

Retrospective closure verification protocol

Auditing previously closed non-conformance reports against decennial liability - United Arab Emirates

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Document owner	PMC Quality Manager
Approver	PMC Project Director (or Resident Engineer where the PMC acts as the Engineer)
Applies to	Every project on which the PMC has issued, reviewed or relied on an NCR closure, whether the closure was issued by the PMC, the contractor, the designer or a third-party inspector
Related documents	PMC-QA-LEG-002 statutory liability brief; PMC-QA-LEG-003 escalation letter pack; SOR and NCR control workbook (sheets 16 to 18); Major NCR close-out field aid; SOR and NCR article
Companion workbook sheets	16. Closure Audit Tracker; 17. Decennial Risk Register; 18. RCA CAPA Tracker
Review cycle	Annually, and on any audit trigger event listed in Section 4

Document control

Rev.	Date	Author	Summary of change	Approved by
1.0	7 October 2026	PMC Quality Assurance / Quality Control	First issue. Establishes the 14-step retrospective closure audit protocol, the risk-ranking model, the evidence sufficiency matrices, the forensic red-flag set, the disposition matrix, the retrospective closure certificate and the ten-year dossier index, aligned to the deliverables in the SOR and NCR control workbook (sheets 16 to 18)	PMC Project Director

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1. Definitions and abbreviations

Term	Meaning in this protocol
NCR	Non-conformance report - the record of works that do not comply with a requirement
SOR	Site observation report - a quality observation that is not yet, or may never become, a non-conformance
Closed NCR	An NCR recorded as closed in the register, regardless of the quality of the evidence behind the closure
Verified closure	A closure supported by evidence that satisfies Appendix D and, where the item is physical, by an inspection or test of the condition of the works
Decennial liability	The ten-year strict liability of the contractor and the engineer to the employer for collapse or for defects threatening stability or safety, under Articles 821 to 824 of the Civil Code (Federal Decree-Law No. 25 of 2025)
Latent defect	A defect not apparent at handover that appears later, typically behind finishes, below ground, inside shafts or within concealed services
Tier 1 / 2 / 3	The risk band assigned to each closed NCR by the model in Appendix B. Tier 1 items are all audited, without exception
Evidence pack	The indexed set of records that proves the closure: inspection, test, material, photographic, authority and sign-off records
Opening up	Physically exposing concealed works to establish their true condition
PMC	Project management consultancy
RE	Resident engineer, or the PMC engineer responsible for the discipline or area
ITP	Inspection and test plan, with its hold and witness points

Term	Meaning in this protocol
RCA	Root cause analysis, using the 5 Whys method as a minimum
CAPA	Corrective and preventive action
SMART	Specific, measurable, achievable, relevant and time-bound - the test applied to every corrective action
EDMS	Electronic document management system
Disposition	The classification of a finding and the action it triggers (Appendix G)
Audit gate	A decision point that must be satisfied before the next phase proceeds

2. Legal and regulatory basis

Instrument	Relevance to this protocol	What it requires of the PMC
Federal Decree-Law No. 25 of 2025 (Civil Code), in force 1 June 2026, replacing the 1985 Code	Articles 821 to 824: ten years from delivery; strict liability of the contractor and the engineer, jointly and severally; collapse or defects threatening stability or safety; Article 823 voids any exclusion or limitation; Article 824 allows a claim within three years of collapse or discovery	Maintain, for every structural and safety-related closure, evidence that will still answer the question ten years later
Federal Decree-Law No. 25 of 2025, Articles 246, 247, 255 and 257	Liability for harmful acts, causation-based harm, assessment of damages, and the rule that harmful-act liability cannot be excluded or limited by agreement	Assume no contractual cap protects an unverified closure; the audit is the only real protection
Federal Decree-Law No. 31 of 2021 (Penal Code), Articles 66 and 251 to 259	Forgery and the knowing use of a forged document; the definition of an official document; corporate criminal liability; the duty to report a crime	Run the forensic review in Step 7; preserve originals; take legal advice before altering anything
Federal Decree-Law No. 34 of 2021 (cybercrime), Article 14	Forging or knowingly using a forged electronic document, with elevated penalties for government e-documents	Treat the electronic record as evidence: preserve metadata, portal entries and transmission logs; do not re-save or convert files before a forensic copy is taken
Dubai Law No. 14 of 2025 (engineering consultancy) and Dubai Law No. 7 of 2025 (contracting)	Registration, competency certificates, professional standards, ten-year retention of project records and sanctions including fines, suspension, deregistration and revocation	Align the dossier and retention practice with the ten-year statutory retention obligation
Emirate-specific building regulations and authority regimes (Dubai Municipality and DDA; DMT, DMT-ADM and ADQCC; Sharjah, Ajman, UAQ, RAK and Fujairah municipalities; Civil Defence; DEWA, ADDC, SEWA, FEWA; RTA and DoT; telecom operators)	Closure of an authority-linked item is not within the PMC's gift: it closes on the authority's own instrument or the utility's acceptance	Re-verify every authority instrument; where the instrument was obtained on an unsupported closure, escalate under Appendix L
Project contract (FIDIC or bespoke) and the Particular Conditions	The obligations, acceptance criteria, quality management and record-keeping duties the closure was supposed to satisfy	Audit against the contract requirement, not against opinion or practice

5. Roles and responsibilities (R = responsible, A = accountable, C = consulted, I = informed)

Activity	Project Director	Quality Manager	Resident / Area Engineer	Discipline Lead	Contractor QA	Designer	Employer
Step 1 Mandate, scope and independence	A	R	C	C	I	I	C
Step 2 Master register reconstruction	I	A	R	C	C	C	-
Step 3 Data integrity reconciliation	I	A	R	C	C	-	-
Step 4 Risk ranking and tiering	I	R	C	C	-	C	-
Step 5 Evidence sufficiency triage	I	A	R	R	C	C	-
Step 6 Sample and test plan	A	R	C	C	C	C	I
Step 7 Forensic record review	I	A	R	-	-	-	-
Step 8 Field verification and testing	I	A	R	R	C	C	I
Step 9 Designer and specialist evaluation	I	C	C	R	C	A	I
Step 10 Authority instrument re-verification	I	A	R	C	C	C	C
Step 11 Findings classification and disposition	A	R	C	C	I	C	C
Step 12 Rectification, RCA and CAPA	I	A	C	C	R	C	I
Step 13 Retrospective closure certification	A	R	R	C	I	C	I

Activity	Project Director	Quality Manager	Resident / Area Engineer	Discipline Lead	Contractor QA	Designer	Employer
Step 14 Dossier, reporting, KPIs, re-audit	A	R	C	-	I	-	I
Escalation to the authority or insurer	A	R	C	C	I	C	A
Discovered falsification or criminal conduct	A	R	I	I	I	I	C

Independence rule

The person who signed the original closure, or who supervised the person who signed it, must not be the sole verifier of that item. Step 1 records the independence arrangement in writing before any review begins. Where the PMC is itself the originator of the defective closure, the verification of that population is assigned to a different PMC office, a different business unit or an external reviewer.

