



Close Substructure Punch List: Defects, Verify, Sign-Off

Close substructure punch list with interactive checklist that's commentable and easy to export as PDF/Excel, enabling defect rectification, verification, and sign-off for below-grade works.

Project:
Date:
Filled by:

Scope & Documentation

1	Load the latest IFC drawings, specs, and RFIs into the checklist; verify revision dates match the project's current issue. Evidence: uploaded files and revision log; Acceptance: latest approved issue only.
2	Define substructure boundaries on a plan (foundations, pile caps, grade beams, basement slabs, waterproofing, drainage) and mark superstructure as excluded. Evidence: annotated plan with supervisor initials.
3	Confirm as-built survey control and benchmark elevations using total station. Evidence: CSV of points and plan overlay; Acceptance: within specified tolerances per approved project specifications and authority requirements.
4	Verify permits, inspections, and hold points related to substructure closeout are cleared. Evidence: uploaded approvals and inspector stamps; Acceptance: all mandatory clearances achieved.
5	Assign responsible parties and due dates for each defect category (concrete, waterproofing, drainage). Evidence: responsibility matrix attached; Acceptance: named owner per item with target date.

Defect Recording & Evidence

6	Perform walkdown by grid/chainage and elevation; capture geotagged photos with a 300 mm scale in frame. Evidence: photo set linked to locations; Acceptance: 100% area coverage recorded.
7	Log each defect with type, location (grid/chainage/elevation), and quantity using a structured form. Evidence: unique ID, timestamped entry; Acceptance: complete fields, no blanks.
8	Physically mark defects using removable chalk and apply a QR sticker matching the digital record. Evidence: photo showing QR and defect; Acceptance: QR-ID parity confirmed.
9	Measure concrete dimensions and cover with laser distance meter and cover meter. Evidence: readings uploaded; Acceptance: within specified tolerances per approved project specifications and authority requirements.
10	Inspect waterproofing laps, terminations, and penetrations; conduct low-voltage holiday detection per manufacturer instructions. Evidence: test report and marked-up photos; Acceptance: continuous membrane, no indications.

Rectification & Rework	
11	Issue rectification work orders citing approved method statements and materials. Evidence: approved method and product data attached; Acceptance: authorization prior to rework.
12	Repair concrete honeycombs/spalls using approved mortar; prepare substrate by grinding and cleaning. Evidence: before/after photos; Acceptance: flush finish, sound substrate, no delamination.
13	Reinstate waterproofing at defective areas with compatible patches and sealant; reinforce corners. Evidence: close-up photos and batch numbers; Acceptance: continuous seal matching manufacturer requirements.
14	Restore drainage falls using screed; verify with laser level at 2 m intervals. Evidence: level grid readings; Acceptance: gradients as designed within specified tolerances.
15	Rework backfill where density failed; compact in layers with vibratory compactor. Evidence: retest results; Acceptance: meets specified density per approved project specifications.

Verification & Testing	
16	Re-measure pile cap and grade beam dimensions and embed locations using calibrated tapes/laser. Evidence: measurement sheet; Acceptance: within specified tolerances per approved project specifications.
17	Check slab levels with a digital level across a defined grid. Evidence: level map or table; Acceptance: flatness and levelness within project tolerance.
18	Confirm rebar cover at accessible substructure faces using cover meter. Evidence: logged readings with locations; Acceptance: per approved project specifications and authority requirements.
19	Test subsoil drainage: flush lines and observe continuous flow ≥ 25 L/min. Evidence: test log and video; Acceptance: free flow, no leaks or blockages.
20	Verify drainage board and protection screed continuity at walls/slabs; probe terminations. Evidence: photos and redlined sketch; Acceptance: full continuity, no exposed membrane.
21	Confirm earthing/bonding conductors within substructure are installed, labelled, and continuous. Evidence: resistance readings (Ω) and photos; Acceptance: continuity per approved project specifications.

Sign-Off & Handover	
22	Close each defect after verification; capture inspector initials, date, and evidence links. Evidence: status set to "closed"; Acceptance: no open items remain.
23	Compile final as-built package: drawings, survey CSVs, test reports, product data. Evidence: indexed file list; Acceptance: complete, approved documents only.
24	Collect digital signatures from contractor, consultant, and client representatives. Evidence: signed certificate with names and timestamps; Acceptance: all parties signed.
25	Affix durable QR tags at access points linking to the closure packet. Evidence: scan verification screenshots; Acceptance: functional link, correct package.
26	Archive the closeout in the project CDE; issue distribution notice to stakeholders. Evidence: transmittal receipt; Acceptance: archived with retention metadata.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
<p>Close substructure punch list is the essential final sweep before releasing foundations and below-grade works. This substructure closeout checklist targets pile caps, footings, grade beams, basement slabs, waterproofing, and drainage—while explicitly excluding any superstructure items. By structuring a rigorous foundation punchlist around record–rectify–verify–sign-off, you prevent water ingress, settlement issues, and rework that becomes expensive after backfilling. The checklist guides a disciplined walkdown by grid and elevation, requires evidence such as geotagged photos, test reports, and survey files, and drives rectification through approved methods and materials traceability. Verification steps cover dimensions, levels, cover readings, flow tests, and membrane integrity checks, culminating in transparent sign-off and archival. Keep the scope clean: no columns, upper walls, or above-grade finishes. Use this interactive tool on mobile or desktop to tick items, leave field comments, and export your closeout package as PDF/Excel with a project QR link.</p>	<p>1. Preparation: Assemble inspector team, PPE, and calibrated tools (laser level, cover meter, holiday detector, total station). Load latest drawings/specs and define grids, chainages, and benchmarks. 2. Project setup: Create locations by grid/elevation in the checklist, import reference files, and set acceptance references per approved project specifications and authority requirements. 3. Using the Interactive Checklist: Start mobile/desktop interactive mode, tick items as completed, add comments, attach geotagged photos and files, and assign owners with due dates. 4. Rectification workflow: Convert defects to tasks, link method statements and materials, and notify responsible subcontractors. Track progress by status and due date. 5. Verification: Reinspect with calibrated tools, record readings and evidence, and update each item’s status to “closed” only after acceptance criteria are met. 6. Export: Generate the closeout package and export as PDF/Excel, including photos, logs, and signatures for submission and archival. 7. Sign-Off: Capture digital signatures from contractor, consultant, and client, publish to the CDE, and validate the QR tag link for field access.</p>