Submission No 67

Item C, Tab 20

INQUIRY INTO ENROLMENT CAPACITY IN INNER CITY PUBLIC PRIMARY SCHOOLS

Name: NSW Department of Education

Date received: 27 September 2016

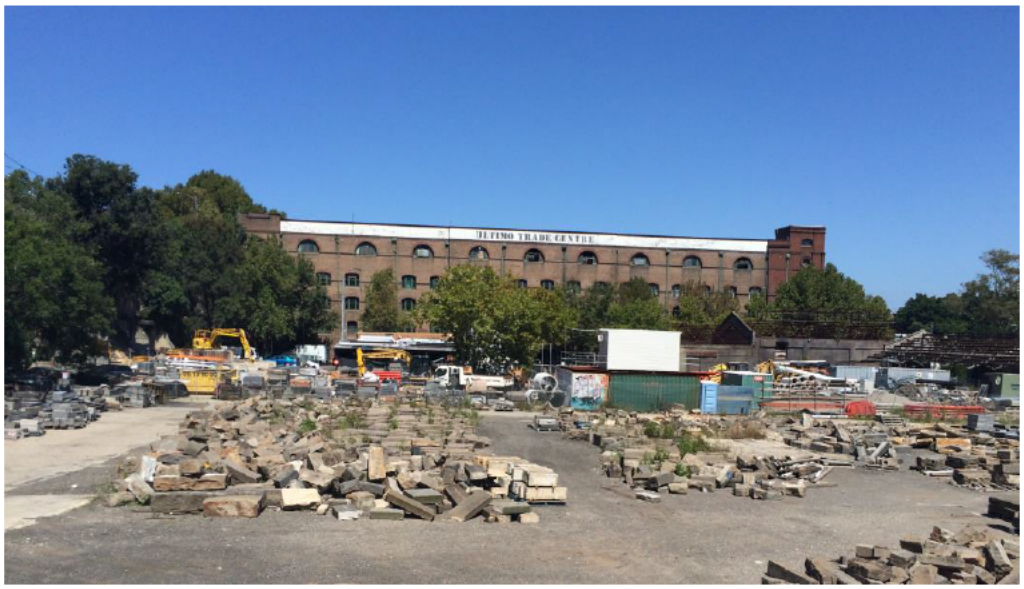
CETEC
Professional Scientific Solutions

OHS & Environmental Care
Sustainability
Advanced Laboratory/Analytical Services
Technology & Innovation

Project Reference:	CN150304
Client:	NSW Public Works: Government Architects Office
Date:	March 2015
Version:	1

REPORT

PEER REVIEW OF DRAFT RAP – ULTIMO PUBLIC SCHOOL AND CHILDCARE CENTRE



Prepared By:

BSc, ISIAQ, LAA
Senior Consultant

BSc (Hons)
NSW Manager & Senior Consultant

PhD, BSc(Hons) AIMM, ARACI, ISIAQ
ACA, AIRAH, FMA
Managing Director and Principal Consultant

TABLE OF CONTENTS

1. INTRODUCTION

CETEC was engaged by NSW Public Works: Government Architects Office to conduct a peer review of environmental reports related to the proposed new Ultimo Pyrmont PS & CC and to provide advice regarding remediation of site. The purpose of the peer review is to ensure that risks are identified and the client has the opportunity to consider the best and most innovative remedial options to achieve the best outcomes for the site.

2. SCOPE

The scope of works and deliverables are as follows:

1) Review all supplied environmental site assessment reports contaminated to become familiar with the sites environmental issues and identify potential environmental issues not previously documented. Conduct a site visit to inspect current site conditions.

2) Collaborate with the current environmental consultant - Douglas Partners Pty Ltd (DP), the site auditor (Environ) and the Government Architects Office (GAO) during the development of the Draft Remedial Action Plan to ensure the best and most innovative remedial options for remediation are considered

3) Review outcomes of any additional testing conducted by Douglas Partners and recommend changes to RAP if required

4) Collaborate with the current environmental consultant (Douglas Partners Pty Ltd), the site auditor (Environ) and the Government Architects Office during the development of the Final Remedial Action Plan to ensure that the best and most innovative remedial options are adequately documented and costed

This report details findings and comments related to items 1 and 2.

3. REVIEWED REPORTS

The main subject of this peer review at this stage of the project is the Douglas Partners Draft Remedial Action Plan, Proposed Primary School, 14-16 Wattle Street Ultimo (Project 73753.02, March 2015 (DP 2015).

