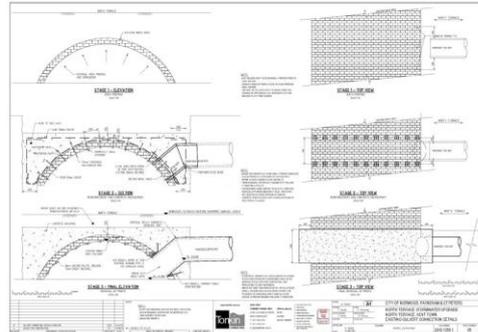


# NORTH TERRACE DRAINAGE



**LOCATION**

North Terrace, Kent Town and Wicks Avenue, Campbelltown

**CONTRACT VALUE**

\$579,000

**CONSTRUCTION PERIOD**

November 2011 - April 2012

**FORM OF CONTRACT**

AS2124-1992

**CLIENT**

City of Norwood, Payneham and St Peters

**PROJECT SUPERVISOR:**

Malcolm Cox

**REFEREE**

Kosta Paraskevopoulos  
City of Norwood,  
Payneham & St Peters  
Ph: 08 8332 6338

**DESCRIPTION OF PROJECT:**

North Terrace has suffered significant flooding near the Royal Hotel during heavy rain events. The City of Norwood, Payneham and St Peters developed a significant stormwater solution to resolve the flooding. The new solution required the pipe to connect into a 150yr old sandstone arch culvert (which used to be the bridge over First Creek). The new stormwater stretched from the Royal Hotel up past College Road.

**PROJECT CHALLENGES:**

1. North Terrace is one of the main arterial routes into the city centre. The road is busy until from 5am till 3am most days. T & J Constructions completed the works maintaining two lanes of traffic into the and out of the city during peak times.
2. The arch culvert was over 150 years old and once exposed had a number of sandstone blocks missing from it including the keystone as the result of previous work. T & J Constructions suggested a design to bandage joint the entire arch culvert using arch props and arch anchors. Tonkins assessed the design and approved it as an alternate to the original design in the interest of safeguarding the staff working in the culvert and the old infrastructure.
3. The stormwater system required a number of road crossings to pick up side entry pits on the far side of the road. To minimise traffic issues these road crossings were completed as night works and North Terrace was closed to through traffic. Upon excavating across the road T & J Constructions found the old original tram line concrete foundations dating back over 100yrs which was approximately 2 foot thick with hardwood sleepers embedded in it. T & J Constructions used a rock breaker to remove the old footings at each crossover which increased our program length.

**KEY CONSTRUCTION PROCESSES:**

The North Terrace stormwater project involved extensive traffic management as the stormwater was installed and the significant underground obstructions and services were removed or avoided. North Terrace required a deeplift road reinstatement over a 900m length of road. Council took the opportunity to have T & J Constructions replace the kerb along that section at the same time. Traffic Management was complex as there were multiple stages which required various traffic management processes, including contraflow, lateral shifts, stop go, night time road closures and detours. There were a number of businesses along the stretch or road including the Heart Centre, Royal Hotel, Clark Rubber and Hickinbothams. We worked closely with stakeholders to ensure access was maintained. We also had VMS signs promoting the businesses during non work times.

Works involved in the project include;

- Service Adjustments (water mains)
- Non-complex service relocation
- At grade intersection and channelisation works
- Medium-sized culvert works including precast concrete components
- Granular and or Asphalt Pavements Pavement Construction
- Cross and Longitudinal Drainage
- Moderately complex worksite traffic management
- Pavement construction using modified materials
- High performance surfacings
- Special foundation and/or subgrade and subsoil drainage treatments
- Moderately complex to complex community/stakeholder management