Part A - Why retroactive verification, and what it covers

3. The decennial exposure in one page

Under Articles 821 to 824 of the Civil Code, the contractor and the engineer are liable to the employer for ten years from delivery for total or partial collapse and for any defect threatening the stability or safety of the building or fixed installation. The liability is strict: the employer does not have to prove fault. Article 823 voids any contractual term that excludes or limits it. The claim must be brought within three years of the collapse or of the discovery of the defect.

What the employer must show	What the unsupported closure leaves behind	What the audit provides instead
The building or installation was delivered on a date	Nothing turns on this; the date is on the taking-over certificate	The delivery date and the ten-year end date recorded for every audited item in the decennial risk register
A collapse occurred, or a defect appeared that threatens stability or safety	The defect was concealed by a closure that was never evidence-based, so nobody knew it existed	A verified condition statement for every Tier 1 item, tested and signed, with the residual risk and monitoring recorded
The defect relates to the works, the design or the supervision	With no evidence, the engineer cannot show that the works complied at handover	Contemporaneous evidence of compliance, or evidence of a documented, dated and verified rectification
The claim is within three years of discovery	Discovery is unpredictable, so the exposure window is effectively open for a decade	A dossier that is complete, indexed and retrievable within days of any allegation, in the ten-year period

The audit does not change the law, and it cannot undo a defect. What it changes is the evidence position: it converts a population of unproven closures into a population of verified closures, documented

rectifications and known residual risks, each with an owner and a review date. That is the difference between a defended claim and an indefensible one.

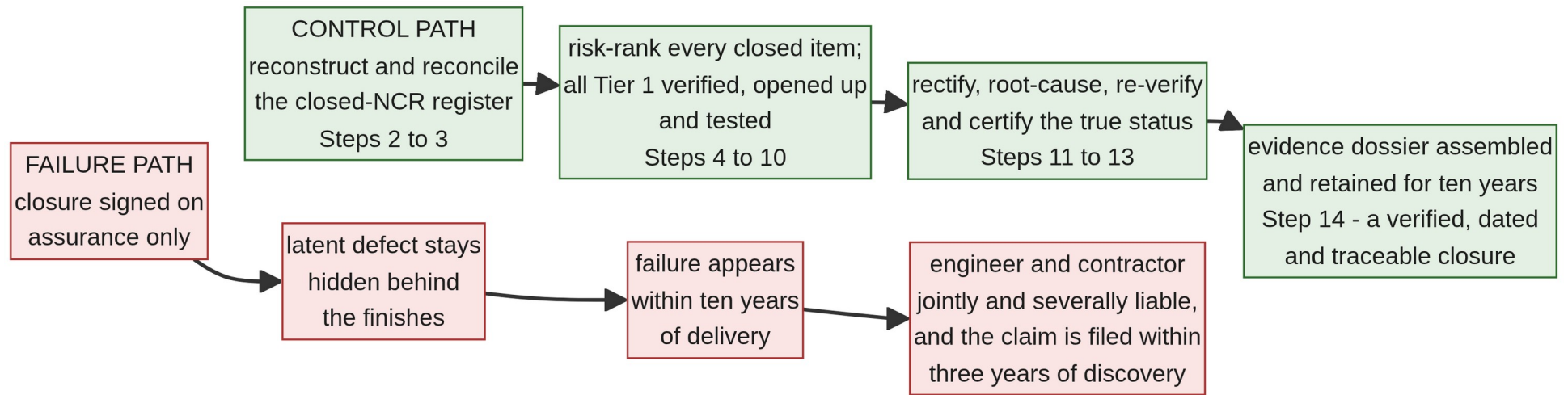


Figure 2 - The failure path and the control path: where the retroactive audit intercepts the defect and where it answers a future claim

4. Scope, triggers and boundaries

Item	Position
In scope	All NCRs closed on the project from structural works onwards, whether closed by the contractor, the PMC, the designer or an authority; all SORs that were escalated into NCRs; all closures linked to a payment valuation, a taking-over milestone or an authority instrument; all closures on elements that are now concealed
Out of scope	Open NCRs (these are managed under the live quality process and the escalation letter pack, not this protocol); purely commercial or programme disputes with no technical content; items already independently verified and documented under a current closure certificate
Trigger events - the protocol is run when any of these occurs	(a) the PMC is newly appointed, or is asked to take over quality records from a predecessor; (b) a claim, notice or reservation is received that touches on completed works; (c) a latent defect, water ingress, movement or failure appears in completed works; (d) an authority raises an observation or refuses an instrument; (e) the project approaches taking-over, handover, or the expiry of the defects notification period; (f) a change of ownership, refinancing or sale due diligence; (g) an insurer, lender or rating assessment requires evidence of closure quality; (h) a tender for a new project in the same client portfolio requires disclosure of past performance
Minimum frequency	A continuous or rolling audit on projects with more than 150 closed NCRs; a single full audit at handover and once in each subsequent year of the ten-year period for projects below that threshold
Boundaries of authority	The audit establishes the technical and documentary position. It does not determine contractual entitlement, it does not certify compliance on behalf of an authority, and it does not replace legal advice where falsification, criminal conduct or a live claim is suspected
Cost and resource expectation	Phase 1 to 2 is a desktop exercise measured in days. Phase 3 to 4 is the cost driver: opening up, testing and rectification. Cost recovery from a contractor or a former consultant is a separate commercial decision taken on the findings

Ethical, evidential and legal safeguards

Risk in running the audit	Safeguard to apply before starting
Records are altered, deleted or reconstructed once the audit begins	Step 2 takes a read-only forensic copy of the register, the closure packs, the EDMS folder and the authority portal exports before any analysis. All later work is against the copy; the originals are locked and their hashes recorded
The audit is read as an admission of liability	Frame it in the mandate as a routine quality assurance exercise, with the legal review under privilege where counsel instructs it. Do not circulate findings outside the defined distribution list

Risk in running the audit	Safeguard to apply before starting
Blame dynamics destroy the cooperation needed to establish the facts	Run the technical phase on a factual, no-blame basis, but preserve the facts that a legal process may need. Appendix G separates the technical finding from the commercial and disciplinary consequences, which are decided by others
Discovering falsification triggers legal duties that the project team cannot assess alone	Stop, preserve and escalate under Appendix G, category E. Take legal advice before interviewing anyone, before notifying anybody outside the mandate and before notifying the insurer. The duty to report a crime and the insurance notification conditions are legal questions, not project decisions
The employer is not told, and later discovers concealment	Report the verified position to the employer in a controlled, factual form, with the corrective plan, once the facts and the legal position are known. Early disclosure is materially better than late discovery
The rectification is done without evidence, reproducing the original problem	Step 12 requires the rectification itself to be verified and photographed, with the verification recorded in the same register. The audit's output is evidence, not assurance

Part B - The step-by-step protocol

6. The protocol at a glance

The protocol has five phases, fourteen steps and four gates. The step register below is the working index; the detailed specification of each step follows. Workbook sheet 16 (Closure Audit Tracker) holds the live data for every step from Step 4 onwards.

