



ENVIRONMENTAL INVESTIGATION SERVICES

25 November 2010

Ref: E15577Klet1

The Presbyterian Church (NSW) Property Trust
c/-Cerno Management Pty Ltd
Suite 2, level 4
280 George Street
Sydney
NSW 2000

Attention: Mr Paul Di Cristo

REPORT REVIEW
PROPOSED NURSING HOME
SCOTTISH HOSPITAL, PADDINGTON

1 Introduction

Cerno Management Pty Ltd commissioned Environmental Investigation Services (EIS), a division of Jeffery & Katauskas Pty Ltd (J&K), to undertake a review and comment on previous investigations undertaken at the site. The review was undertaken generally in accordance with EIS proposal Ref:EP5277K dated 19 November 2010 and Cerno Management Pty Ltd authorisation by e-mail dated 22 November 2010.

2 Objectives

The objectives of the review will be to assess:

- Whether the previous investigations undertaken at the site will comply with SEPP55;
- The outstanding remediation issues at the site; and
- What remedial works and other environmental assessments will be needed to complete the development.



3 Proposed development

Presbyterian Aged Care NSW & ACT (PAC) proposes to expand its aged care services on the Scottish Hospital Site, Paddington.

PAC seeks to develop on the site:

- 82 independent living units on the site ranging in size from 1 through to 3 bedroom apartments;
- 100 residential care beds in nursing home style accommodation with a proportion set aside for dementia patients; and
- ancillary care services to facilitate an ageing in place care model.

4 Previous reports

A number of environmental reports have been prepared for the site. These are summarised below:

- Report On Contamination Assessment, The Scottish Hospital, Paddington, Prepared For Presbyterian Aged Care. Project 28538A, dated July 2000. Douglas Partners Pty Ltd.
- Report To NBRS&P Pty Ltd On Environmental Site Screening For Proposed Extensions At The Scottish Hospital, Paddington. Ref: E15577FRPT, dated 12 December 2000. Environmental Investigation Services.
- Report To NBRS&P Pty Ltd On Remedial Action Plan For Proposed Extensions At The Scottish Hospital, Paddington. Ref: E15577FRAP, dated 27 April 2001. Environmental Investigation Services.
- Additional Environmental Investigation, The Scottish Hospital, Paddington. Ref: E15577Flet dated 27 May 2003. Environmental Investigation Services.
- Asbestos Management Plan, Presbyterian Aged Care For The Scottish Hospital, Paddington. Ref: NBRS-060823-Asb Management Plan-v2, dated August 2006. Pickford & Rhyder Consulting Pty Ltd.
- Report To NBRS&P Pty Ltd On Validation of Remediation For Proposed Extensions At The Scottish Hospital, Paddington, NSW. Ref: E15577F-Val, dated 25 October 2006. Environmental Investigation Services.
- Report To NBRS&P Pty Ltd On Site Management Plan For Proposed Extensions At The Scottish Hospital, Paddington, NSW. Ref: E15577F-SMP, dated October 2006.
- Report to George Andary & Company Pty Ltd c/- Presbyterian Aged Care On Additional Sampling And Analysis Plan For Proposed Extensions to Scottish Hospital at Lot 2 in DP607572, Paddington, NSW. Ref: E15577F-SAP, dated 26 July 2007, EIS.



- Report to George Andary & Company Pty Ltd c/- Presbyterian Aged Care On Environmental Site Assessment for Proposed Extensions at the Scottish Hospital, Lot 2 in DP607572, Paddington, NSW. Ref:E15577F-RPT2 October 2007.
- Report to Presbyterian Aged Care On c/- George Andary & Company Pty Ltd on Long Term Environmental Site Management Plan For Proposed Extensions To Scottish Hospital at Lot 2 in DP607572, Paddington, NSW. Ref: E15577F-EMP, dated November 2007.
- Report to Presbyterian Aged Care On c/- George Andary & Company Pty Ltd on Short Term Environmental Site Management Plan For Proposed Extensions To Scottish Hospital at Lot 2 in DP607572, Paddington, NSW. Ref: E15577F-EMP2, dated December 2007.

The investigation was the subject of a review by independent EPA accredited contaminated site auditor (Chris Jewell of CM Jewell & Associates Pty Ltd). Although some interim audit advice was provided a site audit statement and site audit report were not issued.

