JBS&G

The Uniting Church in Australia Property Trust (NSW)
For Uniting (NSW.ACT)

Phase 1 Environmental Site Assessment

War Memorial Hospital
125 Birrell Street, Waverley NSW 2024

12 April 2017

51594/104024 (Rev 0)

JBS&G

www.jbsg.com.au

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Table of Contents

Executive Summary 1

1. Introduction 3
   - 1.1 Background 3
   - 1.2 Objective 4
   - 1.3 Scope of Works 4

2. Site Conditions and Surrounding Environment 5
   - 2.1 Site Identification 5
   - 2.2 Site Description 5
   - 2.3 Surrounding Land-use 7
   - 2.4 Topography 7
   - 2.5 Geology and Soil 7
   - 2.6 Acid Sulfate Soils 8
   - 2.7 Hydrology 8
   - 2.8 Hydrogeology 8

3. Site History 9
   - 3.1 Aerial Photograph 9
   - 3.2 Historical Land Titles 7
   - 3.3 EPA Records 8
   - 3.4 Council Records 9
   - 3.5 Heritage Register 9
   - 3.6 WorkCover Dangerous Goods Records 10
   - 3.7 Site History Summary 10
   - 3.8 Integrity Assessment 11

4. Conceptual Site Model (CSM) 12
   - 4.1 AECs & COPCs 12
   - 4.2 Potentially Contaminated Media 12
   - 4.3 Potential Receptors 12
   - 4.4 Potential Exposure Pathways 13
   - 4.5 Potential for Migration 13
   - 4.6 Preferential Pathways 13

5. Sampling and Analysis Plan 14
   - 5.1 Data Quality Objectives 14
     - 5.1.1 State the Problem 14
     - 5.1.2 Identify the Decision 14
     - 5.1.3 Identify Inputs to the Decision 14
     - 5.1.4 Define the Study Boundaries 14

5.1.5 Develop a Decision Rule 14
5.1.6 Specify Limits of Decision Error 15
5.1.7 Optimise the Design for Obtaining Data 17
5.2 Soil Sampling Methodology 17
5.3 Laboratory Analysis 18
6. Assessment Criteria 19
6.1 Regulatory Guidelines 19
6.2 Soil Assessment Criteria 19
7. Quality Assurance/Quality Control 21
7.1 QA/QC Results 21
7.2 QA/QC Discussion 22
7.2.1 Precision 22
7.2.2 Accuracy 22
7.2.3 Representativeness 22
7.2.4 Comparability 23
7.2.5 Completeness 23
7.2.6 Sensitivity 23
7.3 QA/QC Conclusion 23
8. Soil Results 24
8.1 Soil Field Observations 24
8.2 Soil Analytical Results 24
8.2.1 Metals 24
8.2.2 PAHs 25
8.2.3 Asbestos 26
8.2.4 TRH 26
8.2.5 BTEX 26
8.2.6 OCPs 26
8.2.7 OPPs 26
8.2.8 PCBs 26
9. Discussion 27
9.1 Are there any unacceptable risks to likely future receptors from impacted soil? 27
9.2 Are there any issues relating to the local area background soil concentrations? 27
9.3 Are there any impacts from chemical mixtures? 27
9.4 Are there any aesthetic concerns? 27
9.5 Is there any evidence of, or potential for, migration of contaminants from the site? 27

9.6 Is a site management strategy required?.....28

10. Conclusions and Recommendations.....29

10.1 Conclusions.....29

10.2 Recommendations 29

11. Limitations 31

List of Tables

Table 2.1: Summary Site Details 5

Table 5.1: Summary of Decision Rules.....15

Table 5.2: Summary of Quality Assurance / Quality Control Program 16

Table 5.3: Sampling and Analytical Program 18

Table 7.1: QA/QC Results Summary.....21

List of Figures

Figure 1 Site Location

Figure 2 Site Layout

Figure 3 Sample Locations

Figure 4 Health Based Soil Criteria Exceedances

Appendices

Appendix A Summary Tables

Appendix B Photographic Log

Appendix C Monitoring Wells

Appendix D Historical Aerial Photographs

Appendix E Land Titles

Appendix F EPA Records

Appendix G Section 149 (2) and (5) Certificate

Appendix H Heritage Records

Appendix I Hazardous Chemicals Search

Appendix J Bore Logs

Appendix K Laboratory Documentation

Appendix L 95% UCL Calculations

Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Uniting Church in Australia Property Trust (NSW) For Uniting (NSW.ACT) (Uniting, the Client) to review and update a previous Due Diligence / Phase 1 Environmental Site assessment (ESA) of the War Memorial Hospital located at 125 Birrell St, Waverley, NSW (the site). The revised site has an area of approximately 3 hectares (ha). The site location and site layout are presented on **Figure 1** and **Figure 2**, respectively. The legal identification of the site, including lot and Deposited Plan (DP) numbers is provided in **Table 2.1**.

The site is proposed to be redeveloped including expansion of the existing aged care / aged health services campus that would expand the hospital with additional aged care and independent living facilities, office space and areas for community services across the balance of the site. Further, there may be underground parking which will extend out from buildings under open spaces of the site.

The objectives of the investigation were to characterise potential contamination at the site and to draw preliminary conclusions regarding the suitability of the site for the proposed site, or make recommendations on future works required to enable such conclusions to be made.

The scope of work comprised a desktop review of the initial detailed site inspection (2012) and limited soil investigation, a new detailed site inspection (2016), evaluation of existing soil data against current NEPC (2013) guidance and preparation of an updated ESA.

Based on the findings of this assessment and subject to the limitations in **Section 11**, the following conclusions are provided:

- The main portion of the site is understood to have been owned by the Vickery family from 1866 until 1919, when the property was gifted to the Methodist Church for use as a hospital, which continues to the current day. Former residential lots bordering the main portion of the site have gradually been acquired for incorporation into the currently defined site extent.
- A limited site sampling program was implemented in 2012, inclusive of 20 sampling locations. Fill materials generally comprising silty sand with inclusions of ash, slag, tiles, concrete and sandstone gravels were observed to depths ranging from 0.3 to 1.1 m bgs, although some locations did not penetrate the depth of fill material due to obstructions. Natural sands were encountered at three locations at depth ranging from 0.35 to 0.75 m bgs.
- Lead concentrations in fill material in some areas of the site have been identified to represent a potentially unacceptable risk to human receptors under the proposed land use scenario and copper and zinc concentrations in fill material have been identified to represent a potentially unacceptable risk to ecological receptors.
- PAHs including carcinogenic PAHs (as BaP TEQ) concentrations in fill material in some areas of the site have been identified to represent a potentially unacceptable risk to human receptors under the proposed land use scenario and B(a)P concentrations in fill material in some areas of the site represents a potentially unacceptable risk to ecological receptors.
- Concentrations of remaining COPCs, including asbestos, were identified at soil sampling locations to be present at concentrations less than the adopted site assessment criteria.
- No chemical mixtures, aesthetic issues or significant offsite migration risks were identified.
- Whilst areas of near surface fill material have been identified at the site as being impacted with heavy metals and PAHs to varying extent as a result of past land uses, the scale and

extent of the identified impact is not such that common remediation and/or management techniques could not render the site suitable for the future proposed uses. As such, the potential for contamination to occur at the site is considered not to represent a significant barrier to future development of the site.

The following recommendations are made in light of the conclusions:

- Further detailed site investigation be undertaken in accordance with NSW EPA guidance once a detailed development proposal has been designed for the site such that the nature and scale of the investigation may be targeted toward areas of proposed ground disturbance and the most sensitive land uses including landscaped areas to provide appropriate data to draw specific conclusions in relation to the suitability of the site with respect to the anticipated exposure scenarios.
- Subject to the outcome of the detailed investigation activities a remedial/management strategy will be developed to address requirements for management of unacceptable soil contamination risks prior to or during future development activities such that the site (or site portion) may be considered suitable for proposed future use.
- The detailed site assessment reports and, if required, remedial action plan documentation will be required to be submitted with specific development applications to the consent authority for approval as part of the development planning process.
- Given the age of buildings at the site, hazardous materials surveys should also be completed on existing buildings proposed for demolition to ensure appropriate management of materials during demolition of structures as part of future redevelopment activities.

1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by Uniting Church in Australia Property Trust (NSW) For Uniting (NSW.ACT) (Uniting, the Client) to review and update a previous Due Diligence / Phase 1 Environmental Site assessment (ESA) of the War Memorial Hospital located at 125 Birrell St, Waverley, NSW (the site). The revised site has an area of approximately 3 hectares (ha). The site location and site layout are presented on **Figure 1** and **Figure 2**, respectively. The legal identification of the site, including lot and Deposited Plan (DP) numbers is provided in **Table 2.1**.

JBS&G (as JBS Environmental P/L) were engaged by UnitingCare in 2012 to complete a due diligence level Phase 1 ESA of the War Memorial Hospital Site. The results of the assessment have previously been presented in two documents:

- *Due Diligence Assessment, War Memorial Hospital Site at 125 Birrell St, Waverley NSW*. JBS, January 2013 (JBS 2013a); and
- *War Memorial Hospital Due Diligence Assessment Results*, JBS, 6 February 2013 (JBS 2013b).

The site is proposed to be redeveloped including expansion of the existing aged care / aged health services campus that would expand the hospital with additional aged care and independent living facilities, office space and areas for community services across the balance of the site. Further, there may be underground parking which will extend out from buildings under open spaces of the site.

The site is proposed to be redeveloped including expansion of the existing aged care / aged health services campus that would expand the hospital with the development of additional aged care and independent living facilities, office space and areas for community services across the balance of the site. Further, there may be underground parking which will extend out from buildings under open spaces of the site.At the time of the JBS (2013) assessment it was understood that Uniting was considering development of the site with additional aged care/ health services and the assessment was to assist early master planning of the site. The 2013 assessment area comprised an area of approximately 3 hectares (ha) comprising seven lots. The due diligence assessment included a desktop site assessment review, detailed site inspection, implementation of a soil sampling and analysis program for targeted contaminants of concern at 20 locations and subsequent comparison of contaminant concentrations with applicable site investigation criteria derived from NEPC (1999[1]), being the NSW EPA endorsed guidance at the time of the investigation. This density of site investigation locations comprised approximately 50 % of the minimum guideline density included in NSW (1995)[2]. On this basis, the scope of the completed investigation is considered to have comprised of a Phase 1 ESA with Limited Soil Sampling.

It is understood that since the previous 2013 assessment, several adjoining properties have been acquired and as such, Uniting require consideration of the adjoining lots in the context of the available site contamination data. It appears that seven additional lots have been added (121 Birrell St, 2, 4, 6 and 8 Church St and 162 and 164 Bronte Rd).

In addition, JBS&G note that since preparation of JBS (2013a), NSW EPA endorsed site assessment guidance, including site assessment criteria have been updated as NEPC (2013)[3]. To satisfy the preliminary requirements outlined by Waverley Council[4] (Council), it is necessary for the existing

[1] *National Environment Protection (Assessment of Site Contamination) Measure*, National Environment Protection Council, 1999 (NEPC 1999).

[2] *Contaminated Sites: Sampling Design Guidelines*, NSW Environment Protection Authority, 1995 (EPA 1995).

[3] *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1),* National Environment Protection Council, 2013 (NEPC 2013).

[4] As per email communications dated 20 June 2016.

data to be evaluated against the current regulatory framework and guidance such that the assessment meets the requirements of SEPP 55[5].

updated guidelines to assess whether the previously identified contamination is still of concern with the revised guidelines.

Whilst it has been indicated by Council that it is sufficient to expand the coverage of the cottages to the existing contamination report, JBS&G recommend that given the absence of conclusions and recommendations in the original report, the requirement under EPA guidance to review the laboratory data in accordance with the updated assessment criteria (NEPC 2013) and increase the assessment footprint, that a new assessment report is prepared using the existing data. In the event that Council then request a review by an independent site auditor, the report will be immediately ready for review.

The investigation has been developed in accordance with NEPC (2013), guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

1.2 Objective

The objectives of the investigation were to characterise potential contamination at the site and to draw preliminary conclusions regarding the suitability of the site for the proposed site, or make recommendations on future works required to enable such conclusions to be made.

1.3 Scope of Works

The scope of work comprised:

- Desktop review of readily available relevant background and historical information including:
  - site conditions and environmental setting;
  - s.149 certificate(s) obtained from council (as per JBS 2013a records);
  - current and historical land title records (as per JBS 2013a records);
  - historical aerial photographs (as per JBS 2013a records);
  - heritage records held by the Department of Planning;
  - Dangerous Goods / Hazardous Chemicals database search by SafeWork NSW (as per JBS 2013 records);
  - records of environmental incidents or former environmental licenses as held by the EPA;
- Review of a previous geotechnical investigation provided by UnitingCare (DP 2005[6]).
- Detailed site inspection, including inspection of the additional 7 lots, to assess whether the areas of concern remain in a similar condition to that previously documented in JBS (2013a) and to document any new AECs in the additional lots.
- Evaluation of existing laboratory data of soil samples with the current health and ecological investigation/screening levels as presented in NEPC (2013) applicable for the proposed landuse(s).
- Preparation of an updated ESA report in general accordance with guidelines made or approved by the EPA.

[5] *State Environmental Planning Policy No 55—Remediation of Land* (SEPP 55).

[6] *Geotechnical Investigation, Proposed Bronte Road Development, War Memorial Hospital, Waverley.* Douglas Partners, Project 43539, November 2005 (DP 2005).

2. Site Conditions and Surrounding Environment

2.1 Site Identification

The location of the site is shown in **Figure 1**. The site details are summarised in **Table 2.1** and described in detail in the following sections.

Table 2.1: Summary Site Details

Site Address	War Memorial Hospital, 125 Birrell Street, Waverley NSW 2024	
Lot / DP	*Lots as per JBS 2013a:* Lot 1 DP172133 Lot 1 DP948186 Lot 2 DP1061588 Lot 3 DP667555 Lot 1 DP1061548 Lot 2 DP1061548 Lot 1 DP567694 Lot 3 DP593710 Lot 4 DP593710 Lot 7 DP948185 Lot B DP317831 (easement)	*Additional Lots:* Lot 1 DP166786 Lot 1 DP1115706 Lot 1 DP630460 Lot 2 DP630460 Lot 1 DP1098550 Lot 2 DP1098550 Lot 1 DP167332 Lot A DP317831 Lot 1 DP212655 Lot 3 DP1098550
Local Government Authority	Waverley Council	
Site Owner	Uniting Care	
Site Area	Approximately 3.4 ha	
Approximate Geographical Coordinates (MGA 56)	Easting: 338475 Northing: 6247858	
Zoning	R3 Medium Density Residential and SP2 Infrastructure	
Previous Land-use	Residential	
Current Land-use	Aged Care Hospital	
Proposed Use	Continued use as an Aged Care Hospital, some aged care and independent living facilities, office space and areas for community services, and potential underground parking.	

2.2 Site Description

The revised site inspection was conducted on 12 July 2016. The site layout is shown in **Figure 2**. The site was generally in a similar condition to the 2012 site inspection. A photographic log of the site is provided in **Appendix B.**

The site comprised heritage listed buildings and grounds, with additional residential and medical service buildings. From the external inspection, the buildings appeared to be in good condition with no notable deterioration.

The site was bound on all sides by a variety of fencing types or building walls including brick, sandstone, wire chain and timber, with open gate access from all four streets surrounding the site.

Specific notes on each individual lot of the site as shown on Figure 2 are discussed following.

Lot 1 DP 172133 is located in the south-eastern portion of the site and was occupied by the Vickery Building. A contaminated waste storage area (dialysis waste) was observed to the west of the building and was located on asphalt, which appeared to be in good condition. The lot was also occupied with open space gardens and grassed areas to the west, the Chapel, former paint storage shed, former petrol storage area (Depot 2), part of the Morgan building and access roads. A grease trap, E.L.P storeroom and boiler room were located adjacent to the kitchen of the Morgan building. Inspection of the grease trap was not possible during the site inspection.

Lot 1 DP 567694 was occupied by the remainder of the Morgan Building in the south, bordered to the west by concrete and then a bituminous concrete paved carpark. The remainder of the Morgan building was characterised by ACM eaves which appeared to be in good condition and a

maintenance shed. Dangerous goods storage was evident within the maintenance shed including storage of small amounts of flammable liquid within appropriately signed and bunded storage cabinets on a concrete slab, which was observed to be in good condition, with no odours or staining observed in this area. The natural fall of the land along the southern boundary of Lot 1 was towards the west and the site had been levelled such that the ground level on site at the south west corner of the site was approximately 1.5 m higher than the level of the adjoining Church Street. The filled area was retained along Church Street by a stone wall, with a battered slope falling to the fence line along the western boundary in this area. A concrete paved carpark was located in the central portion of the lot with a garden material storage area (two stockpiles) located to the west of the car park. At the southwest corner of the lot, one mulch stockpile and one raised mound area were observed. A men's shed constructed from weatherboard cladding with eaves made of Asbestos Containing Materials (ACM) on a concrete slab was located in the northern portion of the lot. A tennis court, electric barbeque and residential units were located to the west of the garden shed.

Lot 1 DP 948186, Lot 2 DP 1061588 and Lot 3 DP667555 were occupied by administrative and hospital buildings, with some gardens and grassed areas between buildings. A pipe made of suspected ACM was located on the southern wall of the building in Lot 2 DP 1061588. The pipe appeared to be in good condition. A storage room was located next to the stairs of the basement level of the building in Lot 2 DP1061588, yet inspection was not available due to access restriction.

Lot 1 DP 1061588 contained the O'Reilly building and brick footings of a former structure. Suspected wall cladding board made of ACM were identified on the west of the building.

Lot 2 DP 1061548 was occupied by a residential building with a garden maintenance storage area at the rear. No odours or staining was observed in the storage area. Lot 7 DP 948185 comprised a residential building with a maintenance garage. The maintenance garage was constructed on a concrete slab that appeared to be in good condition, flammable liquid, toxic substances and pesticides were kept within a lockable cabinet within the garage. An abandoned oil container (20 L) and other rubbish were observed in a verge adjacent to the maintenance garage. Very minor staining of the slab was observed. No odours were observed.

Lot 4 DP 593710 was occupied by the Edina Hostel and Edina Nursing Home. Gardens and grassed areas were situated between buildings and a bituminous concrete paved carpark in the northern portion of the lot. A disused incinerator was located adjacent to the Edina Hostel. Some ash staining was noted on the concrete and face brick work above the incinerator. A maintenance office was located to the east of the incinerator. Edina Hospital was located at the south of Lot 4 DP 593710, and general waste and medical waste bins were located at the northwest corner of the hospital on an area of asphalt.

The additional lots in the updated master plan situated in the south-western corner of the site comprised low density residential properties. Front and rear yards were observed with a mixture of grassed, paved and concreted areas. The tenanted lots were generally well maintained. Some of the vacated lots were not maintained with overgrown lawns/plants in the yards. No internal access to the residential properties was available at the time of the site inspection.

No soil staining or odours were identified in accessible areas inspected during the site inspection. No stressed vegetation likely to be the result of contamination was observed during the site inspection. There was no evidence of flaking paint identified on the exterior of the buildings or ground surfaces around the building. Very minor staining on the concrete slab surface in the maintenance garage within Lot 7 DP948185 was observed.

A single suspected ACM fragment was identified (ACM01) on the ground surface within the eastern portion of the site during the previous inspection in 2012. The fragment was collected for sampling purposes as discussed in **Section 8.2.3**. Analytical results indicated the material did not contain asbestos. No other suspected ACM fragments were observed on the ground surface across the site

during this inspection. ACM was observed on a number of the buildings at the site in the form of pipes, eaves and cladding.

2.3 Surrounding Land-use

The current landuse of adjacent properties or properties across adjacent roads is shown in **Figure 2** and summarised below.

- North – The site is bound to the north by residential properties and Birrell Street. Residential properties are also located further north beyond Birrell Street.
- East – Residential properties, a church and Waverley College are located beyond Carrington Road to the east. Waverley Park is located approximately 300 m to the northeast.
- South – The site is bound to the south by Church Street and to the southwest by the corner of Church Street and Bronte Road. Residential and commercial properties are located further south beyond Church Street.
- West – The site is bound to the west by Bronte Road. Residential and commercial properties are located beyond Bronte Road.

2.4 Topography

Review of the regional topographic data (SIXMAPS[7]) indicated that the site has an elevation of between 90 and 100 m Australian Height Datum (AHD). The regional topography slopes gently to the southwest towards Willow Pond, located approximately 1.1 km from the site. To the east of the site the topography slopes gently down to the southeast towards the Tasman Sea, located approximately 1.7 km from the site. During the site inspection, the site was observed to gently slope to the west towards Bronte Road.

The localised topography of the site has been modified with apparent cut and fill to level areas to facilitate the construction of buildings, access roads, paths and landscaping areas. The general slope of the site falls to the west, consistent with the regional topography.

2.5 Geology and Soil

Review of the regional geological map (DM 1966[8]) indicated the site is located on the boundary of an area of Quaternary alluvium and Hawkesbury Sandstone. Hawkesbury Sandstone of Triassic age consists of sandstone and quartz, with some shale. Alluvium consists of alluvial gravel, sand, silt and clay.

Review of the regional soil map (DLWC 2002[9]) indicated that the site is located within the Newport Aeolian Soil Landscape group. The typical Newport landscape is characterised by gently undulating plains to rolling rises of Holocene sands mantling other soil materials or bedrock. Newport soils are shallow, well sorted Silaceous sands, overlying moderately deep buried sands including Yellow Podzolic Soils with sandy topsoils on crests and gentle slopes; deep podsols on steep slopes, lower slopes and in depressions. Limitations of soil in the Newport group are the very high soil erosion hazard, localised steep slopes, very low soil fertility and non-cohesive topsoils.

Review of the previous investigation (DP 2005) identified fill material at the site to 0.5 m below ground surface (bgs) comprising silty sand and sandstone gravel with inclusions of gravel, ash and concrete pieces. Fill was underlain by silty sand or sand over extremely weathered to fresh sandstone.

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7 *NSW Government Spatial Information Exchange website, https://maps.six.nsw.gov.au/* accessed 8 July 2016

8 Sydney 1:250 000 Geological Series Sheets S1 56-5(third edition). NSW Department of Mines, 1966 (DM 1966)

9 *Sydney Soil Landscape Series Sheet 9130 (second edition).* Department of Land and Water Conservation, 2002 (DLWC 2002).

2.6 Acid Sulfate Soils

Review of the Acid Sulfate Soil map from Australian Soil Resource Information System (ASRIS)[10] indicated there was extremely low probability of occurrence of Acid Sulfate Soils (ASS) in the proximity of the site. On this basis, no further consideration of ASS management is required.

2.7 Hydrology

The nearest surface water body is the Willow Pond located 1.1 km to the southwest of the site. The Tasman Sea is located approximately 1.7 km to the east of the site.

Infiltration of precipitation is expected to be minimal in sealed areas of the site, but is likely to occur in vegetated or grassed areas given the local sandy soils. Surface water accumulating after heavy or prolonged rainfall is likely to drain towards the southwest in line with the local topography, or be collected within the onsite stormwater infrastructure. Stormwater infrastructure onsite is believed to drain to the municipal systems in the surrounding roadways.

2.8 Hydrogeology

Review of registered groundwater bore information obtained from the NSW Office of Water (NOW) database identified five groundwater bores within a 1 km radius of the site. Details registered for these bores are included in **Appendix C**.

Groundwater bore GW107016 is located approximately 400 m to the northeast of the site. The bore was installed within Waverley Park and registered for recreation purposes. The bore was installed through sandy loam, sandstone and shale to 130 m bgs. Standing water level (SWL) was recorded at 21.60 m bgs. No details were provided regarding the groundwater quality.

Groundwater bore GW111553 is located approximately 900 m southwest of the site. The bore was installed on a private property and registered for domestic purposes. The bore was installed to a depth of 14 m bgs. No details were provided regarding groundwater depths or groundwater quality.

Groundwater bore GW110058 is located approximately 800 m to the southwest. The bore was installed on private property and registered for domestic purposes. The bore was installed to a depth of 8 m bgs. No details were provided regarding groundwater quality.

Groundwater bore GW107447 is located approximately 800 m southwest of the site. The bore was installed through sand to a depth of 8.24 m bgs. SWL was recorded at 5.49 m bgs. Groundwater salinity was recorded as good. No other details were provided regarding groundwater quality.

Groundwater bore GW106854 is located approximately 800 m southwest of the site. The bore was installed on a private property and registered for domestic purposes. The bore was installed through sand to a depth of 7 m bgs. No details regarding groundwater depths or groundwater quality were provided.

Free groundwater was not observed during the previous geotechnical investigation (DP 2005), although it was noted that the use of water as a flushing medium during coring precluded observations of groundwater.

Based on local topography, shallow groundwater flow is anticipated to be to the southwest towards Willow Pond, while the regional groundwater flow resident in sandstone bedrock at a significant depth below ground surface is likely to be to the east towards the coast.

[10] *Australian Soil Resource Information System,* http://www.asris.csiro.au/, accessed 11 July 2016

3. Site History

3.1 Aerial Photograph

Copies of aerial photographs obtained from the Department of Lands are included in **Appendix D**. Relevant information from the aerial photograph review is summarised below.

1930: The image was of low resolution and contrast and details were difficult to discern. Three residential buildings were located in the current location of the Edina Hostel building. The central and northwest portions of the site comprised vegetated vacant land and gardens with a small residential property in the northwest portion of the site, along Birrell Street. The O'Reilly building was identified in the northeastern portion with an access road oriented in a north south direction providing access from Birrell Street. The Vickery building was present in the eastern portion of the site. Some small buildings or sheds were located to the east of the access road.

Residential properties were located to the north, east and west of the site. A school was located to the south of the site. A park with a water tower was located beyond the residential properties to the northeast of the site.

1951: The Morgan Building was identified within the southeastern portion of the site. What appeared to be a paved area was located to the west of the Vickery Building. Two buildings had been constructed within the northwest portion of the site, within the location of the current bituminous concrete carpark. Several buildings were also present in the northeastern portion of the site. An access road oriented in a north south direction off Church Street was located in the southern portion of the site. The current day residential houses in the south-western portion of the site appeared to have been constructed.

A square structure that appeared to be a water reservoir had been constructed to the west of the park, beyond the residential properties to the northeast of the site.

1961: Some vegetation within the central eastern portion of the site had been removed. The Morgan building had been extended to the south with two additional buildings. The remaining areas of the site appeared similar to the 1951 photograph.

The areas surrounding the site appeared similar to the previous photograph.

1970: Some vegetation within the central and western portions of the site had been removed and the Edina Nursing Home buildings had been constructed in the northwest portion of the site. The remaining areas of the site appeared similar to the previous photograph.

A new residential complex had been constructed and a bowling club established to the east of the site, along Birrell Street. The remaining areas surrounding the site appeared similar to the previous photograph.

1978: The building within the northwest portion of the site, along Birrell Street, had been removed. The three residential buildings located along the western site boundary had been demolished and the current Edina Hostel building had been constructed. The remaining areas of the site appeared similar to the previous photograph.

The areas surrounding the site appeared similar to the 1970 photograph.

1986: The current tennis court had been constructed within the central portion of the site. The remaining areas of the site appeared similar to the previous photograph.

The areas surrounding the site appeared similar to the previous photograph.

1994: A shed and a paved area had been constructed to the east of the tennis court and a residential complex constructed to the west. The remaining areas of the site appeared similar to the previous photograph.

The areas surrounding the site appeared similar to the previous photograph.

2004: Car parks had been constructed to the south of the tennis court and within the northeast portion of the site, along Birrell Road. The remaining areas of the site appeared similar to the previous photograph.

The areas surrounding the site appeared similar to the previous photograph.

3.2 Historical Land Titles

A summary of title documentation records relevant to this investigation is provided below. Copies of the title records are included in **Appendix E**.

Lot 1 in DP172133

In 1922 the land had a group of owners including Methodist Ministers, Medical Practitioners, a Merchant, Manager and Estate Agents. In 1973 the land was transferred to Methodist Church (NSW) Property Trust. In 2007 the land was transferred to the Uniting Church of Australia Property Trust (NSW).

Lot 1 in DP948186, Lot 2 in DP1061588, Lot 3 in DP667555 and Lot 1 DP1061548

In 1915 the land was owned by Ebenezer Frank Vickery, a Solicitor of Sydney. In 1920 the land was transferred to a group of owners including Methodist Ministers, Medical Practitioners, a Merchant, Manager and Estate Agents. In 1926 and 1935 new Trustees were appointed under the Methodist Church Property Act. In 1973 the land was transferred to Methodist Church (NSW) Property Trust. In 2007 the land was transferred to the Uniting Church of Australia Property Trust (NSW).

Lot 2 in DP1061548

In 1915 the land was owned by Ebenezer Frank Vickery, a Solicitor of Sydney. In 1920 the land was transferred to the Methodist Missionary Society of Australasia Trust Association. In 1928 the land was transferred to a group of owners including Methodist Ministers, Medical Practitioners, a Merchant, Manager and Estate Agents. In 1935 new trustees were appointed under the Methodist Church Property Act. In 1973 the land was transferred to Methodist Church (NSW) Property Trust. In 2007 the land was transferred to the Uniting Church of Australia Property Trust (NSW).

Lot 1 in DP567694

In 1907 the land was owned by Ebenezer Vickery of Waverley, a property owner. In 1916 the land was transferred to Ebenezer Frank Vickery, Kenneth Firth Vickery and Bessie Irene Hipsley. In 1930, 1935, 1942 and 1964, new trustees were appointed under the Methodist Church Property Act. In 1973 the land was transferred to the Methodist Church (NSW) Property Trust. In 2010 the land was transferred to the Uniting Church of Australia Property Trust (NSW).

Lots 3 and 4 in DP593710 (Part formerly in V.4549 F.109)

In 1932 the land was owned by Heather Gladys Truda, wife of Giuseppe Joe Truda a Musician. In 1934 the land was transferred to a widow, Mary Sudakoff and then to James Thompson Steele Tate, a Teacher, in 1947. In 1972 the land was transferred to Methodist Church (NSW) Property Trust and then to the Uniting Church of Australia Property Trust (NSW) in 1978.

Lots 3 and 4 in DP593710 (Part formerly in V.6715 F.110)

In 1953 the land was owned by Alexander Charles Dermont, a Clerk. In 1954 the land was transferred to Ivy Mildred Rushbrooke, a widow. In 1967 the land was transferred to Jude Rushbrooke, a Proof Reader and Kenna Chubb Durst, a married woman. Later in 1967 the land was transferred to Tommass and Guiseppine Trihisoma, a builders labourer and his wife. In 1970 the land was transferred to Roy Mason Euston Glover, a Clerk and then to the Methodist Church (NSW) Property Trust in 1971.

Lots 3 and 4 in DP593710 (Part formerly in V.6715 F.111)

In 1953 the land was owned by Alexander Charles Dermont, a Clerk. In 1954 the land was transferred to Kathleen Rayall, a married woman and then to Dorathea Catherine Vickery a Spinster later that year. In 1972 the land was transferred to the Methodist Church (NSW) Property Trust and then to the Uniting Church of Australia Property Trust (NSW) in 1978.

Lots 3 and 4 in DP593710 (Part formerly in V.7813.F3)

In 1959 the land was owned by Lonnie Fred Fox, a Sandblaster and his wife. In 1971 the land was transferred to Josephine and John Dorahy, a married woman and a Clerk and then to Arthur Marshall, an Accountant in 1971. Later in 1971 the land was transferred to the Methodist Church (NSW) Property Trust and then to the Uniting Church of Australia Property Trust (NSW) in 1978.

Lots 3 and 4 in DP593710 (Part formerly V.9872 F.165)

In 1958 the land was owned by Mabel Roberts Foster, a Spinster and Mary Watterson Osborn, a Dentists wife. In 1971 the land was transferred to Winston Darcy O'Reilly, a Clerk, and in 1972 to the Methodist Church (NSW) Property Trust. In 1978 the land was transferred to the Uniting Church of Australia Property Trust (NSW).

