Watheroo Part A

C-TWELVE

Case Study
C1223-001

Year
2022

Client
CBH

Site/Location
Watheroo / Mashalling Area

Region
Wheat Belt, Western Australia

Scope
Insitu
Stabilisation of existing Pavement

Total Production
2500M2

Product Type
C-12 +

Carbon Sequestered
80T

Total Tonnes Placed
40T

Safety
Zero LTIs

Project Summary

In September 2022 CBH Group (CBH) engaged C-Twelve (C12) to rehabilitate a 2,500 m2 hardstand area within the terminal, which is subjected to fully loaded, turning trucks. The treatment was a 150mm in-situ stabilisation of the existing pavement. The in-situ material was stabilised with a C12 propriety 60/40 anionic bitumen emulsion, C12+, and biochar. Three weeks after stabilisation, the hardstand surface was sprayed with a C12 proprietary rubberised anionic bitumen emulsion, C12R, to seal the pavement. In January 2023 a 10mm crushed granite aggregate biochar blend was spread and rolled into the surface.

The section had been opened to traffic for approximately two weeks and showed no signs of structural compromise. Surface ravelling and shrinkage cracking however were evident over large areas. Premature ravelling can occur for several reasons including poor material grading, insufficient binder content and inadequate compaction. It should be noted ravelling and shrinkage cracking are not uncommon for other stabilised pavements such as foamed bitumen and cement. The purpose of a stabilised pavement is to provide a structurally adequate base, which is typically overlaid with a wearing course – either a spray seal or asphalt. Where an exposed stabilised base is trafficked for prolonged periods without a wearing surface there is a high probability of ravelling, irrespective of the type of stabilisation.

C-Twelve
62-64 Wittenberg Drive
Canning Vale WA 6155
0401 334 421
www.c-twelve.com.au