



Trenchless Assessments



We provide geotechnical and structural design and verification of trenchless installation of conduits and services beneath all types of trenchless crossings including rail, road, and waterways. We specialise in microtunnelling and HDD assessments which meet ARC, PTA, MRWA, and other rail authorities / regulatory bodies' requirements.

We can provide a range of services for microtunnelling assessments including:

- Geotechnical investigations to assess the ground conditions along the trenchless alignment - boreholes are undertaken at the entry and exit pit locations.
- Structural calculations for pipes and conduits for the following:
 - Installation forces and stresses, including pull force.
 - Maximum expected ground surface settlement over the bore centreline due to installation of the pipe.
 - Minimum and maximum allowable surface fluid (mud) drilling pressures.
 - Maximum allowable safe pulling stress.
 - Pipe capacity, buckling and deflection checks.
- Provide advice on the following:
 - Minimum pipe wall thickness.
 - Minimum required depth of cover.
- Anchor block calculations.
- Pipe suitability design verification.

We can also provide:

- Drill alignment profiles which include:
 - Entry / exit pit coordinates and angles.
 - Aerial imagery.
 - Geotechnical borehole locations.
 - Bore hole trajectory and length in plan view.
 - Ground elevation.
- Depth of cover.
- Horizontal chainage (2D).
- Utility services within close proximity of the drill alignment.

We undertake assessments below rail and road crossings for the following installation methods:

- Microtunnelling.
- Horizontal Directional Drilling (HDD).
- Auger Boring.
- Pipe Jacking.
- And more.