Lot 7 in DP94185

In 1915 the land was owned by Edith Margery Vickery, a Spinster and in 1928 the land was transferred to a group of owners including Methodist Ministers, Medical Practitioners, a Merchant, Manager and Estate Agents. In 1935 new trustees were appointed under the Methodist Church Property Act and in 1973 the land was transferred to the Methodist Church (NSW) Property Trust. In 2007 the land was transferred to the Uniting Church of Australia Property Trust (NSW).

3.3 EPA Records

Search of the NSW Environmental Protection Authority (EPA) database was undertaken on 8 July 2016 (**Appendix F**) for the site and immediate surroundings. The search consisted of the:

- NSW EPA Protection of the Environment Act public register of licence, applications and notices (maintained under Section 308 of the Protection of the Environment Operations Act 1997 (POEO Act));
- NSW EPA contaminated land public register of record of notices (under Section 58 of the Contaminated Land Management Act 1997 (CLM Act)); and
- NSW contaminated sites notified to the EPA (under Section 60 of the CLM Act).

Results of the searches are discussed below.

POEO

A search of the EPA's public register under the *Protection of the Environment Operations Act 1997* was undertaken. The search identified that, for the site, there were no prevention, clean-up or prohibition notices.

Environment Protection Licence No. 6370 was held by South Eastern Sydney and Illawarra Area Health Service for the production and storage of up to 10 tonnes of clinical and related waste material. A licence variation was issued in 2005 (Notice No. 1044609) and allows for the generation and storage of clinical and related wastes. Copies of the licence and variation are included in **Appendix F**.

Section 58

No notices have been issued under Section 58 of the CLM Act for the site and immediate surroundings.

Section 60

The site or adjacent properties are not on the list of NSW contaminated sites notified to the EPA under Section 60 of the CLM Act.

3.4 Council Records

The zoning certificate for the site was obtained from Waverley Council, and is included in **Appendix G**. Relevant information is summarised below.

- The site is zoned SP2 Infrastructure and R3 Medium Density Residential.
- The land does not include or comprise critical habitat.
- The land is not in a heritage area.
- The land contains items of heritage (see **Section 3.5**).
- The land is not proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act 1961.*
- The land is not affected by a policy adopted by Council that restricts the development of land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).
- The land is not affected by a policy adopted by another public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the Council, that restricts the development of land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).
- The land is not subject to flood related development controls for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing).
- The land is not subject to flood related development controls.
- The land is not bush fire prone land.
- The land is not affected by any road widening proposal under Division 2 of Part 3 of the Roads Act, any Environmental Planning Instrument or any resolution of the Council.
- The land is not reserved for acquisition.
- The land is not a declared investigation area or remediation site, or the subject of an investigation order or remediation order under the *Contaminated Land Management (CLM) Act 1997*. The land is not the subject of a voluntary investigation or remediation proposal or a site audit statement within the meaning of the *CLM Act 1997*.

3.5 Heritage Register

A search of the Australian Heritage Trust database and the NSW Heritage Inventory was undertaken for the site. Results from the searches are summarised below and details of heritage items are included as **Appendix H**.

Australian Heritage Register

Heritage items identified on the site includes a group of Victorian buildings and the Edina house.

NSW Heritage Register

Heritage items identified on the site includes the War Memorial Hospital Grounds and the War Memorial Hospital buildings.

Review of the heritage information indicates the buildings and grounds were constructed between 1880s and 1945. The site was originally the residence of the Vickery family who donated the property for use as a memorial hospital in 1919.

3.6 WorkCover Dangerous Goods Records

A search of records held by WorkCover indicated the presence of chemical and petroleum storage at the site, as summarised below. A copy of the records is provided as **Appendix I**.

- **1993:** A licence to store petrol, compressed air and medical oxygen at the site was approved. The licence indicated that the petrol was to be stored in a roofless store with a maximum storage capacity of 1000 L (5 x 200L drums). The licence indicated the typical quantity to be kept on site was 600 L. The plans show the storage depot for the petrol within the central eastern portion of the site, along Carrington Road.
- **2000:** The licence to keep the petrol on site was renewed by the War Memorial Hospital. The location of the storage depot was within a storage building in the eastern portion of the site.
- **2006:** A declaration of dangerous goods was submitted by the War Memorial Hospital for the site which included the storage of 600 L of petrol in addition to 500 L of chlorine. The plans indicated the chlorine was stored adjacent to the James Green building within the northwest portion of the site.

3.7 Site History Summary

A summary of the site history is provided in **Table 3.1**.

Table 3.1 Summary Site History

Period	Activity	Source
1915	The northeastern portion of the site was owned by Ebenezer Frank Vickery, a Solicitor.	Title documentation
1920-1922	The eastern and northeastern portions of the site was owned by a group including Methodist Ministers, Medical practitioners, a Merchant, Manager and Estate Agents.	Title documentation
1930	Three residential buildings were located in the current location of the Edina Hostel building. The O'Reilly building was identified in the northeastern portion. The Vickery building was present in the eastern portion. Some small buildings or sheds were located to the east of the O'Reilly building.	Aerial photograph (1930)
1951	The Morgan building had been constructed within the southeast portion of the site. Two buildings had been constructed within the northwest portion of the site, within the current location of the bituminous concrete carpark.	Aerial photograph (1951)
1961	Some vegetation within the central eastern portion of the site had been removed. The Morgan Building had been extended to the south with two additional buildings. The remaining areas of the site appeared similar to the previous photograph.	Aerial photograph (1961)
1970	Some vegetation within the central and western portions of the site had been removed and the Edina Nursing Home buildings had been constructed in the northwest portion of the site.	Aerial photograph (1970)
1973	The site was transferred to the Methodist Church (NSW) Property Trust	Title documentation
1978	The building within the northwest portion of the site, along Birrell Street, had been removed. The three residential buildings located along the western site boundary had been demolished and the current Edina Hostel building had been constructed. Lots 3 and 4 DP 593710 (western portion of the site) were transferred to the Uniting Church of Australia Property Trust (NSW)	Aerial photograph (1978) Title documentation

Period	Activity	Source
1986	The Morgan Building had been further extended to the south with an additional building. The current tennis court had been constructed within the central portion of the site.	Aerial photograph (1986)
1993	War Memorial Hospital applied for a license to store petrol, compressed air and medical oxygen at the site.	WorkCover documentation
1994	A concrete area had been constructed to the east of the tennis court and a residential complex constructed to the west.	Aerial photograph (1994)
2000	License to store petrol onsite was renewed by the War Memorial Hospital.	WorkCover documentation
2004	Car parks had been constructed to the south of the tennis court and within the northeast portion of the site, along Birrell Road.	Aerial photograph (2004)
2006	A declaration of dangerous goods was submitted by the War Memorial Hospital for the site which included the storage of petrol and chlorine.	WorkCover documentation
2007-2010	Remaining areas of the site were transferred to the Uniting Church of Australia Property Trust (NSW)	Title documentation
2011-2016	The site continued to run as War Memorial Hospital, and acquired additional 7 lots (previously residential cottages) at the southwest corner along Church Street and Bronte Road	Aerial photographs from SIXMAPs

3.8 Integrity Assessment

The information obtained from the historical sources reviewed has been found to be in general agreement and of a suitable quality. It is therefore considered that the information provided in this historical assessment has an acceptable level of accuracy.

4. Conceptual Site Model (CSM)

4.1 AECs & COPCs

Based on the history review and observations of the site, AECs and associated COPCs have been identified and are presented in **Table 4.1**.

Table 4.1 Areas of Environmental Concern and Associated Contaminants of Potential Concern

Area of Environmental Concern	Contaminants of Potential Concern
Fill material observed across the site including ash and slag	Heavy metals (As, Cd, Cr, Cu, Hg, Pb, Ni, Zn), TRH/BTEX, PAHs, OCP/OPPs, PCBs and asbestos
Hazardous materials impacts associated with presence and demolition of former buildings in the northern and western portions of the site	Lead and asbestos
Paint and petrol storage shed in the eastern portion	TRH/BTEXN, PAHs and lead
Grease trap within the southeastern portion of the site	TRH/BTEX and PAHs
Former incinerator in the northwestern portion	Heavy metals, TRH/BTEX, PAHs, OCPs and asbestos
Garden/Maintenance shed and garden material storage area	Heavy metals, TRH/BTEX, PAHs, OCP/OPPs and PCBs

4.2 Potentially Contaminated Media

Potentially contaminated media present at the site include:

- potential fill material observed across the site;
- natural soils;
- groundwater; and
- soil vapour.

Fill material may have been imported to the site from unknown sources to create current ground surface levels, and as such is identified as a potentially contaminated medium.

In addition, surface soils (whether fill material or natural soils) are a potentially contaminated medium based on the historical uses of the site for residential and hospital purposes, including the above mentioned (**Table 4.1**) facilities and infrastructure.

Based on the potential leachability of the contaminants within fill material, and the historical site use, vertical migration of contamination from the fill material or surface soil into the underlying soils may have occurred where surface soils or fill is found to be significantly impacted.

The potential for groundwater to be a contaminated medium is moderate based on the historical storage of petrol, in ground grease trap and other chemicals at the site, the sandy soils and potential for shallow groundwater. However, the potential for groundwater to be contaminated is dependent upon the mobility of soil contamination identified at the site.

The potential for surface water to be a contaminated medium is low based on the absence of surface water on the site, and the absence of significant sources of potential contamination identified.

Similar to groundwater, should soil impacts be identified, the potential for soil vapour as a contaminated media may require further consideration.

4.3 Potential Receptors

Potential human and ecological receptors or on near the site include:

- Site occupants, workers and visitors;

- Maintenance / construction workers, including subsurface works;
- Flora and fauna on the site; and
- The freshwater ecosystem of Willow Pond located hydro-geologically downgradient of the site.

4.4 Potential Exposure Pathways

Based on the COPCs identified in soil, groundwater and soil vapour, the potential exposure pathways for the site include:

- Oral and dermal pathways from impacted soils and groundwater (either through beneficial groundwater re-use or made accessible via excavation).
- Inhalation of airborne contaminants (including airborne asbestos fibres).
- Inhalation of vapours migrating from impacted soils and groundwater.
- Contaminant uptake via vegetation (flora) or bioaccumulation within fauna.

4.5 Potential for Migration

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is a combination of:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);
- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The potential contaminants identified during of the site history review are generally in either a solid form (e.g. asbestos) or liquid form (e.g. petroleum hydrocarbons).

As the site is predominantly sealed with roads, buildings or vegetation, the potential for migration of contaminants from the site via windblown dust is low.

The potential for contaminants to migrate via surface water runoff is low due to the absence of any significant source of contamination identified, the sealed nature of a large portion of the site and the absence of a permanent water body across the site.

The potential for migration of contaminants via groundwater is low based on the absence of significant potential sources of contamination identified at the site. However, in the event that significant soil contamination is identified, the potential for groundwater contamination will need to be reassessed.

4.6 Preferential Pathways

For the purpose of this assessment, preferential pathways have been identified as natural and/or man-made pathways that result in the preferential migration of COPC as either liquids or gasses.

Man-made preferential pathways are present on the site, generally associated with potential fill materials and underground service infrastructure which may act as preferential pathways for mobile liquid and vapour contaminants.

5. Sampling and Analysis Plan

5.1 Data Quality Objectives

Data quality objectives (DQOs) were developed for the contamination assessment, as discussed in the following sections.

5.1.1 State the Problem

Uniting is assessing the re-development potential of the site and an updated Phase 1 ESA is required to support the master planning of the site.

5.1.2 Identify the Decision

Based on the decision making process for assessing urban redevelopment sites detailed in DEC (2006), the following decisions are required to be made:

- Are there any unacceptable risks to likely future onsite receptors from soil?
- Are there any issues relating to the local area background soil concentrations that exceed appropriate soil criteria?
- Are there any impacts of chemical mixtures?
- Are there any aesthetic issues?
- Is there any evidence of, or potential for, migration of contaminants from the site?
- Is a site management strategy required?

5.1.3 Identify Inputs to the Decision

Inputs to the decisions were:

- Detailed site inspections (2012 and 2016);
- Soil environmental data collected by soil sampling and laboratory analysis;
- Soil criteria based on the proposed land use; and
- Confirmation that data generated by sample analysis were of an acceptable quality to allow reliable comparison to assessment criteria by assessment of quality assurance / quality control as per the data quality indicators established in **Section 5.2.**

5.1.4 Define the Study Boundaries

The approximate site boundary is located at 125 Birrell Street, Waverley, NSW, as shown in **Figure 2**. The site is legally described as per the Lot details provided in **Table 2.1**. The study targeted the potential contamination issues identified in the CSM.

The vertical extent of the soil investigation completed part of JBS&G (2013a) was to 1.1 m bgs which extended into natural sands below fill material at some sampling locations.

Due to the nature of potential contaminants identified, seasonality was not assessed as part of this investigation. The initial study including a detailed site inspection and soil sampling was conducted in December 2012 with an additional detailed site inspection of the extended site area completed in July 2016.

5.1.5 Develop a Decision Rule

The decision rules adopted to answer the decisions identified in **Section 5.1.2** are summarised in **Table 5.1**.

Table 5.1: Summary of Decision Rules

Decision Required to be Made	Decision Rule
Are there any unacceptable risks to likely future receptors from impacted soil?	Soil analytical data was compared against appropriate land use scenario criteria derived from NSW EPA endorsed NEPC (2013). Statistical analyses of the data in accordance with relevant guidance documents were undertaken, if appropriate, to facilitate the decisions. The following statistical criteria were adopted with respect to soils: Either: the reported concentrations were all below the site criteria; Or: the 95% upper confidence limit (UCL) of the average concentration for each analyte was below the adopted site criterion; no single analyte concentration exceeded 250% of the adopted site criterion; and the standard deviation of the results was less than 50% of the site criterion. If the statistical criteria stated above were satisfied, the decision was No. If the statistical criteria were not satisfied, the decision was Yes.
Are there any issues relating to the local area background soil concentrations that exceed appropriate soil criteria?	Analytical data in natural soil samples were compared to the background levels for urban areas of NSW as described in NEPC 2013. If the 95% UCL of surface soils exceeded published background concentrations (NEPC 2013), the decision was Yes. Otherwise, the decision was No.
Are there any chemical mixture?	Were there more than one group of contaminants present which increase the risk of harm? If there was, the decision was Yes. Otherwise, the decision was No.
Are there any significant aesthetic concerns from impacted soils present at the site?	Were significant odour or other aesthetic issues identified during the soil assessment? If yes, the decision was Yes. Otherwise, the decision was No.
Is there any evidence of, or potential for, migration of contaminants from the site?	Based on the assessment results was there any evidence of, or potential for, migration of contaminants from the site? If there was potential for unacceptable contaminant concentrations to migrate, the decision was Yes. Otherwise, the decision was No.
Is a site management strategy required?	Was the answer to any of the decisions Yes? If yes, a site management strategy was required. If no, a site management strategy was not required.

5.1.6 Specify Limits of Decision Error

This step is to establish the decision maker's tolerable limits on decision errors, which are used to establish performance goals for limiting uncertainty in the data. Data generated during this project must be appropriate to allow decisions to be made with confidence.

Specific limits with respect to the limits of decision error adopted for this project have been implemented in accordance with the appropriate guidance from NEPC (2013), appropriate data quality indicators (DQIs) used to assess quality assurance / quality control) and standard JBS&G procedures for field sampling and handling.

To assess the usability of the data prior to making decisions, the data will be assessed against pre-determined Data Quality Indicators (DQIs).

The pre-determined DQIs established for the project are discussed below in relation to precision, accuracy, representativeness, comparability, completeness and sensitivity (PARCCS parameters), and are shown in **Table 5.2**.

- **Precision** - measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples.
- **Accuracy** - measures the bias in a measurement system. The accuracy of the laboratory data that are generated during this study is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards.
- **Representativeness** – expresses the degree which sample data accurately and precisely represent a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.
- **Comparability** - expresses the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples; ensuring analysing laboratories use consistent analysis techniques and reporting methods.
- **Completeness** – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.
- **Sensitivity** - expresses the appropriateness of the chosen field and laboratory methods, including the limits of reporting, in producing reliable data in relation to the adopted site assessment criteria.

Table 5.2: Summary of Quality Assurance / Quality Control Program

Data Quality Indicator	Frequency	Data Quality Criteria
Precision		
Blind duplicates (intra laboratory)	1 / 20 samples	<50% RPD1
Blind triplicates (inter laboratory)	1 / 20 samples	<50% RPD1
Accuracy		
Surrogate spikes	All organic samples	70-130%
Laboratory control samples	1 per lab batch	70-130%
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes	-	-
Samples extracted and analysed within holding times.	-	organics (7 to 14 days), inorganics (28 days to 6 months)
Trip spike	1 per sampling batch	70-130% recovery
Trip blank	1 per sampling batch	<LOR
Rinsate	1 per sampling batch with reusable sampling equipment	<LOR
Laboratory Blanks	1 per analytical method	<LOR
Comparability		

Data Quality Indicator	Frequency	Data Quality Criteria
Standard operating procedures for sample collection & handling	All samples	All samples
Standard analytical methods used for all analyses	All samples	All samples
Consistent field conditions, sampling staff and laboratory analysis	All samples	All samples
Limits of reporting appropriate and consistent	All samples	All samples
Completeness		
Sample description and COCs completed and appropriate	All samples	All samples
Appropriate documentation	All samples	All samples
Satisfactory frequency and result for QC samples	All QA/QC samples	-
Data from critical samples is considered valid	-	Critical samples valid
Sensitivity		
Field and analytical methods and limits of recovery appropriate for media and adopted site assessment criteria	All samples	LOR < adopted site criteria (where possible)

1 Relative percent difference (RPD)

If any of the DQIs are not met, further assessment will be necessary to determine whether the non-conformance will significantly affect the usefulness of the data. Corrective actions may include requesting further information from samplers and/or analytical laboratories, downgrading of the quality of the data or alternatively, re-collection of the data.

A qualitative assessment of compliance with standard procures and appropriate sample collection methods will be completed during the DQI compliance assessment.

5.1.7 Optimise the Design for Obtaining Data

Various strategies for developing a statistically based sampling plan are identified in EPA 1995[11], including judgemental, random, systematic and stratified sampling patterns.

Sampling locations were generally systematic across the site, although skewed towards identified AECs.

For characterisation of a 3 ha site, EPA (1995) recommends the collection of samples from 40 grid-based locations. Given the JBS (2013) assessment was being conducted for due diligence purposes, a sampling density at half the rate from EPA (1995) was considered appropriate to characterise potential contamination at the site, enabling preliminary conclusions to be drawn on the suitability of the site for the proposed use.

5.2 Soil Sampling Methodology

Soil samples were collected from boreholes advanced using a hand auger. Samples were generally collected from soils at the surface (0-0.1 m), subsurface (0.2-0.3 m, 0.4-0.5 m, and then at 0.5 m intervals or changes in geology until termination). Where possible, boreholes were extended 0.3 m in natural soils.

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indicators of contamination were noted on the bore logs (**Appendix J**). Collected soil samples were immediately transferred to laboratory supplied sample containers. The sample containers were labelled, sealed and transferred to a chilled esky for sample preservation prior to and during shipment. A chain-of-custody form was completed and forwarded with the samples to the testing laboratory.

[11] *Sampling Design Guidelines.* NSW EPA. September 1995. (EPA 1995)

Samples were analysed in accordance with the analytical schedule in **Table 5.3**.

5.3 Laboratory Analysis

JBS&G contracted a NATA certified laboratory Envirolab Services Pty Ltd (Envirolab) as the primary laboratory for the required analyses. The secondary laboratories for the works were ALS Global (ALS) and Pickford & Rhyder (for asbestos only). All laboratories were NATA registered for the required analyses. In addition, the laboratories were required to meet JBS&G's internal QA/QC requirements. Laboratory analysis of samples was conducted as summarised in **Table 5.3**.

Table 5.3: Sampling and Analytical Program

Sample Media	No. Sample Locations	Analyses (exc. QA/QC)
Soil	20 hand auger locations (HA01- HA20)	Heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) – 25 samples TRH – 9 samples BTEX – 9 samples PAHs – 12 samples OCP/OPPs – 7 samples PCBs – 7 samples Asbestos – 7 samples ASLP (PAHs) – 3 ASLP (heavy metals) - 2

6. Assessment Criteria

6.1 Regulatory Guidelines

Development of site assessment criteria and the associated scope of investigation was undertaken with consideration to aspects of the following guidelines, as relevant:

- *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1),* National Environment Protection Council (NEPC 2013);
- *Contaminated Sites: Sampling Design Guidelines*, NSW EPA, 1995 (EPA 1995);
- *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites*, NSW OEH, 2011 (OEH 2011);
- *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme*, 2nd Edition, NSW EPA, 2006 (DEC 2006);
- *Contaminated Sites: Guidelines on Duty to Report Contamination under the Contaminated Land Management Act 1997 (as amended 2015),* NSW Environment Protection Authority (EPA 2015);
- *CRCCARE Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater*, 2011, Friebel and Nadebaum (CRCCARE 2011).

6.2 Soil Assessment Criteria

An aged care facility and hospital represents a scenario that does not fall under the standard health investigation land use scenarios presented in NEPM (2013). Schedule B7 of NEPM (2013) states "the HILs developed for the commercial/industrial land use scenario are not applicable to a site used frequently by more sensitive groups such as children (within childcare centres, hospitals and hotels) and the elderly (within hospitals, aged care facilities and hospices)." Given that elderly and other sensitive sub-populations (such as patients with immunosuppression and pre-existing illness) are frequent users of the site, a more sensitive land use scenario is required to be adopted. In addition, the proposed redevelopment includes maintenance of existing and additional turfed, landscaped and green areas / corridors. To this extent, the following soil assessment criteria have been adopted as appropriate for the identified future proposed land uses:

- Health Investigation Levels (HILs) for residential with minimum opportunities for soil access – HIL-B (NEPC 2013);
- HILs for public open spaces such as parks, playgrounds, ovals, and footpaths - HIL-C (NEPC 2013);
- Health Screening Levels (HSLs) for petroleum hydrocarbons considering potential for vapour intrusion, sand for low to high density residential - HSL A & HSL B (NEPC 2013);
- HSLs for petroleum hydrocarbons considering potential for vapour intrusion, sand for recreational / open space - HSL C (NEPC 2013);
- HSLs for concentrations of asbestos in soil for residential with minimum opportunities for soil access (HSL-B) and public open space (HSL-C) (NEPC 2013);
- Management limits for hydrocarbons for urban residential and public open space land use – coarse grained soil (NEPC 2013);
- Generic ecological investigation levels (EILs) based on NEPC (2013) for urban residential and public open space; and

- Ecological Screening Levels (ESLs) for TRH fractions, BTEX and benzo(a)pyrene in coarse grained soil for urban residential and public open space land use (NEPC 2013).

Where no criteria are present for a contaminant, the laboratory limit of reporting (LOR) has been used as an initial screening criteria.

It is noted that the most conservative ecological investigation and screening levels have been adopted given the current absence of NEPC (2013) soil characteristic data.

The site assessment criteria are presented in **Table A**, **Appendix A**.

7. Quality Assurance/Quality Control

7.1 QA/QC Results

The QA/QC results are summarised in **Table 7.1** and discussed in **Section 7.2** below. Detailed QA/QC data is included in the laboratory documentation provided in **Appendix K**.

Table 7.1: QA/QC Results Summary

Data Quality Indicator	Results	DQI Met?
Precision		
Soil Blind duplicates (intra laboratory)	0-114% RPD The primary and duplicate samples targeting asbestos were in agreement. Duplicate samples were analysed at a rate above 1/20 primary samples.	Partial[1]
Soil Blind triplicates (inter laboratory)	0-93% RPD The primary and triplicate samples targeting asbestos were not in agreement. Triplicate samples were analysed at a rate above 1/20 primary samples	Partial[1]
Accuracy		
Surrogate spikes	79 - 121% recovery Surrogate spikes were completed for all organic samples.	Yes
Laboratory control samples	<LOR	Yes
Matrix spikes	78 - 137% recovery At least 1 matrix spike recovery was completed for each batch of samples.	Partial[1]
Representativeness		
Sampling appropriate for media and analytes	All sampling conducted in accordance with JBS procedures, consistent with NEPC (1999) guidance in force at the time of the works.	Yes
Laboratory blanks	<LOR	Yes
Samples extracted and analysed within holding times.	All samples were extracted and analysed within holding times with the exception of PAH analysis for 3 samples which were 7 days out of holding time	Partial[1]
Trip spike	103-113% 1 trip spike accompanied soil samples	Yes
Trip blank	Trip blank was damaged during shipment of the samples to the laboratory and unable to be analysed.	Partial[1]
Comparability		
Standard operating procedures for sample collection & handling	Field staff used same standard operating procedures throughout works.	Yes
Standard analytical methods used for all analyses	Standard analytical methods were used.	Yes
Consistent field conditions, sampling staff and laboratory analysis	Sampling was conducted using standard operating procedures in the same conditions throughout the works. The laboratory remained consistent throughout the investigation.	Yes
Limits of reporting appropriate and consistent	Limits of reporting were consistent and appropriate	Yes
Completeness		

Sample description and COCs completed and appropriate	All borehole logs and COCs were completed appropriately.	Yes
Appropriate documentation	Field documentation was appropriately completed.	Yes
Satisfactory frequency and result for QC samples	All frequency and results for QA/QC were generally satisfactory	Partial[1]
Data from critical samples is considered valid	Data from critical samples is considered valid.	Yes
Sensitivity		
Field and analytical methods and limits of recovery appropriate for media and adopted site assessment criteria	Appropriate laboratory analysis methods and detection limits were considered to have been achieved to the extent practicable during the field and laboratory phases of this investigation.	Yes

Notes: 1 See discussion of DQI exceedances

7.2 QA/QC Discussion

7.2.1 Precision

Field duplicates had relative percentage differences (RPDs) generally within the acceptable range of less than 50%, with the following exceptions:

- TRH C_{10}-C_{36}, benzo(a)pyrene and total PAHs in duplicate pair QC01 and HA03 0-0.1 with RPDs of 114%, 82% and 92%, respectively.
- TRH C_{10}-C_{36} and total PAHs in triplicate pair QC01A and HA03 0-0.1 with RPDs of 93% and 65%, respectively.

The elevated RPDs reported are attributed to the heterogeneous nature of the sandy fill material present at the site, where contaminants may bind preferentially to certain components of the fill material. The RPDs for TRH C_{10}-C_{36} and total PAHs may also be artificially elevated by the cumulative effect of fraction additions.

As a conservative measure the highest reported values have been adopted during evaluation of the data.

7.2.2 Accuracy

One matrix spike sample was completed for the batch of samples (1 per 25 samples). Matrix spike recoveries were generally within the acceptable range of 70-130% for all analytes with the exception of PAHs which reported a matrix spike recovery slightly higher than the acceptable range for Chrysene (137%). Some matrix spike recoveries for PAHs could not be reported at all due to the high concentration of analytes in the primary sample (HA03 0-0.1) causing matrix interferences.

The absence of matrix spike recoveries for same analytes is considered not to significantly impact upon the conclusions of the accuracy of the assessment, as acceptable recoveries for laboratory control samples indicate that the soil analytical data are of an acceptable quality to achieve the objectives of the investigation.

7.2.3 Representativeness

The trip blank was damaged during shipment to the laboratory and could not be analysed. Given the trip spike recovery was within the acceptable range, and the rinsate sample which accompanied the samples to the laboratory reported analytes below the LOR, the absence of a trip blank does not significantly impact on the representativeness of the data or the ability to be confident in the validity of the data obtained for use in this assessment.

On receipt of laboratory results indicating elevated PAH concentrations from some surface soil samples, selected sub-surface soil samples were then submitted for analysis to assess the extent of the contamination through the soil profile. Consequently, three samples from Batch 83208 were 7

days outside of the recommended holding time. It is noted that the elevated PAH compounds were generally present at the non-volatile extent of the PAH compound range and as such, given the samples were appropriately stored at the laboratory until analysed, there is unlikely to have been significant decline in reported concentrations. However, as a conservative measure the potential for slightly decreased PAH concentrations in these additional delineation samples has been taken into consideration during the assessment of the analytical results.

7.2.4 Comparability

Experienced JBS&G personnel undertook all sampling in accordance with standard JBS&G sampling methods.

All field works and sampling were undertaken by one experienced JBS&G field scientist.

The laboratory LORs were consistent and are considered appropriate.

7.2.5 Completeness

Samples were generally transported under full chain of custody (COC) documentation. The COC documentation was completed correctly and the selected analyses were correctly conducted.

All field documentation was completed appropriately and were correct.

The frequency of analysis and result for all QC samples are appropriate.

7.2.6 Sensitivity

The adopted analytical methods generally provided suitable LORs with respect to the adopted site assessment criteria.

7.3 QA/QC Conclusion

The field sampling and handling procedures produced QA/QC results which indicate that the soil data are of an acceptable quality and suitable for use in site characterisation.

The NATA certified laboratory results sheets indicate that the project laboratory was generally achieving levels of performance within its recommended control limits during the period when the samples from this program were analysed.

On the basis of the results of the field and laboratory QA/QC program, the soil data are of an acceptable quality upon which to draw conclusions regarding the environmental condition of the site.

8. Soil Results

8.1 Soil Field Observations

Geology encountered at the site during this investigation is summarised below. Borelogs are included as **Appendix J**.

During the investigation fill material was identified across the site from 0.3 to 1.1 m bgs. Natural material was encountered from 0.3 to 0.75 m bgs at three locations across the site and generally comprised fine to medium grained sand. Elsewhere, drilling was terminated on obstructions in the fill material. The fill material generally comprised silty sand with inclusions of plant matter, ash, slag, tile fragments, concrete and sandstone gravels.

Slight hydrocarbon odours were identified in sub-surface fill material at sample location HA18 adjacent to the incinerator in the north-western portion. There was no other evidence of staining or odours in the fill.

A single suspected ACM fragment was identified (ACM01) on the ground surface within the eastern portion of the site. The fragment was collected for sampling purposes as discussed in **Section 8.2.5**. No other suspected ACM fragments were observed on the ground surface across the site.

No groundwater seepage was reported during the investigation to a maximum depth of 1.1 m bgs.

8.2 Soil Analytical Results

The soil sampling locations are shown on **Figure 3**. Health soil criteria exceedances are shown on **Figure 4**. Summarised soil analytical results are presented in **Table A.** Summarised soil leachate results are presented in **Table B.** Detailed laboratory documentation is provided in **Appendix K**. 95% Upper Confidence Limit (UCL) statistical calculations are presented in **Appendix L**. The soil analytical results are discussed in the following sections.

8.2.1 Metals

HIL-B – Residential with Minimal Soil Access

Concentrations of lead in soil samples selected for analysis exceeded the HIL-B criteria of 1200 mg/kg in fill material at three sample locations, HA11 0-0.1, HA12 0-0.1 and HA15 0-0.1, with concentrations ranging from 1300 to 1500 mg/kg.

The sample lead population was statistically assessed using methodologies described in **Section 5** to generate a 95% UCL of the arithmetic mean as presented in **Appendix L**. Statistical assessment of the results identified that no individual analtye concentration exceeded 250% of the adopted site criterion, the standard deviation of the results was less than 50% of the site criterion and the 95% UCL value was reported as 604.3 mg/kg, which is less than the adopted HIL-B criterion of 1200 mg/kg. On this basis, lead concentrations as a population were considered to have met the HIL-B criterion.

Concentrations of heavy metals in other soil samples selected for analysis were all less than the HIL-B criteria.

HIL-C – Public Open Space

Concentrations of lead in soil samples selected for analysis exceeded the HIL-C criteria of 600 mg/kg in fill material at four sample locations, HA06 0-0.1, HA11 0-0.1, HA12 0-0.1, HA12 0.2-0.3 and HA15 0-0.1, with concentrations ranging from 740 to 1500 mg/kg.

Concentrations of heavy metals in other soil samples selected for analysis were all less than the HIL-C criteria.

EIL

Concentrations of copper in soil samples selected for analysis exceeded the EIL criterion of 60 mg/kg in seven locations with concentrations ranging from 62 to 140 mg/kg. The 95% UCL of copper was calculated at 60.45 mg/kg, slightly exceeding the EIL.

