost, incentive, SRAV and revenue are distinct objects.
FXadj / R / USDoby	Construction foreign-exchange adjustment, its prescribed USD/GBP rate and USD expenditure base. Distinct from similarly named development adjustments.
Sunk / committed / avoidable	Historical irrecoverable cost / contractual future obligation / expenditure that a feasible choice can still avoid. A commitment's cancellation terms determine its incremental effect.
Mechanical completion / commissioning / readiness	Physical completion to defined requirements / authorised functional and CO_2 testing / demonstrated availability for the relevant service and user. None automatically establishes all the others.
Positive or no-effect control	A case in which the right answer is no defect, no change or no additional action when the stated evidence conditions hold.