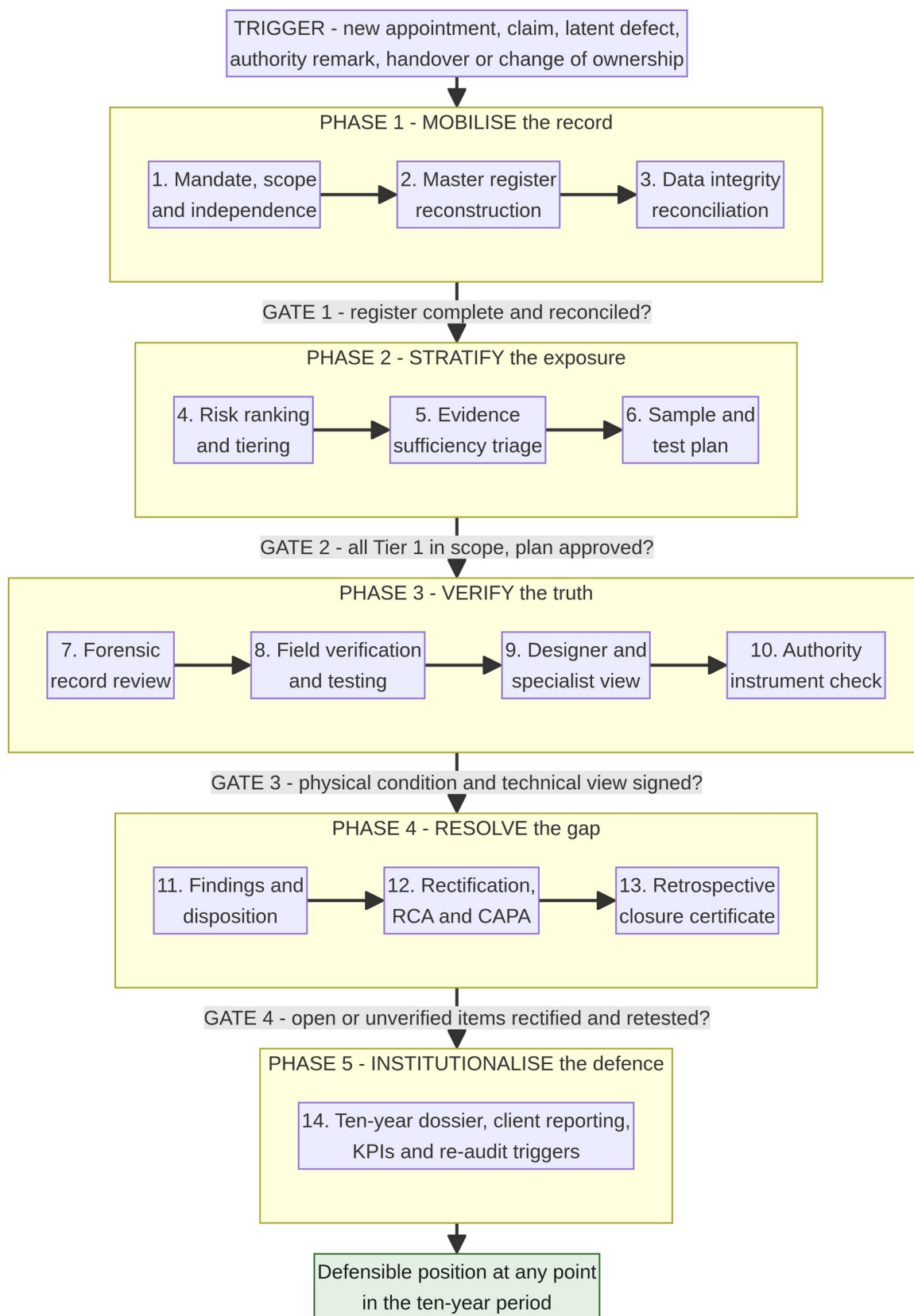


Figure 1 - The five phases, fourteen steps and four gates of the retrospective closure audit protocol

Table 1 - Protocol step register

Step	Name	Purpose	Key output	Typical duration	Owner
1	Mandate, scope and independence	Establish authority, boundaries, independence and the legal safeguards	Signed audit mandate and scope note	2-3 days	Quality Manager
2	Master register reconstruction	Build one register of every closed NCR with the fields needed to audit it	Master register, forensic copy taken	5-10 days	RE with QA
3	Data integrity reconciliation	Test the register against the other project records and close the gaps	Reconciliation report and gap list	3-5 days	Quality Manager
4	Risk ranking and tiering	Rank every closed NCR by exposure and assign Tier 1, 2 or 3	Tier assignments in sheet 16 and 17	3-5 days	Quality Manager
5	Evidence sufficiency triage	Test the evidence held against the requirement for that NCR type	Per-item evidence gap assessment	5-10 days	RE with QA
6	Sample and test plan	Confirm the mandatory Tier 1 population and the sampling for Tiers 2 and 3	Approved audit and test plan	3-5 days	Quality Manager
7	Forensic record review	Detect back-dating, fabrication, reuse and other red flags	Forensic findings schedule	5-10 days	Quality Manager
8	Field verification and testing	Establish the true physical condition of the works	Inspection and test reports, photographs	4-12 weeks	RE with discipline leads
9	Designer and specialist evaluation	Determine whether any defect threatens stability or safety	Designer technical assessment per item	2-4 weeks	Designer, coordinated by PMC
10	Authority instrument re-verification	Confirm that every authority-linked item closed on the authority's own instrument	Instrument verification schedule	2-4 weeks	RE with Quality Manager
11	Findings classification and disposition	Assign each item a disposition and the action it triggers	Disposition schedule, Appendix G	1 week	Quality Manager
12	Rectification, RCA and CAPA	Remedy the works and prevent recurrence, with evidence	Rectification records, RCA and CAPA	Per finding	Contractor, verified by PMC
13	Retrospective closure certification	Re-certify the true status of every audited item	Retrospective closure certificates	1-2 weeks	PMC, countersigned
14	Dossier, reporting, KPIs and re-audit	Store the defence, report it and keep it alive	Ten-year dossier, client report, KPI dashboard	Ongoing	Quality Manager