Concentrations of zinc in all soil samples selected for analysis exceeded the EIL criterion of 70 mg/kg with concentrations ranging from 76 to 340 mg/kg.

Concentrations of lead in three soil samples selected for analysis exceeded the EIL criterion of 1100 mg/kg, however, the calculated 95% UCL is less than the adopted EIL criterion. On this basis, lead concentrations as a population were considered to have met the EIL criterion.

Concentrations of heavy metals in other soil samples selected for analysis were all less than the EIL criteria.

Leachate

Neutral leachate tests for heavy metals were conducted on shallow soil samples from HA11, HA12 and HA15 based on the initial results. The results of the leachate analysis indicate that minor amounts of lead (up to 0.033 mg/L) are leachable under neutral conditions.

8.2.2 PAHs

HIL-B – Residential with Minimal Soil Access

Carcinogenic PAHs (as BaP TEQ) concentrations were reported above the HIL-B criterion (4 mg/kg) in three sample locations, HA05 0-0.1 (6.99 mg/kg), HA03 0.2-0.3 (5.477 mg/kg) and HA11 0-0.1 (9.74 mg/kg). The 95% UCL of Carcinogenic PAHs (as BaP TEQ) was calculated at 5.898 mg/kg, which exceeds the HIL-B criteria. In addition, the SD was calculated at greater than 50% of the adopted criteria.

Concentrations of total PAHs in the soil samples selected for analysis were all less than the site assessment criteria.

HIL-C – Public Open Space

Carcinogenic PAHs (as BaP TEQ) concentrations were reported above the HIL-C criterion (3 mg/kg) in three sample locations, HA05 0-0.1 (6.99 mg/kg), HA05 0.2-0.3 (3.04 mg/kg), HA11 0-0.1 (9.74 mg/kg), HA03 0-0.1 (3.869 mg/kg) and HA03 0.2-0.3 (5.477 mg/kg).

The concentration of carcinogenic PAHs (as BaP TEQ) location HA11 0-0.1 (9.74mg) exceeded the adopted HIL-C criteria of 3 mg/kg by greater than 250% and therefore 95% UCL statistics could not be applied to this data population.

Concentrations of total PAHs in the soil samples selected for analysis were all less than the site assessment criteria.

ESL

The concentration of benzo(a)pyrene in the soil samples selected for analyses exceeded the ESL (0.7 mg/kg) in seven sample locations ranging in concentration from 0.87 to 7.7 mg/kg.

Concentrations of naphthalene in the soil samples selected for analysis were all less than the site ESL criteria.

Leachate

Neutral leachate tests for PAHs were conducted on shallow soil samples from HA03, HA05 and HA11 based on the initial results. The results of the leachate analysis indicated that PAHs are unlikely to significantly leach under neutral conditions.

8.2.3 Asbestos

The concentration of asbestos in the soil samples selected for analyses were all less than the LOR of 0.1 g/kg. No asbestos was observed in the material observed during soil sampling. No asbestos was detected within ACM01 (the suspected ACM fragment) by the laboratory.

8.2.4 TRH

The concentration of TRH in the soil samples selected for analyses were all less than the health site assessment criteria.

The concentration of TRH >C_{16}-C_{34} in HA11 0-0.1 (430 mg/kg) and its duplicate QC01 (350 mg/kg), exceeded the adopted ESL criterion of 300 mg/kg.

The sample TRH >C_{16}-C_{34} population was statistically assessed using methodologies described in **Section 5** to generate a 95% UCL of the arithmetic mean as presented in **Appendix L**. Statistical assessment of the results identified that no individual analtye concentration exceeded 250% of the adopted site criterion, the standard deviation of the results was less than 50% of the site criterion and the 95% UCL value was reported as 266.3 mg/kg, which is less than the adopted ESL criterion of 300 mg/kg. On this basis, TRH >C_{16}-C_{34} concentrations as a population were considered to have met the ESL criterion.

8.2.5 BTEX

The concentration of BTEX in the soil samples selected for analyses were all less than the site assessment criteria and below the LOR.

8.2.6 OCPs

The concentration of OCPs in the soil samples selected for analyses were all less than the site assessment criteria and below the LOR.

8.2.7 OPPs

The concentration of OPPs in the soil samples selected for analyses were all less than the site assessment criteria and below the LOR.

8.2.8 PCBs

The concentration of PCBs in the soil samples selected for analyses were all less than the site assessment criteria and generally below the LOR.

9. Discussion

9.1 Are there any unacceptable risks to likely future receptors from impacted soil?

Elevated concentrations of heavy metals and PAHs identified in fill material at sampling locations as shown on **Figure 3** and **Figure 4** appear to be associated with ash and slag inclusions in the fill material identified across the majority of the site. Based on the current preliminary soils assessment, elevated concentrations of lead, copper, zinc and carcinogenic PAHs as BaP TEQ and B(a)P in soil are considered to pose a potential risk to human or ecological receptors under a residential with minimal access land use and/or recreational land use.

It is noted that no soil characterisation data has been collected during this preliminary investigation that allows for the derivation of site specific EILs and thus the EILs adopted in this assessment are considered likely to be conservative. Future additional investigations targeted to areas of proposed landscaping may reduce the extent of material required to be managed.

Concentrations of other COPCs identified in the CSM for the site are considered not to pose a risk under the land use scenarios assessed. Asbestos was not identified on the ground surface or within fill material sampling locations completed at the site. It is noted that ACM has been identified within existing buildings/structures that will require management if these are to be demolished or refurbished.

9.2 Are there any issues relating to the local area background soil concentrations?

Background soil samples were not analysed as part of the current investigation. Future additional investigations should target background soil concentrations to confirm there are no issues relating to local area background soil concentrations.

9.3 Are there any impacts from chemical mixtures?

There were no potential chemical mixtures identified during the investigation that may pose an unacceptable contamination risk at the site with respect to future site users.

9.4 Are there any aesthetic concerns?

Minor hydrocarbon odours were identified within fill material at sample location HA18 located adjacent to the disused incinerator. The odours were only identified when in close proximity of the soil, and were not identifiable at the ground surface. Based on this, the identified odour does not present an unacceptable aesthetic issue at the site.

There were no other potential aesthetic issues identified during the preliminary site assessment.

9.5 Is there any evidence of, or potential for, migration of contaminants from the site?

The potential for migration of contaminants from the site is considered to be low based upon the absence of significant surface soil contamination and sealed or well vegetated nature of the surface of the site.

Leachate testing indicated that PAHs were not significantly leachable and lead had only a minor potential for leaching under neutral conditions. Given the potential volume of lead impacted fill present at the site, and the concentrations of lead which, while above the HILs, was not particularly high, the potential for migration of lead from fill to groundwater and then offsite is low.

9.6 Is a site management strategy required?

Based on the scope of works completed, including the preliminarily nature of the soils assessment, and the limitations presented in **Section 12**, remediation or management of the identified heavy metal and PAH impact will be required to make the site suitable for its proposed use.

Further assessment is required to determine the extent of heavy metal and PAHs impacted fill materials and to draw further conclusions on the suitability of the site for its proposed use.

10. Conclusions and Recommendations

10.1 Conclusions

Based on the findings of this assessment and subject to the limitations in **Section 11**, the following conclusions are provided:

- The main portion of the site is understood to have been owned by the Vickery family from 1866 until 1919, when the property was gifted to the Methodist Church for use as a hospital, which continues to the current day. Former residential lots bordering the main portion of the site have gradually been acquired for incorporation into the currently defined site extent.
- A limited site sampling program was implemented in 2012, inclusive of 20 sampling locations. Fill materials generally comprising silty sand with inclusions of ash, slag, tiles, concrete and sandstone gravels were observed to depths ranging from 0.3 to 1.1 m bgs, although some locations did not penetrate the depth of fill material due to obstructions. Natural sands were encountered at three locations at depth ranging from 0.35 to 0.75 m bgs.
- Lead concentrations in fill material in some areas of the site have been identified to represent a potentially unacceptable risk to human receptors under the proposed land use scenario and copper and zinc concentrations in fill material have been identified to represent a potentially unacceptable risk to ecological receptors.
- PAHs including carcinogenic PAHs (as BaP TEQ) concentrations in fill material in some areas of the site have been identified to represent a potentially unacceptable risk to human receptors under the proposed land use scenario and B(a)P concentrations in fill material in some areas of the site represents a potentially unacceptable risk to ecological receptors.
- Concentrations of remaining COPCs, including asbestos, were identified at soil sampling locations to be present at concentrations less than the adopted site assessment criteria.
- No chemical mixtures, aesthetic issues or significant offsite migration risks were identified.
- Whilst areas of near surface fill material have been identified at the site as being impacted with heavy metals and PAHs to varying extent as a result of past land uses, the scale and extent of the identified impact is not such that common remediation and/or management techniques could not render the site suitable for the future proposed uses. As such, the potential for contamination to occur at the site is considered not to represent a significant barrier to future development of the site.

10.2 Recommendations

The following recommendations are made in light of the conclusions:

- Further detailed site investigation be undertaken in accordance with NSW EPA guidance once a detailed development proposal has been designed for the site such that the nature and scale of the investigation may be targeted toward areas of proposed ground disturbance and the most sensitive land uses including landscaped areas to provide appropriate data to draw specific conclusions in relation to the suitability of the site with respect to the anticipated exposure scenarios.
- Subject to the outcome of the detailed investigation activities a remedial/management strategy will be developed to address requirements for management of unacceptable soil contamination risks prior to or during future development activities such that the site (or site portion) may be considered suitable for proposed future use.

- The detailed site assessment reports and, if required, remedial action plan documentation will be required to be submitted with specific development applications to the consent authority for approval as part of the development planning process.
- Given the age of buildings at the site, hazardous materials surveys should also be completed on existing buildings proposed for demolition to ensure appropriate management of materials during demolition of structures as part of future redevelopment activities.

11. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

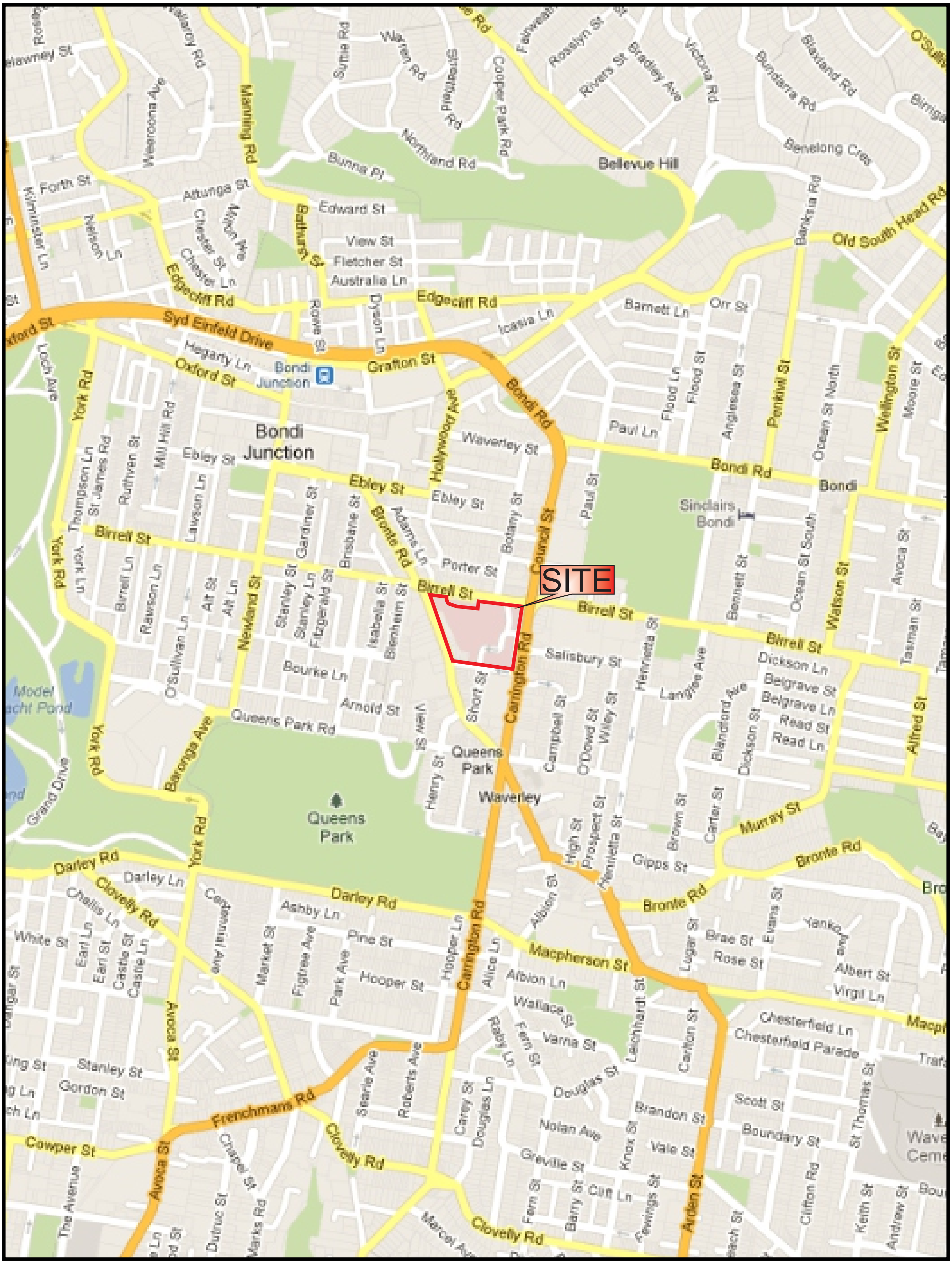
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Figures



Source: Base Image - Google Maps www.maps.google.com accessed 13-12-2012

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0 100 200 400 m

Scale: Approximate

Datum: MGA94 Zone 56 - AHD

A4

Rev	Description	Drn.	Date
A	Original Issue - R01	SE	19-08-2016

Legend:

Approximate Site Boundary

JBS&G **Figure 1: Site Location**

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 51954

File Name: 51954_01

Source: Base Image - 6 Viewer www.six.nsw.gov.au imagery date 2010 accessed 11-12-2012

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0 15 30 60 m

Scale: 1:1,500

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - R01	SE	12-04-2017

Legend:

- Approximate Site Boundary
- Cadastral Boundary

JBS&G **Figure 2: Site Layout**

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 51954 File Name: 51954_02

Source: Base Image - 6 Viewer www.six.nsw.gov.au imagery date 2010 accessed 11-12-2012

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0 15 30 60 m

Scale: 1:1,500

Datum: GDA 1994 MGA Zone 56 - AHD

A4			
A	Original Issue - R01	SE	12-04-2017
Rev	Description	Drn.	Date:

Legend:

- Approximate Site Boundary
- Approximate Hand Auger Location
- Non-Asbestos Fibre Cement Fragment

JBS&G **Figure 3: Sampling Locations**

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 51954 File Name: 51954_03

HA11	Depth	Concentration	Criteria
Analyte	(m BGS)	(mg/kg)	
Lead	0.0-0.1	1500	HIL C
B(a)P TPE	0.0-0.1	9.74	HIL B & HIL C

HA12	Depth	Concentration	Criteria
Analyte	(m BGS)	(mg/kg)	
Lead	0.0-0.1	1300	HIL C

HA05	Depth	Concentration	Criteria
Analyte	(m BGS)	(mg/kg)	
B(a)P TPE	0.0-0.1	6.998	HIL B & HIL C

HA03	Depth	Concentration	Criteria
Analyte	(m BGS)	(mg/kg)	
B(a)P TPE	0.0-0.1	3.869	HIL C

HA06	Depth	Concentration	Criteria
Analyte	(m BGS)	(mg/kg)	
Lead	0.0-0.1	740	HIL C

HA15	Depth	Concentration	Criteria
Analyte	(m BGS)	(mg/kg)	
Lead	0.0-0.1	1400	HIL C

Source: Base Image - 6 Viewer www.six.nsw.gov.au imagery date 2010 accessed 11-12-2012

© 2017 JBS&G

0 15 30 60 m

Scale: 1:1,500

Datum: GDA 1994 MGA Zone 56 - AHD

A4			
A	Original Issue - R01	SE	12-04-2017
Rev	Description	Drn.	Date:

Legend:

- Approximate Site Boundary
- Approximate Hand Auger Location
- Non-Asbestos Fibre Cement Fragment

JBS&G

Figure 4: Health Based Soil Criteria Exceedances

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 51954 File Name: 51954_04

Appendix A Summary Tables

Table A: Soil Analtyical Summary Table
Project Number: 51594
Project Name: Waverley War Memorial Hospital ESA

				Metals & Metalloids								TPHs (NEPC 1999)					TRHs (NEPC 2013)							BTEX						
				Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	>C10-C40 Fraction (Total)	C6-C10 Fraction	C6 - C10 less BTEX (F1)	>C10 - C16 less Naphthalene (F2)	Benzene	Ethylbenzene	Toluene	BTEX (Total)	Xylene (m & p)	Xylene (o)	Xylene (Total)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				4.00	0.50	1.00	1.00	1.00	0.10	1.00	1.00	10.00	50.00	100.00	100.00		50.00	100.00	100.00		10.00	10.00	50.00	0.20	0.50	0.50		0.50	0.50	
NEPM 2013 EIL - Urban Residential (generic)				*100*		*190*	*60*	*1100*		*30*	*70*																			
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																	*120*	*300*	*2800*		*180*	*180*	*120*	*50*	*70*	*85*				*105*
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Recreational - HSL C																														
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																														
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																														
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																	1000	2500	10000		700									
NEPM 2013 Soil HIL B				**500**	**150**	**500**	**30000**	**1200**	**120**	**1200**	**60000**																			
NEPM 2013 Soil HIL C				**300**	**90**	**300**	**17000**	**600**	**80**	**1200**	**30000**																			
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																						45	110	0.5	55	160				40
NEPM 2013 Soil HSL C for Vapour Intrusion - Sand 0 to <1m																						nl	nl	nl	nl	nl				nl
Field ID	**Sample Depth**	**Sample Date**	**Lab Report No.**																											
ACM01		13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01	0-0.1	12/12/2012	83208	<4	<0.5	5	25	370	0.2	4	*130*	<25	<50	<100	<100	-	<50	<100	<100	-	<25	<25	<50	<0.2	<1	<0.5	-	<2	<1	-
HA02	0-0.1	12/12/2012	83208	4	1.2	15	*140*	550	0.4	16	*550*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03	0-0.1	12/12/2012	83208	<4	<0.5	7	36	190	0.3	5	*160*	<25	<50	<100	110	-	<50	150	<100	-	<25	<25	<50	<0.2	<1	<0.5	-	<2	<1	-
HA03	0.2-0.3	12/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04	0-0.1	12/12/2012	83208	<4	<0.5	27	25	91	0.1	30	*110*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05	0-0.1	13/12/2012	83208	7	<0.5	8	44	390	0.5	6	*210*	<25	<50	140	160	-	<50	250	<100	-	<25	<25	<50	<0.2	<1	<0.5	-	<2	<1	-
HA05	0.2-0.3	13/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA06	0-0.1	13/12/2012	83208	5	<0.5	10	31	**740**	0.2	5	*150*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07	0-0.1	13/12/2012	83208	7	<0.5	15	19	280	0.2	2	*140*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA08	0-0.1	13/12/2012	83208	8	<0.5	10	*99*	510	3	4	*200*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA09	0-0.1	13/12/2012	83208	<4	<0.5	8	37	200	0.5	2	*76*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA10	0-0.1	13/12/2012	83208	<4	<0.5	6	21	210	0.4	2	*150*	<25	<50	<100	<100	-	<50	<100	<100	-	<25	<25	<50	<0.2	<1	<0.5	-	<2	<1	-
HA11	0-0.1	13/12/2012	83208	9	0.8	11	*87*	***1500***	0.3	21	*720*	<25	<50	260	290	-	<50	*430*	130	-	<25	<25	<50	<0.2	<1	<0.5	-	<2	<1	-
HA11	0.2-0.3	13/12/2012	83208-A	<4	<0.5	4	*25*	*570*	0.3	7	*160*																			
HA12	0-0.1	13/12/2012	83208	<4	<0.5	8	30	***1300***	0.9	3	*170*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA12 - Triplicate	0-0.1	13/12/2012	83208	<4	<0.5	8	30	**1100**	0.7	4	*170*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA12	0.2-0.3	13/12/2012	83208-A	<4	<0.5	6	15	770	0.6	3	*98*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA13	0-0.1	13/12/2012	83208	4	<0.5	8	34	570	0.6	3	*150*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA14	0-0.1	13/12/2012	83208	<4	<0.5	14	*83*	320	0.1	7	*730*	<25	<50	<100	160	-	<50	170	<100	-	<25	<25	<50	<0.2	<1	<0.5	-	<2	<1	-
HA15	0-0.1	13/12/2012	83208	5	<0.5	13	*62*	***1400***	0.7	8	*270*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA15	0.2-0.3	13/12/2012	83208-A	5	<0.5	11	*45*	***1200***	0.7	5	*230*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA16	0-0.1	13/12/2012	83208	5	<0.5	8	33	180	0.2	6	*170*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA17	0-0.1	13/12/2012	83208	<4	<0.5	8	55	270	0.3	5	*340*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA18	0-0.1	13/12/2012	83208	<4	0.7	21	*62*	160	0.4	18	*190*	<25	<50	140	110	-	<50	210	<100	-	<25	<25	<50	<0.2	<1	<0.5	-	<2	<1	-
HA18	0.2-0.3	13/12/2012	83208	<4	<0.5	12	*120*	100	0.3	10	*120*	<25	<50	<100	<100	-	<50	130	<100	-	<25	<25	<50	<0.2	<1	<0.5	-	<2	<1	-
HA18	0.4-0.5	13/12/2012	83208	<4	<0.5	15	58	120	0.2	10	*180*	<25	<50	<100	<100	-	<50	130	<100	-	<25	<25	<50	<0.2	<1	<0.5	-	<2	<1	-
HA19	0-0.1	13/12/2012	83208	<4	<0.5	13	46	510	0.2	11	*150*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA20	0-0.1	13/12/2012	83208	<4	0.7	4	17	65	<0.1	2	*83*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	0-0.1	12/12/2012	83208	<4	<0.5	7	39	240	0.3	7	*180*	<25	<50	230	170	-	<50	*350*	<100	-	<25	<25	<50	<0.2	<1	<0.5	-	<2	<1	-
QC01a	0-0.1	12/12/2012	ES1229744	<5	<1	6	42	187	0.3	5	*179*	<10	<50	180	120	300	<50	260	<100	260	<10	<10	-	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5
QC02	0-0.1	13/12/2012	83208	<4	<0.5	6	22	240	0.3	2	*180*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02a	0-0.1	13/12/2012	ES1229744	<5	<1	6	21	218	0.3	2	*165*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																														
Number of Results				32	32	32	32	32	32	32	32	15	15	15	15	5	15	15	15	5	15	15	14	15	15	15	5	15	15	5
Number of Detects				12	6	32	32	32	31	32	32	4	4	9	11	5	4	13	5	5	4	4	4	4	4	4	4	4	4	4
Minimum Concentration				<4	<0.5	4	15	65	<0.1	2	76	<10	<50	<100	<100	300	<50	<100	<100	260	<10	<10	<50	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5
Minimum Detect				4	0.7	4	15	65	0.1	2	76	ND	ND	140	110	300	ND	130	130	260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration				9	1.2	27	140	1500	3	30	730	<25	<50	260	290	300	<50	430	130	260	<25	<25	<50	<0.2	<1	<0.5	<0.2	<2	<1	<0.5
Maximum Detect				9	1.2	27	140	1500	3	30	730	ND	ND	260	290	300	ND	430	130	260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration				3.3	0.35	10	47	485	0.45	7.2	217	12	25	114	120		25	198	57		12	12	25	0.1	0.48	0.25		0.93	0.48	
Median Concentration				2	0.25	8	36.5	300	0.3	5	170	12.5	25	50	110	300	25	170	50	260	12.5	12.5	25	0.1	0.5	0.25	0.1	1	0.5	0.25
Standard Deviation				2.1	0.22	5.1	31	418	0.52	6.5	163	2.3	0	81	74		0	118	24		2.3	2.3	0	0	0.075	0		0.23	0.075	
Number of Guideline Exceedances				0	0	0	7	7	0	0	30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	7	7	0	0	30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0

Data Comments

#1 ESDAT Combined with Non-Detect Multiplier of 0.5. Some Analytes are missing from this Combined Compound.

Table A: Soil Analtyical Summary Table
Project Number: 51594
Project Name: Waverley War Memorial Hospital ESA

				Polycyclic Aromatic Hydrocarbons																			
				Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (medium bound)*	Benzo(b)fluoranthene	Benzo(b,k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Carcinogenic PAHs as B(a)P TPE	Phenanthrene	Pyrene	PAHs (Total)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.10	0.10	0.10	0.10	0.05	0.50		0.20	0.10		0.10	0.10	0.10	0.10	0.10	0.10		0.10	0.10	
NEPM 2013 EIL - Urban Residential (generic)																			*170*				
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil								*0.7*															
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Recreational - HSL C																							
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																							
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																							
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																							
NEPM 2013 Soil HIL B																				**4**			**400**
NEPM 2013 Soil HIL C																				**3**			**300**
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																			3				
NEPM 2013 Soil HSL C for Vapour Intrusion - Sand 0 to <1m																			nl				
Field ID	**Sample Depth**	**Sample Date**	**Lab Report No.**																				
ACM01		13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01	0-0.1	12/12/2012	83208	<0.1	<0.1	0.1	0.6	*0.87*	1	-	1.3	0.5	-	0.7	<0.1	1.2	<0.1	0.5	<1 - 0.1	1.042[#1]	0.5	1.3	8.07
HA02	0-0.1	12/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03	0-0.1	12/12/2012	83208	<0.1	0.4	0.6	2.6	*3.1*	4	-	4.2	1.5	-	2.4	0.3	5	0.2	1.7	<0.1	**3.869[#1]**	2.6	5.2	30.9
HA03	0.2-0.3	12/12/2012	83208-A	-	-	-	-	*4.4*	-	-	-	-	-	-	-	-	-	-	-	**5.477**	-	-	-
HA04	0-0.1	12/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05	0-0.1	13/12/2012	83208	<0.1	0.5	0.7	4.1	*5.5*	8	-	7.6	2.9	-	3.9	0.7	7	0.2	3.2	<1 - 0.1	**6.998[#1]**	3.2	7.3	48.3
HA05	0.2-0.3	13/12/2012	83208-A	-	-	-	-	*2.4*	-	-	-	-	-	-	-	-	-	-	-	**3.04**	-	-	-
HA06	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA08	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA09	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA10	0-0.1	13/12/2012	83208	<0.1	0.1	0.2	1.2	*1.5*	2	-	2.2	0.8	-	1.1	0.1	2.3	<0.1	0.9	<0.1	1.829[#1]	1	2.3	16.4
HA11	0-0.1	13/12/2012	83208	0.1	0.4	0.8	5.3	*7.7*	11	-	11	4.5	-	5.5	0.9	12	0.2	5.1	<1 - 0.1	**9.74[#1]**	5.2	12	60.9
HA11	0.2-0.3	13/12/2012	83208-A					*0.59*												0.717			
HA12	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA12 - Triplicate	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA12	0.2-0.3	13/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA13	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA14	0-0.1	13/12/2012	83208	<0.1	0.1	0.1	0.6	*0.71*	1	-	1	0.4	-	0.5	<0.1	1.1	<0.1	0.4	<0.1	0.869[#1]	0.6	1.2	7.11
HA15	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA15	0.2-0.3	13/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA16	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA17	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA18	0-0.1	13/12/2012	83208	<0.1	<0.1	<0.1	0.4	0.56	1	-	0.9	0.3	-	0.4	<0.1	0.7	<0.1	0.4	<0.1	0.697[#1]	0.3	0.8	5.1
HA18	0.2-0.3	13/12/2012	83208	<0.1	<0.1	<0.1	0.2	0.23	<0.5	-	0.4	<0.1	-	0.2	<0.1	0.5	<0.1	0.1	<0.1	0.3125[#1]	0.2	0.5	3.03
HA18	0.4-0.5	13/12/2012	83208	<0.1	<0.1	0.1	0.7	*0.9*	1	-	1.3	0.5	-	0.6	<0.1	1.3	<0.1	0.5	<0.1	1.081[#1]	0.5	1.3	4.2
HA19	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA20	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	0-0.1	12/12/2012	83208	<0.1	1.3	2.3	7.8	*7.4*	10	-	10	3	-	6.3	0.8	14	0.7	3.6	<1 - 0.2	**9.433[#1]**	9.2	14	80.7
QC01a	0-0.1	12/12/2012	ES1229744	<0.5	1	1.9	5.3	*4.8*	-	5.7	-	2.8	2.1	5	0.5	11	<0.5	2.3	<0.5	**6.9**	5.3	11	58.7
QC02	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02a	0-0.1	13/12/2012	ES1229744	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistical Summary

Number of Results	15	15	15	15	16	14	5	14	15	5	15	15	15	15	15	15	16	15	15	15
Number of Detects	5	11	13	15	16	13	5	14	14	5	15	10	15	8	15	8	16	15	15	15
Minimum Concentration	<0.1	<0.1	<0.1	0.2	0.23	<0.5	5.7	0.4	<0.1	2.1	0.2	<0.1	0.5	<0.1	0.1	<0.1	0.3125	0.2	0.5	3.03
Minimum Detect	0.1	0.1	0.1	0.2	0.23	1	5.7	0.4	0.3	2.1	0.2	0.1	0.5	0.2	0.1	ND	0.3125	0.2	0.5	3.03
Maximum Concentration	<0.5	1.3	2.3	7.8	7.7	11	5.7	11	4.5	2.1	6.3	0.9	14	0.7	5.1	<0.5	9.74	9.2	14	80.7
Maximum Detect	0.1	1.3	2.3	7.8	7.7	11	5.7	11	4.5	2.1	6.3	0.9	14	0.7	5.1	0.2	9.74	9.2	14	80.7
Average Concentration	0.073	0.36	0.63	2.6	2.9	3.9		4	1.6		2.4	0.32	5.1	0.17	1.7	0.16	3.7	2.6	5.2	29
Median Concentration	0.05	0.1	0.2	1.2	1.95	1.5	5.7	1.75	0.8	2.1	1.1	0.1	2.3	0.05	0.9	0.05	2.4345	1	2.3	16.4
Standard Deviation	0.061	0.43	0.78	2.6	2.6	4.2		4	1.5		2.3	0.34	5.1	0.19	1.7	0.13	3.4	2.9	5.1	28
Number of Guideline Exceedances	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0

Data Comments

#1 ESDAT Combined with Non-Detect Multiplier of 0.5. Some Analytes are missing f

Table A: Soil Analtyical Summary Table
Project Number: 51594
Project Name: Waverley War Memorial Hospital ESA

