Submission No 67

Item C, Tab 13

INQUIRY INTO ENROLMENT CAPACITY IN INNER CITY PUBLIC PRIMARY SCHOOLS

Name: NSW Department of Education

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ULTIMO PUBLIC SCHOOL

14-16 WATTLE STREET, ULTIMO - Summary of Site Investigations and Proposed Site Remediation Works

1.0 Douglas Partners Report on Contamination Investigations

1.1 Background

Douglas Partners (DP) issued their report on the site contamination investigation at 14/16 Wattle Street Ultimo, on 21 July 2014.

This report presented the outcome of recent site investigations by DP, in conjunction with collating information obtained during previous investigations by DP, Environmental Investigation Services (EIS), Sinclair Knight Merz (SKM) and Coffey Partners (CP) during the period 1994 to 2005.

1.2 Site Investigation Regime by DP (7 to 23 April 2014)

1.2.1 Soil Investigation

DP conducted borehole investigations at twenty five locations around the site, between depths of 0.4 to 6m.

Soil samples were recovered from each borehole, and were subsequently tested.

Please note that the depth of boreholes was limited to 6m, as the investigations were targeted at a site encapsulation remediation methodology.

1.2.2 Groundwater Investigation

DP established ten groundwater wells (6 new to depths of between 3 and 6m, and 4 existing wells)

Water samples were taken from the wells and tested.

1.2.3 Soil Vapour Investigation

DP established six soil vapour wells.

Soil vapour samples were taken and tested.

1.3 Site Contaminants

1.3.1 Previous Investigations

The main contaminants of concern based on previous investigations, include TPH (Total Petrol Hydrocarbons), PAH, Metals, VOC and Asbestos

DP tested for all of these contaminants, with the exception of asbestos.

1.3.2 Recent Investigations – Assessment Criteria

DP adopted the most stringent Site Assessment Criteria (SAC), being Tier 1.

Within the SAC, DP adopted the appropriate Health Investigation Level (HIL) and Health Screening Level (HSL).

1.3.3 Recent Investigations – Outcome of Test Results

Eighty two per cent of the bore hole locations, yielded test results in exceedance of human health-based thresholds (HIL or HSL).

The ground water testing identified that significant contamination was still present at, and immediately down gradient of site.

The soil vapour tests were all within Australian screening levels.

1.3.4 DP Summary of Outcome

DP is of the view that:

- Elevated concentrations of metals and organic contaminants are still present in soils
- The concentrations of contaminants present a potential source for soil vapour and groundwater contamination
- Elevated concentrations of contaminants are still present within groundwater on site, and are likely to be still migrating off site
- The site can be rendered suitable for the proposed development, subject to appropriate remediation and/or management
- The presence of an unacceptable vapour intrusion risk cannot be discounted at this stage
- An impermeable barrier system is recommended for groundwater management

2.0 Methods of Remediation

DP has identified the following potential site remediation options:

- Option 1 - Excavation of all contaminated soils, and de-watering to remove contaminated water
- Option 2 - Excavation of some or all filling down to a nominal depth below the groundwater smear zone, groundwater treatment, installation of a barrier wall, and capping of the entire site
- Option 3 - Insitu soil treatment to immobilise contaminants
- Option 4 - Encapsulation of all site soils and groundwater in low permeability barriers
- Option 5 - Hydrodynamic isolation of groundwater at the site through a system of groundwater abstraction and recharge

DP has prepared a strategy for the implementation of option 2, as DP is of the view that option 2 is the most cost effective solution

3.0 Estimate of Costs for Site Remediation

The Governments Architects Office (GAO) has prepared two estimates of cost for the proposed site remediation works.

The initial estimate of for $ 9,441,000 (excluding GST), was for the implementation of option 2 over a limited area of the site (ie three “hot spots”).

The most recent estimate of $ 23,270,000 (excluding GST), was for the implementation of option 2 over a more extensive area of the site (refer to Drawing 2 Revision B within the GP report Appendix A)

Mitchell Brantman is currently preparing an estimate of costs for option 1.