7. Step-by-step protocol

7.1 Phase 1 - Mobilise the record

Step 1 Mandate, scope and independence

Element	Specification
Objective	A written mandate that gives the audit authority, defines what is covered, and records the independence arrangement
Inputs	Appointment or instruction; project quality plan; contract quality clauses; NCR procedure; the liability brief PMC-QA-LEG-002; counsel's advice where a claim is live
Method	Draft and sign a two-page mandate: purpose, population in scope, period covered, independence, confidentiality, distribution list, legal safeguards, and the escalation route for suspected falsification. Confirm the resource, budget and access rights (EDMS, portal, site access, contractor records)
Tools	Mandate and scope note template; independence declaration for each reviewer
Evidence produced	Signed mandate; independence declarations; distribution list
Gate	No reviewer may audit an item they signed. Where a whole population was signed by one person, an alternative reviewer is named before the phase closes
If the gate fails	Do not proceed. Obtain the alternative reviewer or narrow the scope to the population that can be independently reviewed

Step 2 Master register reconstruction

Element	Specification
Objective	One register that captures every closed NCR on the project, with the fields that make it auditable
Inputs	NCR register and its revision history; SOR register; EDMS NCR folder; contractor quality records; inspection and test records; payment valuations; taking-over documentation; authority submission and permit files; email and portal correspondence
Method	Take a read-only forensic copy of each source, record the hash, then extract into the register the fields in Appendix A. Reconcile NCR numbering across sources, including renumbered, cancelled, merged and superseded NCRs. Where an NCR number appears in a valuation or an authority submission but not in the register, the item is captured with status 'record missing'
Tools	Workbook sheet 16, closed-NCR master register fields (Appendix A); EDMS export; hash utility
Evidence produced	Master register with source reference for every field; forensic copy log
Gate	Every NCR referenced anywhere in the project record appears in the register, even if the closure record itself is missing

Element	Specification
If the gate fails	Widen the source set. A register that misses items is a false assurance and will not survive an employer or insurer review

Step 3 Data integrity reconciliation

Element	Specification
Objective	Test the register against independent project records and document every gap
Inputs	Master register; interim payment valuations and their measured quantities; concrete pour cards and inspection records; material submittals and approvals; test reports; authority instruments; handover and snag documentation; photographs
Method	Four reconciliations: (1) closure date against the date the work was actually completed or covered up; (2) closure against the payment valuation that included the work; (3) closure against the inspection and test records that should sit behind it; (4) closure against the authority instrument for authority-linked items. Record every gap, every unexplained sequence and every record that cannot be found
Tools	Reconciliation worksheet in sheet 16; valuation-to-NCR cross-reference
Evidence produced	Reconciliation report; gap list; list of items where the record cannot be found
Gate	The register is complete and every gap is either explained or flagged as a finding
If the gate fails	Rebuild the record for the affected period before ranking items: an item with an unknown history cannot be tiered reliably

7.2 Phase 2 - Stratify the exposure

Step 4 Risk ranking and tiering

Element	Specification
Objective	Rank every closed NCR by decennial exposure and evidence weakness, so that verification resource goes where the risk is
Inputs	Reconciled master register; the risk model in Appendix B; the works classification (structural, envelope, MEP, fire, external)
Method	Score each item on the impact factors and the evidence factors in Appendix B, total the score, and assign the tier: Tier 1 at 18 or above (mandatory full verification), Tier 2 at 10 to 17 (targeted verification), Tier 3 at 9 or below (statistical verification plus any item flagged). Record the score and the tier in sheets 16 and 17 with the scoring date and the scorer
Tools	Appendix B; sheet 16 (tier and score columns); sheet 17 (decennial risk register)
Evidence produced	Scored and tiered register; Tier 1 population extract

Element	Specification
Gate	Every closed NCR carries a score, a tier and a named owner. Tier 1 items are listed individually, not by category
If the gate fails	Do not begin field work. An untiered population cannot be sampled defensibly

Step 5 Evidence sufficiency triage

Element	Specification
Objective	For every item, test the evidence held against the evidence the item type requires
Inputs	Closure packs; Appendix D evidence sufficiency matrix; the contract acceptance criterion and the ITP hold points for the element
Method	Complete the evidence matrix for each item: which of the required records exist, are readable, are signed by the right person, are dated, and actually demonstrate the criterion was met. Score the evidence as complete, partial or absent, and identify the specific missing element rather than a general judgement
Tools	Appendix D matrix; workbook sheet 5 (closure evidence checklist) extended to the audited population
Evidence produced	Per-item evidence gap statement, traceable to a specific missing record
Gate	No item is described as 'closure documented' without naming the records that prove it
If the gate fails	Re-inspect the closure pack. Verbal assurance is not evidence and is recorded as absent

Step 6 Sample and test plan

Element	Specification
Objective	An approved plan that states exactly what will be physically verified, how, by whom, at what cost, and against which criterion
Inputs	Tier assignments; evidence gaps; Appendix C sampling rules; Appendix E test methods; access and safety constraints; the contractor's cooperation under the contract
Method	Fix the mandatory population (all Tier 1, all items with an evidence gap on a structural or life-safety element, all items where a red flag was found in Step 7), then apply the sampling rules for Tier 2 and Tier 3. For each item, name the test method from Appendix E, the acceptance criterion, the laboratory or specialist required, the hold point, and the make-good obligation if the test is destructive
Tools	Appendix C and Appendix E; sheet 16 test columns; site access and permit-to-work arrangements
Evidence produced	Approved audit and test plan; cost and resource estimate; access plan

Element	Specification
Gate	The plan is approved by the Document owner and the Employer is informed before intrusive work starts on completed or occupied areas
If the gate fails	Do not open up works without an agreed make-good obligation and access plan: damage without reinstatement creates a second problem

7.3 Phase 3 - Verify the truth

Step 7 Forensic record review

Element	Specification
Objective	Establish whether the records are what they claim to be, before physical verification gives them credibility
Inputs	Forensic copies of closure packs, test reports, photographs, signed forms, electronic files and portal submissions
Method	Apply Appendix F: review file metadata (creation and modification dates, producing software), signature and stamp consistency, numbering and date sequences, photograph metadata and duplicate detection, test value plausibility, laboratory accreditation, and portal timestamp against declared date. Record every indicator with its location and the original evidence preserved
Tools	Appendix F red-flag schedule; metadata inspection; hash and duplicate comparison
Evidence produced	Forensic findings schedule; preserved originals with hashes; list of items carrying a red flag
Gate	Every red flag is recorded and either resolved with an explanation or carried forward as a finding. Nothing is 'tidied up'
If the gate fails	If an indicator suggests falsification, stop the affected item's technical review and escalate under Appendix G, category E, before taking any further step