				Organochlorine Pesticides																							
				Hexachlorobenzene	Aldrin	4,4-DDE	Aldrin + Dieldrin (Sum of Total)	Dieldrin	alpha-BHC	DDD	DDT	beta-BHC	DDT+DDE+DDD (Sum of Total)	alpha-Chlordane	Chlordane	delta-BHC	gamma-Chlordane	Endosulfan alpha	Endosulfan beta	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	0.05	0.05		0.05	0.05	0.05	0.10	0.05		0.05		0.05	0.05	0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.10
NEPM 2013 EIL - Urban Residential (generic)											*180*																
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																											
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Recreational - HSL C																											
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																											
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																											
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																											
NEPM 2013 Soil HIL B				**15**			**10**						**600**		**90**						**20**			**10**			**500**
NEPM 2013 Soil HIL C				**10**			**10**						**400**		**70**						**20**			**10**			**400**
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																											
NEPM 2013 Soil HSL C for Vapour Intrusion - Sand 0 to <1m																											
Field ID	**Sample Depth**	**Sample Date**	**Lab Report No.**																								
ACM01		13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA01	0-0.1	12/12/2012	83208	<0.1	<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
HA02	0-0.1	12/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03	0-0.1	12/12/2012	83208	<0.1	<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
HA03	0.2-0.3	12/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04	0-0.1	12/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05	0-0.1	13/12/2012	83208	<0.1	<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
HA05	0.2-0.3	13/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA06	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA07	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA08	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA09	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA10	0-0.1	13/12/2012	83208	<0.1	<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
HA11	0-0.1	13/12/2012	83208	<0.1	<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
HA11	0.2-0.3	13/12/2012	83208-A																								
HA12	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA12 - Triplicate	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA12	0.2-0.3	13/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA13	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA14	0-0.1	13/12/2012	83208	<0.1	<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
HA15	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA15	0.2-0.3	13/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA16	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA17	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA18	0-0.1	13/12/2012	83208	<0.1	<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
HA18	0.2-0.3	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA18	0.4-0.5	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA19	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA20	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	0-0.1	12/12/2012	83208	<0.1	<0.1	<0.1	<0.2[#4]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3[#2]	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
QC01a	0-0.1	12/12/2012	ES1229744	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
QC02	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02a	0-0.1	13/12/2012	ES1229744	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																											
Number of Results				13	0	0	0	0	0	0	0	0	13	13	5	13	13	13	13	13	13	13	5	13	13	13	13
Number of Detects				4	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Minimum Concentration				<0.05	99999	99999	99999	99999	99999	99999	99999	99999	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1
Minimum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration				<0.1	0	0	0	0	0	0	0	0	<0.3	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.2
Maximum Detect				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration				0.047									0.14	0.047		0.047	0.047	0.047	0.047	0.047	0.047	0.047		0.047	0.047	0.047	0.056
Median Concentration				0.05									0.15	0.05	0.025	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.025	0.05	0.05	0.05	0.05
Standard Deviation				0.008									0.042	0.008		0.0083	0.0083	0.008	0.0083	0.0083	0.0083	0.008		0.008	0.0083	0.008	0.017
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Data Comments

#1 ESDAT Combined with Non-Detect Multiplier of 0.5. Some Analytes are missing f

Table A: Soil Analtyical Summary Table
Project Number: 51594
Project Name: Waverley War Memorial Hospital ESA

				Polychlorinated Biphenyls								Organophosphorus Pesticides																			Asbestos	Other
				Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	Azinphos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Dementon-S-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenamiphos	Fenitrothion	Fenthion	Malathion	Monocrotophos	Parathion	Parathion methyl	Pirimiphos-ethyl	Prothiofos	Ronnel	Asbestos ID in Soil	Moisture
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	g/kg	%
EQL				0.10	0.10	0.10	0.10	0.10	0.10	0.10			0.05	0.05	0.05		0.05		0.05	0.05		0.10								0.10		0.10
NEPM 2013 EIL - Urban Residential (generic)																																
NEPM 2013 ESL Urban Residential and Public Open Space, Coarse Soil																																
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Recreational - HSL C																																
NEPM 2013 HSL Asbestos in Soil - Bonded ACM - Residential - HSL B																																
NEPM 2013 HSL Asbestos in Soil - FA & AF - HSL																																
NEPM 2013 Mgnt Limits - Residential, Parkland and Public Open Space, Coarse																																
NEPM 2013 Soil HIL B											**1**			**340**																		
NEPM 2013 Soil HIL C											**1**			**250**																		
NEPM 2013 Soil HSL A & HSL B for Vapour Intrusion - Sand 0 to <1m																																
NEPM 2013 Soil HSL C for Vapour Intrusion - Sand 0 to <1m																																
Field ID	**Sample Depth**	**Sample Date**	**Lab Report No.**																													
ACM01		13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
HA01	0-0.1	12/12/2012	83208	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	11
HA02	0-0.1	12/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
HA03	0-0.1	12/12/2012	83208	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	7.3
HA03	0.2-0.3	12/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04	0-0.1	12/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
HA05	0-0.1	13/12/2012	83208	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	23
HA05	0.2-0.3	13/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA06	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
HA07	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.9
HA08	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
HA09	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
HA10	0-0.1	13/12/2012	83208	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	5.4
HA11	0-0.1	13/12/2012	83208	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	<1	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	12
HA11	0.2-0.3	13/12/2012	83208-A																													
HA12	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3
HA12 - Triplicate	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA12	0.2-0.3	13/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA13	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
HA14	0-0.1	13/12/2012	83208	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	9.2
HA15	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
HA15	0.2-0.3	13/12/2012	83208-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA16	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
HA17	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
HA18	0-0.1	13/12/2012	83208	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	9.1
HA18	0.2-0.3	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.4
HA18	0.4-0.5	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.5
HA19	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
HA20	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.5
QC01	0-0.1	12/12/2012	83208	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	13
QC01a	0-0.1	12/12/2012	ES1229744	-	-	-	-	-	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	<0.1	13.2
QC02	0-0.1	13/12/2012	83208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.6
QC02a	0-0.1	13/12/2012	ES1229744	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.5
Statistical Summary																																
Number of Results				12	12	12	12	12	12	12	13	0	0	0	0	0	0	0	0	13	5	12	5	5	5	5	5	5	5	12	14	30
Number of Detects				4	4	4	4	4	5	4	4	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4	4	4	30
Minimum Concentration				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	99999	99999	99999	99999	99999	99999	99999	99999	<0.05	<0.05	<0.1	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	<0.1	<0.1	5.4
Minimum Detect				ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.4
Maximum Concentration				<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<1	0	0	0	0	0	0	0	0	<0.1	<0.05	<0.1	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	<0.1	<0.1	23
Maximum Detect				ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	23
Average Concentration				0.075	0.075	0.075	0.075	0.075	0.13	0.075	0.45									0.047		0.05								0.05	0.05	12
Median Concentration				0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5									0.05	0.025	0.05	0.025	0.025	0.1	0.1	0.1	0.025	0.025	0.05	0.05	11
Standard Deviation				0.071	0.071	0.071	0.071	0.071	0.16	0.071	0.15									0.0083		0								0	0	4.2
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Data Comments

#1 ESDAT Combined with Non-Detect Multiplier of 0.5. Some Analytes are missing f

Table B: Soil Leachate Summary
Project Number: 51594
Project Name: Waverley War Memorial Hospital ESA

			Metals & Metalloids								Polycyclic Aromatic Hydrocarbons														
			Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Lead	Mercury (Inorganic)	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL			0.001	0.000	0.001	0.001	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Field ID	**Sample Depth**	**Sample Date**																							
HA03	0-0.1	12/12/2012	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
HA05	0-0.1	13/12/2012	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
HA11	0-0.1	13/12/2012	<0.05 - 0.001	<0	<0.001	<0.01 - 0.004	0.011 - 1	<0	0.001 - 0.03	0.12 - 6.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
HA12	0-0.1	13/12/2012	<0.001	<0	<0.001	<0.01 - 0.005	0.033 - 1.1	<0.001	<0.001	0.041 - 1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA15	0-0.1	13/12/2012	<0.05 - 0.002	<0	<0.001	0.007 - 0.03	0.009 - 0.7	<0.001	<0.001	0.008 - 0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																									
Number of Results			3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3
Number of Detects			2	0	0	3	3	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<0.001	<0	<0.001	0.007	0.009	<0	<0.001	0.008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Minimum Detect			ND	ND	ND	0.007	0.009	ND	0.001	0.008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			0.002	0	<0.001	0.03	1.1	<0.001	0.03	6.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Maximum Detect			0.002	ND	ND	0.03	1.1	ND	0.03	6.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.009	0	0.0005	0.0093	0.48	0.00033	0.0055	1.4	0.0005	0.0005	0.0005	0.0005	0.0005		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Median Concentration			0.013	0	0.0005	0.005	0.5055	0.0005	0.0005	0.6205	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Standard Deviation			0.0074	0	0	0.0079	0.11	0.00029	0.0087	1.5	0	0	0	0	0		0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix B Photographic Log

PHOTO 1: CONTAMINATED WASTE STORAGE TO THE WEST OF THE VICKERY BUILDING

PHOTO 2: FORMER PAINT STORAGE SHED

PHOTO 3: E.L.P STOREROOM AT SOUTH EAST OF LOT 1 DP172133

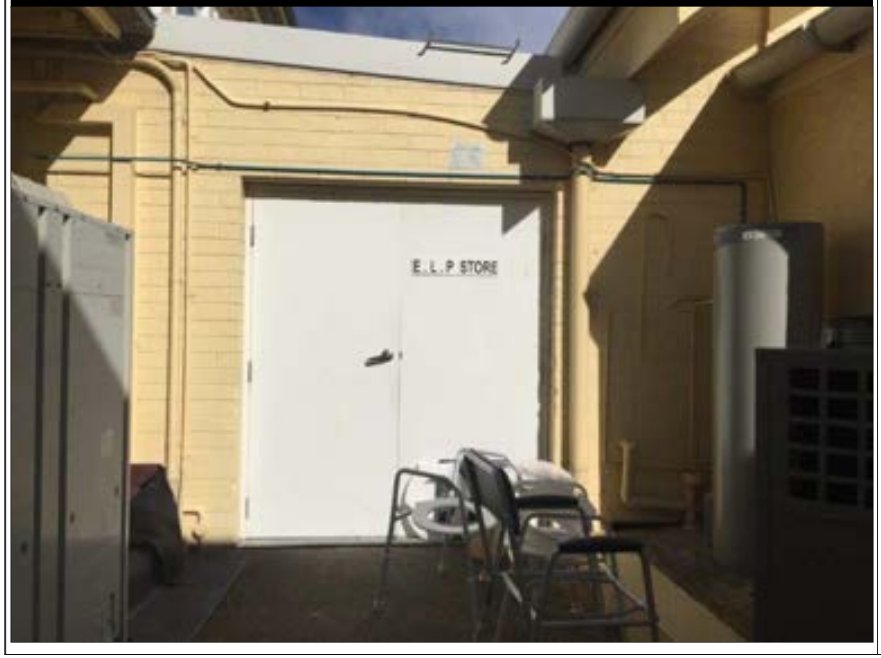


PHOTO 4: BOILER ROOM AT SOUTH EAST OF LOT 1 DP172133

JBS&G

Job No: 51099	
Client: UnitingCare	
Version:	Date: 12-07-2016
Drawn By: RF	Checked By: KY
Not to Scale	
Coord. Sys n/a	

War Memorial Hospital

125 Birrell Street,
Waverley NSW 2024

PHOTO 5: ACM EAVES AT THE ENTRANCE OF WEST OF MORGAN BUILDING

PHOTO 6: ACM EAVES AT THE ENTRANCE OF WEST OF MORGAN BUILDING

PHOTO 7: OXIDIZING GAS STORED AT WEST OF MORGAN BUILDING

PHOTO 8: ENTRANCE AT THE WEST OF MORGAN BUILDING

JBS&G

Job No: 51099	
Client: UnitingCare	
Version:	Date: 12-07-2016
Drawn By: RF	Checked By: KY
Not to Scale	
Coord. Sys n/a	

War Memorial Hospital

125 Birrell Street,
Waverley NSW 2024

PHOTO 9: MAINTENANCE SHED AT WEST OF MORGAN BUILDING

PHOTO 10: FLAMMABLE LIQUID STORED WITHIN MAINTENANCE SHED OF WEST OF MORGAN BUILDING

PHOTO 11: GARDEN STORAGE AREA

PHOTO 12: MULCH STOCKPILE AT CENTRAL CARPARK

JBS&G

Job No: 51099	
Client: UnitingCare	
Version:	Date: 12-07-2016
Drawn By: RF	Checked By: KY
Not to Scale	
Coord. Sys n/a	

War Memorial Hospital

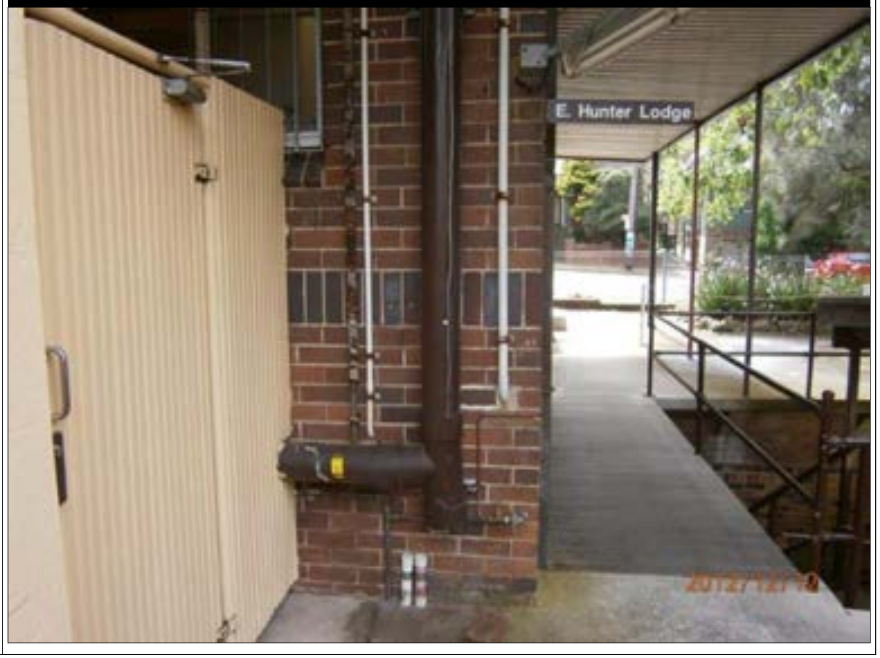
125 Birrell Street,
Waverley NSW 2024

PHOTO 13: FILL MATERIAL STOCKPILE AT SOUTH WEST CORNER OF CARPARK

PHOTO 14: MEN'S SHED

PHOTO 15: ACM EAVES OF MEN'S SHED

PHOTO 16: ACM PIPE IN LOT 2 DP 1061588



JBS&G

Job No: 51099	
Client: UnitingCare	
Version:	Date: 12-07-2016
Drawn By: RF	Checked By: KY
Not to Scale	
Coord. Sys n/a	

War Memorial Hospital

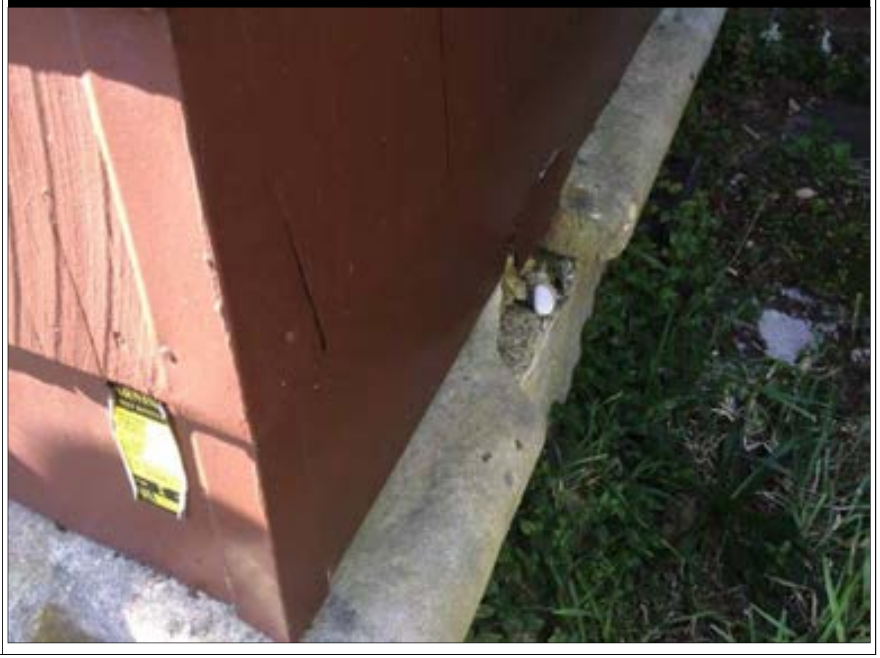
125 Birrell Street,
Waverley NSW 2024

PHOTO 17: LOCKED BASEMENT STORAGE ROOM IN LOT 2 DP1061588

PHOTO 18: LANDSCAPE IN LOT 3 DP667555

PHOTO 19: O'REILLY BUILDING

PHOTO 20: SUSPECTED ACM CLADDING



JBS&G

Job No: 51099	
Client: UnitingCare	
Version:	Date: 12-07-2016
Drawn By: RF	Checked By: KY
Not to Scale	
Coord. Sys n/a	

War Memorial Hospital

125 Birrell Street,
Waverley NSW 2024

PHOTO 21: REAR GARDEN MAINTENANCE STORAGE IN LOT 2 DP1061548

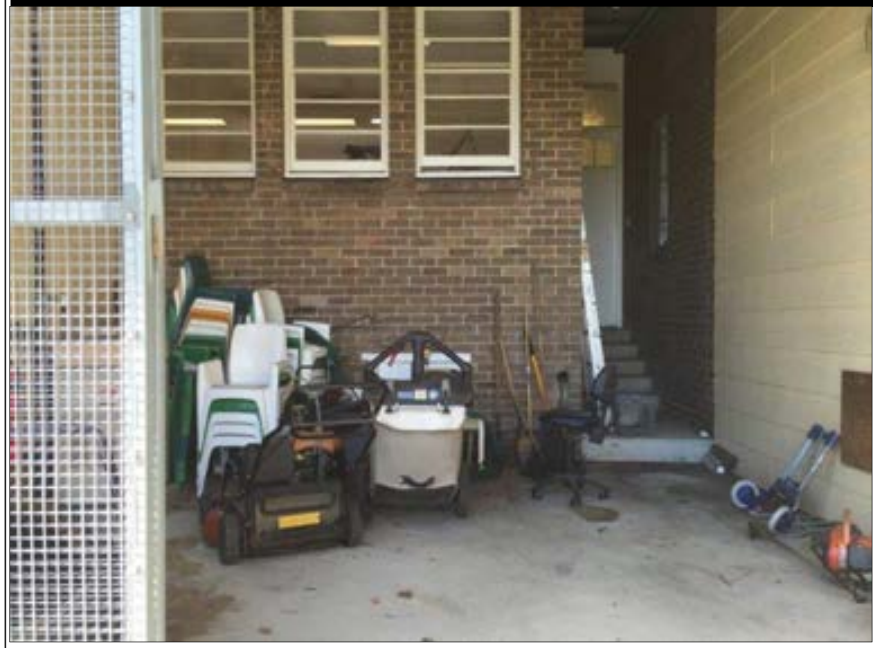


PHOTO 22: REAR GARDEN MAINTENANCE STORAGE IN LOT 2 DP1061548

PHOTO 23: DANGEROUS GOODS KEPT IN MAINTENANCE SHED IN LOT 7 DP 948185

PHOTO 24: DANGEROUS GOODS KEPT IN MAINTENANCE SHED IN LOT 7 DP 948185

JBS&G

Job No: 51099	
Client: UnitingCare	
Version:	Date: 12-07-2016
Drawn By: RF	Checked By: KY
Not to Scale	
Coord. Sys n/a	

War Memorial Hospital

125 Birrell Street,
Waverley NSW 2024

PHOTO 25: DANGEROUS GOODS KEPT IN MAINTENANCE SHED IN LOT 7 DP 948185

PHOTO 26: ABANDONED OIL CONTAINER AND OTHER RUBBISH NEXT TO MAINTENANCE GARAGE

PHOTO 27: DISUSED INCINERATOR

PHOTO 28: ASH STAINING ON THE CONCRETE ABOVE INCINERATOR

JBS&G

Job No: 51099	
Client: UnitingCare	
Version:	Date: 12-07-2016
Drawn By: RF	Checked By: KY
Not to Scale	
Coord. Sys n/a	

War Memorial Hospital

125 Birrell Street,
Waverley NSW 2024

PHOTO 29: GENERAL WASTE BINS AT THE SIDE OF EDINA NURSING HOME

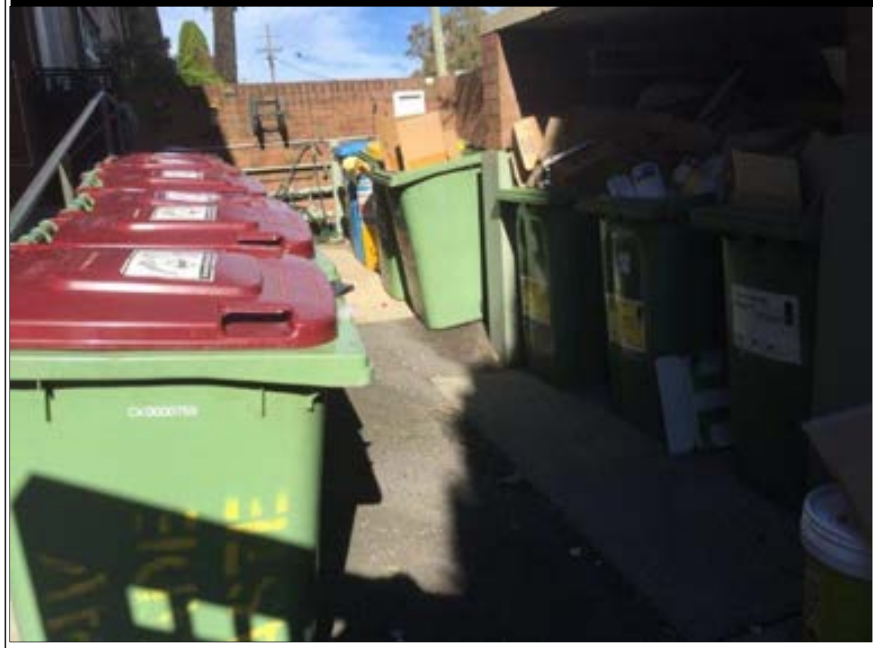


PHOTO 30: ADDITIONAL LOTS RESIDENTIAL COTTAGES

PHOTO 31: ADDITIONAL LOTS RESIDENTIAL COTTAGES

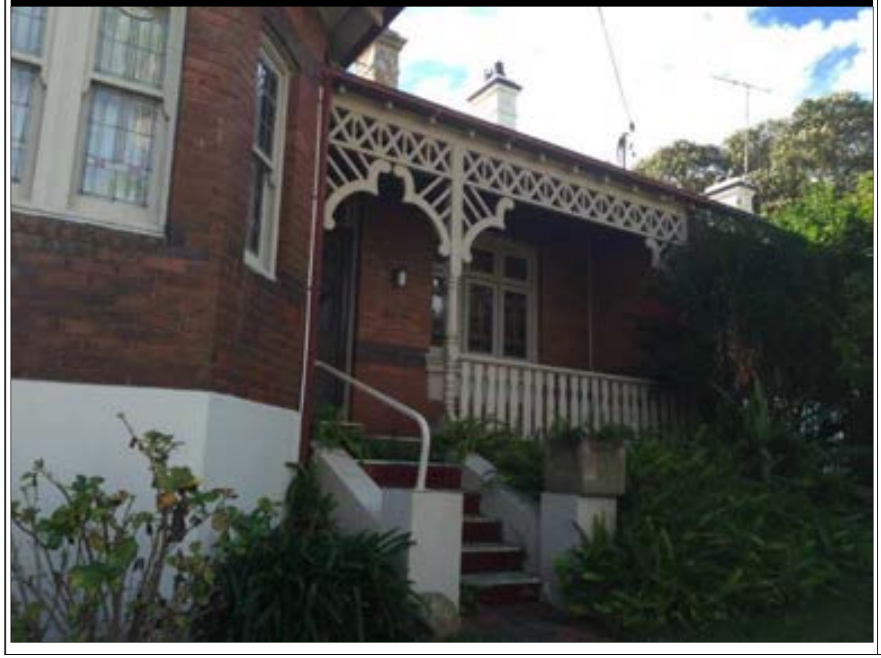
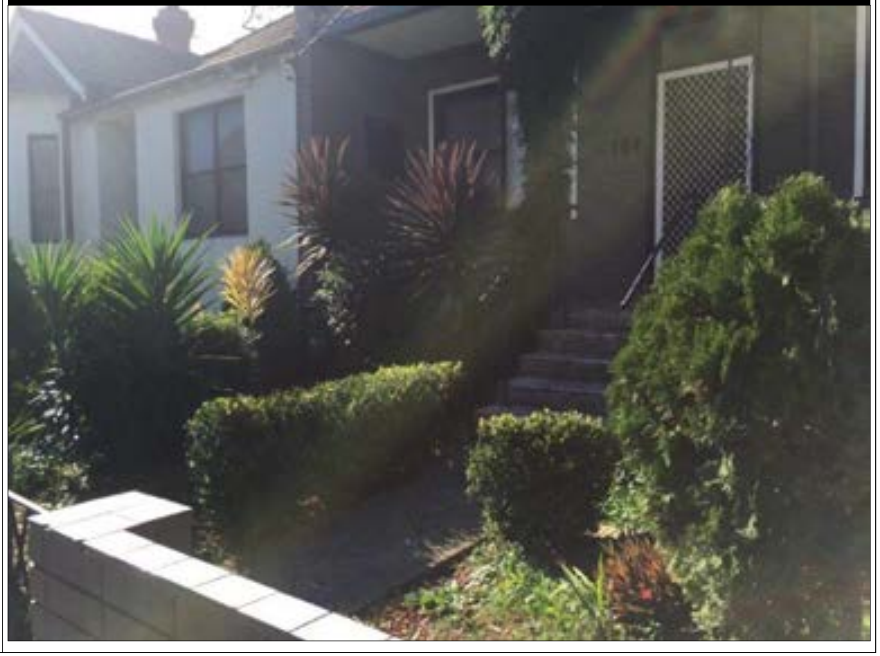


PHOTO 32: ADDITIONAL LOTS RESIDENTIAL COTTAGES



JBS&G

Job No: 51099	
Client: UnitingCare	
Version:	Date: 12-07-2016
Drawn By: RF	Checked By: KY
Not to Scale	
Coord. Sys n/a	

War Memorial Hospital

125 Birrell Street,
Waverley NSW 2024

PHOTO 33: ADDITIONAL LOTS RESIDENTIAL COTTAGES

JBS&G

Job No: 51099	
Client: UnitingCare	
Version:	Date: 12-07-2016
Drawn By: RF	Checked By: KY
Not to Scale	
Coord. Sys n/a	

War Memorial Hospital

125 Birrell Street,
Waverley NSW 2024

Appendix C Monitoring Wells

NSW Office of Water
Work Summary

GW107016

Licence: 10BL164341
Licence Status: CANCELLED

Authorised Purpose(s): TEST BORE
Intended Purpose(s): RECREATION (GROUNDWATER)

Work Type: Bore
Work Status:
Construct.Method: Rotary Air
Owner Type:

Commenced Date:
Completion Date: 12/11/2004
Final Depth: 130.40 m
Drilled Depth: 130.40 m

Contractor Name: INTERTEC DRILLING SERVICES
Driller: Colin Leslie Barden
Assistant Driller:

Property: WAVERLEY PARK BONDI RD BONDI
GWMA: -
GW Zone: -
Standing Water Level: 21.600
Salinity:
Yield: 0.700

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.1	332 752011
Licensed:	CUMBERLAND	ALEXANDRIA	Whole Lot 332//752011

Region: 10 - Sydney South Coast
CMA Map:
River Basin: - Unknown
Grid Zone:
Scale:
Area/District:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6248167.0
Easting: 338947.0
Latitude: 33°53'40.5"S
Longitude: 151°15'29.8"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure

Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	5.60	204			Down Hole Hammer
1		Hole	Hole	5.60	130.40	158			Down Hole Hammer
1	1	Casing	Pvc Class 9	-0.30	41.70	140			Screwed and Glued
1	1	Casing	Steel	-0.30	5.70	158	148		Driven into Hole
1	1	Opening	Slots - Diagonal	33.70	41.70	140		1	Sawn, PVC Class 9, SL: 100.0mm, A: 3.00mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
30.00	36.00	6.00	Unknown			0.45	36.00		170.00
84.00	85.00	1.00	Unknown			0.25	85.00		150.00

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	2.00	2.00	SANDY LOAM	Loam	
2.00	4.00	2.00	RED BROWN SANDSTONE/W	Sandstone	
4.00	6.00	2.00	L/GREY SANDSTONE/ W.	Sandstone	
6.00	17.00	11.00	L/GREY SANDSTONE	Sandstone	
17.00	30.00	13.00	GREY SANDSTONE	Sandstone	
30.00	36.00	6.00	GREY , FRACTURED SANDSTONE	Sandstone	
36.00	39.80	3.80	DARK GREY SANDSTONE	Sandstone	
39.80	40.00	0.20	SHALE	Shale	
40.00	42.00	2.00	DARK,FRACTURED SANDSTONE	Sandstone	
42.00	53.70	11.70	LT, GREY SANDSTONE	Sandstone	
53.70	54.00	0.30	LT, GREY FRACTURED SANDSTONE	Sandstone	
54.00	80.00	26.00	GREY SANDSTONE	Sandstone	
80.00	82.00	2.00	SILTY SHALE,SANDSTONE	Sandstone	
82.00	84.00	2.00	GREY SANDSTONE QUARTZ	Sandstone	
84.00	86.00	2.00	GREY SANDSTONE	Sandstone	
86.00	88.00	2.00	GREY SANDSTONE/SILTSTONE	Sandstone	
88.00	92.80	4.80	LT GREY SANDSTONE	Sandstone	
92.80	93.00	0.20	GREY FRACTURED SANDSTONE	Sandstone	
93.00	95.80	2.80	CREAM FRACTURED SANDSTONE	Sandstone	
95.80	106.00	10.20	LT/GREY SANDSTONE	Sandstone	
106.00	106.30	0.30	LT GREY FRACTURED SANDSTONE	Sandstone	
106.30	121.00	14.70	LT GREY SANDSTONE	Sandstone	
121.00	127.00	6.00	LT GREY CREAM SANDSTONE	Sandstone	
127.00	130.40	3.40	CREAM/LT GREY SANDSTONE	Sandstone	

Remarks

01/05/2006: Previous Lic No:10BL164341

***** End of GW107016 *****

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

NSW Office of Water
Work Summary

GW111553

Licence: 10BL165565
Licence Status: CONVERTED

Authorised Purpose(s): DOMESTIC
Intended Purpose(s): DOMESTIC

Work Type: Bore
Work Status: Supply Obtained
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/01/2005
Final Depth:
Drilled Depth:

Contractor Name:
Driller: Unkown Unknown
Assistant Driller:

Property: WRIGHT 147 DARLEY RD RANDWICK 2031 NSW
GWMA:
GW Zone:
Standing Water Level:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.1	17//4698
Licensed:			

Region: 10 - Sydney South Coast
CMA Map:
River Basin: - Unknown
Area/District:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6247218.0
Easting: 337673.0
Latitude: 33°54'10.6"S
Longitude: 151°14'39.6"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

Remarks

***** End of GW111553 *****

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

NSW Office of Water
Work Summary

GW110058

Licence: 10BL600038
Licence Status: CONVERTED

Authorised Purpose(s): DOMESTIC
Intended Purpose(s): DOMESTIC

Work Type: Spear
Work Status:
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/01/2006
Final Depth:
Drilled Depth:

Contractor Name:
Driller: Unkown Unknown
Assistant Driller:

Property: ABRAHAMS 185 DARLEY RD RANDWICK 2031 NSW
GWMA:
GW Zone:
Standing Water Level:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.1	3//6209
Licensed:			

Region: 10 - Sydney South Coast
CMA Map:
River Basin: - Unknown
Grid Zone:
Scale:
Area/District:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6247171.0
Easting: 337856.0
Latitude: 33°54'12.2"S
Longitude: 151°14'46.6"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

Remarks

01/01/2006: Form A Remarks:
Casing: PVC 50mm.

