

Bored Piles for high-load deep foundations

Cast-in-place reinforced concrete piles formed in a drilled shaft, for high loads and large depths.

CAN BE CONSIDERED WHERE

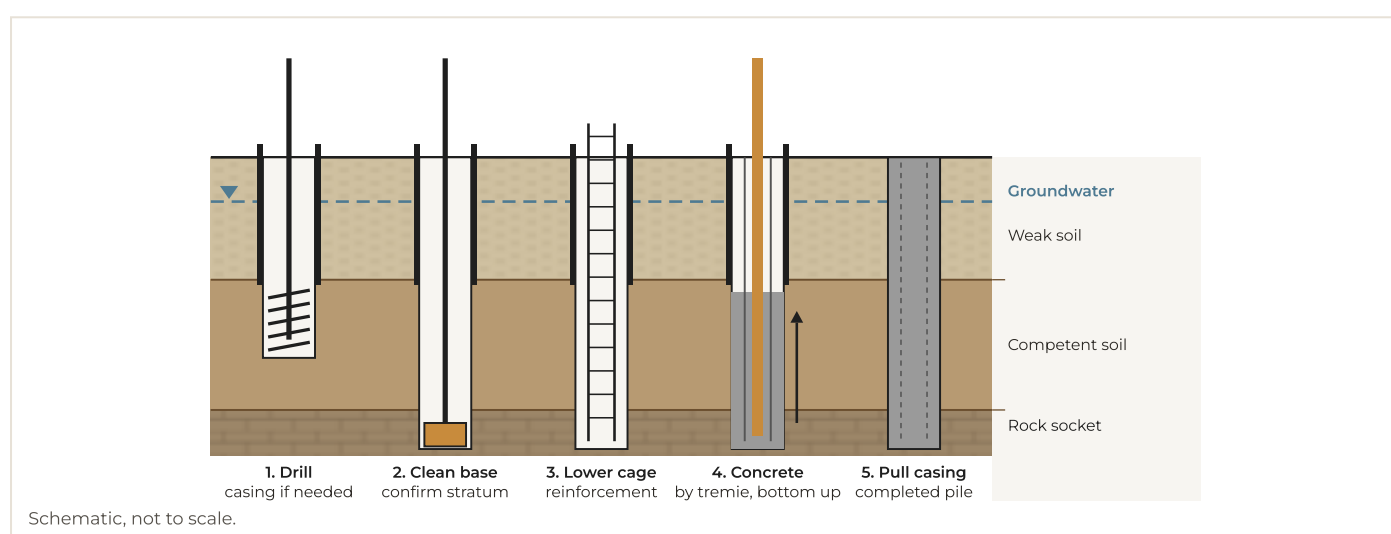
- High structural loads: buildings, bridges and industrial structures.
- Competent strata at depth, including rock sockets.
- Sites where vibration and noise from driven piles are not acceptable.

LIMITATIONS

- Shafts in loose or water-bearing soils need temporary casing or support fluid.
- Spoil must be removed and managed.
- Quality depends on a clean base and a continuous concrete supply.

HOW IT WORKS

The shaft is drilled with augers, buckets or core barrels. Where the ground is unstable, a temporary steel casing or a support fluid such as bentonite or polymer keeps the shaft open.



DESIGN INPUTS

- Site investigation: soil and rock profile, groundwater.
- Loads: compression, tension and lateral.
- Pile diameter, length and socket requirements.
- Concrete and reinforcement specification.
- Design standard and verification requirements.

EXECUTION CONTROLS

- Position, verticality and depth.
- Strata confirmation against the design.
- Support fluid properties, where used.
- Base cleaning before concreting.
- Concrete volume compared with theoretical volume; tremie embedment; concrete samples.

VERIFICATION AND ACCEPTANCE

Design intent: What is required

Design loads, capacity and settlement criteria agreed with the consultant.

Production control: What was done

Pile records: depth, strata, fluid, concrete volume.

Acceptance: What was proven

Static or dynamic load tests, integrity tests and concrete strength tests.

DELIVERABLES

Method statement and risk assessment · Pile layout drawings · Pile records · Concrete test results · Load and integrity test reports · As-built records