Step 8 Field verification and testing

Element	Specification
Objective	Establish the true physical condition of the works covered by each audited closure
Inputs	Approved test plan; Appendix E method selection; as-built information; safe access; calibrated equipment and accredited laboratories

Element	Specification
Method	Inspect and, where required, open up and test. Non-destructive methods first (visual, dimensional, cover meter, rebound hammer, ultrasonic pulse velocity, thermography, moisture, CCTV of services), then intrusive methods (cores, opening up of finishes and penetrations, weld and bolt checks, load or water tests) where the non-destructive result is inconclusive or the evidence gap is material. Record location, method, result, criterion, pass or fail, photographs with scale, and the identity of the tester
Tools	Appendix E; test plan; calibrated instruments; accredited laboratory reports; site inspection records; photographic register
Evidence produced	Inspection and test reports per item; dated photographs; instrument and calibration records; make-good records
Gate	Every Tier 1 item has a recorded physical condition, obtained by a named competent person, against a stated criterion
If the gate fails	Test again with a better method, or escalate the item to Step 9 for a specialist assessment. 'Unable to verify' is a finding, not a closure

Step 9 Designer and specialist evaluation

Element	Specification
Objective	Determine, for each confirmed defect, whether it threatens stability or safety - the test that engages decennial liability
Inputs	Test results; as-built and design information; the designer's original design and any approvals; specialist reports
Method	Instruct the designer, and any specialist required (structural, geotechnical, façade, fire, waterproofing, MEP), to issue a written assessment per item: the nature and cause of the defect, whether it affects stability or safety, whether it is progressive, the residual capacity, the required remedy, the monitoring needed, and the urgency. Record the designer's assessment against the decennial test expressly
Tools	Designer assessment template; specialist inspection and testing; monitoring plan
Evidence produced	Signed designer and specialist assessments with the decennial test answered explicitly per item
Gate	No item with a confirmed defect is dispositioned until the designer has answered whether stability or safety is affected
If the gate fails	Escalate to the Employer and take independent specialist advice. Do not decide structural adequacy within the audit team

Step 10 Authority instrument re-verification

Element	Specification
Objective	Confirm that every authority-linked closure is backed by the authority's own instrument or the utility's acceptance

Element	Specification
Inputs	NCRs linked to permits, inspections, connections or certificates; submission files; portal records; the authority and utility matrix (workbook sheets 6 and 7)
Method	For each authority-linked item, verify the instrument itself: its reference, its date, its scope, its conditions still outstanding, and whether it was issued before or after the works it covers. Where a closure claimed to be authority-verified but the instrument is absent, mis-scoped or conditional, record the finding and re-open the item internally
Tools	Workbook sheet 7 (authority tracker); Appendix L notification touchpoints
Evidence produced	Instrument verification schedule; list of items where the authority position differs from the closed record
Gate	Every authority-linked closure is either supported by the instrument or reported as open
If the gate fails	Take advice before contacting the authority where the discrepancy may amount to a false submission (see Appendix L and Appendix G, category E)

7.4 Phase 4 - Resolve the gap

Step 11 Findings classification and disposition

Element	Specification
Objective	Assign every audited item a disposition, with the action and the timescale attached
Inputs	Evidence triage, forensic findings, test results, designer assessments, instrument checks
Method	Apply the six dispositions in Appendix G: A verified closed; B compliant but evidence deficient; C unverified and non-compliant; D open with a stability or safety implication; E falsification indicators; F record missing. Record the disposition, the required action, the owner, the target date and the reporting obligation for each
Tools	Appendix G disposition matrix; sheet 16 disposition columns
Evidence produced	Disposition schedule with actions, owners and dates; short-term containment record
Gate	Every audited item has a disposition and every disposition has an action owner and date
If the gate fails	Do not issue anything to the Employer. An unclassified finding will be read as concealment

Step 12 Rectification, root cause analysis and CAPA

Element	Specification
Objective	Remedy the works and remove the cause, with evidence that the remedy works and the cause will not recur
Inputs	Disposition schedule; designer remedy requirements; the contractor's method statements; Appendix H

Element	Specification
Method	For each item: contain the risk; agree the rectification method; carry out the works; re-inspect and re-test to the original acceptance criterion; then complete the Appendix H record - 5 Whys to a root cause that is within the project's control, SMART corrective actions, measurable preventive actions with a monitoring mechanism, named responsibilities, an implementation schedule with target dates, and evidence of effectiveness reviewed after an interval long enough to prove it
Tools	Appendix H template; workbook sheet 18 (RCA CAPA tracker); re-test and re-inspection records
Evidence produced	Rectification records with photographs; re-test results; completed RCA and CAPA with effectiveness evidence; updated register status
Gate	No item is closed as rectified without a passed re-test against the original criterion, recorded by a person independent of the one who certified the original closure
If the gate fails	The item stays open. A rectification without verification reproduces the exact failure this protocol exists to prevent

Step 13 Retrospective closure certification

Element	Specification
Objective	Replace an unsupported closure record with a certificate that states the verified truth, including where the truth is that the item was rectified or that a residual risk remains
Inputs	Verified condition, test results, designer assessment, rectification evidence, dispositions
Method	Issue the Appendix I certificate for each audited item, retaining the original closure record with it, unaltered. The certificate states the original closure, the verification method and date, the result, the rectification where applicable, the residual risk and its monitoring, the decennial relevance, and the signatures - the verifier and a counter-signer independent of the original signatory
Tools	Appendix I certificate; workbook sheet 12 (closure certificate) extended to the retrospective form
Evidence produced	Signed retrospective closure certificates; updated register status; supersession note that does not delete the original record
Gate	Every audited item has a certified status. The original closure records remain in the file
If the gate fails	Do not delete or overwrite the original record under any circumstances. The supersession trail is part of the defence

7.5 Phase 5 - Institutionalise the defence

Step 14 Ten-year dossier, reporting, KPIs and re-audit

Element	Specification
Objective	Make the defence durable for the full ten-year period and keep it current
Inputs	Certificates; test reports; designer assessments; decennial risk register; KPIs
Method	(a) Assemble the dossier in the Appendix J structure, indexed and named consistently, in the EDMS and in a read-only archive outside the project system; (b) report to the Employer in the agreed format and frequency; (c) maintain the KPI set in Appendix K and the decennial risk register in sheet 17; (d) diarise the re-audit triggers, including annual review and the events listed in Section 4; (e) on project completion, hand the dossier to the Employer with a transmittal that identifies what it is, and retain the PMC's own copy
Tools	Appendix J dossier structure; Appendix K KPIs; sheet 17 register; transmittal template
Evidence produced	Ten-year dossier with index; client report; KPI dashboard; re-audit schedule; handover transmittal
Gate	The dossier can be retrieved and understood by a stranger within one working day, using only the index
If the gate fails	Rebuild the index. A dossier that cannot be navigated does not answer a claim within the time available

