

Project Profile Port Pirie Stage One CBD Upgrade



Client	Port Pirie Regional Council
Location	Port Pirie, South Australia
Duration	January 2017 - June 2017
Contract	Lump Sum Construct Only
Cost	\$3.6 million

Project Overview

Port Pirie Regional Council is situated on the upper reaches of the Spencer Gulf in the Southern Flinders Ranges of South Australia. The 1,761km² council's boundary is home to 17,000 residents, 10,000 properties and 1,300km of roads.

The Port Pirie Central Business District Upgrade project was designed to revitalise the Port Pirie City Centre and its environs and included improvements of the streetscape, alteration of associated signage, improved branding and the installation of essential infrastructure. The aim of the project was to revitalise the public realm and retail environment to support local businesses and the community.

McMahon Services was awarded the contract to deliver Stage 1 of the works which occurred predominately on Alexander and Florence Streets. Initial works included demolition and appropriate disposal of existing kerbing, footpaths, spoon drains, ramps, trees, vegetation, street furniture and asphalt. Demolished waste included 6,300m² of bitumen and 1,000m³ of concrete.

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Stormwater works included 400m of reinforced concrete pipe 300mm to 900mm in diameter, the installation of over 300m of 100mm to 225mm diameter PVC pipe, 12 double side entry pits, two single side entry pits, six junction boxes and the installation of twenty pits.

Concrete kerbing works totalled over 2,000 lineal metres and included the construction of kerbs, gutters, concrete plinths, flush kerbs, median kerbs, semi-mountable kerbs, driveway crossovers, spoon drains and 27 pram ramps. Coloured and exposed aggregate concrete was applied to the roundabouts, concrete plinths, pedestrian crossings and pram ramps.

Over 5,600m² of asphalt was laid, of which 3,500m² was deeplift. 1,650t of asphalt was used on the project. More than 3,500m² of footpaths were constructed and comprised of milled and shot blasted pavers sourced from Urbanstone and Littlehampton.

Street furniture included the supply and installation of 24 seats, 37 bollards, six bins, eight bike racks, six banner poles, one drinking fountain, new signage and the reinstatement of existing signage, laser cut street signs applied to roundabouts, and stoneset tree surrounds with aluminium edge frames.

Landscape works totalled 1,000m² and included the planting of over 3,500 plants, 47 trees and 13 palm trees with an average height of 5m. Over 2,000m of irrigation piping with five control boxes were installed to regulate the supply of water to the plants. Other works included service locations, line marking, installation of ten new light poles and one switchboard, and the laying of 300m of electrical conduits.

Project Challenges

Traffic Management

A staged approach was adopted to maximise traffic and pedestrian access, with only full road closures occurring for asphalt works, on both street, and for stormwater and water main works on Alexander Street. All affected businesses were provided with advanced communications and notice of works at all times. Night shift works on footpaths were undertaken regularly to allow the footpaths to remain open during business hours.

Latent ground conditions

Service locating, stormwater and service trenching and pipelaying works were challenged by the deep trenches required and the high groundwater table. Due to the tightly constrained construction site, trenching works could not be benched so shoring boxes were utilised to prevent the collapse of earthen walls.

Groundwater levels were affected by tidal sea water infiltration. To mitigate this risk a 100mm diameter submersible pump with screenings to the underside of the pipe was utilised at all times during trenching works to keep the water level down. On occasions, works had to be coordinated to align with low sea tide levels to minimise water infiltration.

Extensive and previously unknown services were encountered both before and during the earthworks phases requiring careful detailed excavations around operational services so not to damage them. Old asbestos stormwater pipes were also encountered, carefully removed and disposed of at an EPA licenced receiving station.

Community and Stakeholder Engagement

Key to the success of the project was the collaborative approach adopted between Port Pirie Regional Council and McMahon Services on strategies and plans for engaging with and managing community and stakeholder expectations. As the works were adjacent to prominent commercial and retail businesses in the centre of the town, an early engagement strategy was adopted. Project Manager Gary Fitzpatrick presented to all key stakeholders on how the works would be conducted and staged, and how disruptions to traffic and pedestrians would be minimised.

Project updates were communicated on an ongoing basis, and included planned road closures and night works. These were communicated with Port Pirie Regional Council during weekly coordination meetings, who then broadcast this information to the public via various mediums including local radio, local television advertising and through the Council's Facebook page.

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