In addition the following environmental reports were reviewed by CETEC to gain a background understanding of the site:

- Coffey Partners International Pty Ltd (Coffey) Wattle Street Depot, Ultimo, Environmental Site Assessment (Report No. E2035/1-AF, August 1996) (Coffey 1996);

- Tropman & Tropman Architects Heritage Assessment, Wattle Street Depot, Pyrmont (Project 9713, April 1997);
- Coffey Wattle Street Depot, Ultimo, Supplementary Environmental Site Assessment (Report No. E2035/2-AF, July 1997) (Coffey 1997);
- Coffey Wattle Street Depot, Ultimo, Groundwater Monitoring and Well Installation (Report No. E2035/6-AF, July 1998) (Coffey 1998);
- DP Report on Additional Environmental Assessment Works, Wattle Street Depot Ultimo (Project 37334, December 2004) (DP, 2004);
- DP Remediation Action Plan, Wattle Street Depot Ultimo (Revision 2, Project 30284D, June 2005) (the RAP);
- Government Architects Office, Ultimo Public School and Childcare Centre, Master Plan Study (December 2013);
- DP Report on Contamination Investigation, Proposed School 14 - 16 Wattle Street, Ultimo (Project 73753.01, July 2014) (DP, 2014).

4. COMMENT ON REMEDIATION OPTIONS

In general CETEC agrees with DPs rational for selecting the preferred remediation options.

Technologies considered by DP such as In-situ thermal, flushing, SVE, chemical oxidation, electrokinetic separation and solidification are either unsuitable to treat the contaminants of concern at this site or may be technically feasible but would require extensive field and laboratory trials (given the likelihood of mixed contaminants and current lack of clarity on the nature and distribution of contamination) which would not fit within the project risk and time frames.

In regards to preferred remediation options presented by DP in the Draft RAP, CETEC comments and questions are listed below.

DP Option 1) *Source removal, partial physical encapsulation and MNA and*

DP Option 2) *Removal to nominal depth, partial physical encapsulation and MNA.*

Cetec Comment – Options 1 and 2 are essentially the same the only difference being Option 2 may require excavation of more soil. However, considering current reports show widespread contamination, it may not be significantly more.

DP Option 3) *Physical encapsulation and impermeable barrier wall (IBW).*

Cetec Comment – Option 3 seems similar to Option 2 with the addition of an IBW. Further discussion is required on what the difference is between the physical encapsulations proposed in Options 1, 2 and 3.

DP Option 4) *Removal and offsite disposal of all contaminated soil and groundwater*

Cetec Comment: Removing all contaminated soil and ground water from the site would achieve the best local environmental outcomes within the project timeframe but in terms of the wider environment this is just transferring the problem somewhere else and is likely to be the most expensive in both economic and lifecycle terms.

5. POTENTIAL INNOVATION

CETEC considers that there is scope for further discussions regarding potential innovation specifically as listed below:

- Strategy for continued remediation / improvement after primary remediation and when the site is operational as a learning environment - a school that actively and continuously studies practical measures for improving the local environment.

  A potential ongoing remediation strategy could include small groundwater treatment plant and or soil vapour treatment plant which can also be used as education and research tool. This is dependent on eliminating exposure risk to the students, community and environment and on what contamination is left after primary remediation. This may confer considerable cost-benefits to the project but will have on-going management costs. However if the site is sealed as per the DP Options 1-3, the site will require on-going environmental management.

  Another potential ongoing remediation strategy could include the use of trees to provide continuing phytoremediation of groundwater. This has been suggested by DP in Wentworth Park but this is likely to require permission from the land owner (Sydney City). It may be possible to keep such a strategy within the site potentially along the western boundary as an element of the landscape architecture which would avoid additional management layers.

6. ADDITIONAL TESTING

In general CETEC agrees with the DP strategy for additional testing which includes detailed groundwater investigation, further vapour investigation, identification and delineation of soil

contamination sources and testing for hazardous waste disposal. In addition to this CETEC recommend consideration of the following:

- Test for and inspect asbestos contamination in soil and under slabs
- Test PCB where the sub-station was located. Although DP tested for PCB in 2004 none of the samples were from the area where the sub-station was located.
- Trenching rather than bore hole sampling in some areas may be advantageous e.g. for inspection of asbestos in soil and examination of the physical distribution and heterogeneity.

DISCLAIMER

CETEC has taken all reasonable care to ensure that the information contained in this report is accurate. The report is based on data and information collected by CETEC personnel during location visits and information accepted in good faith from various personnel associated with this work. However, no warranty or representation can be given that the information and materials contained in it are complete or free from errors or inaccuracies.

CETEC accepts no responsibility for any deficiency, misstatements or inaccuracies contained in this report as a result of omissions, misinterpretation or fraudulent acts of the persons interviewed or contacted.

To the extent permitted by applicable laws, CETEC accepts no liability for any decision, action, loss, damages or expenses of any kind including without limitation, compensatory, direct, indirect or consequential damages, loss of data, income or profit, loss of or damage to property, or claims by third parties howsoever arising in connection with the use or reliance on the information in this report. This exclusion of liability shall also apply to damages arising from death or personal injury potentially caused by the negligence of CETEC or any of its employees or agents.

By viewing this report, you are acknowledging that you have read and agree to the above disclaimer.

COPYRIGHT