

MAYLANDS

principal shared path,
underpass and footbridge



Client: Main Roads Western Australia

Location: Maylands, WA

Value: \$4 million

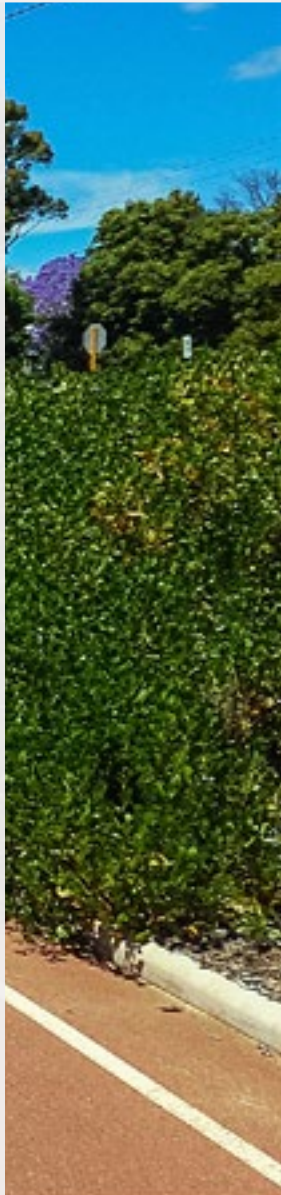
Completion Date: February 2004

The works comprised the construction of a 2km long principal shared path (PSP), an underpass and footbridge all of which were located adjacent to or within the electrified rail reserve of the Perth to Midland up-main.

Ancillary works included drainage, limestone block retaining walls founded on reinforced concrete footings, fencing, lighting, landscaping, car parks, line marking and kerbing.

Due to the location of the works within and adjacent to the electrified Perth to Midland rail reserve, a comprehensive rail safety management plan was developed to the Public Transport Authority's (PTA) specification and approval and was implemented throughout the project.

Further, rail isolations were required during major activities, namely; sheet piling adjacent to the running line, installation of the King William Street footbridge superstructure and replacement of the main span at the Meltham Train Station.





Soil nailing works being carried out adjacent to the rail tracks

special features

- The PSP comprises a red oxide laterite asphalt wearing course founded on a crushed limestone base course
- Extensive sheet piling was required to retain the rail running line at the approach of the Hotham Street underpass. These works occurred at night and under isolation of the running line up-main
- Main Roads Footbridge 9208 spans King William Street and comprises a composite steel and cast-insitu deck founded on cast-insitu retaining walls and large spread footings. The bridge also includes steel protective screens to PTA specification for earthing and bonding
- Detailed excavation and speared dewatering methods were employed during construction of the bridge abutments
- To prevent undermining of the rail running line and King William Street, propped cantilever sheet piling and soldier piling methods were used
- The installation of the superstructure occurred at night and during a full road closure of King William Street
- The Hotham Street underpass comprises a cast-insitu flat slab deck founded on contiguous bored CFA piles
- The underpass was constructed by the top-down method and includes a fibre-reinforced shotcrete facing to the exposed inside faces of the contiguous piles
- The presence of the high pressure CMS gas pipeline adjacent to the underpass determined both the staging and safe construction methodology of the underpass to ensure the integrity of the gas pipeline was maintained at all times
- Other works included the replacement of the Meltham Station footbridge that spans the Perth to Midland up-main and the refurbishment of the switch-back pedestrian ramps to the station.



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BOCOL CONSTRUCTIONS PTY LTD

suite 13/7 kintail rd applecross wa 6153 / po box 80 applecross wa 6953
t (08) 9316 1148 / e reception@bocol.com.au / w bocol.com.au
ACN 008 904 005 | ABN 82 008 904 005