***** End of GW110058 *****

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

NSW Office of Water
Work Summary

GW107447

Licence: 10BL163858
Licence Status: CONVERTED

Authorised Purpose(s): DOMESTIC
Intended Purpose(s): DOMESTIC

Work Type: Spear
Work Status: Supply Obtained
Construct.Method: Jetted - Water
Owner Type: Private

Commenced Date:
Completion Date: 17/06/2004
Final Depth: 8.23 m
Drilled Depth: 8.24 m

Contractor Name:
Driller: Arthur Korkidas
Assistant Driller:

Property: DUCHEN 14 MARKET ST RANDWICK 2031
GWMA: -
GW Zone: -
Standing Water Level: 5.490
Salinity: Good
Yield: 1.000

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.1	1//1085287
Licensed:	CUMBERLAND	ALEXANDRIA	Whole Lot PT10//6209

Region: 10 - Sydney South Coast
River Basin: 213 - SYDNEY COAST - GEORGES RIVER
Area/District:
CMA Map: 9130-3S
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6247114.0
Easting: 337879.0
Latitude: 33°54'14.1"S
Longitude: 151°14'47.5"E

GS Map: -
MGA Zone: 0
Coordinate Source: GIS - Geographic Information System

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	8.23	100			Jetted - Water
1	1	Casing	Pvc Class 12	0.00	7.63	42			Glued
1	1	Opening	Screen	7.63	8.23	50		1	Stainless Steel, Screwed, A: 0.01mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
5.49	8.23	2.74	Unknown	5.49		1.00			

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	8.23	8.23	Sand, unconsolidated	Sand	

Remarks

17/06/2004: Form A Remarks:
spear point - stainless steel over PVC 50mm, 600 length .006 aperture, screwed
01/04/2010: updated from original form A

***** End of GW107447 *****

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

NSW Office of Water
Work Summary

GW106854

Licence: 10BL163505
Licence Status: CONVERTED

Authorised Purpose(s): DOMESTIC
Intended Purpose(s): DOMESTIC

Work Type: Spear
Work Status: Supply Obtained
Construct.Method: Auger
Owner Type: Private

Commenced Date:
Completion Date: 15/02/2005
Final Depth: 7.00 m
Drilled Depth: 7.00 m

Contractor Name:
Driller: Rosario Fedele
Assistant Driller:

Property: ALLAN 16 MARKET ST RANDWICK 2031
GWMA: -
GW Zone: -
Standing Water Level:
Salinity:
Yield:

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.1	1//367856
Licensed:	CUMBERLAND	ALEXANDRIA	Whole Lot 1//367856

Region: 10 - Sydney South Coast
River Basin: 213 - SYDNEY COAST - GEORGES RIVER
Area/District:
CMA Map: 9130-3S
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6247103.0
Easting: 337878.0
Latitude: 33°54'14.4"S
Longitude: 151°14'47.5"E

GS Map: -
MGA Zone: 0
Coordinate Source: GIS - Geographic Information System

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	7.00	100			Auger

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	7.00	7.00	sand	Sand	

Remarks

02/02/2010: updated from original form a

***** End of GW106854 *****

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

Appendix D Historical Aerial Photographs

Source: Base Image - Department of Lands, Sydney, 06-03-1930, Map 3422

© 2013 JBS Environmental Pty Ltd

0 50 100 200 m

Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - Aerials	SE	03-01-2013

Legend:

Approximate Site Boundary

JBS ENVIRONMENTAL

Figure: Waverley, March 1930, Map 3422

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 42458

File Name: 42458_1930

Source: Base Image - Department of Lands, Sydney, 05-1951, Run 14

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0 50 100 200 m

Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - Aerials	SE	03-01-2013

Legend:

Approximate Site Boundary

JBS ENVIRONMENTAL

Figure: Waverley, May 1951, Run 14

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 42458

File Name: 42458_1951

Source: Base Image - Department of Lands, Cumberland Series, 1961, Run 36E

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0 50 100 200 m

Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - Aerials	SE	03-01-2013

Legend:

Approximate Site Boundary

JBS ENVIRONMENTAL

Figure: Waverley, 1961, Run 36E

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 42458

File Name: 42458_1961

Source: Base Image - Department of Lands, Cumberland Series, 07-07-1970, Run 18

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0 50 100 200 m

Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - Aerials	SE	03-01-2013

Legend:

Approximate Site Boundary

JBS ENVIRONMENTAL

Figure: Waverley, July 1970, Run 18

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 42458

File Name: 42458_1970

Source: Base Image - Department of Lands, County of Cumberland, 06-05-1978, Run 17

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0 50 100 200 m

Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - Aerials	SE	03-01-2013

Legend:

Approximate Site Boundary

JBS ENVIRONMENTAL

Figure: Waverley, May 1978, Run 17

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 42458

File Name: 42458_1978

Source: Base Image - Department of Lands, Sydney, 02-08-1986, Run 23W

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0 50 100 200 m

Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - Aerials	SE	03-01-2013

Legend:

Approximate Site Boundary

JBS ENVIRONMENTAL

Figure: Waverley, August 1986, Run 23W

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 42458

File Name: 42458_1986

Source: Base Image - Department of Lands, Sydney, 04-10-1994, Run 11

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0 50 100 200 m

Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - Aerials	SE	03-01-2013

Legend:

Approximate Site Boundary

JBS ENVIRONMENTAL

Figure: Waverley, October 1994, Run 11

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 42458

File Name: 42458_1994

Source: Base Image - Department of Lands, Sydney, 08-10-2004, Run 6

© 2013 JBS Environmental Pty Ltd

0 50 100 200 m

Scale: 1:5,000

Datum: GDA 1994 MGA Zone 56 - AHD

Rev	Description	Drn.	Date:
A4			
A	Original Issue - Aerials	SE	03-01-2013

Legend:

Approximate Site Boundary

JBS ENVIRONMENTAL

Figure: Waverley, October 2004, Run 6

Client: UnitingCare

Project: War Memorial Hospital, Waverley NSW

Job No: 42458

File Name: 42458_2002

Appendix E Land Titles

~ Search ~

re Lot 1 in DP 172133

Schedule of Registered Proprietors

Lt. A819340 Reg 2/8/22 (V.1817 F.21 - V.2568 F.94)	John Gladwell Wheen, John George Morris Taylor, Charles John Prescott, James Greer, Methodist Ministers & Walter Cecil McClelland & Percy Walton Smith, Medical Practitioners Fred Cull, Merchant, Francis Williamson Firth, Manager & Percy Newman Slade & Herbert Middleton Hawkins, Estate Agents, all of Sydney
Lt. N194106 Reg 11/5/73 (V.3352 F.132)	Methodist Church (N.S.W.) Property Trust
App AC788715 Reg 1/2/2007 (1/172133)	The Uniting Church in Australia Property Trust (N.S.W.)

7/12/2012.

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/172133

SEARCH DATE	TIME	EDITION NO	DATE
7/12/2012	12:20 PM	1	1/2/2007

LAND

LOT 1 IN DEPOSITED PLAN 172133
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP172133

FIRST SCHEDULE

THE UNITING CHURCH IN AUSTRALIA PROPERTY TRUST (N.S.W.) (AP AC788715)

SECOND SCHEDULE (5 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 A153729 RIGHT OF DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN SO BURDENED IN VOL 3352 FOL 132
3 A153729 A153730, A153731, A153732 & A153733 RIGHT OF WAY & DRAINAGE AFFECTING THE PART OF THE LAND ABOVE DESCRIBED SHOWN SO BURDENED IN VOL 3352 FOL 132
4 A153727 A153728, A153729 RIGHTS OF DRAINAGE AFFECTING PARTS OF THE LAND ABOVE DESCRIBED MORE FULLY SET OUT IN THE SAID INSTRUMENTS
5 B282738 EASEMENT APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN SO BURDENED IN VOL 3352 FOL 132

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.

~ Search ~

	re Lot 1 in DP 948186
	Schedule of Registered Proprietors
Tfr A153730 Reg 8/4/1915 (V.2388 K F.149)	Ebenezer Frank Vickery of Dyaney Dairator
Tfr A610756 Reg 9/9/20 (V.2568 F.86)	John Gladwell Wheen James Edward Carruthers, John George Morris Taylor, Charles John Prescott James Green, Joseph Woodhouse, Walter Cecil McClelland, Percy Walton Smith, Fred Cull, Francis Williamson Firth Percy Newman Slade & Herbert Middleton Hawkins
B 318337 Reg 16/2/26 (V.2568 F.86)	Appointment of New Trustees under Methodist Church Property Act
C 388204 Reg 27/11/35 (V.2568 F.86)	Appointment of New Trustees Methodist Church Property Act
Tfr N194106 Appln AC788715	} As before — 7/12/12

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/948186

SEARCH DATE	TIME	EDITION NO	DATE
7/12/2012	12:21 PM	1	1/2/2007

LAND

LOT 1 IN DEPOSITED PLAN 948186
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP948186

FIRST SCHEDULE

THE UNITING CHURCH IN AUSTRALIA PROPERTY TRUST (N.S.W.) (AP AC788715)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 A153728 RIGHT OF DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN SO BURDENED IN VOL 2568 FOL 86
3 A153730 RIGHT OF WAY AND DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED DESCRIBED AFFECTING THE LAND SHOWN SO BURDENED IN VOL 2568 FOL 86

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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~ Search ~

re Lot 2 in DP 1061588

Schedule of Registered Proprietors

Hr A153731	Ebenezer Frank Vickery
Reg 8/4/1915	of Sydney
(V.2384 F.49)	Solicitor
Hr A610756	As before
B318337	
C388204	
N194106	
AC788715	

WJ 7/12/12

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 2/1061588

SEARCH DATE	TIME	EDITION NO	DATE
7/12/2012	12:21 PM	1	1/2/2007

LAND

LOT 2 IN DEPOSITED PLAN 1061588
AT WAVERLEY
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1061588

FIRST SCHEDULE

THE UNITING CHURCH IN AUSTRALIA PROPERTY TRUST (N.S.W.) (AP AC788715)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 A153731 RIGHT OF WAY AND DRAINAGE 6.095 METRES WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING PART OF LOT 1 IN DP 172133 SHOWN SO BURDENED IN THE TITLE DIAGRAM
3 A153728 RIGHT OF DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN AS "DRAINAGE EASEMENT 4 FEET WIDE" IN DP948185

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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~ Search ~

re Lot 3 in DP 667555

Schedule of Registered Proprietors

Fr A153732	Ebenezer Frank Vickery
Reg 8/4/1915	of Lyaney
(V2384 F49	Solicitor
Fr A610756	As before
B318337	
C388204	
N194106	
AC788715	

7/12/12

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 3/667555

SEARCH DATE	TIME	EDITION NO	DATE
7/12/2012	12:22 PM	1	1/2/2007

LAND

LOT 3 IN DEPOSITED PLAN 667555
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP667555

FIRST SCHEDULE

THE UNITING CHURCH IN AUSTRALIA PROPERTY TRUST (N.S.W.) (AP AC788715)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 A153732 RIGHT OF WAY AND DRAINAGE EASEMENT APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LANE 6.095 WIDE SHOWN IN DP4993.
3 A153728 RIGHT OF DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN AS "DRAINAGE EASEMENT 4FT WIDE" IN DP948185.

NOTATIONS

NOTE: SECTION 181B CROSS EASEMENTS MAY APPLY.
UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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~ Search ~

re Lot 1 in DP 1061548

Schedule of Registered Proprietors

Tfr A153733	Ebenezer Frank Vickery
Reg 8/4/1915	of Sydney
(V.2384 F.148-9)	Solicitor
Tfr A610756	As before
B318337	
C388204	
N194106	
AC788715	

7/12/12

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/1061548

SEARCH DATE	TIME	EDITION NO	DATE
7/12/2012	12:22 PM	1	1/2/2007

LAND

LOT 1 IN DEPOSITED PLAN 1061548
AT WAVERLEY
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1061548

FIRST SCHEDULE

THE UNITING CHURCH IN AUSTRALIA PROPERTY TRUST (N.S.W.) (AP AC788715)

SECOND SCHEDULE (4 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 A153729 RIGHT OF DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING LOT 2 IN DP 1061548
3 A153733 RIGHT OF WAY AND DRAINAGE 6.095 METRES WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING PART OF LOT 1 IN DP172133 SHOWN SO BURDENED IN THE TITLE DIAGRAM
4 A153729 RIGHT OF DRAINAGE 1.23 METRES WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND DESIGNATED (Y) IN THE TITLE DIAGRAM

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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~ Search ~

re Lot 2 in DP 1061548

Schedule of Registered Proprietors

Tfr A153729 Reg 8/4/15 (V.2384 F.148+9)	Ebeneger Frank Vickery of Sydney Solicitor
Tfr A560583 Reg 16/4/20 (V2577 F.193)	Methodist Missionary Society of Australasia Trust Association
Tfr B638937 Reg 16/4/28 (V2577 F.193	John Gladwell Wheen, John George Morris Taylor, Charles John Prescott, James Green of Sydney, Methodist Ministers and Walter Cecil McClelland & Percy Walton Smith of Sydney, Medical Practitioners & Fred Cull of Sydney, Merchant, Francis Williamson Firth of Sydney, Manager, Percy Newman Adolf & Herbert Middleton Hawkins of Sydney Estate Agents & Ebeneger Frank Vickery of Sydney, Solicitor
C388204 N194106 AC788715	As before

MJ 7/12/12

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 2/1061548

SEARCH DATE	TIME	EDITION NO	DATE
7/12/2012	12:23 PM	1	1/2/2007

LAND

LOT 2 IN DEPOSITED PLAN 1061548
AT WAVERLEY
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1061548

FIRST SCHEDULE

THE UNITING CHURCH IN AUSTRALIA PROPERTY TRUST (N.S.W.) (AP AC788715)

SECOND SCHEDULE (6 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 A153733 RIGHT OF WAY AND DRAINAGE 6.095 METRES WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING PART OF LOT 1 IN DP172133 SHOWN SO BURDENED IN THE TITLE DIAGRAM
3 A153729 RIGHT OF DRAINAGE 1.23 METRES WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND DESIGNATED (Y) IN THE TITLE DIAGRAM
4 A153729 RIGHT OF DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND AS MORE FULLY SET OUT IN A153729
5 A153729 RIGHT OF DRAINAGE 1.23 METRES WIDE AFFECTING THE LAND SHOWN SO BURDENED IN THE TITLE DIAGRAM
6 B282738 RIGHT OF WAY AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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~ Search ~

	re Lot 1 in DP 567694
	Schedule of Registered Proprietors
V1817 F.21 issued 2/10/1907	Ebeneger Vickery of Waverley Property Owner
TA A200427 Reg 23/8/1916 (V1817 F.21)	Ebeneger Frank Vickery Kenneth Tenth Vickery Dessie Irene Hipsley
Lpr B548685 Reg 19/10/27 (V1817 F.21)	As for Lpr. A610756 (1/948186).
C107445 Reg 9/9/30 (V4067 F197)	Appointment of New Trustees under Methodist Church Property Act
C388204	As before
D123385 Reg 6/7/42 (V4067 F197) J672061 Reg 23/7/64 (V4321 F.86)	Appointment of New Trustees under Methodist Church Property Act

NG 7/12/12

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re Lot 1 in DP 567694

Schedule of Rega Proprietors Contd

App. N194106 Methodist Church (N. S. W.)
Reg 11/5/73 Property Trust.
(V. 9784 F180)

App. AC 788715
Reg 28/1/2010 } As before
(1/567694)

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/567694

SEARCH DATE	TIME	EDITION NO	DATE
7/12/2012	12:23 PM	2	28/1/2010

LAND

LOT 1 IN DEPOSITED PLAN 567694
AT WAVERLEY
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP567694

FIRST SCHEDULE

THE UNITING CHURCH IN AUSTRALIA PROPERTY TRUST (N.S.W.) (AP AC788715)

SECOND SCHEDULE (10 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
* 2 AF530817 PART OF THE LAND ABOVE DESCRIBED IS USED AS A RETIREMENT VILLAGE UNDER THE RETIREMENT VILLAGES ACT 1999 KNOWN AS "CONRAD BEARD COURT RETIREMENT VILLAGE" SHOWN HATCHED IN PLAN WITH AF530817
3 A153727 RIGHT OF DRAINAGE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
4 A153728 RIGHT OF DRAINAGE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
5 A153729 RIGHT OF DRAINAGE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
6 B998389 EASEMENTS FOR DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN AS RIGHTS OF DRAINAGE OVER SITE OF EASEMENT 1.829 METRES WIDE IN DP567694
7 683902 EASEMENTS FOR DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN AS RIGHTS OF DRAINAGE OVER SITE OF EASEMENT 1.829 METRES WIDE IN DP567694
8 683903 EASEMENT FOR DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN AS RIGHTS OF DRAINAGE OVER SITE OF EASEMENT 0.914 METRES WIDE AND RIGHTS OF DRAINAGE OVER SITE OF EASEMENT 1.829 METRES WID
9 DP1147460 EASEMENT FOR ELECTRICITY AND OTHER PURPOSES 2 AND 3.3 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1147460
10 DP1147460 RIGHT OF CARRIAGEWAY 4 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1147460

END OF PAGE 1 - CONTINUED OVER

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/567694 PAGE 2

NOTATIONS

NOTE: REFER ALL DEALINGS TO SD2 (RETIREMENT VILLAGE)
UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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~ Search ~

re Lots 3 & 4 in DP 593710

Schedule of Registered Proprietors of PART formerly in V. 4549 F 109

V. 4549 F. 109 issued 21/10/32	Heather Gladys Truda wife of Giuseppe Joe Truda of Sydney, Musician
Tfr C 228884 Reg 25/1/34 (V 4549 F 109)	Mary Dudakoff of Dyaney Widow
Tfr D 753863 Reg 12/11/47 (V 4549 F 109)	James Thompson Steele Tate of Ranamuck Teacher
Tfr M 652612 Reg 9/3/72 (V 4549 F 109)	Methodist Church (N.S.W.) Property Trust
App Q 577853 Reg 17/3/78 (V. 12784 F. 192)	The Uniting Church in Australia Property Trust (N.S.W.)

7/12/12

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~ Search ~

	re Lots 3 & 4 in DP 593710
	Schedule of Registered Proprietors of PART (formerly in V 6715 F 110)
V. 6715 F110 iss. 8/9/53	Alexander Charles Dermont of Brookvale Clerk
Tfr F988196 Reg 11/2/54 (V6715 F110	Ivy Mildred Rushbrooke of Waverley Widow
App K735316 Reg 20/7/67 (V. 6715 F110)	Jude Rushbrooke of Waverley, Proof Reader & Kenna Chubb Dietist of Darlinghurst, Married Woman
Tfr K837114 Reg 12/10/67 (V6715 F110)	Tommass Trihisoma of Paddington, Builder's Labourer & Giuseppina Trihisoma, his wife
Tfr M114510 Reg 22/12/70 (V6715 F110)	Roy Mason Euston Glover of Gordon Clerk
Tfr M602490 Reg 23/12/71	Methodist Church (N. S. W.) Property Trust

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~ Search ~

re Lots 3 & 4 in DP 593710

Schedule of Registered Proprietors
of PART formerly in V6715 F. 111

V6715 F 111 Iss. 8/9/53	Alexander Charles Dermont of Brookvale, Clerk
Lfr G281 Reg 11/2/54 (V6715 F 111)	Kathleen Rayall of Gateshead-on-Tyne, England Married Woman
Lfr G40339 Reg 23/3/54 (V6715 F 111)	Dorothea Catherine Hickey of Waverley Spinster
Lfr N11584 Reg 23/11/72 (V6715 F. 11)	The Methodist Church (N. S. W.) Property Trust
Appln Q577853	As before

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~ Search ~

re Lots 3 & 4 in DP 593710

Schedule of Registered Proprietors of PART formerly in V 7813 F.3.

Tfr H 118946	Lennie Fred Fox
V. 7813 F.3	of Waverley, Sandblaster &
10/12/59	Bernice Mary Fox, his wife
App. M 163835	Josephine Mercy Dorahy Married
Reg 24/2/71	Woman & John Patrick Dorahy
(V 7813 F.3)	Clerk, both of Lidcombe
Tfr M 241810	Arthur Leslie Marshall
Reg 7/4/71	of Beecroft
(V 7813 F3)	Accountant
Tfr M 602491	Methodist Church (N.S.W.)
Reg 23/12/71	Property Trust
(V 7813 F.3)	
App Q 577853	As before

7/12/12

Jenners Title Searching Co.

~ Search ~

re Lots 3 & 4 in DP 593710

Schedule of Registered Proprietors
of PART formerly in V. 9872 F. 165

TA D764903 V. 5832 F 82 & 83 iss. 26/5/58	Mabel Roberts Foster of Randwick Spinster & Mary Watterson Osborn wife of Horace Rupert Osborn of Randwick Dentist
Tfr M492834 Reg 16/11/71 (V 9872 F 165 & 6)	Winston D'Arcy O'Reilly of Roseville Clerk
Tfr M602489 Reg 24/2/72 (V 9872 F 165)	Methodist Church (N.S.W.) Property Trust
App. Q577853	As before

7/12/12

Jenners Title Searching Co.

~ Search ~

re Lot 3 in DP 593710

Schedule of Registered Proprietors

Lr Q671111 Reg 15/5/78 (V13589 F246)	The Sydney County Council
R AG862973 Reg 8/6/2005 (3/593710)	Ausgrid

MJ 7/12/12

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 4/593710

SEARCH DATE	TIME	EDITION NO	DATE
7/12/2012	12:24 PM	-	-

VOL 13589 FOL 247 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT 4 IN DEPOSITED PLAN 593710
AT WAVERLEY
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP593710

FIRST SCHEDULE

THE UNITING CHURCH IN AUSTRALIA PROPERTY TRUST (N. S. W.)

SECOND SCHEDULE (5 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 683902 B998389 EASEMENTS FOR DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
3 683903 EASEMENTS FOR DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
4 A153727 A153728 A153729 RIGHTS OF DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
5 F988196 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

JBS-Waverley PRINTED ON 7/12/2012

*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 3/593710

SEARCH DATE	TIME	EDITION NO	DATE
7/12/2012	12:23 PM	1	8/6/2005

LAND

LOT 3 IN DEPOSITED PLAN 593710
AT WAVERLEY
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP593710

FIRST SCHEDULE

AUSGRID (R AG862973)

SECOND SCHEDULE (4 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 683902 B998389 EASEMENTS FOR DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
3 683903 EASEMENTS FOR DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
4 A153727 A153728 A153729 RIGHTS OF DRAINAGE APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

JBS-Waverley PRINTED ON 7/12/2012

*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.

~ Search ~

	re Lot 7 in DP 948185
	Being Part Land in Auto Consol 4036-50
Tfr A153728	Edith Margery Vickery
D518975	of Waverley
Reg 21/4/1915	Spinster
25/7/1927	
(V2568 F 85-94)	
Tfr B680479	John George Morris Taylor, Charles John
Reg 22/6/28	Prescott, James Green, Walter Cecil
(V 4036 F 50)	McClelland, Percy Walton Smith, Fred
	Cull, Francis William Fitch, Percy
	Newman Slade, Herbert Middleton
	Hawkins & Ebenezer Frank Vickery
C 388204	As before
N 194106	
AC 788715	
	MG 7/12/12
	Jenners Title Searching Co.

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 4036-50

SEARCH DATE	TIME	EDITION NO	DATE
7/12/2012	12:24 PM	1	1/2/2007

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
AT WAVERLEY
LOCAL GOVERNMENT AREA WAVERLEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM SEE SCHEDULE OF PARCELS

FIRST SCHEDULE

THE UNITING CHURCH IN AUSTRALIA PROPERTY TRUST (N.S.W.) (AP AC788715)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 A153728 RIGHT OF DRAINAGE APPURTENANT TO LOT 7 IN DP948185 AFFECTING THE LAND AS MORE FULLY SET OUT IN A153728
3 A153728 RIGHT OF DRAINAGE 1.22 METRE WIDE AFFECTING THE PART OF LOT 7 IN DP 948185 SHOWN SO BURDENED IN THE TITLE DIAGRAM

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS	TITLE DIAGRAM
LOT B IN DP317831	DP317831
LOT 7 IN DP948185	DP948185.

*** END OF SEARCH ***

*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.

Appendix F EPA Records

List of NSW Contaminated Sites Notified to EPA as of 21 June 2016

Background

A strategy to systematically assess, prioritise and respond to notifications under Section 60 of the *Contaminated Land Management Act 1997* (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under *Government Information (Public Access) Act 2009*.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

For some notifications, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any offsite consequences to the community or environment. Such sites would still need to be cleaned up, but this could be done in conjunction with any subsequent building or redevelopment of the land. These sites may not require intervention under the CLM Act, but could be dealt with through the planning and development consent process.

Where indications are that the nominated site is causing actual harm to the environment or an unacceptable offsite impact (i.e. it is a "significantly contaminated site"), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site.

As such, the sites notified to the EPA and presented in the following table are at various stages of the assessment and/or remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The tables provide an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the responsible landowner.

The following questions and answers may assist those interested in this issue:

Frequently asked questions

What is the difference between the "List of NSW Contaminated Sites Notified to the EPA" and the "Contaminated Land: Record of Notices"?

A site will be on the Contaminated Land: Record of Notices only if the EPA has issued a regulatory notice in relation to the site under the *Contaminated Land Management Act 1997*.

The sites appearing on this "List of NSW contaminated sites notified to the EPA" indicate that the notifiers consider that the sites are contaminated and warrant reporting to the EPA. However, the contamination may or may not be significant enough to warrant regulation by the EPA. The EPA needs to review and, if necessary, obtain more information before it can make a determination as to whether the site warrants regulation.

Why my site appears on the list?

Your site appears on the list because of one or more of the following reasons:

- The site owner and/or the person partly or fully responsible for causing the contamination notified to the EPA about the contamination under Section 60 of the *Contaminated Land Management Act 1997*. In other words, the site owner or the "polluter" believes the site is contaminated.
- The EPA has been notified via other means and is satisfied that the site is or was contaminated.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that the EPA is aware of, with regard to its regulatory role under the CLM Act. An absence of a site from the list does not necessarily imply the site is not contaminated.

The EPA relies upon responsible parties to notify contaminated sites.

How are these notified contaminated sites managed by the EPA?

There are different ways that the EPA manages these notified contaminated sites. First, an initial assessment is carried out by the EPA. At the completion of the initial assessment, the EPA may take one or more than one of the following management approaches:

- The contamination warrants the EPA's direct regulatory intervention either under the *Contaminated Land Management Act 1997* or the *Protection of the Environment Operations Act 1997* (POEO Act), or both. Information about current or past regulatory action on this site can be found on EPA website.
- The contamination with respect to the current use or approved use of the site, as defined under the *Contaminated Land Management Act 1997,* is not significant enough that it warrants EPA regulation.
- The contamination does not require EPA regulation and can be managed by a planning approval process.
- The contamination is related to an operational Underground Petroleum Storage System, such as a service station or fuel depot. The contamination may be managed under the POEO Act and the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2008.
- The contamination is being managed under a specifically tailored program operated by another agency (for example the Department of Industry and Investment's *Derelict Mines Program*).

I am the owner of a site that appears on the list. What should I do?

First of all, you should ensure the current use of the site is compatible with the site contamination. Secondly, if the site is the subject of EPA regulation, make sure you comply with the regulatory requirements, and you have considered your obligations to notify other parties who may be affected.

If you have any concerns, contact us and we may be able to offer you general advice, or direct you to accredited professionals who can assist with specific issues.

I am a prospective buyer of a site that appears on the list. What should I do?

You should seek advice from the vendor to put the contamination issue into perspective. You may need to seek independent expert advice.

The information provided in the list is meant to be indicative only, and a starting point for your own assessment. Site contamination as a legacy of past site uses is not uncommon,

particularly in an urbanised environment. If the contamination on a site is properly remediated or managed, it may not materially impact upon the intended future use of the site. However, each site needs to be considered in context.

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or *Protection of the Environment Operations Act 1997*. Alternatively, the EPA may require information via a notice issued under s77 of the *Contaminated Land Management Act 1997* or issue a Preliminary Investigation Order.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the *Contaminated Land Management Act 1997* is not required.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997*. A regulatory approach is being finalised.

Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the *Protection of the Environment Operations Act 1997* (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the *Environmental Planning and Assessment Act 1979* (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the *Protection of the Environment Operations Act 1997* (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the *Environmental Planning and Assessment Act 1979* (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the *Contaminated Land Management Act 1997* (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record.

Suburb	Site Name	Address	Contamination Activity Type	Management Class	Latitude	Longitude
WARNERS BAY	Historically Filled Land	41-43 Charles STREET	Unclassified	Regulation under CLM Act not required	-32.97340461	151.6464383
WARNERS BAY	Caltex Service Station	55 King STREET	Service Station	Under assessment	-32.97418806	151.6476184
WARNERVALE	Former Timber Treatment Plant	Aldenham and Railway ROADS	Other Industry	Contamination formerly regulated under the CLM Act	-33.24732018	151.4469037
WARRAWONG	Caltex Service Station	75-77 King STREET	Service Station	Under assessment	-34.49037817	150.888802
WARREN	Caltex Service Station	1 Coonamble ROAD	Service Station	Under assessment	-31.69508383	147.8405578
WARREN	Former Mobil Warren Depot	16 Dubbo STREET	Other Petroleum	Contamination currently regulated under CLM Act	-31.6943058	147.8314606
WARREN	Former Shell Depot	8 Dubbo STREET	Other Petroleum	Regulation being finalised	-31.69379262	147.8308088
WATERLOO	Diversity Waterloo	1-13 Archibald AVENUE	Other Industry	Under assessment	-33.90204305	151.2097328
WATERLOO	Proposed Construction Site	2 John STREET	Other Industry	Regulation under CLM Act not required	-33.89989686	151.2010324
WATERLOO	Waverley Woollahra Process Plant	355 Botany ROAD	Other Industry	Regulation under CLM Act not required	-33.9063092	151.2042672
WATERLOO	Shell Coles Express Service Station	867-877 South Dowling STREET	Service Station	Regulation under CLM Act not required	-33.90179774	151.2143789
WATERLOO	Lawrence Dry Cleaners	887-893 Bourke STREET	Unclassified	Contamination currently regulated under CLM Act	-33.89897433	151.2101436
WAUCHOPE	Expressway Spares UST	3 Sancrox ROAD	Other Petroleum	Regulation under CLM Act not required	-31.44421922	152.8218723
WAUCHOPE	Former Shell Depot	56-64 High STREET	Other Petroleum	Regulation under CLM Act not required	-31.45804845	152.7314151
WAUCHOPE	Wauchope Service Station	57 High STREET	Service Station	Regulation under CLM Act not required	-31.45737022	152.7305018
WAUCHOPE	Shell Coles Express Service Station	64 High STREET	Service Station	Under assessment	-31.45764495	152.7315975
WAUCHOPE	Former Timber Treatment Site	Blackbutt DRIVE	Other Industry	Regulation under CLM Act not required	-31.46575645	152.7228555
WAVERTON	Berry's Bay Woodley's Marina	1 Balls Head DRIVE	Other Industry	Contamination currently regulated under POEO Act	-33.84441851	151.1947433
WAVERTON	Oyster Cove AGL	2 King STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.83637995	151.193541
WAVERTON	SRA Land	95 Bay ROAD	Unclassified	Contamination formerly regulated under the CLM Act	-33.83716728	151.1969497
WELLINGTON	Caltex Service Station	124-128 Lee STREET	Service Station	Under assessment	-32.55082729	148.9411537
WELLINGTON	BP Wellington Service Station	35A Maxwell STREET	Service Station	Under assessment	-32.55835121	148.9447284
WELLINGTON	Woolworths Petrol Wellington	79 Lee STREET	Service Station	Under assessment	-32.54874227	148.9408531
WENTWORTH	Caltex - Wentworth	110 Adams STREET	Service Station	Regulation under CLM Act not required	-34.1024927	141.9160539
WENTWORTH FALLS	Bodington Hospital	Bodington DRIVE	Unclassified	Contamination formerly regulated under the CLM Act	-33.73201608	150.3874102
WENTWORTH POINT	TNT Express	23 Bennelong Parkway PARK	Other Petroleum	Under assessment	-33.83115118	151.0726636
WENTWORTH POINT	RMS Eastern Precinct	3-7 Burroway ROAD	Other Petroleum	Regulation under CLM Act not required	-33.8233882	151.0815668
WENTWORTHVILLE	Former Workshop	2 Rawson Rd and 8 Barfil CRESCENT	Unclassified	Regulation under CLM Act not required	-33.81568808	150.9671853
WERRINGTON	Caltex Service Station	Cnr Dunheved Rd and Henry Lawson DRIVE	Service Station	Under assessment	-33.74577725	150.7409877
WERRINGTON	Claremont Meadows Former landfill	Gipps STREET	Landfill	Regulation under CLM Act not required	-33.77341076	150.7557628
WERRINGTON	7-Eleven Werrington	Lot 122 Dunheved ROAD	Service Station	Under assessment	-33.74699408	150.7428609
WEST BALLINA	Caltex Big Prawn Service Station	Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-28.86374913	153.5321482
WEST GOSFORD	Caltex Service Station	283 Manns ROAD	Service Station	Under assessment	-33.41659727	151.325219

NSW EPA

Healthy Environment, Healthy Community, Healthy Business

Home Contaminated land Record of notices

Search results

Your search for:LGA: Waverley Council

Search Again
Refine Search

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the planning process.

Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... more search tips

More information about particular sites may be available from:

- The POEO public register
- The appropriate planning authority: for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act.

See What's in the record and What's not in the record.

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.
This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register

18 August 2016

Connect Fee

Protection of the Environment Operations Act 1997

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997

SOUTH EASTERN SYDNEY AND ILLAWARRA AREA HEALTH SERVICE,

ABN 78 390 886 131,

125 BIRRELL STREET,

WAVERLEY NSW 2024

Attention: Mr. IAN PATERSON

Notice Number 1044609

File Number 501871

Date 24-Mar-2005

NOTICE OF VARIATION OF LICENCE NO. 6370

BACKGROUND

A. SOUTH EASTERN SYDNEY AND ILLAWARRA AREA HEALTH SERVICE t/as ("the licensee") is the holder of Environment Protection Licence No. 6370 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of Scheduled Activity - Premises Based at 125 BIRRELL STREET, WAVERLEY, NSW.

B. Licence varied as an outcome of the licence review conducted by the EPA under section 78 of the POEO Act 1997.

VARIATION OF LICENCE NO. 6370

1. By this notice the EPA varies licence No. 6370 as set out in the Appendix. The Appendix is a copy of the provisions of the licence which are varied by this notice, marked with the variations that are made to them.
2. The variations to the licence are indicated in the following way:
   - if a strike through mark appears through any word or other text (eg. ~~Solids or~~) this indicates that the word or other text is deleted from the licence by this notice; and
   - if a double underline appears under any word or other text (eg. must be treated) this indicates that the word or other text is added to the licence by this notice.
3. Except as provided by section 84(2) of the Act, the variations to the licence by this notice begin to operate at the expiry of the period of 21 days after you receive notice of the variations, unless another date is specified in this notice.
4. Section 84(2) of the Act provides that a variation to a licence does not operate:

- until the expiry of the period of 21 days after you are given notice of the decision to vary the licence is given to the; or
- if an appeal against the decision is lodged within that period, until the Land and Environment Court confirms the decision or the appeal is withdrawn; or
- until you notify the EPA in writing that no appeal is to be made against the decision to vary the licence,

whichever first occurs.

. . . . . .

Mr Steve Beaman

Manager

Sydney Waste

(by Delegation)

INFORMATION ABOUT THIS NOTICE

- Section 287 of the Act enables appeals to be made in connection with decisions about licences within 21 days after you are given notice of the decision.
- Details provided in this notice will be available on the EPA's Public Register in accordance with section 308 of the Act.
- This notice is issued under section 58(5) of the Act .

Environment Protection Authority

Environment Protection Licence

Section 55 Protection of the Environment Operations Act 1997

- Licence number: 6370
- File number: 501871
- Licence Anniversary Date: 22-October
- Review date not later than ~~01-Jul-2005~~24-Mar-2008

Licence Type
Premises

Licensee
SOUTH EASTERN SYDNEY AND ILLAWARRA AREA HEALTH SERVICE
125 BIRRELL STREET
WAVERLEY NSW 2024

Licensed Premises
WAR MEMORIAL HOSPITAL WAVERLEY
125 BIRRELL STREET
WAVERLEY NSW 2024

Fee Based Activity	Scale
Hazardous, Industrial or Group A Waste Generation or Storage (73)	0 - 10 T

EPA Region
Sydney ~~Region~~Waste
~~Level 7, 79 George Street~~59-61 Goulburn Street
~~PARRAMATTA NSW 2150~~SYDNEY NSW 2000
Phone: 02 9995 5000
Fax: 02 9995 ~~6900~~5999
~~PO Box 668 PARRAMATTA~~PO Box A290 SYDNEY SOUTH
NSW ~~2124~~1232

INFORMATION ABOUT THIS LICENCE **4**
Dictionary 4
Responsibilities of licensee 4
Transfer of licence 4
Variation of licence conditions 4
Duration of licence 4
Licence review 4
Fees and annual return to be sent to the EPA 5
Public register and access to monitoring data 5
1 ADMINISTRATIVE CONDITIONS **6**
A1 What the licence authorises and regulates 6
A2 Premises to which this licence applies 7
A3 Other activities 7
A4 Information supplied to the EPA 7
2 DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND **7**
P1 Location of monitoring/discharge points and areas 7
3 LIMIT CONDITIONS **8**
L1 Pollution of waters 8
L2 Load limits 8
L3 Concentration limits 8
L4 Volume and mass limits 8
L5 Waste 8
L6 Noise Limits 9
L7 Potentially offensive odour 9
4 OPERATING CONDITIONS **9**
O1 Activities must be carried out in a competent manner 9
O2 Maintenance of plant and equipment 9
O3 Emergency response 9
O4 Processes and management 10
O5 Monitoring of waste movements within NSW 10
O6 Monitoring of interstate movements of controlled wastes 13
O7 Clinical and related Wastes 15
O8 Sharps Waste 15
O9 Cytotoxic Waste 16
5 MONITORING AND RECORDING CONDITIONS **16**
M1 Monitoring records 16
M2 Requirement to monitor concentration of pollutants discharged 16
M3 Testing methods - concentration limits 16
M4 Recording of pollution complaints 17
M5 Telephone complaints line 17

M6 Requirement to monitor volume or mass 17
6 REPORTING CONDITIONS 18
R1 Annual return documents 18
R2 Notification of environmental harm 19
R3 Written report 19
R4 Regular reporting of transportation of certain wastes within NSW 20
R5 Regular reporting of interstate movements of controlled wastes 20
GENERAL CONDITIONS 21
G1 Copy of licence kept at the premises 21
POLLUTION STUDIES AND REDUCTION PROGRAMS 21
SPECIAL CONDITIONS 22
Appendices 22
DICTIONARY 28
Model Licence Dictionary 28
General Dictionary 29

Information about this licence

Dictionary

The licence contains a dictionary, which defines terms used in the licence. It is found at the end of the licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- Ensure persons associated with you comply with this licence, as set out in section 64 of the Act.
- Control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act).
- Report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Transfer of licence

Transfer of the licence to another person may be requested by the licensee using the form for this purpose available from the EPA.

Variation of licence conditions

Variations to the conditions of this licence may be requested by the licensee using the form for this purpose available from the EPA. The EPA may also vary a licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 3 years after the issue of the licence, as

set out in Part 3.6 of the Act. You will receive advance notice of the licence review. For licences held immediately before 1 July 1999, the first review will take place before 1 July 2002.

Fees and annual return to be sent to the EPA

The licence requires you to forward to the EPA an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints).

The Annual Return must be submitted within 60 days after the end of each reporting period. Where a licence is transferred, surrendered or revoked, a special reporting period applies.

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Usually the licence fee period is the same as the reporting period.

See condition R1 and the accompanying form regarding the Annual Return requirements.

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications
- licence conditions and variations
- statements of compliance

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

Licence anniversary date

22-October

This licence is issued to

SOUTH EASTERN SYDNEY AND ILLAWARRA AREA HEALTH SERVICE
125 BIRRELL STREET
WAVERLEY NSW 2024

subject to the conditions which follow:

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Waste Activities

Fee Based Activity	Scale
Hazardous, Industrial or Group A Waste Generation or Storage (73)	0 - 10 T

A1.3 Not applicable.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
WAR MEMORIAL HOSPITAL WAVERLEY
125 BIRRELL STREET
WAVERLEY
NSW
2024
~~DP 567694 VOL 3352 & 12784 FOLIO 132 & 20~~DP 2,4,5,6,7 PT99//4993, 1//172133, B//317831, 1//567694, 3//667555, 1//948186, 99DP4993

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:
(a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
(b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 Not applicable.

P1.3 Not applicable.

3 Limit conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

L2.1 Not applicable.

L2.2 Not applicable.

L3 Concentration limits

L3.1 Not applicable.

L3.2 Not applicable.

L3.3 Not applicable.

L4 Volume and mass limits

L4.1 Not applicable.

L5 Waste

L5.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.

L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.

L5.3 Except as provided by any other condition of this licence, only the hazardous and/or industrial and/or Group A waste listed below may be generated and/or stored at the premises.

- Clinical and related wastes. [R100]

L5.4 The quantity of hazardous/and/or industrial and/or Group A waste generated and/or stored on the premises must not exceed 10 tonnes per year.

L6 Noise Limits

L6.1 Not applicable.

L7 Potentially offensive odour

L7.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

4 Operating conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:
(a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
(b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
(a) must be maintained in a proper and efficient condition; and
(b) must be operated in a proper and efficient manner.

O3 Emergency response

O3.1 Within 3 months of the date of the issue of the licence, the licensee must develop, or update, an emergency response plan which documents the procedures to deal with all types of incidents (eg spill, explosions or fire) that may occur at the premises or outside of the premises (eg during transfer) which are likely to cause harm to the environment.

O4 Processes and management

O4.1 The licensee must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the EPA Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes, in force as at 1 July 1999.

O4.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5 Monitoring of waste movements within NSW

O5.1 Conditions O5.2 to O5.16 apply to the movement of the types of hazardous and/or industrial and/or Group A waste as listed in L5.3, within NSW.

Prerequisites for waste movements

O5.2 If the waste is transported from the premises, the licensee must ensure that the waste is transported:
(a) to a place which has been licensed by the EPA to issue consignment authorisation numbers; and
(b) to a place that can otherwise lawfully accept that class of waste.

O5.3 If the waste is transported from the premises, the licensee must;
(a) obtain a consignment authorisation number from the consignee;
(b) complete an approved waste data form in relation to the consigned waste in accordance with the instructions on the form and to the extent required, and give a copy of the form to the person transporting the waste;
(c) ensure that the waste data form:
  (i) is completed accurately, and
  (ii) is retained for a period of not less than 4 years from the time the form was completed, and
  (iii) is made available for inspection by an authorised officer on request;
(d) ensure, if the waste is of such an amount as to require the person transporting it to be licensed, that the person transporting the waste is licensed.

Application for a consignment authorisation number

O5.4 To obtain a consignment authorisation number as required by 05.3 (a), the licensee must apply in writing to the consignee. An application must include the following information:
(a) a statement identifying the classification of the waste in accordance with the requirements of condition 04.1;
(b) copies of all information used to classify the waste;
(c) an estimate of the amount of waste to which the application applies;

(d) whether the consignment will consist a single load or multiple loads;
(e) an estimate of the total period required for transportation of the consignment;
(f) the date of dispatch of at least the first load in the consignment.

Note: The licensee may nominate the dates of dispatch of as many loads as is feasible. This should be discussed with the consignee and will depend on the predictability of the rate of generation of the waste and the likelihood of the need for amendments to the dates nominated. If the waste is predictable, a schedule may be able to be submitted for the entire consignment, however if it is unpredictable, the date of only one future load may be able to be determined at a time (see also 05.9 about amending notified dates).

Note: The requirement for a written application for a consignment authorisation number does not preclude preliminary contact to obtain quotes and/or advice. Such preliminary contact does not require the formal provision of the above information that need only be supplied in the formal application.

O5.5 Once an application for a consignment authorisation number, as set out in 05.4 has been submitted, the licensee must not submit an application for the same consignment to another consignee until notification is received concerning the outcome of the application.

Notification of dates of dispatch of the second and subsequent loads in a consignment.

O5.6 The licensee must provide the consignee with written notification of the date of dispatch of each load of waste.

O5.7 The notification referred to in 05.6 must be received by consignee no later than the date of arrival of the preceding load at the destination.

Notification of a final load in a consignment.

O5.8 Unless the movement of an entire consignment of waste occurs in a single load, by the time the final load in a consignment is accepted at the destination, the licensee must have informed the consignee in writing, that no further loads are to be dispatched under that consignment authorisation number.

Note: The notifications referred to in conditions 05.6 and 05.8 may be attached to the waste data form of the preceding load.

Amendments to the nominated date(s) of dispatch

O5.9 If the date of dispatch for a load of waste is changed, the licensee must give written notification of this to the consignee and nominate a revised date of dispatch.

O5.10 A notification referred to in 05.9 must occur on or before the date of delivery as previously nominated.

Note: More than one amendment to dates of dispatch may occur.

Cancellation of consignment authorisations

O5.11 If the licensee determines that the delivery of a consignment of waste is to be discontinued for any reason, the consignee must be notified in writing before the nominated date of dispatch of the next expected load.

Notification of delayed delivery by transporter

O5.12 If the licensee receives written notification from a transporter who removed waste from the premises specifying a revised date of delivery to the destination which is more than 7 days after the date of dispatch, the licensee must note and record that date.

Record keeping

O5.13 The licensee must record and retain all information related to each consignment of waste.

Note: This includes waste data forms and copies of other documents such as notifications of revised delivery dates, regular and other reports, etc.

O5.14 The records referred to in 05.13 must be kept so that:
(a) all records relating to individual consignment authorisation numbers are kept physically together;
(b) consignments transported by each transporter can be readily identified and accessed; and
(c) consignments sent to each destination can readily be identified and accessed.

Note: The licensee must keep all information for at least 4 years.

Exception reporting

O5.15 The licensee must notify the EPA, in writing, within 48 hours of becoming aware of any suspected breaches of the Act, the Protection of the Environment Operations (Waste) Regulation 1996 or this licence.

O5.16 The licensee must notify the EPA in writing within 48 hours of becoming aware of any of the following:
(a) the refusal by a person to whom the licensee has applied for a consignment authorisation number in accordance with 05.4 to issue such a number;
(b) the refusal of a transporter to transport waste after arriving at the licensee's premises for the purposes of transporting that waste;
(c) a transporter who transports, or attempts to transport, waste without a waste data form completed to the extent required;
(d) the refusal of a consignee to accept waste from the licensee;
(e) the failure of the licensee to receive written confirmation of receipt of waste from a consignee within 21 days of dispatch, or where a transporter has provided written notification of a revised date of delivery as set out in 05.12 within 21 days of that date;
(f) the notification by a transporter of a revised date of delivery which is more than 90 days after the date of dispatch of the waste.

Note: The EPA should be notified of exception reports by sending a facsimile to:

Manager, Hazardous Waste Regulation

NSW Environment Protection Authority

O6 Monitoring of interstate movements of controlled wastes

O6.1 Conditions O6.2 to O6.11 apply to the movement of the types of hazardous and/or industrial and/or Group A waste as listed in L5.3, into and out of NSW.

Note: The requirements of the NEPM apply to the interstate movement of any of the wastes listed in Appendix 1 of this licence.

Classification of controlled waste

O6.2 The licensee must accurately identify the waste, in accordance with 04.1, and determine if the waste is a controlled waste within the meaning of the NEPM.

Note: The waste producer must check with the agency in the State or Territory of destination to determine whether waste is classified as a controlled waste under the NEPM. Unless advised otherwise by the agency of the State or Territory of destination, any waste included in Appendix 1 of this licence is a controlled waste for the purposes of the NEPM.

Application for a consignment authorisation

O6.3 If the waste is transported from the premises to another participating State or Territory, the licensee must comply with all conditions attached to the consignment authorisation issued by an agency or a facility delegated by an agency in the destination State or Territory.

Note: The waste producer is required by the Protection of the Environment Operations (Waste) Regulation 1996 to obtain, prior to the waste being dispatched, a consignment authorisation from an agency, or a facility delegated by an agency, in the destination State or territory to allow the movement of controlled waste.

Waste movements

O6.4 If the waste is transported from the premises to another participating State or Territory, the licensee must ensure that the waste is transported to a place that can lawfully be used as a waste facility for that waste.

O6.5 The licensee must ensure that the waste transporter is licensed as required by the agency of each participating State or Territory through which the waste is transported.

O6.6 The licensee must:

(a) retain a copy of the waste transport certificate for the waste for a period of not less than 4 years from the time the form was completed, and

(b) make the copy of the waste transport certificate available for inspection by an authorised officer on request.

Note: The waste producer is required by the Protection of the Environment Operations (Waste) Regulation 1996 to complete a waste transport certificate for the waste. This should be done in accordance with the instructions printed on the certificate and the required copy of the waste transport certificate should be forwarded to the agency in the State of destination.

Notification of delayed delivery by transporter

O6.7 If the licensee receives written notification from the transporter who removed waste from the licensee's premises specifying a revised date of delivery to the destination which is more than 7 days after the date of dispatch, the licensee must note and record that date.

Record keeping

O6.8 The licensee must record and retain all information related to each consignment of waste.

Note: This includes the waste transport certificates and copies of other documents such as consignment authorisations issued by an agency in the destination State or Territory, notifications of revised delivery dates by transporters, regular and other reports, etc.

O6.9 The records referred to in 06.8 must be kept so that:
(a) all records relating to each consignment authorisation are kept physically together;
(b) consignments transported by each transporter can be readily identified and accessed, and
(c) consignments sent to each destination can readily be identified and accessed.

Note: The licensee must keep all information for at least 4 years.

Exception reporting

O6.10 The licensee must notify the EPA in writing within 48 hours of becoming aware of a suspected breach of the Act, the Protection of the Environment Operations (Waste) Regulation 1996 or this licence.

O6.11 The licensee must notify the EPA in writing within 48 hours of becoming aware of any of the following:
(a) the refusal by an agency, or facility delegated by an agency, in participating State or Territory to whom the licensee has applied for a consignment authorisation in accordance with 06.3, to issue such an authorisation;
(b) the refusal of a transporter to transport waste after arriving at the licensee's premises for the purposes of transporting that waste to another participating State or Territory to the extent required;
(c) a transporter who transports, or attempts to transport, waste to another participating State or Territory without a waste transport certificate completed to the extent required;
(d) the refusal of a destination in another participating State or Territory to accept from the licensee waste for which a consignment authorisation has been issued;
(e) the failure of the licensee to receive written confirmation of receipt of waste from a destination in another participating State or Territory within 28 days of dispatch.

Note: The EPA should be notified of exception reports by sending a facsimile to:

Manager, Hazardous Waste Regulation

NSW Environment Protection Authority

O7 Clinical and related Wastes

O7.1 The licensee must ensure that the handling, labelling, containment and storage of clinical wastes are carried out in accordance with the Waste Management Guidelines for Health Care Facilities, 1998, issued by the NSW Department of Health.

O7.2 Without limiting to O7.1, the licensee must ensure that:

(a) clinical wastes are stored or contained in a weather proof secure location isolated from any other wastes, and that the storage area is maintained in a condition which presents no threat to the environment.

(b) the storage area for clinical wastes contains all necessary equipment required to clean and disinfect the area in case of spillage.

(c) ~~no radioactive substance as defined by the Radiation Control Act, 1990 is mixed or stored with any of the clinical wastes.~~

~~(d)~~ bagged clinical wastes are stored and transported in rigid containers which are leak proof, shatter proof, washable and have securely fitting lids to prevent spills at all times.

(e) bags and containers used for storage and transport of clinical wastes are colour coded and clearly marked with the wording Clinical Wastes along with biological hazard symbol in accordance with the requirements of the Waste Management Guidelines for Health Care Facilities, 1998, issued by the NSW Department of Health.

(f) containers used for clinical waste which are to be reused must be thoroughly cleansed and disinfected with hospital strength disinfectant before being reused.

(g) where second hand containers are used, all other irrelevant markings must be obliterated.

O8 Sharps Waste

O8.1 In addition to O7.1, the licensee must ensure that:

(a) sharps are segregated by the use of enclosed rigid impenetrable containers, which comply with Australian Standards AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in waste bags labelled Clinical Wastes along with appropriate biohazard symbol.

(b) sharps contaminated by any residual cytotoxic drug are segregated by the use of enclosed rigid impenetrable containers, which comply with Australian Standards AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in cytotoxic waste bags labelled Cytotoxic Wastes along with appropriate biohazard symbol.

(c) sharps are transported in rigid impenetrable containers which are leakproof, shockproof and have securely fitting lids and which comply with Australian Standard AS/NZS 3816-1998, Management of Clinical and Related Wastes.

O9 Cytotoxic Waste

O9.1 In addition to O7.1 and O7.2, the licensee must ensure that:

cytotoxic wastes are disposed of at a high temperature incinerator approved by the EPA or a method approved by the EPA and by the NSW Department of Health.

5 Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
(a) in a legible form, or in a form that can readily be reduced to a legible form;
(b) kept for at least 4 years after the monitoring or event to which they relate took place; and
(c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

(a) the date(s) on which the sample was taken;
(b) the time(s) at which the sample was collected;
(c) the point at which the sample was taken; and
(d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 Not applicable.

M3 Testing methods - concentration limits

M3.1 Not applicable.

M3.2 Not applicable.

M4 Recording of pollution complaints

M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M4.2 The record must include details of the following:
(a) the date and time of the complaint;
(b) the method by which the complaint was made;
(c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
(d) the nature of the complaint;
(e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
(f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

M5.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M5.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
(a) the date of the issue of this licence or
(b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

M6 Requirement to monitor volume or mass

M6.1 Not applicable.

M6.2 Not applicable.

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
(a) a Statement of Compliance; and
(b) a Monitoring and Complaints Summary.
A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee,
(a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
(b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on
(a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
(b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

Deadline for Annual Return

R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

Notification where actual load can not be calculated

R1.6 Not applicable.

Licensee must retain copy of Annual Return

R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

R1.8 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
(a) the licence holder; or
(b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
(a) where this licence applies to premises, an event has occurred at the premises; or
(b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
(a) the cause, time and duration of the event;
(b) the type, volume and concentration of every pollutant discharged as a result of the event;
(c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; and
(d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
(e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;

(f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event;
(g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Regular reporting of transportation of certain wastes within NSW

R4.1 Conditions R4.2 to R4.5 apply to the transport of hazardous and/or industrial and/or Group A waste within NSW.

Regular reporting

R4.2 The licensee must supply to the EPA, for each transporter that transported waste from the licensees premises, the information as set out in Appendix 2, table 1.

R4.3 The licensee must supply to the EPA, for each destination within NSW which received waste from the licensee, the information as set out in Appendix 2, table 2.

Reporting periods

R4.4 Reports to the EPA in accordance with R4.2 and R4.3 shall be supplied on or before:
(a) 30 April for the reporting of information relating to wastes transported from the premises between 1 January and 31 March of that year;
(b) 31 July for the reporting of information relating to wastes transported from the premises between 1 April and 30 June of that year;
(c) 31 October for the reporting of information relating to wastes transported from the premises between 1 July and 30 September of that year;
(d) 31 January for the reporting of information relating to wastes transported from the premises between 1 October and 31 December of the previous year.

Nil reports

R4.5 If waste has not been transported from the premises in any reporting period as set out in R4.4 the EPA must be advised in writing by the licensee, by the dates referred to in R4.4 in lieu of reporting as required in R4.2 and R4.3.

R5 Regular reporting of interstate movements of controlled wastes

R5.1 Conditions R5.2 to R5.5 apply to the movement of hazardous and/or industrial and /or Group A waste as listed in L5.3, into and out of NSW.

Note: The requirements of the NEPM apply to the interstate movement of any of the wastes listed in Appendix 1 of this licence.

Regular reporting

R5.2 The licensee must supply to the EPA, for each transporter that transported waste from the premises to a destination in another participating State or Territory, the information as set out in Appendix 2, table 3.

Reporting periods

R5.3 Reports to the EPA in accordance with R5.2 shall be supplied on or before:
(a) 30 April for the reporting of information relating to wastes transported from the premises between 1 January and 31 March of that year;
(b) 31 July for the reporting of information relating to wastes transported from the premises between 1 April and 30 June of that year;
(c) 31 October for the reporting of information relating to wastes transported from the premises between 1 July and 30 September of that year;
(d) 31 January for the reporting of information relating to wastes transported from the premises between 1 October and 31 December of the previous year.

Nil reports

R5.4 If waste has not been transported from the premises in any reporting period as set out in R5.3, the EPA must be advised in writing by the licensee, by the dates referred to in R5.3 in lieu of reporting as defined in R5.2.

Interstate transport of controlled wastes

R5.5 The licensee must comply with the requirements of the NEPM.

General conditions

G1 Copy of licence kept at the premises

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Pollution studies and reduction programs

U1~~U.~~1 Not applicable.

Special conditions

E1.1 Not applicable.~~E1 Not applicable.~~

Appendices

APPENDIX 1

WASTE DESCRIPTIONS AND CORRESPONDING WASTE CODES

The waste descriptions and waste codes shown below must be used to identify hazardous, industrial and Group A wastes on the waste data form for movements of those wastes within NSW, and to identify controlled wastes on the waste transport certificate for those wastes moved between NSW and other States and Territories. The waste codes must also be used to identify wastes when reporting the information required in the Tables in Appendix 2.

Description	Waste Code		Description	Waste Code
Acidic solutions or acids in solid form	B100		Organohalogen compounds - other than substances referred to in this list	M160
Animal effluent and residues (abattoir effluent, poultry and fish processing wastes)	K100		Perchlorates	D340
Antimony; antimony compounds	D170		Phenols, phenol compounds including chlorophenols	M150
Arsenic; arsenic compounds	D130		Phosphorus compounds excluding mineral phosphates	D360
Asbestos	N220		Polychlorinated dibenzo-furan (any congener)	M170
Barium compounds (excluding barium sulphate)	D290		Polychlorinated dibenzo-p-dioxin (any congener)	M180
Basic solutions or bases in solid form	C100		Residues from industrial waste treatment/disposal operations	T190
Beryllium; beryllium compounds	D160		Selenium; selenium compounds	D240
Boron compounds	D310		Sewage sludge and residues including nightsoil and septic tank sludge	K130
Cadmium; cadmium compounds	D150		Soils contaminated with a controlled waste	N120
Ceramic-based fibres with physico-chemical characteristics similar to those of asbestos	N230		Surface active agents (surfactants), containing principally organic constituents and which may contain metals and inorganic materials	M250
Chlorates	D350		Tannery wastes (including leather dust, ash, sludges and flours)	K140
Chromium compounds (hexavalent and trivalent)	D140		Tellurium; tellurium compounds	D250
Clinical and related wastes	R100		Thallium; thallium compounds	D180
Cobalt compounds	D200		Triethylamine catalysts for setting foundry sands	M230
Containers and drums which are contaminated with residues of substances referred to in this list	N100		Tyres	T140

Copper compounds	D190		Vanadium compounds	D270
Cyanides (inorganic)	A130		Waste chemical substances arising from research and development or teaching activities including those which are not identified and/or are new and whose effects on human health and/or the environment are not known	T100
Cyanides (organic)	M210		Waste containing peroxides other than hydrogen peroxide	E100
Encapsulated, chemically-fixed, solidified or polymerised wastes	N160		Waste from heat treatment and tempering operations containing cyanides	A110
Ethers	G100		Waste from manufacture, formulation and use of wood-preserving chemicals	H170
Filter cake	N190		Waste from the production, formulation and use of biocides and phytopharmaceuticals	H100
Fire debris and fire washwaters	N140		Waste from the production, formulation and use of inks, dyes, pigments, paints, lacquers and varnish	F100
Fly ash	N150		Waste from the production, formulation and use of organic solvents	G160
Grease trap waste	K110		Waste from the production, formulation and use of photographic chemicals and processing materials	T120
Halogenated organic solvents	G150		Waste from the production, formulation and use of resins, latex, plasticisers, glues and adhesives	F110
Highly odorous organic chemicals (including mercaptans and acrylates)	M260		Waste from the production and preparation of pharmaceutical products	R140
Inorganic fluorine compounds excluding calcium fluoride	D110		Waste mineral oils unfit for their original intended use	J100
Inorganic sulfides	D330		Waste oil/water, hydrocarbons/water mixtures or emulsions	J120
Isocyanate compounds	M220		Waste pharmaceuticals, drugs and medicines	R120
Lead; lead compounds	D220		Waste resulting from surface treatment of metals and plastics	A100
Mercury; mercury compounds	D120		Waste tarry residues arising from refining, distillation, and any pyrolytic treatment	J160
Metal carbonyls Nickel compounds Non toxic salts Organic phosphorous compounds	D100 D210 D300 H110		Waste substances and articles containing or contaminated with polychlorinated biphenyls, polychlorinated napthalenes, polychlorinated terphenyls and/or polybrominated biphenyls	M100
Organic solvents excluding halogenated solvents	G110		Wool scouring wastes Zinc compounds	K190 D230

APPENDIX 2

Table 1

[Table 1 refers to the regular reporting requirements in R4.2. Its purpose is to provide information on the total amount of waste moved by each transporter from waste activities in NSW.]

1. The licensee must provide a copy of the information in the following table for each transporter used by the licensee in the reporting period.

Waste Activities Table 1: Waste Movements By Transporter and Waste Category			
Name of Licensed Waste Activity:		**Waste Activity Licence No.:**	
Reporting Period:		**ANZSIC Code for Waste Activity:**	
Name of Transporter:		**Licence No. of Transporter**	

Waste class	**Waste Code**	**Amount of Waste Transported in Reporting Period (tonnes)**
Hazardous Non-Liquid Waste	*Code for each waste of this class*	*Total Weight for waste of each code*
Hazardous Liquid Waste	*Code*	*Weight*
	Code	*Weight*
Industrial Non-Liquid Waste	*Code*	*Weight*
	Code	*Weight*
Group A Liquid Waste	*Code*	*Weight*

	Code	*Weight*

*[NOTES: **Waste code** refers to the codes listed in Appendix 1 of this licence and entered on the waste transport certificates.*
***Waste class** refers to the classification of waste in accordance with Appendix 1 of the Protection of the Environment Operations Act 1997 and its regulations.*

***ANZSIC code** means the Australian and New Zealand Standard Industrial Classification code published by the Australian Bureau of Statistics.]*

Table 2:

[Table 2 refers to the reporting requirements in R4.3. Its purpose is to provide information on the total amount of waste sent to each destination within NSW. Cross referencing by ANZSIC code provides data on which types of industry are sending wastes to disposal and treatment facilities.]

1. The licensee must provide a copy of the information in the following table for <u>each</u> destination within NSW used by the licensee in the reporting period for the purposes of the receipt of controlled waste.

Waste Activities Table 2: Waste Movements By Destination (within NSW) and Waste Category			
Name of Licensed Waste Activity:		**Waste Activity Licence No.:**	
Reporting Period:		**ANZSIC Code for Waste Activity**	
Destination:			

Waste class	**Waste Code**	**Amount of Waste Transported in Reporting Period (tonnes)**
Hazardous Non-Liquid Wastes	*Code for each waste of this class*	*Total Weight for waste of each code*
	Code	*Weight*
Industrial Non-Liquid Wastes	*Code*	*Weight*
	Code	*Weight*
Hazardous Liquid Wastes	*Code*	*Weight*
	Code	*Weight*
Group A Liquid Wastes	*Code*	*Weight*

NOTES:

Waste code *refers to the codes listed in Appendix 1 of this licence and entered on waste data forms.*
Waste class *refers to the classification of waste in accordance with Schedule 1 of the Protection of the Environment Operations Act 1997 and its regulations.*

ANZSIC code *means the Australian and New Zealand Standard Industrial Classification code published by the Australian Bureau of Statistics.*

Table 3:

[Table 3 refers to the regular reporting requirements in R5.2. Its purpose is to provide information on the total amounts of controlled wastes sent from NSW licensed waste activities to other States and Territories. Cross-referencing by ANZSIC code allows data on which types of industries are sending wastes interstate.]

1. The licensee must provide a copy of the information in the following table for each destination outside NSW used by the licensee in the reporting period for the purposes of the receipt of controlled waste.

