

Micro Piles for restricted access and underpinning

Small-diameter drilled and grouted piles for underpinning, tight access and tension loads.

CAN BE CONSIDERED WHERE

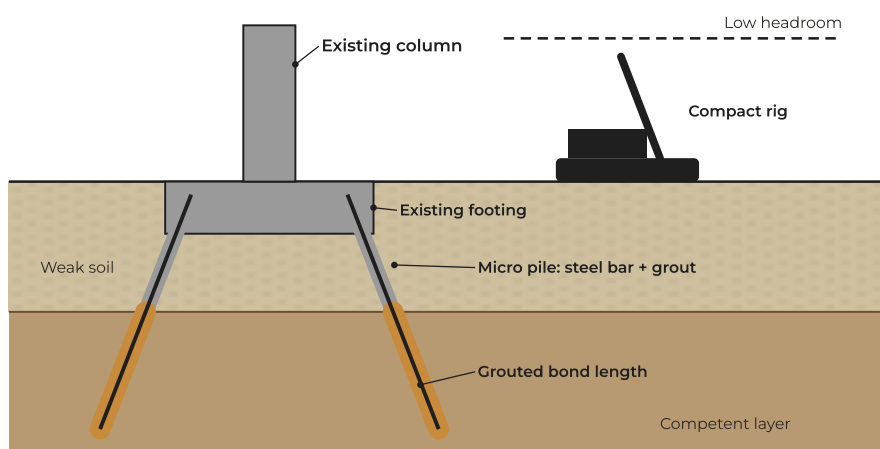
- Underpinning and strengthening existing foundations.
- Restricted access and low headroom.
- Tension (uplift) as well as compression loads.
- Ground with obstructions or rock.

LIMITATIONS

- Each pile carries less load, so more piles may be needed.
- Slender piles need checking for buckling in very soft soils.
- Permanent piles need designed corrosion protection.

HOW IT WORKS

A hole is drilled, often with a casing or a hollow self-drilling bar. Steel reinforcement is installed.



Schematic, not to scale.

DESIGN INPUTS

- Site investigation.
- Loads: compression and tension.
- Pile diameter, bond length and reinforcement.
- Grout specification.
- Corrosion protection and design life.

EXECUTION CONTROLS

- Drilling records.
- Reinforcement type and length.
- Grout mix, volume and pressure.
- Grout samples.
- Pile records.

VERIFICATION AND ACCEPTANCE

Design intent: What is required

Design loads and acceptance criteria agreed with the consultant.

Production control: What was done

Drilling and grouting records for each pile.

Acceptance: What was proven

Compression or tension load tests and grout strength tests.

DELIVERABLES

Method statement and risk assessment · Pile layout drawings · Pile records · Grout test results · Load test reports