

Project Profile

Dock One Stage 1



Client	Renewal SA
Location	Adelaide, South Australia
Duration	November 2017 to January 2019
Contract	Lump Sum Construct Only
Cost	\$3.0 million

Project Overview

Dock One is a 4.0ha waterfront development site that will become a primarily residential precinct with activated ground floor spaces facing the waterfront and public promenade. In December 2017 it was announced that Starfish Developments was the successful proponent to redevelop the land at Dock One as part of the implementation of the Port Adelaide Renewal Program overseen by Renewal SA.

Starfish's proposal included approximately 270 homes, predominantly two and three bedroom townhouses, and the redevelopment of the Marine and Harbors building into apartments and ground floor retail premises. Public access to the waterfront will be maintained with a promenade and a pedestrian bridge will be installed across Dock One. The building project was awarded to Starfish in partnership with developers.

The major challenge facing the site that 90 years earlier it was a wharf, and had been filled in with various artificial materials including old foundations of the previous wharf buildings, rails and thick concrete slabs. The resulting ground conditions had low load bearing capacity severely restricting the capabilities for building construction in the area. Therefore, a bulk earthworks project was required to improve ground conditions before any development works could commence.

McMahon Services

Head Office

T (08) 8203 3100 F (08) 8260 5210

E adelaide@mcmservices.com.au

W mcmservices.com.au



McMahon Services were awarded the bulk earthworks remediation project based in part to the company's success at delivering the Lot Fourteen Stage 1 Works in Adelaide's central business district, also for Renewal SA.

Scope of Work

Bulk earthworks included the excavation and placement of approximately 20,000m³ of site material to provide an engineered base and major subgrade improvement works. Other works included the removal of underground structures and 1.2km of redundant services, importing approximately 29,000m³ of fill to raise the area to design levels, and surcharging sensitive areas within the site. Completion works included the removal of preload fill and constructing approximately 370m of retaining walls.

As the site was close to existing buildings, McMahon Services employed the use of a large compactor to manage the compaction using static ground pressure techniques. This ensured vibration was not used on the site and did not cause resonance-induced damage to any nearby buildings including the heritage infrastructure adjacent to the site

Project Challenges

A key project challenge was to remediate the average subgrade condition. The subgrade material, due to its vicinity to the water table and its geotechnical properties, required major re-works. This comprised of importing quarry rock and geotextile rolls placed in a control manner to improve the bearing capacity of the natural ground. Bridging layers were constructed where required.

Given the proximity of the site to existing residential and commercial properties, careful consideration was given to dust management and material drag out was also required.

McMahon's Services undertook more dust suppression activities than would be normal for a site this size to ensure no complaints were received. Daily checks and reporting of dust conditions and appraisal of the weather forecast ensured dust control methods matched the forecast weather. This was important to ensure that too much water wasn't applied which might create an issue with runoff as the project was adjacent to the sensitive marine environment.



McMahon Services

Head Office

T (08) 8203 3100 F (08) 8260 5210

E adelaide@mcmservices.com.au

W mcmservices.com.au





McMahon Services

Head Office

T (08) 8203 3100 **F** (08) 8260 5210

E adelaide@mcmervices.com.au

W mcmervices.com.au