Part C - Templates, models and appendices

Appendix A - Master register data fields (every closed NCR)

Field	Purpose and expected content	Workbook column
NCR reference and revision	All versions of the number, including renumbering and merges	A-B
Issue date and issuer	When and by whom the NCR was raised (PMC, contractor, designer, authority)	C-D
Requirement breached	Clause, specification, drawing number and revision, code reference	E
Element, location and level	Element type, grid or room, level, zone, asset tag	F-H
Description of the non-conformance	One factual sentence, as issued	I
Works classification	Structural, envelope or façade, waterproofing, MEP, fire and life safety, external works, finishes	J
Original closure date, method and signatory	The date of closure, the person who signed, and their role and competency grade	K-M
Evidence referenced at closure	Every record cited in the closure, with its own reference	N

Field	Purpose and expected content	Workbook column
Evidence actually traced	What was found in the files, and what could not be found	O
Authority linkage	Permit, inspection, connection or certificate to which the closure relates	P
Payment linkage	Valuation number and measured quantity that included the work	Q
Concealment status	Whether the element is now concealed, occupied or inaccessible	R
Risk score and tier	From Appendix B, with the scoring date and scorer	S-T
Evidence status	Complete, partial or absent, with the specific gap named	U
Forensic status	Clear, indicator recorded, under review, escalated	V
Physical verification	Method, date, tester, result, criterion, pass or fail	W-AB
Designer assessment	Whether stability or safety is affected, and the residual risk	AC-AD
Disposition and action	Appendix G disposition, required action, owner, target date	AE-AH
Rectification and re-verification	Method, completion date, re-test result, verifier	AI-AL
Certificate reference	The retrospective closure certificate issued under Appendix I	AM
Status and review date	Current status, decennial review date, next action	AN-AO

Appendix B - Risk scoring model

Factor	Score	Basis of scoring
IMPACT AND EXPOSURE		
Structural or stability relevance	0-5	5 = primary structural element or foundation; 3 = secondary structure; 0 = no structural role
Life safety or fire relevance	0-5	5 = fire compartmentation, escape, smoke control, structural fire protection; 0 = none
Authority or statutory linkage	0-5	5 = completion certificate, occupancy or Civil Defence instrument depends on it; 0 = none
Waterproofing or durability relevance	0-3	3 = concealed waterproofing or below-ground waterproofing; 0 = none
Concealment and inaccessibility	0-3	3 = covered and inaccessible without opening up; 0 = open and inspectable
Payment or valuation linkage	0-3	3 = the work was paid for on the certificate without verification; 0 = not paid
EVIDENCE WEAKNESS		

Factor	Score	Basis of scoring
Evidence completeness at closure	0-5	5 = no evidence at all; 3 = partial; 0 = complete and traceable
Signatory quality and independence	0-3	3 = self-certified by the executing party; 0 = independent verification on record
Age and record survival risk	0-2	2 = closure more than three years old or records at risk; 0 = recent and intact
Red flag present	0-2	2 = an Appendix F indicator is recorded and unresolved; 0 = clear
TIERING		
Tier 1 - mandatory full verification	18 or more	Every item verified physically and documentarily; no sampling permitted
Tier 2 - targeted verification	10 to 17	All items in the highest-scoring strata verified; minimum of 30 per cent of the band or all items of a stratum, whichever is greater
Tier 3 - statistical verification	9 or less	Minimum 10 per cent random sample within each stratum, plus any item carrying a red flag or a missing record

Appendix C - Sampling plan

Rule	Requirement
Mandatory 100 per cent	Every Tier 1 item; every item on a structural, foundation, fire or life-safety element; every item where the evidence is absent rather than partial; every item carrying a red flag; every item where the record is missing; every item linked to an authority instrument; every item that was certified for payment without independent verification
Random and targeted sampling	Tier 2: minimum 30 per cent, biased to the highest-scoring strata, to concealed works and to single-signatory populations. Tier 3: minimum 10 per cent random within each stratum, drawn by a documented method so the selection can be defended as representative
Stratification keys	Works classification, signatory, contractor or subcontractor, time period, level or zone, and authority linkage
Sample expansion	If the failure rate found in a stratum exceeds 10 per cent, expand that stratum to 100 per cent. If it exceeds 25 per cent, treat the whole population of that class as unverified and apply Appendix G category C or D to it
Sample size table (Tier 2 and 3)	Population 1-20: verify 20 per cent, minimum 3. Population 21-50: 10 items plus 10 per cent of the remainder. Population 51-150: 15 items plus 5 per cent of the remainder. Population over 150: 25 items plus 3 per cent of the remainder, with a continuous rolling audit thereafter
Recording	The sample, the selection method, the reasons for exclusion and the expansion decisions are recorded in sheet 16 so that the audit itself can be reviewed

Appendix D - Evidence sufficiency matrix

NCR type	Evidence that must exist for a verified closure
Structural concrete and foundations	Approved method statement; inspection record for reinforcement (cover, spacing, laps, fixings) before pour; pour card with volume, batch and slump; cube or cylinder results with laboratory accreditation; curing record; repair method statement where applicable; re-inspection and test after repair; as-built record of the element
Steelwork and connections	Material certificates with traceability; welder qualifications; weld inspection and NDT records (visual, ultrasonic, magnetic particle, dye penetrant) with acceptance criteria; bolt torque or tensioning records; coating and fire protection thickness records; dimensional survey
Waterproofing (concealed)	Approved system and applicator; substrate inspection; membrane continuity or spark test; flood or ponding test of at least 24 hours with photographs; protection layer inspection before covering; as-built extent drawing; access hatch or inspection provision
Façade and curtain wall	Glazing and framing approvals; setting-out and fixing inspection; structural silicone or sealant adhesion test; water penetration test (AAMA 501.2 or equivalent); air infiltration test where specified; drainage and ventilation path verified; thermal or movement inspection; safety glass certification
MEP concealed services	Approved shop drawings and coordination; pressure or leakage test with instrument calibration; installation inspection before closing; chlorination, flushing or cleaning record; duct leakage test; insulation and fire-stopping records; access panel provision; balancing (TAB) report; as-built services drawings
Fire and life safety	Penetration seal records by system and reference; fire door inspection and hardware certification; damper and smoke control verification; passive fire protection records; alarm and detection cause and effect test; emergency lighting and escape signage verification; the Civil Defence inspection or approval reference
Authority-linked items	The authority's own inspection report or approval instrument with its reference and date; the conditions attached and confirmation that each has been discharged; the utility acceptance or connection notice; any variation or dispensation with its reference; the submission tracking record
External works and drainage	Compaction test records by layer; asphalt core density and temperature records; level and fall survey; CCTV survey of drainage with the acceptance report; manhole and connection integrity; kerb and paving dimensional inspection; road-opening and reinstatement approval
Finishes and architectural	Mock-up or benchmark approval; substrate and setting-out inspection; material conformity certificates; finish and tolerance inspection against the specified standard; snag and de-snag inspection records; cleaning and protection records

