

Groundwater Level Monitoring with standpipes and piezometers

Standpipes and piezometers record groundwater levels and pore water pressure before, during and after the works.

TYPICALLY USED FOR

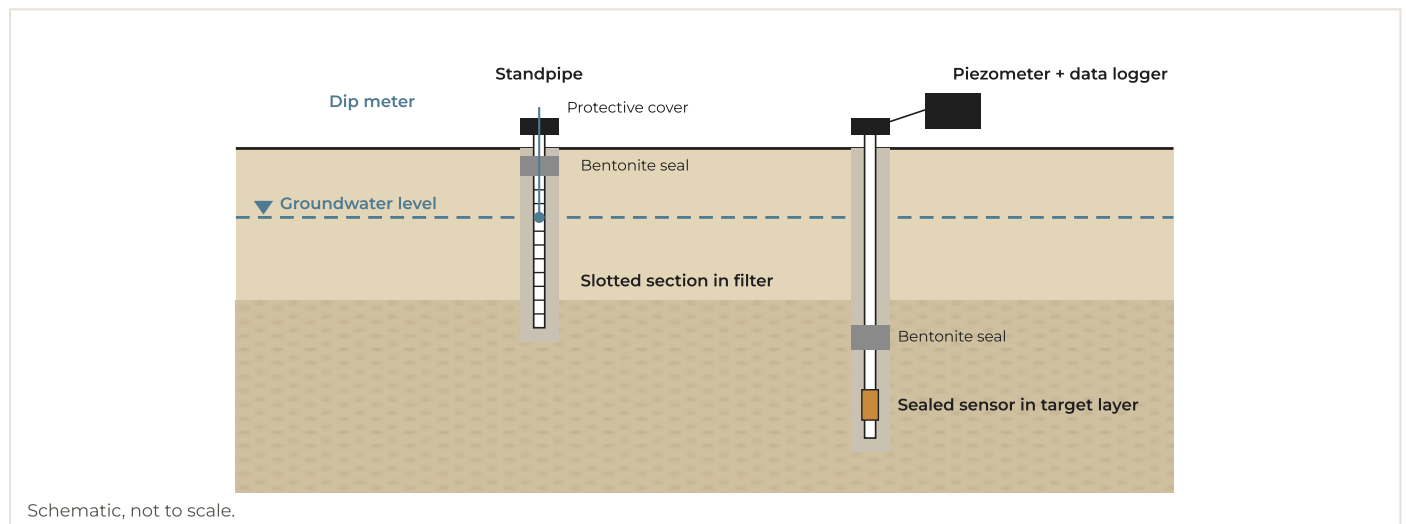
- Dewatering systems and excavations below the water table.
- Consolidation with preloading and vertical drains.
- Dynamic compaction and vibro works in saturated soils.
- Seasonal and tidal groundwater variation for design.

LIMITATIONS

- A standpipe shows the combined water level over its response zone; a sealed piezometer is needed for a single layer.
- Instruments must be protected from damage on an active site.
- Readings need a consistent datum and frequency to be useful.

HOW THE TEST WORKS

A borehole is drilled to the target layer and a standpipe with a slotted section, or a piezometer sealed within the layer, is installed with a filter and bentonite seals. The top is protected by a cover and surveyed.



TEST PLANNING INPUTS

- Purpose: design level, dewatering performance or pore pressure response.
- Instrument type, locations and response zones.
- Reading frequency and trigger levels where used.
- Datum and survey reference.
- Reporting requirements.

TEST EXECUTION CONTROLS

- Installation depth, filter and seals recorded.
- Readings taken to a consistent datum and frequency.
- Instruments protected and checked after damage.
- Logger data downloaded and checked.

INTERPRETATION AND REPORTING

Test plan: What is specified

Monitoring purpose, locations and any trigger levels agreed with the consultant.

Test record: What was measured

Installation logs and readings for each instrument.

Interpretation: What it shows

Time plots and interpretation, in the monitoring report.

DELIVERABLES

Monitoring plan · Installation records · Reading records and logger data · Time plots · Monitoring reports