Waste Activities Table 3: Controlled Waste Movements By Interstate Destination and Waste Category			
Name of Licensed Waste Activity:		**Waste Activity Licence No.:**	
Reporting Period:		**ANZSIC Code Waste Activity:**	
Destination State or Territory:		**Destination Facility**	

Waste class	**Waste Code**	**Amount of Waste Transported in Reporting Period (tonnes)**
Hazardous Non-Liquid Waste	*Code for each waste of this type*	*Total Weight for waste of this code*
	Code	*Weight*
Industrial Non-Liquid Waste	*Code*	*Weight*
	Code	*Weight*
Hazardous Liquid Waste	*Code*	*Weight*
	Code	*Weight*
Group A Liquid Waste	*Code*	*Weight*

Other Types of Waste (eg Group B and C Liquid Wastes, Used Tyres)	*Code*	*Weight*

*[NOTES: **Waste code** refers to the codes listed in Appendix 1 of this licence and entered on the waste transport certificates.*
***Waste class** refers to the classification of waste in accordance with Appendix 1 of the Protection of the Environment Operations Act 1997 and its regulations.*
***ANZSIC code** means the Australian and New Zealand Standard Industrial Classification code published by the Australian Bureau of Statistics.]*

Dictionary

Model Licence Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

Agency	A body or bodies of a participating State or a participating Territory which that State or Territory has nominated for the purposes of the NEPM.
Chemical control order (CCO)	An order under sections 22 and 23 of the Environmentally Hazardous Chemicals Act 1985.
Consignee	The person to whom the waste is dispatched, and includes: (a) in the case of a waste facility that is licensed - the occupier; (b) in the case of a person carrying on mobile waste processing that is licensed - the person operating the mobile place; (c) in the case of a place that can be otherwise lawfully be used as a waste facility for that waste - the owner or occupier of that place.
Consignment	One or more shipments of a specified waste dispatched to a particular destination.
Consignment authorisation	An approval which includes a unique identifier granted by an agency, or a facility delegated by an agency, in the jurisdiction of destination to allow the movement of controlled waste.
Controlled waste	Any waste included in List 1 of Schedule A of the NEPM, provided that the waste possesses one or more of the characteristics in List 2, of Schedule A of the NEPM.
Date of dispatch	The date on which a load of waste is removed from the premises**.**
Destination	Where hazardous, industrial or Group A wastes are transported within NSW, the place described in the waste data form as the destination for the waste. Where controlled wastes are transported between NSW and another participating State or Territory, the place described in Part 3 of the waste transport certificate as the facility receiving the waste.
Facility	A place where controlled wastes are received.
Facility Operator	A person in charge of a facility.
Jurisdiction of destination	In relation to a particular consignment of waste means the State or Territory in which the facility is located to which the waste is intended to be transported.

Load	The amount of a consignment of waste placed on a vehicle for any single dispatch from the premises at which it was generated or stored.
Load number	A consecutive number identifying each load of waste within a consignment and starting with 1 for the first load of each consignment. One or more loads may make up a consignment.
NEPM	The National Environment Protection (Movement of Controlled Wastes between States and Territories) Measure 1998.
Non-liquid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997.
Participating State or Territory	A State or Territory that is (a) a party to the Intergovernmental Agreement on the Environment made on 1 May 1992 between the Commonwealth, the States, the Australian Capital Territory, the Northern Territory and the Australian Local Government Association, a copy of which is set out in the Schedule to the Commonwealth Act; and (b) in which an Act that corresponds to the National Environment Protection Council Act 1994 of the Commonwealth is in force in accordance with the Agreement.
Recycling of waste	The processing of waste into a similar non-waste product.
Regulation	The Protection of the Environment Operations (Waste) Regulation 1996.
Transporter	A person responsible for moving controlled wastes either from one participating State or Territory to another or through participating States or Territories.
Waste activity	An activity, whether required to be licensed or not, carried on for business or other commercial purposes, that involves the generating or storage of any of the following waste classes: (a) hazardous waste, (b) industrial waste, (c) Group A waste.
Waste class	Means either hazardous, industrial or Group A waste.
Waste data form	A certificate in the form approved by the EPA.
Waste guidelines	The document called *"Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes"* issued by the EPA and in force as at 1 July 1999.
Waste producer	Means the licensee.
Waste transport certificate	A certificate in the form approved by the EPA as fulfilling the requirements of Schedule B of the National Environment Protection (Movement of Controlled Wastes between States and Territories) Measure 1998.

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998

local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TSP	Means total suspended particles
TSS	Means total suspended solids
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Mr Tim Gilbert

~~Principal Officer~~
Environment Protection Authority

(By Delegation)

03-Feb-2000

End Notes

Section 55 Protection of the Environment Operations Act 1997

Environment Protection Licence

Licence - 6370

Department of Environment & Climate Change NSW

Licence Details	
Number:	6370
Anniversary Date:	22-October
Review Due Date:	24-Mar-2010

Licensee
SOUTH EASTERN SYDNEY AND ILLAWARRA AREA HEALTH SERVICE
125 BIRRELL STREET
WAVERLEY NSW 2024

Licence Type
Premises

Premises
WAR MEMORIAL HOSPITAL WAVERLEY
125 BIRRELL STREET
WAVERLEY NSW 2024

Scheduled Activity
Waste Activities

Fee Based Activity	Scale
Hazardous, Industrial or Group A Waste Generation or Storage (73)	0 - 10 T

Region
Waste Operations
59-61 Goulburn Street
SYDNEY NSW 2000
Phone: 02 9995 5000
Fax: 02 9995 5999
PO Box A290 SYDNEY SOUTH
NSW 1232

INFORMATION ABOUT THIS LICENCE **4**
Dictionary 4
Responsibilities of licensee 4
Variation of licence conditions 4
Duration of licence 4
Licence review 4
Fees and annual return to be sent to the EPA 4
Transfer of licence 5
Public register and access to monitoring data 5
1 ADMINISTRATIVE CONDITIONS **5**
A1 What the licence authorises and regulates 5
A2 Premises to which this licence applies 7
A3 Other activities 7
A4 Information supplied to the EPA 7
2 DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND **7**
P1 Location of monitoring/discharge points and areas 7
3 LIMIT CONDITIONS **8**
L1 Pollution of waters 8
L2 Load limits 8
L3 Concentration limits 8
L4 Volume and mass limits 8
L5 Waste 8
L6 Noise Limits 9
L7 Potentially offensive odour 9
4 OPERATING CONDITIONS **9**
O1 Activities must be carried out in a competent manner 9
O2 Maintenance of plant and equipment 9
O3 Emergency response 10
O4 Processes and management 10
O5 Monitoring of waste movements within NSW 10
O6 Monitoring of interstate movements of controlled wastes 13
O7 Clinical and related Wastes 15
O8 Sharps Waste 15
O9 Cytotoxic Waste 16
5 MONITORING AND RECORDING CONDITIONS **16**
M1 Monitoring records 16
M2 Requirement to monitor concentration of pollutants discharged 16
M3 Testing methods - concentration limits 17
M4 Recording of pollution complaints 17

M5 Telephone complaints line 17
M6 Requirement to monitor volume or mass 18
6 REPORTING CONDITIONS 18
R1 Annual return documents 18
R2 Notification of environmental harm 19
R3 Written report 19
R4 Regular reporting of transportation of certain wastes within NSW 20
R5 Regular reporting of interstate movements of controlled wastes 21
GENERAL CONDITIONS 22
G1 Copy of licence kept at the premises 22
POLLUTION STUDIES AND REDUCTION PROGRAMS 22
SPECIAL CONDITIONS 22
Appendices 22
DICTIONARY 28
Model Licence Dictionary 28
General Dictionary 30

Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act); and
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

SOUTH EASTERN SYDNEY AND ILLAWARRA AREA HEALTH SERVICE
125 BIRRELL STREET
WAVERLEY NSW 2024

subject to the conditions which follow.

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-

based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Waste Activities

Fee Based Activity	Scale
Hazardous, Industrial or Group A Waste Generation or Storage (73)	0 - 10 T

A1.3 Not applicable.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
WAR MEMORIAL HOSPITAL WAVERLEY
125 BIRRELL STREET
WAVERLEY
NSW
2024
DP 2,4,5,6,7 PT99//4993, 1//172133, B//317831, 1//567694, 3//667555, 1//948186, 99DP4993

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:
(a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
(b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 Not applicable.

P1.2 Not applicable.

P1.3 Not applicable.

3 Limit conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

L2.1 Not applicable.

L2.2 Not applicable.

L3 Concentration limits

L3.1 Not applicable.

L3.2 Not applicable.

L3.3 Not applicable.

L4 Volume and mass limits

L4.1 Not applicable.

L5 Waste

L5.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.

L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.

L5.3 Except as provided by any other condition of this licence, only the hazardous and/or industrial and/or Group A waste listed below may be generated and/or stored at the premises.

Clinical and related wastes. [R100]

L5.4 The quantity of hazardous/and/or industrial and/or Group A waste generated and/or stored on the premises must not exceed 10 tonnes per year.

L6 Noise Limits

L6.1 Not applicable.

L7 Potentially offensive odour

L7.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

4 Operating conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:
(a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
(b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
(a) must be maintained in a proper and efficient condition; and
(b) must be operated in a proper and efficient manner.

O3 Emergency response

O3.1 Within 3 months of the date of the issue of the licence, the licensee must develop, or update, an emergency response plan which documents the procedures to deal with all types of incidents (eg spill, explosions or fire) that may occur at the premises or outside of the premises (eg during transfer) which are likely to cause harm to the environment.

O4 Processes and management

O4.1 The licensee must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the EPA Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes, in force as at 1 July 1999.

O4.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5 Monitoring of waste movements within NSW

O5.1 Conditions O5.2 to O5.16 apply to the movement of the types of hazardous and/or industrial and/or Group A waste as listed in L5.3, within NSW.

Prerequisites for waste movements

O5.2 If the waste is transported from the premises, the licensee must ensure that the waste is transported:
- (a) to a place which has been licensed by the EPA to issue consignment authorisation numbers; and
- (b) to a place that can otherwise lawfully accept that class of waste.

O5.3 If the waste is transported from the premises, the licensee must;
- (a) obtain a consignment authorisation number from the consignee;
- (b) complete an approved waste data form in relation to the consigned waste in accordance with the instructions on the form and to the extent required, and give a copy of the form to the person transporting the waste;
- (c) ensure that the waste data form:
  - (i) is completed accurately, and
  - (ii) is retained for a period of not less than 4 years from the time the form was completed, and
  - (iii) is made available for inspection by an authorised officer on request;
- (d) ensure, if the waste is of such an amount as to require the person transporting it to be licensed, that the person transporting the waste is licensed.

Application for a consignment authorisation number

O5.4 To obtain a consignment authorisation number as required by 05.3 (a), the licensee must apply in writing to the consignee. An application must include the following information:

(a) a statement identifying the classification of the waste in accordance with the requirements of condition 04.1;
(b) copies of all information used to classify the waste;
(c) an estimate of the amount of waste to which the application applies;
(d) whether the consignment will consist a single load or multiple loads;
(e) an estimate of the total period required for transportation of the consignment;
(f) the date of dispatch of at least the first load in the consignment.

Note: The licensee may nominate the dates of dispatch of as many loads as is feasible. This should be discussed with the consignee and will depend on the predictability of the rate of generation of the waste and the likelihood of the need for amendments to the dates nominated. If the waste is predictable, a schedule may be able to be submitted for the entire consignment, however if it is unpredictable, the date of only one future load may be able to be determined at a time (see also 05.9 about amending notified dates).

Note: The requirement for a written application for a consignment authorisation number does not preclude preliminary contact to obtain quotes and/or advice. Such preliminary contact does not require the formal provision of the above information that need only be supplied in the formal application.

O5.5 Once an application for a consignment authorisation number, as set out in 05.4 has been submitted, the licensee must not submit an application for the same consignment to another consignee until notification is received concerning the outcome of the application.

Notification of dates of dispatch of the second and subsequent loads in a consignment.

O5.6 The licensee must provide the consignee with written notification of the date of dispatch of each load of waste.

O5.7 The notification referred to in 05.6 must be received by consignee no later than the date of arrival of the preceding load at the destination.

Notification of a final load in a consignment.

O5.8 Unless the movement of an entire consignment of waste occurs in a single load, by the time the final load in a consignment is accepted at the destination, the licensee must have informed the consignee in writing, that no further loads are to be dispatched under that consignment authorisation number.

Note: The notifications referred to in conditions 05.6 and 05.8 may be attached to the waste data form of the preceding load.

Amendments to the nominated date(s) of dispatch

O5.9 If the date of dispatch for a load of waste is changed, the licensee must give written notification of this to the consignee and nominate a revised date of dispatch.

O5.10 A notification referred to in 05.9 must occur on or before the date of delivery as previously nominated.

Note: More than one amendment to dates of dispatch may occur.

Cancellation of consignment authorisations

O5.11 If the licensee determines that the delivery of a consignment of waste is to be discontinued for any reason, the consignee must be notified in writing before the nominated date of dispatch of the next expected load.

Notification of delayed delivery by transporter

O5.12 If the licensee receives written notification from a transporter who removed waste from the premises specifying a revised date of delivery to the destination which is more than 7 days after the date of dispatch, the licensee must note and record that date.

Record keeping

O5.13 The licensee must record and retain all information related to each consignment of waste.

Note: This includes waste data forms and copies of other documents such as notifications of revised delivery dates, regular and other reports, etc.

O5.14 The records referred to in 05.13 must be kept so that:
(a) all records relating to individual consignment authorisation numbers are kept physically together;
(b) consignments transported by each transporter can be readily identified and accessed; and
(c) consignments sent to each destination can readily be identified and accessed.

Note: The licensee must keep all information for at least 4 years.

Exception reporting

O5.15 The licensee must notify the EPA, in writing, within 48 hours of becoming aware of any suspected breaches of the Act, the Protection of the Environment Operations (Waste) Regulation 1996 or this licence.

O5.16 The licensee must notify the EPA in writing within 48 hours of becoming aware of any of the following:
(a) the refusal by a person to whom the licensee has applied for a consignment authorisation number in accordance with 05.4 to issue such a number;
(b) the refusal of a transporter to transport waste after arriving at the licensee's premises for the purposes of transporting that waste;
(c) a transporter who transports, or attempts to transport, waste without a waste data form completed to the extent required;
(d) the refusal of a consignee to accept waste from the licensee;

(e) the failure of the licensee to receive written confirmation of receipt of waste from a consignee within 21 days of dispatch, or where a transporter has provided written notification of a revised date of delivery as set out in 05.12 within 21 days of that date;

(f) the notification by a transporter of a revised date of delivery which is more than 90 days after the date of dispatch of the waste.

Note: The EPA should be notified of exception reports by sending a facsimile to:

Manager, Hazardous Waste Regulation

NSW Environment Protection Authority

O6 Monitoring of interstate movements of controlled wastes

O6.1 Conditions O6.2 to O6.11 apply to the movement of the types of hazardous and/or industrial and/or Group A waste as listed in L5.3, into and out of NSW.

Note: The requirements of the NEPM apply to the interstate movement of any of the wastes listed in Appendix 1 of this licence.

Classification of controlled waste

O6.2 The licensee must accurately identify the waste, in accordance with 04.1, and determine if the waste is a controlled waste within the meaning of the NEPM.

Note: The waste producer must check with the agency in the State or Territory of destination to determine whether waste is classified as a controlled waste under the NEPM. Unless advised otherwise by the agency of the State or Territory of destination, any waste included in Appendix 1 of this licence is a controlled waste for the purposes of the NEPM.

Application for a consignment authorisation

O6.3 If the waste is transported from the premises to another participating State or Territory, the licensee must comply with all conditions attached to the consignment authorisation issued by an agency or a facility delegated by an agency in the destination State or Territory.

Note: The waste producer is required by the Protection of the Environment Operations (Waste) Regulation 1996 to obtain, prior to the waste being dispatched, a consignment authorisation from an agency, or a facility delegated by an agency, in the destination State or territory to allow the movement of controlled waste.

Waste movements

O6.4 If the waste is transported from the premises to another participating State or Territory, the licensee must ensure that the waste is transported to a place that can lawfully be used as a waste facility for that waste.

O6.5 The licensee must ensure that the waste transporter is licensed as required by the agency of each

participating State or Territory through which the waste is transported.

O6.6 The licensee must:
(a) retain a copy of the waste transport certificate for the waste for a period of not less than 4 years from the time the form was completed, and
(b) make the copy of the waste transport certificate available for inspection by an authorised officer on request.

Note: The waste producer is required by the Protection of the Environment Operations (Waste) Regulation 1996 to complete a waste transport certificate for the waste. This should be done in accordance with the instructions printed on the certificate and the required copy of the waste transport certificate should be forwarded to the agency in the State of destination.

Notification of delayed delivery by transporter

O6.7 If the licensee receives written notification from the transporter who removed waste from the licensee's premises specifying a revised date of delivery to the destination which is more than 7 days after the date of dispatch, the licensee must note and record that date.

Record keeping

O6.8 The licensee must record and retain all information related to each consignment of waste.

Note: This includes the waste transport certificates and copies of other documents such as consignment authorisations issued by an agency in the destination State or Territory, notifications of revised delivery dates by transporters, regular and other reports, etc.

O6.9 The records referred to in 06.8 must be kept so that:
(a) all records relating to each consignment authorisation are kept physically together;
(b) consignments transported by each transporter can be readily identified and accessed, and
(c) consignments sent to each destination can readily be identified and accessed.

Note: The licensee must keep all information for at least 4 years.

Exception reporting

O6.10 The licensee must notify the EPA in writing within 48 hours of becoming aware of a suspected breach of the Act, the Protection of the Environment Operations (Waste) Regulation 1996 or this licence.

O6.11 The licensee must notify the EPA in writing within 48 hours of becoming aware of any of the following:
(a) the refusal by an agency, or facility delegated by an agency, in participating State or Territory to whom the licensee has applied for a consignment authorisation in accordance with 06.3, to issue such an authorisation;
(b) the refusal of a transporter to transport waste after arriving at the licensee's premises for the purposes of transporting that waste to another participating State or Territory to the extent required;

(c) a transporter who transports, or attempts to transport, waste to another participating State or Territory without a waste transport certificate completed to the extent required;
(d) the refusal of a destination in another participating State or Territory to accept from the licensee waste for which a consignment authorisation has been issued;
(e) the failure of the licensee to receive written confirmation of receipt of waste from a destination in another participating State or Territory within 28 days of dispatch.

Note: The EPA should be notified of exception reports by sending a facsimile to:

Manager, Hazardous Waste Regulation
NSW Environment Protection Authority

O7 Clinical and related Wastes

O7.1 The licensee must ensure that the handling, labelling, containment and storage of clinical wastes are carried out in accordance with the Waste Management Guidelines for Health Care Facilities, 1998, issued by the NSW Department of Health.

O7.2 Without limiting to O7.1, the licensee must ensure that:

(a) clinical wastes are stored or contained in a weather proof secure location isolated from any other wastes, and that the storage area is maintained in a condition which presents no threat to the environment.

(b) the storage area for clinical wastes contains all necessary equipment required to clean and disinfect the area in case of spillage.

(c) bagged clinical wastes are stored and transported in rigid containers which are leak proof, shatter proof, washable and have securely fitting lids to prevent spills at all times.

(e) bags and containers used for storage and transport of clinical wastes are colour coded and clearly marked with the wording Clinical Wastes along with biological hazard symbol in accordance with the requirements of the Waste Management Guidelines for Health Care Facilities, 1998, issued by the NSW Department of Health.

(f) containers used for clinical waste which are to be reused must be thoroughly cleansed and disinfected with hospital strength disinfectant before being reused.

(g) where second hand containers are used, all other irrelevant markings must be obliterated.

O8 Sharps Waste

O8.1 In addition to O7.1, the licensee must ensure that:

(a) sharps are segregated by the use of enclosed rigid impenetrable containers, which comply with Australian Standards AS/NZS 4031-1992 (non-reusable containers) and 4261-1994

(reusable containers) before disposal in waste bags labelled Clinical Wastes along with appropriate biohazard symbol.

(b) sharps contaminated by any residual cytotoxic drug are segregated by the use of enclosed rigid impenetrable containers, which comply with Australian Standards AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in cytotoxic waste bags labelled Cytotoxic Wastes along with appropriate biohazard symbol.

(c) sharps are transported in rigid impenetrable containers which are leakproof, shockproof and have securely fitting lids and which comply with Australian Standard AS/NZS 3816-1998, Management of Clinical and Related Wastes.

O9 Cytotoxic Waste

O9.1 In addition to O7.1 and O7.2, the licensee must ensure that:

cytotoxic wastes are disposed of at a high temperature incinerator approved by the EPA or a method approved by the EPA and by the NSW Department of Health.

5 Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
(a) in a legible form, or in a form that can readily be reduced to a legible form;
(b) kept for at least 4 years after the monitoring or event to which they relate took place; and
(c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
(a) the date(s) on which the sample was taken;
(b) the time(s) at which the sample was collected;
(c) the point at which the sample was taken; and
(d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 Not applicable.

M3 Testing methods - concentration limits

M3.1 Not applicable.

M3.2 Not applicable.

M4 Recording of pollution complaints

M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M4.2 The record must include details of the following:
(a) the date and time of the complaint;
(b) the method by which the complaint was made;
(c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
(d) the nature of the complaint;
(e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
(f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

M5.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M5.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
(a) the date of the issue of this licence or
(b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

M6 Requirement to monitor volume or mass

M6.1 Not applicable.

M6.2 Not applicable.

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
(a) a Statement of Compliance; and
(b) a Monitoring and Complaints Summary.
A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:
(a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
(b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
(a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
(b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

Deadline for Annual Return

R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

Notification where actual load can not be calculated

R1.6 Not applicable.

Licensee must retain copy of Annual Return

R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

Certifying of Statement of Compliance and signing of Monitoring and Complaints Summary

R1.8 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
(a) the licence holder; or
(b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
(a) where this licence applies to premises, an event has occurred at the premises; or
(b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
(a) the cause, time and duration of the event;
(b) the type, volume and concentration of every pollutant discharged as a result of the event;
(c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
(d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
(e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
(f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
(g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Regular reporting of transportation of certain wastes within NSW

R4.1 Conditions R4.2 to R4.5 apply to the transport of hazardous and/or industrial and/or Group A waste within NSW.

Regular reporting

R4.2 The licensee must supply to the EPA, for each transporter that transported waste from the licensees premises, the information as set out in Appendix 2, table 1.

R4.3 The licensee must supply to the EPA, for each destination within NSW which received waste from the licensee, the information as set out in Appendix 2, table 2.

Reporting periods

R4.4 Reports to the EPA in accordance with R4.2 and R4.3 shall be supplied on or before:
(a) 30 April for the reporting of information relating to wastes transported from the premises between 1 January and 31 March of that year;
(b) 31 July for the reporting of information relating to wastes transported from the premises between 1 April and 30 June of that year;
(c) 31 October for the reporting of information relating to wastes transported from the premises between 1 July and 30 September of that year;
(d) 31 January for the reporting of information relating to wastes transported from the premises between 1 October and 31 December of the previous year.

Nil reports

R4.5 If waste has not been transported from the premises in any reporting period as set out in R4.4 the EPA must be advised in writing by the licensee, by the dates referred to in R4.4 in lieu of reporting as required in R4.2 and R4.3.

R5 Regular reporting of interstate movements of controlled wastes

R5.1 Conditions R5.2 to R5.5 apply to the movement of hazardous and/or industrial and /or Group A waste as listed in L5.3, into and out of NSW.

Note: The requirements of the NEPM apply to the interstate movement of any of the wastes listed in Appendix 1 of this licence.

Regular reporting

R5.2 The licensee must supply to the EPA, for each transporter that transported waste from the premises to a destination in another participating State or Territory, the information as set out in Appendix 2, table 3.

Reporting periods

R5.3 Reports to the EPA in accordance with R5.2 shall be supplied on or before:

(a) 30 April for the reporting of information relating to wastes transported from the premises between 1 January and 31 March of that year;
(b) 31 July for the reporting of information relating to wastes transported from the premises between 1 April and 30 June of that year;
(c) 31 October for the reporting of information relating to wastes transported from the premises between 1 July and 30 September of that year;
(d) 31 January for the reporting of information relating to wastes transported from the premises between 1 October and 31 December of the previous year.

Nil reports

R5.4 If waste has not been transported from the premises in any reporting period as set out in R5.3, the EPA must be advised in writing by the licensee, by the dates referred to in R5.3 in lieu of reporting as defined in R5.2.

Interstate transport of controlled wastes

R5.5 The licensee must comply with the requirements of the NEPM.

General conditions

G1 Copy of licence kept at the premises

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Pollution studies and reduction programs

U1.1 Not applicable.

Special conditions

E1.1 Not applicable.

Appendices

APPENDIX 1

WASTE DESCRIPTIONS AND CORRESPONDING WASTE CODES

The waste descriptions and waste codes shown below must be used to identify hazardous, industrial and Group A wastes on the waste data form for movements of those wastes within NSW, and to identify controlled wastes on the waste transport certificate for those wastes moved between NSW and other States and Territories. The waste codes must also be used to identify wastes when reporting the information required in the Tables in Appendix 2.

Description	Waste Code		Description	Waste Code
Acidic solutions or acids in solid form	B100		Organohalogen compounds - other than substances referred to in this list	M160
Animal effluent and residues (abattoir effluent, poultry and fish processing	K100		Perchlorates	D340

wastes)				
Antimony; antimony compounds	D170		Phenols, phenol compounds including chlorophenols	M150
Arsenic; arsenic compounds	D130		Phosphorus compounds excluding mineral phosphates	D360
Asbestos	N220		Polychlorinated dibenzo-furan (any congener)	M170
Barium compounds (excluding barium sulphate)	D290		Polychlorinated dibenzo-p-dioxin (any congener)	M180
Basic solutions or bases in solid form	C100		Residues from industrial waste treatment/disposal operations	T190
Beryllium; beryllium compounds	D160		Selenium; selenium compounds	D240
Boron compounds	D310		Sewage sludge and residues including nightsoil and septic tank sludge	K130
Cadmium; cadmium compounds	D150		Soils contaminated with a controlled waste	N120
Ceramic-based fibres with physico-chemical characteristics similar to those of asbestos	N230		Surface active agents (surfactants), containing principally organic constituents and which may contain metals and inorganic materials	M250
Chlorates	D350		Tannery wastes (including leather dust, ash, sludges and flours)	K140
Chromium compounds (hexavalent and trivalent)	D140		Tellurium; tellurium compounds	D250
Clinical and related wastes	R100		Thallium; thallium compounds	D180
Cobalt compounds	D200		Triethylamine catalysts for setting foundry sands	M230
Containers and drums which are contaminated with residues of substances referred to in this list	N100		Tyres	T140
Copper compounds	D190		Vanadium compounds	D270
Cyanides (inorganic)	A130		Waste chemical substances arising from research and development or teaching activities including those which are not identified and/or are new and whose effects on human health and/or the environment are not known	T100
Cyanides (organic)	M210		Waste containing peroxides other than hydrogen peroxide	E100
Encapsulated, chemically-fixed, solidified or polymerised wastes	N160		Waste from heat treatment and tempering operations containing cyanides	A110
Ethers	G100		Waste from manufacture, formulation and use of wood-preserving chemicals	H170
Filter cake	N190		Waste from the production, formulation and use of biocides and phytopharmaceuticals	H100
Fire debris and fire washwaters	N140		Waste from the production, formulation and use of inks, dyes, pigments, paints, lacquers and varnish	F100
Fly ash	N150		Waste from the production, formulation and use of organic solvents	G160
Grease trap waste	K110		Waste from the production, formulation and use of photographic chemicals and processing materials	T120
Halogenated organic solvents	G150		Waste from the production, formulation and use of resins, latex, plasticisers, glues and adhesives	F110
Highly odorous organic chemicals (including mercaptans and acrylates)	M260		Waste from the production and preparation of pharmaceutical products	R140
Inorganic fluorine compounds excluding calcium fluoride	D110		Waste mineral oils unfit for their original intended use	J100
Inorganic sulfides	D330		Waste oil/water, hydrocarbons/water mixtures or emulsions	J120
Isocyanate compounds	M220		Waste pharmaceuticals, drugs and medicines	R120
Lead; lead compounds	D220		Waste resulting from surface treatment of metals and plastics	A100
Mercury; mercury compounds	D120		Waste tarry residues arising from refining, distillation, and any pyrolytic treatment	J160
Metal carbonyls Nickel compounds Non toxic salts Organic phosphorous compounds	D100 D210 D300 H110		Waste substances and articles containing or contaminated with polychlorinated biphenyls, polychlorinated napthalenes, polychlorinated terphenyls and/or polybrominated biphenyls	M100
Organic solvents excluding halogenated solvents	G110		Wool scouring wastes Zinc compounds	K190 D230

APPENDIX 2

Table 1

[Table 1 refers to the regular reporting requirements in R4.2. Its purpose is to provide information on the total amount of waste moved by each transporter from waste activities in NSW.]

1. The licensee must provide a copy of the information in the following table for each transporter used by the licensee in the reporting period.

Waste Activities Table 1: Waste Movements By Transporter and Waste Category			
Name of Licensed Waste Activity:		**Waste Activity Licence No.:**	
Reporting Period:		**ANZSIC Code for Waste Activity:**	
Name of Transporter:		**Licence No. of Transporter**	

Waste class	**Waste Code**	**Amount of Waste Transported in Reporting Period (tonnes)**
Hazardous Non-Liquid Waste	*Code for each waste of this class*	*Total Weight for waste of each code*
Hazardous Liquid Waste	*Code*	*Weight*
	Code	*Weight*
Industrial Non-Liquid Waste	*Code*	*Weight*
	Code	*Weight*
Group A Liquid Waste	*Code*	*Weight*

	Code	Weight

*[NOTES: **Waste code** refers to the codes listed in Appendix 1 of this licence and entered on the waste transport certificates.*
***Waste class** refers to the classification of waste in accordance with Appendix 1 of the Protection of the Environment Operations Act 1997 and its regulations.*

***ANZSIC code** means the Australian and New Zealand Standard Industrial Classification code published by the Australian Bureau of Statistics.]*

Table 2:

[Table 2 refers to the reporting requirements in R4.3. Its purpose is to provide information on the total amount of waste sent to each destination within NSW. Cross referencing by ANZSIC code provides data on which types of industry are sending wastes to disposal and treatment facilities.]

1. The licensee must provide a copy of the information in the following table for each destination within NSW used by the licensee in the reporting period for the purposes of the receipt of controlled waste.

Waste Activities Table 2: Waste Movements By Destination (within NSW) and Waste Category			
Name of Licensed Waste Activity:		**Waste Activity Licence No.:**	
Reporting Period:		**ANZSIC Code for Waste Activity**	
Destination:			

Waste class	**Waste Code**	**Amount of Waste Transported in Reporting Period (tonnes)**
Hazardous Non-Liquid Wastes	*Code for each waste of this class*	*Total Weight for waste of each code*
	Code	*Weight*
Industrial Non-Liquid Wastes	*Code*	*Weight*
	Code	*Weight*
Hazardous Liquid Wastes	*Code*	*Weight*
	Code	*Weight*
Group A Liquid Wastes	*Code*	*Weight*

NOTES:
Waste code *refers to the codes listed in Appendix 1 of this licence and entered on waste data forms.*
Waste class *refers to the classification of waste in accordance with Schedule 1 of the Protection of the Environment Operations Act 1997 and its regulations.*

ANZSIC code *means the Australian and New Zealand Standard Industrial Classification code published by the Australian Bureau of Statistics.*

Table 3:
[Table 3 refers to the regular reporting requirements in R5.2. Its purpose is to provide information on the total amounts of controlled wastes sent from NSW licensed waste activities to other States and Territories. Cross-referencing by ANZSIC code allows data on which types of industries are sending wastes interstate.]

1. The licensee must provide a copy of the information in the following table for each destination outside NSW used by the licensee in the reporting period for the purposes of the receipt of controlled waste.