Appendix E - Test method selection

Element or defect	Preferred verification methods, in order
Reinforced concrete condition and cover	Visual and dimensional survey; cover meter; rebound hammer; ultrasonic pulse velocity; half-cell potential where corrosion is suspected; carbonation depth and chloride content on cores; core compressive strength test where the original result is missing or contradicted
Concrete integrity where a pour record is absent	Ultrasonic pulse velocity mapping; impact echo; ground-penetrating radar for reinforcement layout; core sampling; in the last resort, load testing to the relevant standard with a designed scheme
Waterproofing below finishes	Infrared thermography to locate moisture; moisture meter readings; flood test of an exposed area where practicable; opening up a representative area of the membrane; smoke or dye test for drainage continuity
Buried and concealed drainage	CCTV survey with defect coding; infiltration or water test; dye tracing; manhole and connection survey; level survey
Fire-stopping and compartmentation	Physical inspection of a documented sample of penetrations; opening up where concealed; damper and door inspection against the applicable standard; verification of the approved system against what was installed; authority inspection where required
Electrical and mechanical installations	Insulation resistance and continuity testing; thermographic scan of distribution boards and joints under load; earth loop impedance; protection device testing; pressure and leakage tests; equipment commissioning records; utility acceptance documentation
Structural steel and connections	Dimensional and alignment survey; weld NDT by ultrasonic, magnetic particle or dye penetrant; bolt torque or tension verification; coating and fire-protection thickness measurement
Façade watertightness	Water penetration test to AAMA 501.2 or the specified standard; hose test with controlled pressure; sealant adhesion and hardness checks; inspection of drained and ventilated cavities

Appendix F - Forensic red-flag indicators

Indicator	What it suggests	How to test it	What to preserve
Electronic file created or modified after the declared date, or produced by different software from the rest of the file set	Back-dating or later fabrication	Compare file metadata across the register: creation, modification, producer, author	The original files with hashes; an export of the metadata
Photographs with EXIF dates after the declared closure, or reused across different NCRs	Photographs taken later, or taken elsewhere	Extract EXIF data; run duplicate-image detection across the whole register	Original image files, unmodified, with hashes
Test values that repeat exactly, or fall suspiciously within limits, across unrelated items	Fabricated or copied results	Compare the whole test set statistically; check laboratory registers independently	Test reports with laboratory reference numbers and raw data
Test report without an accreditation number, raw data or a laboratory register entry	Report not issued by an accredited or approved laboratory	Contact the laboratory to verify the report reference directly	The report; the verification correspondence

Indicator	What it suggests	How to test it	What to preserve
Closure date identical to, or immediately before, a valuation or an authority visit	Closure driven by the commercial or inspection calendar	Cross-reference closure dates against valuations, inspections and submissions	The valuation and submission records
Missing or renumbered NCRs, gaps in sequence, or a closure revision that removes findings	Suppression of adverse records	Reconcile against every source that references NCR numbers	The register revision history; the earlier revisions
A signature, stamp or initials that differ in style, position or pressure from the same person's other records	Signature applied by another, or placed on a completed form	Compare across the population; obtain the person's written confirmation	The signed originals
Signed blank or partially completed forms in the file, or forms whose content post-dates the signature	Signature obtained in advance as an administrative convenience	Inspect the physical form and the electronic version; compare content with signature date	The forms; the electronic workflow log
Portal submission timestamp inconsistent with the certificate date, or a certificate with no matching submission	Retrospective submission or unsupported certificate	Extract the authority portal history and compare	Portal export; submission acknowledgements
The same person signing as inspector, reviewer and approver for a population of items	Absence of independent verification and a concentration of risk	Count signatories per item and per population	The signatory analysis

Appendix G - Disposition and action matrix

Disposition	Definition	Required action	Reporting
A - Verified closed	Evidence complete and the physical condition complies with the criterion	Issue the retrospective verification record; no works required; retain the evidence pack	Internal register only
B - Compliant, evidence deficient	Physical condition verified as compliant, but the closure evidence is incomplete	Re-inspect or re-test to produce the missing record; issue the retrospective closure certificate citing it	Internal; summarised to the Employer
C - Unverified and non-compliant	The works do not comply, and the closure was not supported by evidence	Contain; rectify; re-test against the original criterion; complete the RCA and CAPA; certify	Employer informed with the corrective plan
D - Open, with structural, fire or life-safety implication	The defect threatens stability or safety, or affects a statutory instrument	Immediate containment and safety measures; designer assessment; authority and Employer notification as advised; expedited rectification; consider notice to the responsible party under the escalation letter pack	Employer, authority and insurer as advised

Disposition	Definition	Required action	Reporting
E - Falsification indicators	The records themselves are unreliable or fabricated	Stop the technical review on the affected items; preserve originals; take legal advice; notify the insurer through the broker in accordance with the policy; consider the duty to report; manage the individual and the competency position	Legal advice governs; controlled disclosure
F - Record missing	The item appears in the project record but no closure record can be found	Treat as unverified; verify physically; where the work is concealed, open up a representative sample; then disposition as A to D	Employer informed, with the verification plan

Appendix H - Root cause and CAPA template

RCA and CAPA element	Requirement in this protocol
5 Whys	Five successive questions, recorded with the person and the evidence behind each answer, ending at a cause the project can control (for example: the closure template had no mandatory evidence field; the inspection was scheduled without the discipline lead; the hand-over of an unfinished area was permitted for access). Record causes that are not controllable separately as context
Corrective action (SMART)	Specific (names the record, element or process), Measurable (states the evidence and the threshold), Achievable with the resources named, Relevant to the root cause, Time-bound with a target date. One action per row, one owner per action
Preventive action (measurable)	A change to a system, template, checklist, competency requirement, contract clause or verification routine that stops recurrence, with the metric by which success is measured and the baseline before the change
Responsibilities	Named individual, not a department, for each action, and a named approver for closure of the action
Implementation schedule and target dates	Start date, target completion date and actual completion date for each action, held in sheet 18 with RAG status
Monitoring mechanism	The routine that keeps the action alive: monthly sample audit of new closures, review of the two-signature control at every valuation, quarterly reconciliation of the NCR register against the valuation. State frequency and owner
Rectification method and evidence	The repair or replacement method, the acceptance criterion, the re-test and its result, and dated photographs of the rectified works
Effectiveness evidence	The evidence that proves the action worked, reviewed at least one full cycle after implementation: for example, a sample of 20 new closures with complete evidence packs, or zero repeat root causes in the following quarter. An action without effectiveness evidence remains open

