



Restrike Testing Checklist: Re-drive, Capacity, Acceptance

Restrike testing checklist for piles with interactive checklist, commentable records, and export as PDF/Excel. Verify capacity by re-drive after set-up and document acceptance decisions.

Project:
Date:
Filled by:

Pre-Test Planning

1	Identify piles scheduled for restrike and verify the minimum rest period per approved project specifications (e.g., $\geq 24-72$ h). Record pile IDs, coordinates, and rest start/finish times; note that initial PDA scope is excluded.
2	Review design resistance and test objectives; define acceptance criteria per approved project specifications. Prepare a test sheet listing required evidence (photos, videos, signatures, plots) and decision paths (accept, extend driving, or hold).
3	Notify stakeholders and secure work windows/permits per authority requirements (e.g., marine/traffic constraints). Evidence: notification logs, permit numbers, and approved method statement referencing restrike-only scope.

Equipment and Instrumentation

4	Verify hammer data: rated energy (kJ), expected stroke/pressure settings, and ram mass. Acceptance: target energy achievable and controllable within $\pm 5\%$ during test; attach current hammer certificate.
5	Inspect drive head, helmet, and cushions; replace worn elements. Acceptance: cushion thickness and material per manufacturer; seating flush with ≤ 3 mm gap. Capture close-up photos before test.
6	Calibrate and prepare measurement devices: blow counter, stroke gauge/pressure readout, and penetration gauge (mm resolution). Acceptance: calibration certificates ≤ 6 months old; affix gauges securely; photo evidence.

Waiting Period and Readiness Verification

7	Confirm actual waiting time since end-of-initial-drive meets or exceeds specification. Evidence: time-stamped logs; supervisor sign-off. Note: do not use initial PDA data for acceptance decisions.
8	Prepare pile head for restrike: trim to sound material, clean, and level. Acceptance: planeness across helmet contact within ≤ 3 mm; head free of laitance/cracks; photo before/after.
9	Verify alignment and setup: helmet centered, guides engaged, and pile alignment within $\leq 2^\circ$ of vertical (or per specs). Evidence: spirit level/laser readings and photos of setup.

Re-Drive Execution	
10	Conduct warm-up blows at low energy to seat cushions and confirm control. Acceptance: no slippage or eccentric striking; record energy ramp, blows, and observations in the log.
11	Apply steady target energy and record blows versus penetration. Acceptance: measure set to 0.1 mm resolution; capture last 5–10 blows' mm/blow values and hammer energy for analysis.
12	Limit re-drive penetration to the specified test length (e.g., 100–300 mm) unless instructed. Evidence: cumulative penetration reading and photo of scale; stop if damage indicators appear.

Data Capture and Capacity Assessment	
13	Document hammer energy (kJ), stroke/pressure, blow count, and penetration per blow on the test sheet. Evidence: time-stamped photos/video and GPS-tagged notes.
14	Perform capacity assessment per method specified: wave equation analysis or dynamic monitoring during restrrike. Acceptance: estimated ultimate capacity \geq required resistance; attach plots/reports.
15	Evaluate integrity indicators: unusual rebounds, sudden set changes, or high tension signatures (if instrumented). Action: flag suspect piles for further NDT; include photos and comments.

Acceptance and Documentation	
16	Make acceptance decision: Accept, extend driving, or hold for engineering review per specifications. Evidence: signed decision with rationale, energy/blow data, and assessment printouts.
17	Restore pile head and remove instrumentation; repair any spalls and protect with cover. Evidence: post-test photos and material batch/lot for repair compounds if used.
18	Archive complete record: test sheet, calibration certificates, photos/videos, assessment files, approvals, and timestamps. Obtain digital signatures and generate a QR-linked export for traceability.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
<p>Restrike testing validates pile capacity after set-up by re-driving selected piles to confirm design resistance and acceptance. This checklist guides field engineers and inspectors through a disciplined pile restrike procedure, often called a redrive test, with emphasis on timing, execution, and capacity re-assessment. The scope covers re-drive planning, equipment readiness, controlled striking, data capture, and acceptance decisions. It explicitly excludes initial PDA activities at end-of-initial-drive; only restrike-phase assessments are included, whether by blow count analysis, wave equation tools, or dynamic monitoring during restrike as required. Following this process helps avoid premature acceptance, pile damage from overdriving, misinterpreted energy levels, and incomplete records that jeopardize compliance. Expected outcomes include verified capacity after set-up, clear go/no-go decisions, traceable evidence, and an auditable record aligned with approved project specifications and authority requirements. Use the interactive features to tick items, add clarifying comments, and export your evidence bundle to PDF/Excel via QR for seamless handover.</p>	<ol style="list-style-type: none"> 1. Preparation: Gather hammer certificates, calibration records, test sheets, PPE, and measuring tools (blow counter, penetration gauge). Confirm waiting period and pile IDs from as-built records. 2. Open the interactive checklist on your device, start a new test session, and geotag the pile location for traceability. 3. For each item, tick completion, capture photos/videos directly in-app, and add comments noting energy settings, readings, and observations. 4. Attach analysis outputs (wave equation or dynamic plots) to the relevant item. Use standardized fields to log mm/blow and kJ values. 5. Use the decision item to select Accept, Extend Driving, or Hold. Cite evidence and reference the approved project specifications. 6. Export: Generate an export as PDF/Excel that includes images, timestamps, signatures, and GPS tags for submittals. 7. QR verification: Create a QR code linking to the archived record to secure provenance for audits and reviews. 8. Sign-Off: Obtain digital signatures from the inspector, contractor representative, and engineer. Distribute to stakeholders. 9. Archive: Store the signed record in the project repository with consistent naming and cross-reference to pile IDs.