THROSBY CREEK, GUNGAHLIN

OIL/GAS | **SEWER** | STORMWATER | POWER | WATER | TELCO

LOCATION	Gungahlin NSW
CLIENT	Woden Contractors
PIPE	225mm PVC inside a 450mm steel case
GEOLOGY	Hard clay and rock
LENGTH	60 metres per bore
TECHNIQUE	GBM and thrust boring

PROJECT OVERVIEW

UEA was contracted to bore and install 240 metres – four 60 metre bores – of DN225 UPVC sewer pipe within a steel enveloper beneath Horse Park Drive in Gungahlin for Woden Contractors, in a mixture of hard clay and rock ground conditions. The works consisted of four number grade critical bores at four separate locations – one of the bores was in hard displaceable clay ground, one was in a hard shale ground and the remaining two bores were in hard rock ground.

SCOPE OF WORKS

The proposed sewer pipe was a gravity main that connected into existing services and was required to be installed at 0.5% grade. UEA used a combination of the Guided Boring Machine and their laser guided Rock Case Boring Machine to complete the required on-grade pilot bores. The Auger Boring Machine was used to install the steel enveloper pipe.

TECHNICAL DETAILS

UEA had to demonstrate the ability to deliver on grade bores in different ground conditions: hard clay, shale, and rock ground conditions. The team ensured that their methodology allowed for these changing ground conditions:

- Bore 1 – Hard clay
- Bore 2 – Hard clay changing to Class III shale
- Bore 3 – Rock ground up to 40mpa
- Bore 4 – Combination of Class III shale to rock

Pilot Bores

UEA used the Guided Boring Machine to complete an on-grade pilot bore on bore 1. For bores 2, 3 & 4 UEA used its in-house designed Rock Case Boring Machine (RCBM). The RCBM is highly suited for ground conditions from 4mpa to 40mpa as it guarantees grade accuracy similar to the GBM which is +/- 25mm for bores up to 120 metres in length.

Sydney PO Box 600, Blacktown, NSW 2148 | 25 Penelope Crescent, Arndell Park, NSW 2148 **T** (02) 9672 4456 **F** (02) 9672 4461