

Locomotive Wash-down Area Re-aligned

INDUSTRY

Infrastructure

STRUCTURE

Railway

PROBLEM

Sinking slab

LOCATION

PT Augusta, Australia

DURATION / YEAR

2 days / 2009

TECHNOLOGY

Uretek Deep Injection &
Uretek Slab Lifting

BUSINESS UNIT

Mainmark Australia



Summary

At the Downer EDI Rail facility in Port Augusta, South Australia, locomotives are overhauled and re-fitted. Prior to entering the workshop area they are washed down over a concrete slab area.

As so often happens with vehicle wash-down areas, a subsidence problem had occurred caused by the ingress of water eroding the sub-base of the slabs. The slabs had subsided preventing the water from running off into the drains between the rails.

Taking great care keep the rails precisely level and aligned, our team from Adelaide were able to re-support the slabs and recreate proper drainage of the area in just one full day.

Objectives

The objective was to re-support the slabs and to re-align them so that the water used to wash locomotives would run into the mid-rail drains; and to achieve this while maintaining the rails in their precise positions.

Solution

Uretek Deep-Injection: We re-supported the area by injecting engineered structural resin directly through the slabs down to the weaker layers to a depth of 1,000 – 1,500mm.

Uretek Slab-Lifting: By injecting directly underneath wooden sleepers and below the ballast, we raised the exact sections of slab required to correct the drainage of the washdown area.

The wash-down slabs were re-supported and raised to correct levels, restoring drainage without disturbing the rail alignment.