NEPEAN HIGHWAY GAS RELOCATION BORES

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

PROJECT OVERVIEW

UEA completed two thrust bores beneath the Nepean Highway for Comdain Infrastructure (Comdain) on behalf of Multinet Gas, to facilitate the relocation of natural gas infrastructure.

LOCATION	CLIENT	PIPE
Highett VIC	Comdain Infrastructure	DN450 & DN600 Class 4 RCP
GEOLOGY	**LENGTH**	**TECHNIQUE**
Shale		Guided boring & auger boring

SCOPE OF WORKS

To facilitate the relocation of natural gas infrastructure, two 66 metre gas pipeline crossings of the Highway were required:

- 1 x DN300 Steel Licensed Transmission Pressure (TP) pipeline within a DN450 reinforced concrete casing pipe RCP)
- 1 x DN450 Steel High Pressure (HP) pipeline within a DN600 reinforced concrete casing pipe (RCP)

TECHNICAL DETAILS

Two separate launch pits were excavated adjacent to one another, in which the auger boring equipment was set up to complete the works. Due to the displaceable nature of the ground UEA utilised its guided boring machine (GBM) to complete an on-grade pilot bore. An auger boring machine was then used to install 710mm and 600mm diameter steel envelopers which follow each of their pilot bore alignments. Once the steel envelopers were installed, UEA jacked in the DN600 and DN450 RCP respectively to replace the steel envelopers, which were removed in three metre sections from the receipt pit as the RCP progressed. The auger assembly was then removed and the DN450 and DN300 gas pipelines were installed on centralisers through their respective RCPs, and grouted in place.

CHALLENGES

The critical element of these works was to avoid ground syphoning and heave, which would be detrimental to the Nepean Highway. UEA was awarded the boring works when the team presented the GBM's capabilities and showed that it is specifically designed for displaceable ground.

COMPLETION

The project was successfully completed with all bores on the correct grade and alignment.