ROB CARR

GHERINGHAP STREET MAIN DRAIN

CLIENT

City of Geelong

LOCATION

Geelong, VIC

TYPE OF CONTRACT

Construct Only

VALUE RANGE

$5 million - $10 million

CONSTRUCTION PERIOD

Jan 2019 - Dec 2019

OVERVIEW

Flooding is a recognised problem for Central Geelong, with three significant rain events in the past 10 years. With central Geelong growing rapidly and the existing infrastructure in need of updating to enable progress, a new stormwater drain along Gheringhap St, from near Johnstone Park to Corio Bay, had to be constructed to significantly reduce the frequency and severity of flooding within the CBD following major storm events. This ultimately benefits local businesses, residents, visitors and developers in the city. This essential infrastructure will assist future developments in the area by reducing the likelihood and consequences of flood events and assist in ensuring the convention centre or any other future buildings in the area are protected from the effects of flooding as development in and around the waterfront.

In order to minimise the impact on businesses, residents, university campus and the road network in central Geelong, Rob Carr constructed the new DN1800 stormwater drain via microtunnelling traversing down Gheringhap St in Geelong, from Mercer St down to the foreshore at Corio Bay. The tunnel comprised of two straight drives totalling 430m with the longer of the two lines 380m. The tunnel ranged in depths from 4m to 11m and passed under roads, major intersections, critical utilities, services and the foreshore skate park, which had minimal known design levels and ground conditions beneath same. The new DN1800 pipeline was ultimately connected to the existing 100 year old rock stormwater culvert at the upstream end into a newly constructed outfall structure built underneath the footpath at Corio Bay prior to strict timelines set by Council. Manholes were constructed at regular intervals along the alignment, with three constructed within the launch-reception pits, and two others over the newly installed tunnel. All civil works were carefully scheduled to minimise impact on traffic. A Gross Pollutant Trap was also specially built to significantly minimise any potential pollution entering Corio Bay.

PROJECT HIGHLIGHTS

- Successful 380m drive using VMT computerised Guidance System achieving 1:250 grade requirement
- Zero incidents working in tight corridor in Geelong CBD adjacent to University and State Authority buildings
- Ocean outfall inclusive of coffer dam to facilitate construction of live outfall structure
- Achieved target completion date to allow reopening of the tourist foreshore area prior to summer 2019-20
- Reduced risk profile due to pre construction investigative work in critical foreshore area
- Significantly reduced carbon footprint and reduction in environmental impact using microtunnelling in lieu of open excvation construction in CBD.

PROJECT SCOPE

- Temporary works design
- Construction of shafts to 11m deep
- Construction of coffer dam in Corio Bay
- 650m of investigative Pilot Auger tunneling under 50m long section of Skate Park and Foreshore to de-risk project
- 430m of Microtunnelling DN1800 RCJP
- Microtunnel constructed at a grade of 1:250
- Microtunnel in saturated wet clays and sands
- Long term Traffic Control including detours
- Construction of 2.4m square steel reinforced concrete manholes to 11m deep (in situ)
- Construction of 2.4m square GPT structure
- Connection to 100 y/o rock drain with 3m x 5.5m reinforced steel reinforced concrete structure
- Detailed final restoration including, pavements, Skate Park and Foreshore areas
- Work in close proximity to Deakin University

QUEENSLAND
WESTERN AUSTRALIA
NEW SOUTH WALES

Rob Carr Pty Ltd
74-76 Union Cct, Yatala QLD 4027
PO Box 6103, Yatala QLD 4207

P: 1300 883 602
F: 1300 883 605
W: www.robcarr.com.au

Updated December 2019

ROB CARR

GHERINGHAP STREET MAIN DRAIN

Top: Lifting the TCC1800 | **Bottom Left:** Launch shaft on Gheringhap St | **Bottom Right:** Traffic control along Gheringhap St - VIC WHS Office