Appendix I - Retrospective closure certificate (one per audited item)

Field	Entry
Certificate reference and date	[PMC-QA-RC-000] [date]
NCR reference and original closure	NCR [] rev [], originally closed on [date] by [name, role], as recorded in []
Supersession	This certificate supplements and does not replace the original closure record, which is retained unaltered in the file
Verification basis	Documents reviewed: [list]. Physical verification: [method, date, tester]. Testing: [report reference, laboratory, result]. Designer assessment: [reference, date]
Verified condition	[Complying with the acceptance criterion / non-compliant as follows / unable to verify without opening up]
Rectification, where applicable	Method: []. Completed on []. Re-tested on [] with result []. Conducted by [], verified by []
Decennial relevance	Structural or safety-affecting? [yes or no]. Stability or safety implication: []. Residual risk: []. Monitoring: []
Residual risk and monitoring	The residual risk is [none / described], monitored by [], with the next review on [date]
Disposition	Appendix G category [A to F]
Certified by	[Name, position, competency certificate number if applicable] - independent of the original signatory
Countersigned	[PMC Quality Manager / Project Director]
Distribution	[Employer / file / insurer where notified]. Distribution is controlled

Appendix J - Ten-year dossier index

Folder	Contents	Retention
00 Index and transmittals	Dossier index, revision log, transmittal records to the Employer	Ten years from delivery
01 Mandate and method	Audit mandate, scope note, independence declarations, approved test plan	Ten years
02 Master register	The closed-NCR master register with scores, tiers and dispositions, in the state of each revision	Ten years
03 Original closure records	The original closure packs exactly as they were, unaltered, with the forensic copy hash log	Ten years
04 Forensic review	Red-flag schedule, metadata exports, laboratory verification correspondence	Ten years, access restricted
05 Physical verification	Inspection records, test reports, calibration certificates, photographs with location and date	Ten years
06 Designer and specialist assessments	Signed technical assessments and the decennial test answer per item	Ten years
07 Authority instruments	Certificates, approvals, connection notices, submission records and outstanding conditions	Ten years

Folder	Contents	Retention
08 Rectification and re-verification	Method statements, completion records, re-test results, photographs	Ten years
09 RCA and CAPA	5 Whys records, SMART actions, preventive actions, monitoring and effectiveness evidence	Ten years
10 Retrospective certificates	Signed certificates, one per audited item, with countersignature	Ten years
11 Reporting and KPIs	Client reports, KPI dashboards, re-audit schedule and minutes	Ten years
12 Legal and insurance	Legal advice references, insurer notifications and policy correspondence, held separately and access-controlled	Per legal advice

Appendix K - Key performance indicators

KPI	Definition	Target	Frequency	Owner
Record completeness	Closed NCRs whose evidence pack satisfies Appendix D, as a percentage	100 per cent	Monthly	Quality Manager
Tier 1 verification rate	Tier 1 items physically verified, as a percentage of the Tier 1 population	100 per cent within the audit period	Fortnightly	Quality Manager
Evidence gap rate	Items with partial or absent evidence, as a percentage of the audited population	Below 5 per cent after the first cycle	Monthly	RE
Re-opened item rate	Items re-opened after audit, as a percentage of audited items	Trending to zero	Monthly	Quality Manager
Red-flag rate	Items carrying an unresolved Appendix F indicator	Zero unresolved after 30 days	Monthly	Quality Manager
Authority instrument coverage	Authority-linked closures supported by the instrument, as a percentage	100 per cent	Monthly	RE
Rectification cycle time	Days from disposition to verified rectification, by disposition category	Category D within the agreed expedited period	Weekly for D, monthly for C	Contractor, monitored by PMC
CAPA effectiveness	Actions with recorded effectiveness evidence, as a percentage of actions due	100 per cent at review	Quarterly	Quality Manager
Dossier retrievability	Time to assemble a complete item dossier on request, measured in the exercise drill	Within one working day	Annually	Quality Manager

KPI	Definition	Target	Frequency	Owner
Decennial exposure trend	Aggregate risk score of open and residual-risk items from sheet 17	Falling quarter on quarter	Quarterly	Project Director

Appendix L - Authority notification touchpoints

Situation	Touchpoint and action
The item is open and blocks a municipal or utility instrument (completion certificate, occupancy, Civil Defence approval, energisation, water or drainage connection)	Notify the Employer; engage the authority through the registered consultant or applicant in the ordinary course; present the containment and the rectification programme proactively. Concealing an open item from an authority is itself an offence risk
An instrument was issued on the basis of a closure that the audit finds unsupported	Do not contact the authority directly. Escalate to the Employer and take legal advice on voluntary correction of the submission, on the penalty exposure under the Penal Code and the cybercrime law, and on the duty to report
A utility acceptance or connection instrument cannot be traced	Verify directly with the utility's records where the project has the standing to do so; record the result; re-open the item internally until the instrument is produced
An authority raises an observation on completed works	Treat it as a trigger event under Section 4; run Steps 5 to 11 on the affected population; respond to the authority through the applicant with the verified position
Registration, classification or competency issues emerge for the contractor or the consultancy	Advise the Employer; the Employer's written record of the failure is relevant to the assessment of the responsible party under Dubai Law No. 7 of 2025 and Law No. 14 of 2025. Do not threaten to report; record the facts
A defect in completed works appears during the defects notification period or later	Treat it as a decennial-risk event: designer assessment first, then the disposition matrix, then reporting. The three-year claim window runs from discovery, so the evidence position must be established immediately

Using this protocol

Run the phases in order and do not skip a gate: each gate exists because the next phase depends on its output being complete. The workbook sheets 16 to 18 are the working record; the appendices are the standards. Where this protocol meets a live claim, suspected falsification or a statutory instrument, it stops being an audit and becomes a legal matter: take advice first, preserve the records, and report through the route in Section 8 rather than deciding the consequence within the project team.

Standing caution

This protocol is technical guidance for project management and quality professionals. It is not legal advice. The Civil Code article numbers are those of Federal Decree-Law No. 25 of 2025, in force 1 June 2026, and reference the decennial regime at Articles 821 to 824; penalty provisions are those of Federal Decree-Law No. 31 of 2021 and Federal Decree-Law No. 34 of 2021; the Dubai licensing regime is Law No. 7 of 2025 and Law No. 14 of 2025. Verify article numbers, penalty ranges, retention obligations and authority procedures against the current published texts and with UAE counsel before relying on them in any notice, claim, submission or defence.