



Drill bored piles > 600 mm inspection checklist – drilling

Drill bored piles > 600 mm interactive checklist for drilling inspection; commentable records with verticality and base sediment logs, plus export as PDF/Excel for approvals.

Project:

Date:

Filled by:

Pre-Drill Planning and Setup

1	Confirm latest IFC drawings and pile schedule; verify pile diameter \geq 600 mm and design toe level.
2	Set out pile center using total station; tolerance \leq 10 mm or per specs; capture as-built coordinates and stake photo.
3	Verify platform level (± 20 mm) and bearing per geotechnical signoff; record plate-load or engineer approval with photos.
4	Conduct drilling briefing covering strata, slurry/dry method, verticality tolerance, and hold points; file signed toolbox talk.

Rig and Tooling Verification

5	Confirm rig torque, crowd, and stroke meet design depth/diameter; attach rig data sheet and serial number photo.
6	Calibrate depth counter and dual-axis inclinometer; keep certificates \leq 6 months; record zero checks with photos.
7	Inspect buckets/augers/core barrels; measure effective diameter not less than design; photo with tape and tooling ID.
8	Check temporary casing straightness and joints; trial assemble; document roll test and diameter gauge readings.

Drilling Operations Control

9	Confirm drilling method (dry, bentonite, or polymer) per approved method statement; upload approval reference.
10	Record start time, weather, groundwater level, and initial strata; attach site log with readings and photos.
11	Control rotation and crowd to prevent overbreak/necking; log RPM, crowd pressure, and penetration rates by depth.
12	If slurry used, test density (1.05–1.15 g/cm ³), viscosity (32–50 s), sand content per supplier/specs; log every 2 h with kit photos.
13	Measure actual diameter at casing top and first 3 m using calipers/tape; not less than design; record readings and photos.
14	Track depth with weighted tape or electronic sensor; confirm \geq design toe; timestamped depth log signed by driller.

Verticality and Geometry Documentation

15	Check verticality at casing with spirit level and dual-axis inclinometer; deviation $\leq 1\%$ or per specs; capture readings/photos.
16	Perform downhole verticality survey at final depth (inclinometer/televiwer); upload profile report and instrument serial.
17	Verify pile center vs survey control after drilling; tolerance $\leq 25\text{ mm}$ or per specs; attach as-built survey.
18	Record zones of overbreak or constriction; measure diameters by depth interval; add annotated photos with scales.

Base Clean-Out and Sediment Assessment

19	Clean base with clean-out bucket/airlift until returns run clear; photograph last two loads and logging notes.
20	Measure base sediment at center and four quadrants using weighted spoon or sampler; $\leq 50\text{ mm}$ or per specs; log values/photos.
21	Confirm base level and formation description (soil/rock); obtain geotechnical verification; attach signed inspection sheet.

QA Records and Handover (Non-Concreting)

22	Compile drilling log: depth, strata, tool changes, slurry tests, delays; driller and supervisor signatures required.
23	Attach verticality reports, diameter checks, sediment measurements, and calibration certificates; upload to lot file with QR link.
24	Issue ITP hold-point release for concreting; confirm scope excludes concreting activities; obtain approvals and distribute.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
<p>Drill bored piles $> 600\text{ mm}$ require the same controls scaled to a larger diameter, with rigorous documentation of verticality and base sediment, and this checklist focuses strictly on drilling. It supports large-diameter bored piles and bored pile drilling activities, providing practical drilling inspection steps that prevent misalignment, necking, excessive overbreak, and contaminated bases. By standardizing pre-drill planning, rig/tooling verification, drilling operations, verticality checks, and base clean-out assessment, teams reduce rework, protect geotechnical capacity, and hand over a clean, compliant hole for subsequent concreting. The scope excludes concreting operations entirely; acceptance cues reference the approved project specifications and authority requirements. Use this interactive checklist to tick items, add time-stamped comments, attach readings and photos, and export PDF/Excel; a QR code secures the record for field verification.</p>	<p>1. Preparation: Gather calibrated inclinometer, depth counter, survey equipment, mud balance/Marsh funnel (if slurry), clean-out tools, camera, and PPE. Review approved method statement and project specifications. Confirm platform readiness and permissions before starting drilling activities. 2. Using the Interactive Checklist: Start interactive mode, tick items as completed, and add time-stamped comments with photos, readings, and serial numbers. Tag stakeholders where action is needed. Export the evolving record to PDF/Excel at milestones for review. 3. Sign-Off: After completing drilling, verticality, and base sediment checks, obtain digital signatures from driller, supervisor, and geotechnical representative. Distribute the export and archive it with a QR-authenticated link for future verification.</p>