**ANYTHING BUT ROUTINE**

The installation, designed by Jason Gustafson from Livingstone Shire Council, comprised two pilot holes 380 m in length, drilled to a maximum depth of 17 m. The holes were subsequently enlarged using a reamer to allow for the pull-through of the DN 315 and DN 450 pipes.

HDD contractor Maxibor Australia was selected for the installation. Maxibor Business Development Manager David Turner says the project was no routine installation.

“The ground conditions made it a challenging job. The first 260 m of the installation was rock and the last 100 m was other than rock (OTR),” he says.

“So, we had to actually drill a pilot hole of about 258 m and then forward ream the hole out to the required size. Once the rock section was completed, we pushed out to drill all the way through and then reamed the OTR section.”

**PIPELINE ASSEMBLY**

Two 400 m long pipe strings were assembled on the southern shore of the Causeway Lake by butt welding the 20 m sections of pipe. Although Alkadyne HCR193B is a new class of PE100, standard welding parameters can be used.

Weld integrity was verified using the bend back test and all beads were retained by Livingstone Shire Council for quality assurance.

The pipes were then pulled through the bore hole back to the drill rig on the northern shore of the lake. The drag and tensile forces on the pipe were minimised by filling the submerged part of the pipeline with water during the pull-through to counteract buoyancy.

The trenchless installation was completed by attaching flange adapters to connect to the distribution network. The adapters were connected by electrofusion welding using standard fittings, demonstrating HCR193B’s excellent welding compatibility with conventional PE100 resins.

**PROJECT COMPLETED**

The installation was completed by the start of September 2017, with the project delivered on time and on budget. The short turnaround from the awarding of the tender to completion minimised the disturbance to the community.

All stakeholders involved in the project were highly satisfied with the outcome. For Livingstone Shire Council, Millennium PE100 HSCR provided the only viable long-term solution to rehabilitate this water main section by HDD.

Mr Turner says Maxibor is looking forward to working with the pipe again, and testing the limits of the technology.

“It’s the first time Millennium pipe, based on Alkadyne HCR193B, has been used in Australia and we’re glad to be associated with that milestone,” says Mr Turner.

The Yeppoon installation has highlighted how PE100 HSCR ensures the structural and operation integrity of a pipeline, even under the most challenging installation and application conditions. 

For more information visit www.qenos.com or www.iplex.com.au