5 Summary

Previous investigations have indicated the presence of variable fill depths across the site. The fill generally consisted of a heterogeneous mixture of silty sand, clayey sand and sandy clay with various inclusions such as slag, ash and brick fragments. The principal contaminants of concern identified in the previous investigations included polycyclic aromatic hydrocarbons (PAHs), lead and asbestos.

Based upon these observations and the results of previous investigations the following conclusions were drawn:

- Although there is some physical stratification of the fill, the lead and PAH contamination does not appear to be associated with a particular soil strata;
- The lead and PAH contamination does not appear to be confined to a particular area of the site;
- The lead and PAH contamination is randomly distributed horizontally and vertically throughout the fill profile; and
- Asbestos does not appear to be widespread throughout the fill. Some asbestos containing cement fragments were previously encountered in the vicinity of BH212 (adjacent to the above ground storage tank in the south west corner of the site). This has been removed and disposed off site.

The source of the PAH and lead contamination is considered to be ash and slag material in the fill. Significant amounts of waste ash and slag was available in the late nineteenth and early twentieth century as a result of the use of coal for industrial and



domestic heating purposes. Widespread use of ash/slag waste (mixed with other soil and waste materials) as fill material was common in the inner suburbs of Sydney at this time. Similar material has been encountered in other investigations undertaken by EIS in the surrounding area.

An above ground storage (AST) tank located in the south-west corner of the site contains fuel oil. The AST is adjacent to a former incinerator therefore the oil was most likely used to fuel the incinerator. The contaminants of concern associated with this area would be the general contaminants associated identified in the fill material together with Total Petroleum Hydrocarbons that would be associated with any leaks or spills of fuel oil.

Excavation of the entire site was not considered to be viable therefore, the implementation of an Environmental Management Plan was proposed that would restrict access to the underlying contaminated soil by a combination of physical barriers and landscaping.

6 ISSUES

6.1 Will the investigations undertaken at the site comply with SEPP55

The site has been the subject of a number of investigations since 2000. EIS are of the opinion that these investigations were sufficient to characterise the site and prepare the Environmental Management Plan. Due to the change in development plans there will be a requirement to amend the Environmental Management Plan and undertake some further analysis for waste classification purposes following the demolition of buildings.

In general EIS are of the opinion that the investigations undertaken to date together with the amendments to reports and additional investigation will comply with SEPP55.

6.2 What are the outstanding remediation issues at the site.

Based on the available data the outstanding remediation issues are considered to be:

1. Removal of the Above Ground Storage Tank and incinerator in the east corner of the site followed by validation sampling;
2. Waste classification of soil that will be excavated from beneath demolished buildings and any soil that needs to be excavated from the areas around the Above Ground Storage tank and Incinerator;
3. Waste classification of soils from areas that were not included in the excavation plan for the previous development;



4. Installation of subsurface barriers and design of landscaping to minimise access to soil;
5. Dealing with unexpected finds during excavation (eg unrecorded underground storage tanks).

6.3 What remedial works and other environmental assessment will be needed to complete the development.

Based on the available data the following works will required to complete the development.

1. Preparation of a Remedial Action Plan that incorporates the development details;
2. Removal of the Above Ground Storage Tank and incinerator followed by validation sampling;
3. Waste classification sampling and preparation of waste classification letters;
4. Installation of subsurface barriers and design of landscaping to minimise access to soil;
5. Re-writing the Environmental Management Plan (EMP) to take account of the new development; and
6. Establishing an appropriate public notification of the EMP under Section 149(2) of the Environmental Planning and Assessment Act 1979 or a covenant registered on the title to land under Section 88B of the Conveyancing Act. It should be noted that this may have an impact on the land value.

6.4 General Information

Fill and contaminated soil disposal costs are significant and may affect project viability. These costs should be assessed at an early stage of the project development to avoid significant future unexpected additional costs.

The findings presented in this letter are based on site conditions that existed at the time of the assessment. The conclusions are based on the investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances.

This letter has been prepared for the particular project described and no responsibility is accepted for the use of any part of this letter in any other context or for any other purpose. Copyright in this letter is the property of EIS. EIS has used a degree of care, skill and diligence normally exercised by consulting engineers in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this letter.



If you have any questions concerning the contents of this letter please do not hesitate to contact us.

Yours faithfully

ENVIRONMENTAL INVESTIGATION SERVICES

A handwritten signature in black ink, which appears to read 'A Kingswell', is positioned below the company name. The signature is fluid and cursive, with a long horizontal stroke at the end.

Adrian Kingswell
Senior Associate