INQUIRY INTO ENROLMENT CAPACITY IN INNER CITY PUBLIC PRIMARY SCHOOLS

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Ultimo/Pyrmont Public School Fig and Wattle Street Remediation Action Plan Development Status Report

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Executive Summary

The Department of Education and Communities (DEC) has been in negotiations with the City of Sydney to purchase the site at Fig and Wattle Streets, upon which they intended to build a public school to accommodate 1,000 students. Given the site's previous uses, one of the key areas of concern was the level of contamination likely to be present, and the determination of the extent of, methodology for and cost of remediation required to make it suitable as a site for a primary school.

Although the site investigations needed to finalise the recommendation on remediation method had not yet gone ahead, there was sufficient data for our team to provide DEC with order of magnitude costs of the remediation options proposed in the Overview Remediation Action Plan. In addition, consideration of these costs at a high level was needed to inform:

- Approval pathways
- Requirements for an Environmental Impact Statement
- Impact of remediation works on the construction schedule.



Purpose of Report

This report has been prepared at the request of DEC in order to present in a single consolidated report the information available at the time of the decision to halt the development of the site at Fig and Wattle Street (May/June 2015).

Fig 1: Aerial photo of district with Fig and Wattle Street site highlighted in red





Background

McLachlan Lister was engaged to manage the project in June 2014. At this time Douglas Partners was already engaged by the Head Design Consultant, the Government Architects Office (GAO), as the environmental and geotechnical consultant. A draft Remediation Action Plan (RAP) had commenced based on historical data, and some limited site investigations in November of 2013 and April of 2014, but McLL has been advised by GAO that these were stopped before they were complete.

The initial research included a review of historical records of prior site uses and the data from prior site investigations. The following primary contaminants of concern and the level of contamination likely to be present based on this information is summarised below (*from Douglas Partners' Draft Remediation Action Plan, April 2015, pages 10-11. Full report attached as Appendix A*) :

Significant risk:

- Light non-aqueous phase liquids (LNAPL) petroleum-fuel sourced
- Denser non-aqueous phase liquids (DNAPL) tar and asphalt sourced

Elevated Concentrations:

- Polycyclic aromatic hydrocarbons (PAH)
- Total petroleum hydrocarbons (TPH)
- Benzene
- Toluene
- Ethylbenzene and xylenes (BTEX)
- Pheols
- Arsenic
- Lead and chromium

Other Contaminants Potentially Present:

- Creosols
- Volatile organic compounds, including solvents and chlorinated hydrocarbons
- Polychlorinated biphenyl (PCB)
- Organochlorine pesticides (OCP)
- Explosive residues
- Asbestos.

Prior investigations also indicated that contaminated land deposits extended beyond the site boundary and there was a strong likelihood that groundwater flows across the site would continue to bring new contaminants into the site.

Environ was engaged by the Head Design Consultant, GAO, as the environmental auditor in early August 2014, but the project was put on hold in October 2014, so no further work was undertaken until DEC advised in December 2014 that the project would recommence.

In January 2015, it was agreed by consultation with DEC, GAO and Environ that given the sensitivity of the site and its end use, any remediation proposal should be independently peer reviewed. Cetec was engaged by GAO to undertake this role.

In March of 2015, Douglas Partners completed their draft RAP, which included recommendations for additional site investigation, including drilling and test pits, before any definitive recommendations could be made regarding the remediation method. This recommendation was endorsed by both Environ and Cetec, and comments were provided on the RAP overall. These comments were incorporated into a second draft, the Overview Remediation Action Plan, issued in April (attached as Appendix B). The draft ORAP considered, among other things, the need for an impermeable boundary condition to restrict future inflow of contaminants.

Review of previous uses and prior site investigations showed levels and extent of contamination likely to be present

Environmental advice team included three different professional consultancies: Douglas Partners, Environ and Cetec

Expert consensus was that additional data was needed to finalise recommendation on remediation method



At this time, there were five concurrent streams of activity on the project:

- **Concept Design:** Three concept options were being prepared by GAO. The need for additional detailed data on site contamination was becoming urgent in order to choose an option, as this could have an impact on the placement of buildings and foundation designs. A plan for obtaining the data needed on both soils and groundwater was prepared by Douglas Partners and reviewed by both Environ and Cetec.
- Access license: In April of 2015, DEC was in the process of negotiating the terms of access license with City of Sydney. Douglas Partners' plan regarding the data sought and the methodology for obtaining it (drilling, test pits and groundwater monitoring locations) was forwarded to the City of Sydney and requested for inclusion in the terms of the access license, as this information had become a critical path requirement. Applications were made to the Heritage Council for permission to drill, and rigs were reserved in anticipation of Council agreeing to include the testing in the access license.
- **Cost estimating:** Cost estimates for the three building design options were being prepared by Mitchell Brandtman; DEC requested similar preliminary estimates of remediation options be prepared to develop a total project budget.
- Planning Approval Pathway: The appropriate planning approval pathway was being determined, including the best approach for the scoping of an early works package for the remediation. Cost was a consideration in this exercise as well, due to the project's status as a State-Significant Development.
- **Master Schedule:** The ability to achieve an opening date of February 2018 was being reviewed in consideration of the approval pathway, and the time required for the remediation methodologies proposed.

