



## Lednez Site Remediation and Validation, New South Wales

### Environmental Services

Site Remediation and  
Validation of Soil and  
Sediments

#### Client

Thiess Services

#### Location

Lednez and Homebush Bay, New  
South Wales

*“The team assigned to this project brings with them a vast array of experience. They work together well and communication between both the team and between the team and Thiess is exemplary. When issues have arisen in the past, the CH2M HILL team has worked together to offer possible solutions ahead of being requested to do so. The team thinks outside the box and work well in a changing environment.”*

Kate Cole, Senior Project Engineer,  
Thiess Services

CH2M HILL HILL is the Validation consultant for the remedial activities that were undertaken at the Lednez and Homebush Bay sites which occupy a large portion of land adjacent to Homebush Bay on the Rhodes peninsula. The site was historically used for chemical manufacture, and was partly reclaimed using spent lime sludges from various processes. The project also included the remediation of a defined strip of sediments in Homebush Bay to a depth of 0.5m. The major contaminants of concern included dioxins and furans, VOCs and SVOCs.

This high profile site was part of the NSW Site Auditor Scheme and therefore consultation with the Site Auditor and sign off was required at all stages of the project. The project also involved many stakeholders including the surrounding community, Department of Environment & Climate Change and future land owners. Following the four-year project the Site is to be re-developed for residential, open space and community uses.

CH2M HILL conducted validation of all material that was to remain on site including treated material, excavated fill and natural soil and imported material. Contaminated soil was treated using direct thermal desorption. The treated material was then re-classified as being suitable for re-use on site or further treatment. The project also included classifying the contaminant levels in the sediments of Homebush Bay and verification that the required amount of material had been remediated by Thiess Services. Over 400,000m<sup>3</sup> of soil, including 20,000m<sup>3</sup> of sediment, had been validated.

To suit the proposed mixed-use of the land post remediation, several different sets of criteria were developed based on risk assessments, and were refined in the Validation Plan. These were applied in conjunction with statistical techniques to demonstrate that the material remaining on site had been adequately characterised and met site criteria.

During the project CH2M HILL developed a methodology for the in-situ validation of soil and implementation of an online proprietary Site Information Management System (SIMS) for this site. This tool enabled nominated stakeholders and decision makers to access the site's analytical data from a web portal with a user-friendly GIS interface.

In order to efficiently manage the huge volume of data collected, CH2M HILL also developed an innovative procedure for staged validation reporting. This enabled Site Auditor reviews to be completed under tight project timeframes, allowing Thiess to rapidly handover validated stages of the site to their client.