

Eastern Terrace Watermain Upgrade



Photo courtesy of SEIPP Construction Ltd

Project Location:
Christchurch, New Zealand
Contractor:
SEIPP Construction Ltd
Installer:
Utilities Infrastructure
Manufacturer:
Saint-Gobain PAM China
Importer:
Pipe & Infrastructure Ltd (P&I)
Delivery to customer:
PW Pipelines

Product:
Hydroclass® Ductile Iron Pipe DN600
Pipeline length: 2.5km
Joint type:
Universal STD VE Locking Ring Joint



PROJECT BACKGROUND

Extract from Project Specification May 2021.

The scope of the Contract Works was to renew the existing DN600 Concrete Lined Steel (CLS) pipe on Eastern Terrace on a new alignment as shown in the Drawings.

The proposed alignment starts from Palatine Terrace and goes to Eastern Terrace through Heathcote River via a river crossing.

The Contract Works included:

- 2,455 meters of DN600 Ductile Iron Pipe along the route shown on the Drawings.
- 1,308 meters of DN180 PE100 pipe along Eastern Terrace.
- 102 meters of DN600 DI crossing the Heathcote River including the pipe on Palatine Terrace carriageway and the pipe from Heathcote River bank to 113 Malcolm Avenue.

SOURCING

Discussions started approximately 5 years ago with Christchurch City Council.

Pipe and Infrastructure and PAM Saint-Gobain showed all the different options that could be offered for this project to the consulting engineers BECA. A few years later after further discussions and redesigns with CCC and BECA the project was specified DN600 VE Restraint Joint Ductile Iron Pipe.

After the tendering process was complete, the successful merchant was Plumbing World with the contractor being SEIPP Construction. Once all the tender details were agreed upon we were able to hold progress and begin the technical discussions with PAM Saint-Gobain. After that a full presentation and training session was led by Mickael Georgitsis at SEIPP Constuction's facility, which was attended by CCC, P&I, PAM Saint-Gobain, Plumbing World Seipp and Utilities Infrastructure Ltd.



DELIVERY

Sea freight importation of DI pipe ex PAM China met scheduling expectations of the principle and client to accommodate for council inspection and first pipe installation timelines. Although sea freight was challenging post the Covid-19 pandemic, PW Pipelines worked closely with Pipe and Infrastructure to provide transparency on timelines.

All logistic management was undertaken once sea vessel arrived in Lyttleton Port to accommodate the movement and devanning of x47 40-foot containers dual packed with DN600 Ve Joint Ductile Iron Pipe. Initially small challenges were overcome to ensure no pipe was damaged during devanning. Modifications were made to pipe boom to meet load requirements of the pipe weight.

All DI pipe once devanned were stacked in accordance with PAM Saint Gobain guidelines which reduced the risk of potential damage to the external or internal of parts of the DI pipe. Out of 470 pipes only 12 pipes required minor repair prior to installation.

Delivery to site was completed via contractor and hiab. From the pipe stack to arrival on multiple sites no further damage requiring repair was noted.



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INSTALLATION

The installation was carried out by SEIPP Construction Limited. Prior to installation, a Saint-Gobain representative along with representatives from Pipe and Infrastructure provided in-depth training on the installation of Ductile Iron Pipe.

SEIPP has been really pleased with the product and how the installation has progressed.

'We have been working with the Saint Gobain Ductile Iron VE Joint Pipe for the past 18 months on the Eastern Terrace project. It is the first time that we have used restrained pipe of its kind and have found it to be a great product. Being a large diameter pipe and installed in deep excavations it has come with its fair share of construction challenges. However, the handling and installation of the actual pipe has been trouble free. It is a rigid pipe but is able to get a good amount of flexibility out of each joint which has helped resolve unexpected design issues. Of the 470 pipes installed there have been limited quality issues and any damage that has occurred to the pipe has been easily repaired by the site team. The customer service from our supplier and PW / Pipelines has been top notch which has helped with the smooth delivery of the project. We would happily work with both the pipe and our supplier in the future.'

Howie Smith
SEIPP Project Engineer

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