It was agreed that, even in the absence of the additional data from the site investigation, a workshop with Douglas Partners, GAO, McLL and Mitchell Brandtman would be held to agree the parameters for cost planning on the three remediation options proposed in the Overview Remediation Action Plan:

- **Option 2:** combination of part removal of soil to a nominated depth and encapsulation (capping and barrier wall)
- Option 3: encapsulation only (capping and barrier wall)
- Option 4: full removal of contaminated soil (and barrier wall)

Option 1, a 'hotspotting' approach, was not discussed at the workshop, as insufficient data was available to develop this option.

Douglas Partners, Environ and Cetec also all noted that both Options 2 and 3 would likely require some level of gas venting and ongoing monitoring, which could pose challenges in a school environment.

Diagrams of each approach are shown on the following page (not to scale).

The minutes and agreed actions from the workshop are attached as Appendix C.

The outcome of the workshop was a diagrammatic presentation of the three options and their respective costs, noting that while additional data was needed to refine and finalise the option, the consensus was that the options would not radically change. This was subsequently formally submitted to DEC with a covering letter, attached as Appendix D.

The cost estimates supporting the values shown in the diagram are attached as Appendix E.

Workshop held in May 2015 to agree parameters for development of order of magnitude costs for each of the remediation options







Timeline

A summary timeline of the work on the site investigations is shown below.

April 2014	0	Initial fieldwork was undertaken by Douglas Partners on various days from 7-23 April. This comprised 6 boreholes.
June 2014	•	Final Business Case released, nominating Fig and Wattle as the preferred site
June 2014	•	McLachlan Lister is engaged to manage the project
July 2014	•	The outcome of initial site investigation by Douglas Partners was report No 73753.01, dated July 2014. Report notes that additional testing is required
October 2014	•	Project is put on hold, pending outcome of site negotiations
December 2014	•	Education Minister announces commitment to purchase site at Fig and Wattle, noting that 'clear and unfettered access to the whole site as soon as possible before 13 July 2015 so that decontamination works can commence'
February 2015	•	GAO emails McLL confirming Council's site access conditions, used by GAO and McLL on various occasions for site walks and other non-invasive investigations
March 2015	•	Douglas Partners prepares Draft Remediation Action Plan for review by the Auditor and Peer Reviewer for comment and feedback prior to the completion of proposed fieldwork
23 March 2015	•	McLL emails DEC with McLL's comments on Council's latest draft license, noting that the definition of the permitted works needs to include drilling, which was excluded in the draft
31 March 2015	•	McLL emails DEC details regarding proposed drilling works, including staged program to minimise disruption to tenant activities for forwarding to Council to address Council's request for additional information
April 2015	•	Peer reviewer and auditor return comments on Draft RAP; preliminary consensus is a combination of Option 2 (removal of soil to nominated depth) and Option 3 (Physical encapsulation), and concur that additional testing is required to confirm this approach
April 2015	•	Douglas Partners issues Overview RAP
2 April 2015	•	McLL emails DEC noting that Council has not responded to McLL's offers via voice mail to discuss any concerns they had about the drilling works
7 April 2015	•	McLL emails DEC advising that Council has responded, and that the concern was regarding the coordination of asset removal (sandstone). A response from Council on drilling request was promised for 8 April. This was not received.
29 April 2015	•	McLL attends meeting with Council to discuss community services, and again notes the critical path nature of the drilling works. Council noted their intention was to nominate a date in early June for drilling access
1 May 2015	•	DEC requests information on costing for remediation options as proposed in the Overview RAP
5 May 2015	•	McLachlan Lister convenes workshop with Douglas Partners, Government Architects Office, and Mitchell Brandtman (Quantity Surveyors) to review options and agree costing approach
6 May 2015	•	Emails between McLL and DEC commenting on latest draft license from Council, which again notes drilling has been excluded, and the criticality of unfettered access to progress the program and meet the Feb 2018 date to open the new school.
7 May 2015	•	DEC approves proposal from Douglas Partners to undertake drilling of approximately 30 boreholes and the digging of 7 test pits; soil sampling; drilling, monitoring and sampling of groundwater wells; laboratory analysis; and preparation of a survey report, as recommended in Overview RAP
11 May 2015	•	McLachlan Lister issues diagram to DEC showing three remediation options: removal of soil to nominated depth and physical encapsulation; physical encapsulation; and full remediation.
15 May 2015	•	McLachlan Lister issues letter to DEC, summarising the process to date on remediation costing, noting that while the information was preliminary, the team had sufficient confidence in the order of magnitude of the costs to provide indicative numbers to DEC.
18 May 2015	۲	DEC instructs McLachlan Lister to put a hold on any further work while they consider the remediation options.

Appendix A—*Draft Remediation Action Plan,* Douglas Partners, March 2015 Appendix B—Overview Remediation Action Plan, Douglas Partners, April 2015

Appendix C—Workshop Outcomes (minutes and actions)

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Appendix D—Letter to DEC dated 15 May 2015

Appendix E—Cost Estimates for Remediation Options

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