

Project Profile

RAAF Base Edinburgh Remediation Works



Client	Department of Defence
Location	Edinburgh, Adelaide
Duration	32 weeks
Contract	Defence Fuel Installation (DFI) Remediation Works
Cost	\$3.3 million

Project Overview

McMahon Services were engaged to undertake this extensive Defence Fuel Installation (DFI) remediation project within the fully operational Royal Australian Air Force (RAAF) Defence base in Edinburgh, South Australia. The project involved the rectification of non-compliances that were identified within the DFI, including removal of redundant fuel infrastructure, as well as the evaluation and assessment on the condition of the remaining underground storage tanks across the facility.

The RAAF Edinburgh DFI site comprised of five disparate work areas across the base including the Road Movements Section (GFI), the 7RAR Regiment Fuel Facility (7RAR), Aviation Bulk Fuel Installation (BFI), the Fuel Quality Control Facility (FQC) and the Central Emergency Power Station (CEPS). Extensive Environmental assessment and remediation works were also undertaken to ensure the facility was compliant with Defence and EPA standards.

The scope of works included:

- > Extensive electrical, hydraulic and mechanical services in all hazardous areas;
- > Modification to electronic and communications interfaces included supervisory
- > control and data acquisition's (SCADA) systems;

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- › Reverse engineering of Aviation Fuel Fire protection systems;
- › Removal of underground fuel storage tanks;
- › Environmental remediation of excavated area and disposal of contaminated soils;
- › Demolition of redundant fuel infrastructure;
- › Grit blasting and painting of all existing fuel pipework onsite;
- › Reinstatement of redundant day tank and fuel pumping facilities for the base emergency power station;
- › Hand rail and walkway construction to bulk aviation fuel storage tanks;
- › Fabrication and installation of new safety showers and shelters across the site;
- › Safety bollard installation across the DFI.

Additional works were awarded to McMahon Services, including the extraction of damaged, non-compliant and redundant tank infrastructure and undertaking the associated environmental works. McMahon Services then installed new underground storage tanks and ancillary equipment. The works also required modifications to the supervisory control and data acquisition's (SCADA's) system. Intrinsically safe equipment was utilised where required and in accordance with the hazardous area protocols.

There were numerous challenges encountered over the course of the project, mostly in relation to the hazardous areas in which the McMahon Services team were working. The RAAF Edinburgh Base is an operational facility and all works needed to be undertaken without compromising the operational capability of the facility.

Excavation of the underground storage tanks proved to be a difficult task due to the amount of unidentified electrical and fuel infrastructure. To manage this risk, McMahon Services utilised their in-house hydro excavation capability that allowed safe identification of in-ground infrastructure.

To manage the environmental risk, McMahon Services partnered with Agon Environmental who worked with Defence on numerous contamination observations across the facility including full EPA Notification of a significant finding.

