

Sandgate Avenue Flood Alleviation Project, Stage 2

Date

September 2010 – February 2012

Location

Frankston, Victoria

Project Value

\$12.5 million

Project Details

Stage 2 of the Sandgate Avenue Flood Alleviation Drainage Project ('Sandgate Stage 2') is part of a three-stage strategy to increase the capacity of the drainage system in Frankston's Central Activity District (CAD) to reduce flood risks in the area in the case of a major wet weather event. The project was constructed for Melbourne water by JAYDO as part of the Pipelines Alliance.

Works were carried out within the CAD of Frankston requiring an extensive planning and stakeholder engagement process. Construction activities for the Sandgate Stage 2 project involved:

- construction of new inlet works and associated box culverts across Fletcher Road;
- provision of increased drainage capacity along Beach, Olsen and Evelyn Streets;
- lining and re-use of an existing brick drain and creek outlet, and;
- connecting works back into the existing drainage system in the Frankston CAD.

The CAD is the area between Beach Street, Young Street, Playne Street and Kananook Creek in the City of Frankston, to the south-east of Melbourne. It contains significant infrastructure of regional importance. The Bayside North Shopping Centre, law courts, police station and Chisholm Institute of TAFE are all located in the vicinity, and subject to flooding.

Key Challenges

Project works took place in a busy and heavily constrained brownfield environment, where local traffic and retail activity had to continue with as little disruption from works as possible. There were approximately 8000 pedestrian movements per week, and approximately 200 vehicles to be detoured during the peak hour period, including local bus and taxi services, per day. The nearby Frankston railway station is a designated premium station, with several train arrival and departures per hour, and an estimated 1400 passenger movements per day.

Conducting project works in this busy, built-up environment was extremely challenging. The scope included: construction of 14 new manholes and demolition of 10; installation of 18 grated inlet chambers; installation of 140 box culverts; removal of 200m of existing drains and replacement with 270m; construction of transition structures, and integration and/or reconnection of all into the system.

Particularly technically challenging aspects of the program of works included:

- Working in a live stormwater drain environment
- Maintaining functionality of live services and working around services



- Working with affected stakeholder businesses to minimise impact
- Working around and under the railway line
- Cleaning, restoration and relining of an existing brick drain and incorporation of the drain into the project scope.

Project outcomes

The Pipelines Alliance's successful completion of Sandgate Stage 2 achieved the over arching goal of providing increased flood protection to the Frankston CAD by upgrading and increasing the capacity of the local stormwater system.

Works have also significantly improved the local environment. For example, by upgrading road and pavement infrastructure along Beach Street and within Frankston's CAD, and by installing a gross pollutant trap at Olsen Street to capture large litter items such as plastic bags, bottles, newspapers and cigarette butts before they wash into Kananook Creek and Port Philip Bay.

Client feedback on project success

The Melbourne Water Pipelines Alliance Program Manager, Phil Corluka, and project initiators were delighted with the quality and timeliness of the project. Phil stated that the way the project team managed the various challenges to construct the new drainage system was impressive.

The feedback from Melbourne Water Operations and Asset Management personnel was also positive, with a statement saying that the quality of the structural works was the best they'd seen, and raised the industry standard.

The Pipelines Alliance also received a High Commendation for the project at the 2012 Civil Contractors Federation Earth Awards.



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