Submission for:

MBA – WINNER CIVIL ENVIRONMENTAL MANAGEMENT PROJECT - 2011

HMAS HARMAN REMEDIATION

Completed site - November 2010 (sourced from Google Earth)

Contact Details:

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Project Description

HMAS Harman Remediation

HMAS Harman – New Building Project – Contamination Remediation

Principal:	Department of Defence
Superintendent:	Spotless Services Australia Ltd
Contract Value:	$6.5m
Commenced:	January 2010
Completion Date:	October 2010

The project entailed the remediation of asbestos and other contaminants in soil located within the proposed new building development site at HMAS Harman.

Originally this project was awarded a project management contract with a managing contractor responsible for the design and delivery of the entire project. Upon investigation, the identification of contaminated material resulted in the project being delayed and redefined into two components, these being remediation of the site and then construction of the building.

Hewatt Earthworks, through Spotless Services Australia directly to the Department of Defence, was awarded the remediation of the site component on a fast track basis as a mechanism of getting the project back on program. There was an expectation that the site remediation project would be completed in a three month period, however, discovery of more contaminated material than indicated in the initial investigation and periods of wet weather resulted in significant delays, with the project completed in October 2010.

Initial site – January 2010

Hewatt Earthworks' involvement

Hewatt Earthworks was contracted to manage the remediation project from engagement of environmental consultants (site investigations, phases 1 – 3 as per below) to removal of contaminated material and rehabilitation of the site with controlled fill.

Phase 1 - initial investigation and research through any historical records/data and viewing of the site

Phase 2 - test holes dug to confirm Phase 1 findings

Phase 3 - preparation of RAP (Remediation Action Plan) (Refer to Attachments)

Hewatt Earthworks was required to safely and effectively remove all asbestos and other waste from the impacted area so that the waste no longer posed a risk to human health or the natural environment.

Project Tasks Included:

- Sampling and testing of the site to ascertain the extent of the contamination and uncontrolled fill

- Decontamination to a National Environment Protection Measure level
- Earthworks to provide a level compacted engineered fill platform to level 1 ready for detailed footing excavation.

The area was remediated and the site made suitable for National Environment Protection Measure (Assessment of Site Contamination)1999 Health Investigation Level 'A' – Commercial Landuse.

As head contractor, Hewatt Earthworks engaged and managed the following subcontractors:

- Coffey Environmental (for Phase 1 and 2)
- Robson Environmental (for Phase 3)
- SMEC and OTEK (site auditors)
- OZBESTOS (asbestos licence holder)
- Douglas & Partners (Geotechnical consultant)

Technical Aspects

Prior to the development of projects such as Harman, the Commonwealth New Building Project and the Molonglo Development, all bulk disposal of asbestos contaminated material was disposed of in NSW. Only small quantities of double wrapped asbestos were accepted at the Mugga Lane facility. This facility does not have the capacity for bulk deliveries of the magnitude generated by the above projects. Substantial lobbying and negotiations were undertaken by Hewatt Earthworks in order to reactivate the West Belconnen Resource Management Centre (WBRMC).

As the WBRMC had effectively been "mothballed" by ACT NoWaste in 2003, Hewatt Earthworks was required to re-establish and operate the facility. This was undertaken under a memorandum of understanding between Hewatt Earthworks and the ACT Government. Hewatt Earthworks' operation at the Belconnen resource centre included:

- Establishment of Safe Work Method Statements (SWMS), a Safety Plan and protocols with negotiations held with the EPU, Workcover, the Client, the CFMEU, etc, as previous protocols requiring the double wrapping of contaminated material in plastic were not practicable for the large quantities associated with this project. (Please see attached SWMS and Safety Plan)
- Maintenance of access and all weather access roads to the disposal site
- Establishment of a containment area
- Dust suppression
- Provision of plant and equipment to compact, place and seal with capping material
- Protection of all on site personnel to tarp and untarp and clean trucks
- Air monitoring

- Survey control to maintain records of disposal locations by source sites within the disposal area

Due to increasing amounts of revealed contaminated material at the Harman site, budget pressures increased. In a response to control costs, low level contaminated material, that was also geotechnically suitable, was interned on the Harman site within a waste cell. This cell was located at the deepest part of the fill platform at a depth that would not be disturbed during the future construction. The cell was surveyed and recorded and included in the final site validation report.

It was also discovered that the contamination continued well beyond the boundaries of the remediation site. Refer to photo below. The continuation was under existing car parks and it was not feasible to undertake remediation under these completed structures. A marker barrier was therefore installed, identifying the limit of remediation, and a control fill platform constructed over the area.

Air monitoring was undertaken at each end, i.e. at Harman and the WBRMC disposal centre. This was done for the entire duration of the project. No detectable fibre counts were recorded, giving a 100% safety reading for the project.

All water that was generated from the site or created as run off over the contaminated material was trapped and collected in sedimentation ponds. This potentially contaminated water was then utilised in the ongoing suppression of dust for the remediation works (within the contaminated zone). This reduced the need for costly testing of water, delays in the program while waiting for results and costs to dispose of the water off site.

Dust suppression for areas outside of the contaminated zone was achieved by utilising recycled water from our other projects (Airport and Russell). This eliminated the use of any potable water on the project.

Towards the end of the project, when it became apparent that the proposed building works would not proceed immediately, other environmental protection measures were constructed to effectively make the site safer for a period of 6 months. These included:

- Concrete kerbs to existing car park to deflect water to the northern and southern ends
- Geotextile lined flumes installed to provide a pathway for the water down the potentially contaminated area to the remediated platform.
- Intermediate silt fences were constructed to slow the water and perimeter silt fences to act as a final barrier.

Project Quantities:

Approximately 50,000t of contaminated material was removed from the site. Approximately 5,000t of low risk material was interned and approximately 84,000t of clean material was imported for the controlled fill.

Referees

Spotless Service Australia Ltd - Craig Bush

Defence Department - Tammie Weekes