Waste Activities Table 3: Controlled Waste Movements By Interstate Destination and Waste Category			
Name of Licensed Waste Activity:		**Waste Activity Licence No.:**	
Reporting Period:		**ANZSIC Code Waste Activity:**	
Destination State or Territory:		**Destination Facility**	

Waste class	**Waste Code**	**Amount of Waste Transported in Reporting Period (tonnes)**
Hazardous Non-Liquid Waste	*Code for each waste of this type*	*Total Weight for waste of this code*
	Code	*Weight*
Industrial Non-Liquid Waste	*Code*	*Weight*
	Code	*Weight*
Hazardous Liquid Waste	*Code*	*Weight*
	Code	*Weight*
Group A Liquid Waste	*Code*	*Weight*

Other Types of Waste (eg Group B and C Liquid Wastes, Used Tyres)	*Code*	*Weight*

*[NOTES: **Waste code** refers to the codes listed in Appendix 1 of this licence and entered on the waste transport certificates.*
***Waste class** refers to the classification of waste in accordance with Appendix 1 of the Protection of the Environment Operations Act 1997 and its regulations.*

***ANZSIC code** means the Australian and New Zealand Standard Industrial Classification code published by the Australian Bureau of Statistics.]*

Dictionary

Model Licence Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

Agency	A body or bodies of a participating State or a participating Territory which that State or Territory has nominated for the purposes of the NEPM.
Chemical control order (CCO)	An order under sections 22 and 23 of the Environmentally Hazardous Chemicals Act 1985.
Consignee	The person to whom the waste is dispatched, and includes: (a) in the case of a waste facility that is licensed - the occupier; (b) in the case of a person carrying on mobile waste processing that is licensed - the person operating the mobile place; (c) in the case of a place that can be otherwise lawfully be used as a waste facility for that waste - the owner or occupier of that place.
Consignment	One or more shipments of a specified waste dispatched to a particular destination.
Consignment authorisation	An approval which includes a unique identifier granted by an agency, or a facility delegated by an agency, in the jurisdiction of destination to allow the movement of controlled waste.
Controlled waste	Any waste included in List 1 of Schedule A of the NEPM, provided that the waste possesses one or more of the characteristics in List 2, of Schedule A of the NEPM.
Date of dispatch	The date on which a load of waste is removed from the premises**.**
Destination	Where hazardous, industrial or Group A wastes are transported within NSW, the place described in the waste data form as the destination for the waste. Where controlled wastes are transported between NSW and another participating State or Territory, the place described in Part 3 of the waste transport certificate as the facility receiving the waste.
Facility	A place where controlled wastes are received.

Facility Operator	A person in charge of a facility.
Jurisdiction of destination	In relation to a particular consignment of waste means the State or Territory in which the facility is located to which the waste is intended to be transported.
Load	The amount of a consignment of waste placed on a vehicle for any single dispatch from the premises at which it was generated or stored.
Load number	A consecutive number identifying each load of waste within a consignment and starting with 1 for the first load of each consignment. One or more loads may make up a consignment.
NEPM	The National Environment Protection (Movement of Controlled Wastes between States and Territories) Measure 1998.
Non-liquid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997.
Participating State or Territory	A State or Territory that is (a) a party to the Intergovernmental Agreement on the Environment made on 1 May 1992 between the Commonwealth, the States, the Australian Capital Territory, the Northern Territory and the Australian Local Government Association, a copy of which is set out in the Schedule to the Commonwealth Act; and (b) in which an Act that corresponds to the National Environment Protection Council Act 1994 of the Commonwealth is in force in accordance with the Agreement.
Recycling of waste	The processing of waste into a similar non-waste product.
Regulation	The Protection of the Environment Operations (Waste) Regulation 1996.
Transporter	A person responsible for moving controlled wastes either from one participating State or Territory to another or through participating States or Territories.
Waste activity	An activity, whether required to be licensed or not, carried on for business or other commercial purposes, that involves the generating or storage of any of the following waste classes: (a) hazardous waste, (b) industrial waste, (c) Group A waste.
Waste class	Means either hazardous, industrial or Group A waste.
Waste data form	A certificate in the form approved by the EPA.
Waste guidelines	The document called *"Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes"* issued by the EPA and in force as at 1 July 1999.
Waste producer	Means the licensee.
Waste transport certificate	A certificate in the form approved by the EPA as fulfilling the requirements of Schedule B of the National Environment Protection (Movement of Controlled Wastes between States and Territories) Measure 1998.

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time

hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition - 18-Apr-2005

End Notes

1	Licence varied by notice 1044609, issued on 24-Mar-2005, which came into effect on 18-Apr-2005.

Suburb/City	Site Description	Site Address	Activity that caused the contamination	s60 Form Received	EPA Initial Assessment	EPA Management Class
Warrawong	Caltex Service Station	75-77 King St	Service Station	Yes	In progress	B
Warren	Caltex Service Station	1 Coonamble Road	Service Station	Yes	In progress	B
Warren	Former Mobil Warren Depot	16 Dubbo Street	Other Petroleum	Yes	Completed	C
Warren	Former Shell Depot	8 Dubbo Street	Other Petroleum	Yes	Completed	H
Waterloo	Lawrence Dry Cleaners	887-893 Bourke Street	Unclassified	Yes	Completed	C
Waterloo	Proposed Construction Site	2 John Street	Other Industry	Yes	Completed	G
Waterloo	Shell Coles Express Service Station	867-877 South Dowling Street	Service Station	Yes	Completed	E G
Waterloo	Waverley Woollahra Process Plant	355 Botany Road	Other Industry	Yes	Completed	G
Wauchope	Former Shell Depot	56-64 High Street	Other Petroleum	Yes	In Progress	E
Wauchope	Shell Coles Express Service Station	64 High Street	Service Station	Yes	In Progress	A
Wauchope	Wauchope Service Station	57 High Street	Service Station	Yes	Completed	F G
Waverton	Berry's Bay Woodley's Marina	1 Balls Head Drive	Other Industry	No	Completed	D
Waverton	Oyster Cove AGL	2 King Street	Gasworks	No	Completed	C G
Waverton	SRA Land	95 Bay Road	Unclassified	Yes	Completed	C G
Wellington	Caltex Service Station	124-128 Lee St	Service Station	Yes	In progress	B
Wentworth Falls	Bodington Hospital	Bodington Drive	Unclassified	Yes	Completed	C G
Wentworthville	Former Workshop	2 Rawson Rd and 8 Barfil Cres	Unclassified	No	Completed	G
Wenworth	Caltex - Wenthworth	110 Adams Street	Service Station	Yes	In progress	B
Werrington	7 Eleven Werrington	Lot 122 Dunheved Road	Service Station	Yes	In progress	A
Werrington	Caltex Service Station	Cnr Dunheved Rd and Henry Lawson Dr	Service Station	Yes	In progress	B
Werrington	Claremont Meadows Former landfill	Gipps Street	Landfill	Yes	Completed	F G
West Ballina	Caltex Big Prawn Service Station	Pacific Highway	Service Station	No	Completed	C G
West Gosford	Caltex Service Station	69-71 Pacific Highway	Service Station	Yes	In progress	B
West Nelligen	Hughes	Old Bolaro Road	Unclassified	Yes	Completed	C G

Appendix G Section 149 (2) and (5) Certificate

PLANNING CERTIFICATE UNDER SECTION 149 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Date: 12 December 2012 Cert. No.26309
Receipt No. 1236546 Page No: 1

M Hodgins
18 Kelly Cl
BAULKHAM HILLS NSW 2153

Your reference: 42458:2495

Property location	**War Memorial Hospital, 125 Birrell Street, WAVERLEY NSW 2024**
Parcel description:	**Lot 2 DP 1061588, Lot 1 DP 567694, Lot 7 DP 948185, Lot B DP 317831, Lot 1 DP 172133, Lot 2 DP 1061548, Lot 3 DP 667555, Lot 1 DP 1061548, Lot 1 DP 948186**
Owner:	**The Uniting Church in Aust Property Trust (NSW)**
	Level 8 222 Pitt St SYDNEY NSW 2000

In accordance with the requirements of section 149 of the Environmental Planning and Assessment Act 1979 (as amended), the following prescribed matters relate to the land at the date of this certificate.

ITEM 1

Names of relevant planning instruments and DCPs

(1) The name of each environmental planning instrument that applies to the carrying out of development on the land.

(2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (unless the Director-General has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved).

(3) The name of each development control plan that applies to the carrying out of development on the land.

(4) In this clause, proposed environmental planning instrument includes a planning proposal for a LEP or a draft environmental planning instrument.

1. (1) The following local environmental plans (LEP) apply to the land:

Waverley LEP 2012

Gazetted: 26 October 2012

The following state environmental planning policies (SEPP) apply to the land:

- SEPP No. 1 Development Standards
- SEPP No. 4 Development Without Consent and Miscellaneous Complying Development
- SEPP No. 6 Number of Storeys in a Building
- SEPP No. 14 Coastal Wetlands
- SEPP No. 19 Bushland in Urban Areas
- SEPP No. 22 Shops and Commercial Premises
- SEPP No. 32 Urban Consolidation (Redevelopment of Urban Land)
- SEPP No. 33 Hazardous and Offensive Development
- SEPP No. 50 Canal Estates
- SEPP No. 55 Remediation of Land
- SEPP No. 60 Exempt and Complying Development
- SEPP No. 64 Advertising and Signage
- SEPP No. 65 Design Quality of Residential Flat Development
- SEPP No. 70 Affordable Housing (Revised Schemes)
- SEPP No. 71 Coastal Protection
- SEPP (Affordable Rental Housing) 2009
- SEPP (Building Sustainability Index: BASIX) 2004
- SEPP (Exempt and Complying Development Codes) 2008
- SEPP (Housing for Seniors or People with a Disability) 2004
- SEPP (Infrastructure) 2007
- SEPP (Major Development) 2005
- SEPP (Temporary Structures) 2007
- SREP (Sydney Harbour Catchment)
  Any enquiries regarding these SEPPs should be directed to the Department of Planning on: ***(02) 9762 8000*** or http://www.planning.nsw.gov.au

1. (2) The following proposed local environmental plans (LEP) apply to the land:

- **Nil**

The following proposed state environmental planning policies (SEPP) apply to the land:

- Competition SEPP

Any enquiries regarding these SEPPs should be directed to the Department of Planning on: ***(02) 9762 8000*** or http://www.planning.nsw.gov.au

1. (3) The following development control plans (DCP) apply to the land:

Waverley DCP 2012

1. (4) In this clause, proposed environmental planning instrument includes a planning proposal for a LEP or a draft environmental planning instrument.

[The next page is page 4]

ITEM 2

Zoning and land use under relevant LEPs

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a SEPP or proposed SEPP) that includes the land in any zone (however described):

(a) the identity of the zone, whether by reference to a name (such as "Residential Zone" or "Heritage Area") or by reference to a number (such as "Zone No 2(a)"),

(b) the purposes for which the instrument provides that development may be carried out within the zone without the need for development consent,

(c) the purposes for which the instrument provides that development may not be carried out within the zone except with development consent,

(d) the purposes for which the instrument provides that development is prohibited within the zone,

(e) whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed,

(f) whether the land includes or comprises critical habitat,

(g) whether the land is in a conservation area (however described),

(h) whether an item of environmental heritage (however described) is situated on the land.

(a) to (d)

Waverley LEP 2012

Gazetted: 26 October 2012

Zone SP2 Infrastructure

1 Objectives of zone

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.

2 Permitted without consent

Nil

3 Permitted with consent

Roads; The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose

4 Prohibited

Any development not specified in item 2 or 3

Waverley LEP 2012

Gazetted: 26 October 2012

Zone R3 Medium Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a medium density residential environment.
- To provide a variety of housing types within a medium density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.

2 Permitted without consent

Home occupations

3 Permitted with consent

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Child care centres; Community facilities; Group homes; Home industries; Kiosks; Markets; Multi dwelling housing; Neighbourhood shops; Places of public worship; Respite day care centres; Roads; Seniors housing; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Car parks; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Passenger transport facilities; Public administration buildings; Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Restricted premises; Rural industries; Rural workers' dwellings; Service stations; Sewage treatment plants; Sex services premises; Shop top housing; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

(e) The land is **not** subject to any development standards that fix minimum land dimensions for the erection of a dwelling house.

(f) The land does **not** comprise critical habitat.

(g) The land is **not** within a Heritage Conservation Area.

(h) The land **contains** an Item of Environmental Heritage.

- The land contains a Heritage Item - General identified in Waverley Local Environmental Plan 2012.
- The land contains a Heritage Item- Landscape identified in Waverley Local Environmental Plan 2012.

ITEM 2A

Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

To the extent that the land is within any zone (however described) under:

(a) Part 3 of the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* ***(the 2006 SEPP)****,* or

(b) A Precinct Plan (within the meaning of the 2006 SEPP), or

(c) A proposed Precinct Plan that is or has been the subject of community consultation or on public exhibition under the Act,

the particulars referred to in clause 2(a)-(h) in relation to that land (with a reference to "the instrument" in any of those paragraphs being read as a reference to Part 3 of the 2006 SEPP, or the Precinct Plan or proposed Precinct Plan, as the case requires)

The land is **not** subject to the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*

ITEM 3

Complying development

(1) Whether or not the land is land on which complying development may be carried out under each of the codes for complying development because of the provisions of clauses 1.17A (c) and (d) and 1.19 of State *Environmental Planning Policy (Exempt and Complying Development Codes) 2008.*

(2) If complying development may not be carried out on that land because of the provisions of clauses 1.17A (c) and (d) and 1.19 of that Policy, the reasons why it may not be carried out under that clause.

General Housing Code

Complying development under the General Housing Code **may not** be carried out on the land. The land is affected by specific land exemption:

- land contains a Heritage Item.

Housing Alterations Code

Complying development under the Housing Alterations Code **may not** be carried out on the land. The land is affected by specific land exemption:

- land contains a Heritage Item.

General Commercial and Industrial Code

Complying development under the General Commercial and Industrial Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- land contains a Heritage Item.

Subdivisions Code

Complying development under the Subdivisions Code **may not** be carried out on the land. The land is affected by specific land exemptions:

- land contains a Heritage Item.

Rural Housing Code

There are no lands within the Waverley Council area that are affected by this Code.

General Development Code

Complying development under the General Development Code **may not** be carried out on the land. The land is affected by specific land exemption:

- land contains a Heritage Item.

Demolition Code

Complying development under the Demolition Code **may not** be carried out on the land. The land is affected by specific land exemption:

- land contains a Heritage Item.

If only part of the land to which this exemption applies, complying development must not be carried out on any part of that land.

Disclaimer: This certificate only addresses matters raised in clauses 1.17A (c) and (d) and 1.19 *of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.*

ITEM 4

Coastal protection

Whether or not the land is affected by the operation of section 38 or 39 of the *Coastal Protection Act 1979,* but only to the extent that the council has been so notified by the Department of Services, Technology and Administration.

The land is **not** affected by Sections 38 or 39 of the *Coastal Protection Act 1979.*

ITEM 4A

Certain information relating to beaches and coasts

(1) In relation to a coastal council - whether an order has been made under Part 4D of the *Coastal Protection Act 1979* in relation to emergency coastal protection works (within the meaning of that Act) on the land (or on public land adjacent to that land), except where the council is satisfied that such an order has been fully complied with.

No.

(2) In relation to a coastal council:

(a) Whether the council has been notified under section 55x of the *Coastal Protection Act 1979* that emergency coastal protection works (within the meaning of that Act) have been placed on the land (or on public land adjacent to that land), and

No.

(b) If works have been so placed-whether the council is satisfied that the works have been removed and the land restored in accordance with that Act.

Not applicable.

(3) In relation to a coastal council - such information (if any) as is required by the regulations under section 56B of the *Coastal Protection Act 1979* to be included in the planning certificate and of which the council has been notified pursuant to those regulations.

No such information is required to be provided as Regulations under Section 56B of the *Coastal Protection Act 1979* have not been made.

ITEM 4B

Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works

In relation to a coastal council - whether the owner (or any previous owner) of the land has consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

No.

Note "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the *Local Government Act 1993.*

ITEM 5

Mine subsidence

Whether or not the land is proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act 1961.*

The land is **not** proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act 1961.*

ITEM 6

Road widening and road realignment

Whether or not the land is affected by any road widening or road realignment under:

(a) Division 2 of Part 3 of the *Roads Act 1993*, or

(b) any environmental planning instrument, or

(c) any resolution of the council.

The land is **not** affected by any road widening or road realignment under Division 2 of Part 3 of the Roads Act 1993, or any environmental planning instrument or any resolution of the Council.

ITEM 7

Council and other public authority policies on hazard risk restrictions

Whether or not the land is affected by a policy:

(a) adopted by the council, or

(b) adopted by any other public authority and notified to the council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the council,

that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

(a) The land is **not** affected by a policy adopted by Council that restricts the development of land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

(b) The land is **not** affected by a policy adopted by another public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the Council, that restricts the development of land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding).

ITEM 7A

Flood related development controls information

(1) Whether or not development on that land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related development controls.

The land is **not** subject to flood related development controls for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing).

(2) Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

The land is **not** subject to flood related development controls.

(3) Words and expressions in this clause have the same meanings as in the instrument set out in the Schedule to the *Standard Instrument (Local Environmental Plans) Order 2006.*

ITEM 8

Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 27 of the Act.

The land is **not** affected by any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 that provides for the acquisition of the land by a public authority, as referred to in section 27 of the Act.

ITEM 9

Contributions plans

The name of each contributions plan applying to the land.

Waverley Council Development Contribution Plan 2006 (Amendment No.4).

ITEM 9A

Biodiversity certified land

If the land is biodiversity certified land (within the meaning of P*art 7AA of the Threatened Species Conservation Act 1995)*, a statement to that effect.

The land is **not** biodiversity certified land under Part 7AA of the *Threatened Species Conservation Act 1995.*

ITEM 10

Biobanking agreements

If the land is land to which a biobanking agreement under Part 7A of the *Threatened Species Conservation Act 1995* relates, a statement to that effect (but only if the council has been notified of the existence of the agreement by the Director-General of the Department of Environment, Climate Change and Water).

Council has **not** been notified of any biobanking agreement under Part 7A of the *Threatened Species Conservations Act 1995* relating to the land.

ITEM 11

Bush fire prone land

If any of the land is bush fire prone land (as defined in the Act), a statement that all or, as the case may be, some of the land is bush fire prone land.

If none of the land is bush fire prone land, a statement to that effect.

The land is **not** bush fire prone land (as defined in the Act).

ITEM 12

Property vegetation plans

If the land is land to which a property vegetation plan under the *Native Vegetation Act 2003* applies, a statement to that effect (but only if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act).

Council has **not** been notified of any property vegetation plans under the *Native Vegetation Act 2003* applying to the land.

ITEM 13

Orders under Trees (Disputes Between Neighbours) Act 2006

Whether an order has been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land (but only if the council has been notified of the order).

No.

ITEM 14

Directions under Part 3A

If there is a direction by the Minister in force under section 75P (2) (c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect, a statement to that effect identifying the provision that does not have effect.

There is **no** direction under Part 3A.

ITEM 15

Site compatibility certificates and conditions for seniors housing

If the land is land to which *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* applies:

(a) a statement of whether there is a current site compatibility certificate (seniors housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:

(i) the period for which the certificate is current, and

(ii) that a copy may be obtained from the head office of the Department of Planning, and

Council has **not** been notified of any site compatibility certificate and conditions for seniors housing.

(b) a statement setting out any terms of a kind referred to in clause 18 (2) of that Policy that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land.

Council has **not** been notified of any site compatibility certificate and conditions for seniors housing.

ITEM 16

Site compatibility certificates for infrastructure

A statement of whether there is a valid site compatibility certificate (infrastructure), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:

(a) the period for which the certificate is valid, and

(b) that a copy may be obtained from the head office of the Department of Planning.

Council has **not** been notified of any site compatibility certificate for infrastructure.

ITEM 17

Site compatibility certificates and conditions for affordable rental housing.

(1) A statement of whether there is a current site compatibility certificate (affordable rental housing), of which the council is aware, in respect of proposed development on the land and, if there is a certificate, the statement is to include:

(a) the period for which the certificate is current, and

(b) that a copy may be obtained from the head office of the Department of Planning.

Council has **not** been notified of any site compatibility certificate and condition for affordable rental housing.

(2) A statement setting out any terms of a kind referred to in clause 17(1) or 38 (1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that have been imposed as a condition of consent to a development application in respect of the land.

Council has **not** been notified of any site compatibility certificate and condition for affordable rental housing.

Note: The following matters are prescribed by section 59(2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate:

(a) that the land to which the certificate relates is significantly contaminated land within the meaning of that Act-if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

No.

(b) that the land to which the certificate relates is subject to a management order within the meaning of that Act-if it is subject to such an order at the date when the certificate is issued,

No.

(c) that the land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act-if it is the subject of such an approved proposal at the date when the certificate is issued,

No.

(d) that the land to which the certificate relates is subject to an ongoing maintenance order within the meaning of that Act-if it is subject to such an order at the date when the certificate is issued,

No.

(e) that the land to which the certificate relates is the subject of a site audit statement within the meaning of that Act-if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

No.

Note: Section 26 of the *Nation Building and Jobs Plan (State Infrastructure Delivery) Act 2009* provides that a planning certificate must include advice about any exemptions under section 23 or authorisation under section 24 of that Act if the council is provided with a copy of the exemption or authorisation by the Co-ordinator General under that Act.

This land is **not** subject to an Order under Section 23 or authorisation under Section 24 of the *Nation Building and Jobs Plan (State Infrastructure Delivery)Act 2009* for the carrying out of development.

Information provided under S.149(2) is in accordance with the matters prescribed under Schedule 4 of the *Environmental Planning and Assessment Regulation 2000* and is provided only to the extent that the Council has been notified by the Department of Public Works or Department of Planning.

For the purpose of s.149(5) of the *Environmental Planning and Assessment Act, 1979,* the following additional information is provided with relation to development applications which have been determined.

When information pursuant to Section 149(5) is requested, the Council is under no obligation to furnish any of the information supplied herein pursuant to that Section.

DA-354/2007	Approved	13-Sep-2007	Alterations and additions to the War Memorial

			Hospital Complex including new air conditioning units in Heritage listed properties
DA-354/2007/A	Approved	03-Mar-2008	Reorientation of substation and deletion of screen planting
DA-354/2007/B	Approved	11-Aug-2009	Modification to relocate fire hydrant services enclosure
DA-353/2012	Approved	06-Sep-2012	Change of use of store and work shed to 'Men's Shed'

Additional Information Section 149 (5)

The land **has** a frontage to an Arterial Road.

Council draws your attention to Section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5).

The absence of any reference to any matters affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

Please contact the Council's Planning & Environmental Services Department for further information about any instruments or affectations referred to in the Certificate.

……..
ANTHONY REED
GENERAL MANAGER

Appendix H Heritage Records

AUSTRALIAN HERITAGE PLACES INVENTORY

[New Search]

---

1. **Banksia and Witchagil**
   Birrell St, Waverley, NSW
   LGA: Waverley Municipality
   Source: Register of the National Estate

2. **Edina**
   Birrell St, Waverley, NSW
   LGA: Waverley Municipality
   Source: Register of the National Estate

3. **War Memorial Hospital Group**
   Birrell St, Waverley, NSW
   LGA: Waverley Municipality
   Source: Register of the National Estate

Query matched 3 records.

Report produced : 11/12/2012
AHPI URL : http://www.environment.gov.au/heritage/ahpi/index.html

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Place Details

Edina, Birrell St, Waverley, NSW, Australia

Photographs	
List	Register of the National Estate (Non-statutory archive)
Class	Historic
Legal Status	Registered (21/03/1978)
Place ID	2470
Place File No	1/12/038/0005

Statement of Significance

Built by Ebenezer Vickery in the early 1880s and lived in by the Vickery family until after World War One. They were largely instrumental in founding the War Memorial Hospital. Good example of high Victorian style.

(The Commission is in the process of developing and/or upgrading official statements for places listed prior to 1991. The above data was mainly provided by the nominator and has not yet been revised by the Commission.)

Official Values Not Available

Description

Built in the early 1880s. The House is basically five bay, four square with a central front door and is encased in an elaborately moulded cement two storey verandah of arcaded Italianate design, with projecting entrance porch and central tower. The exterior is a good example of coarse and debased Boom style ornament with good cast iron and tiling on verandahs. The interior is again a good example of high Victorian ornament.

History Not Available

Condition and Integrity Not Available

Location

Part of War Memorial Hospital Group, Birrell Street, backing onto Carrington Road, Waverley.

Bibliography Not Available

Report Produced Tue Dec 11 12:53:20 2012

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Place Details

War Memorial Hospital Group, Birrell St, Waverley, NSW, Australia

Photographs	
List	Register of the National Estate (Non-statutory archive)
Class	Historic
Legal Status	Registered (21/03/1978)
Place ID	2469
Place File No	1/12/038/0004

Statement of Significance

Very fine group of high Victorian buildings. Edina most elaborate house in the area, very well preserved and maintained with good examples of all types of applied ornament. All Victorian buildings form a coherent unit of historical interest which, by virtue of the continued connection of the Vickery family with the hospital, is carried on to the later buildings which are well placed in relation to the earlier buildings. Ebenezer Vickery was a prominent and influential Methodist layman.

(The Commission is in the process of developing and/or upgrading official statements for places listed prior to 1991. The above data was mainly provided by the nominator and has not yet been revised by the Commission.)

Official Values Not Available

Description

Edina is a large two storey house with tower built c 1880-90. The exterior is a good example of coarse and debased Boom style ornament with good cast iron and tiling on verandahs. Fine cedar joinery inside and house is complemented by two other buildings, Banksia and Witchagil, two semi-detached and one detached identical two storey Victorian villas, c 1880-90. The gates, detached from main part hospital grounds, are elaborate cast iron with iron gate posts.

History Not Available

Condition and Integrity

Of the three buildings only the north-west villa (Witchagil) has had superficial alterations, a verandah has been closed in by fibro.

Location

Including Edina, Banksia and Witchagil and two sets of gates: 1) corner Birrell Street and Bronte Road; 2) Carrington Road at rear of Edina, Carrington Street, Waverley

Bibliography Not Available

Report Produced Tue Dec 11 12:54:42 2012

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War Memorial Hospital Grounds

Item details

Name of item: War Memorial Hospital Grounds
Type of item: Complex / Group
Group/Collection: Parks, Gardens and Trees
Category: Garden Institutional/ Research
Primary address: Bounded by Birrell and Church Street and Carrington Ro, Waverley, NSW 2024
Parish: Alexandria
County: Cumberland
Local govt. area: Waverley

All addresses

Street Address	Suburb/town	LGA	Parish	County	Type
Bounded by Birrell and Church Street and Carrington Ro	Waverley	Waverley	Alexandria	Cumberland	Primary Address

Statement of significance:

Fine grounds with elegant lawn and majestic trees of considerable age. Forming an impressive setting to an outstanding grouping of Victorian period buildings. Rare example of a Late Victorian mansion conserving original grounds and setting. State significance.

Date significance updated: 05 Feb 00

Note: There are incomplete details for a number of items listed in NSW. The Heritage Branch intends to develop or upgrade statements of significance and other information for these items as resources become available.

Description

Construction years: 1891-1920

Physical description: Central open lawn, set with white statuary, affords a fine vista to the elegant towered, two storey west façade of "Edina". Acentral path runs west and divides the lawn in two. Stone steps at the end of the grassed embankment. The lawn is flanked by majestic trees, particularly the tall (22m) Norfolk Island pines and the spreading Moreton Bay figs (18m high by 30m wide). Possibly planted about 1900. The entry from Birrell Street presents an inviting scene of white two storey, grand buildings and impressive groups of dark foliage trees. These include a row of six Canary Island palms (12m high) from c.1920. The original entry from the corner of Birrell Street and Bronte Road is now closed but the original cast iron panel fence and gates remain. Both in cast iron with sandstone piers, from c.1900. Entrance gate also stand on Carrington Road, from c.1920. Wrought iron and unusual in the use of military motifs of World War 1. The grounds west of the main central lawn are of considerable lesser quality and require reassessment from a landscape viewpoint.

Current use: Hospital
Former use: Hospital

History

Historical notes: Formerly the grounds of the grand Vickery family home, "Edina". Bequeathed to the Methodist Church as a World War 1 memorial hospital. Used as a private hospital since 1922.

Historic themes

Australian theme (abbrev)	New South Wales theme	Local theme
3. Economy-Developing local,	Health-Activities associated with preparing and providing medical assistance	(none)-

rate this site

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regional and national economies	and/or promoting or maintaining the well being of humans	

Assessment of significance

SHR Criteria a) [Historical significance]	This item is of historical and cultural significance
SHR Criteria c) [Aesthetic significance]	This item is of aesthetic and streetscape/landscape significance
Integrity/Intactness:	Substantially intact
Assessment criteria:	Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of significance. Refer to the Listings below for the level of statutory protection.

Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Local Environmental Plan			06 Dec 96		
Heritage study					

Study details

Title	Year	Number	Author	Inspected by	Guidelines used
Waverley Heritage Study	1991	L45/2040	Perumal Murphy Pty Limited		No

References, internet links & imagess

None

Note: internet links may be to web pages, documents or images.

(Click on thumbnail for full size image and image details)

Data source

The information for this entry comes from the following source:

Name:	Local Government
Database number:	2620357

Every effort has been made to ensure that information contained in the State Heritage Inventory is correct. If you find any errors or omissions please send your comments to the Database Manager.

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War Memorial Hospital Group

Item details

Name of item: War Memorial Hospital Group
Type of item: Complex / Group
Group/Collection: Residential buildings (private)
Category: Other - Residential Buildings (private)
Primary address: Birrell Street, Waverley, NSW 2024
Parish: Alexandria
County: Cumberland
Local govt. area: Waverley

All addresses

Street Address	Suburb/town	LGA	Parish	County	Type
Birrell Street	Waverley	Waverley	Alexandria	Cumberland	Primary Address

Statement of significance:

Outstanding historic grouping incorporating three magnificent late Victorian buildings and former stables. Complete as a group and essentially intact despite some loss of integrity. Earlier buildings retain much of their original setting, and more recent buildings reasonably sympathetic in their design and siting. Special social and historic significance for the long association of the site and the hospital with the Vickery family. Original gates and associated fencing of special note. (See accompanying forms for individual buildings and grounds). State significance.

Date significance updated: 04 Oct 99

Note: There are incomplete details for a number of items listed in NSW. The Heritage Branch intends to develop or upgrade statements of significance and other information for these items as resources become available.

Description

Construction years: 1890-1945

Physical description: Group includes "Edina" (c. 1884), "Ellerslie" (1880's), "Banksia" - "Wytchazel" (1880's), Maternity building (1935), Memorial Chapel, two early twentieth century domestic buildings, two sets of gates and fencing, and the original landscaped grounds. Buildings and grounds are individually recorded (see accompanying forms). One set of gates is located at the corner of Birrell Street and Bronte Road. This part of the site, the western area, is now a nursing home. All buildings are modern and generally unsympathetic. The main historic grouping is towards Carrington Road, between Birrell and Church Streets. There is an outstanding set of wrought iron gates on the Carrington Road frontage.

Further information: Reasons for listing: Historical; cultural; social; architectural; aesthetic; rarity value; group value; landmark; streetscape/landscape.

Current use: Hospital/nursing home.
Former use: Hospital/nursing home.

rate this site

History

Historical notes: Complex sited on over two hectares of land, most of which was owned by Ebenezer Vickery, prosperous merchant and benefactor of the Methodist Church. The family lived on the property from the 1860's and built "Edina", "Ellerslie" and "Banksia" - "Wytchazel" in the 1880's. "Ellerslie" incorporates an earlier building. It was the first building used for hospital purposes when the family donated the property for a memorial hospital on Anzac Day, 1919. The hospital was officially opened in 1921. "Edina" was the name of the birthplace in Scotland of Vickery's mother.

Historic themes

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Australian theme (abbrev)	New South Wales theme	Local theme
3. Economy-Developing local, regional and national economies	Health-Activities associated with preparing and providing medical assistance and/or promoting or maintaining the well being of humans	(none)-

Assessment of significance

SHR Criteria a) [Historical significance]	Outstanding historic grouping incorporating three magnificent late Victorian buildings and former stables. Complete as a group and essentially intact despite some loss of integrity. Earlier buildings retain much of their original setting, and more recent buildings reasonably sympathetic in their design and siting. Special social and historic significance for the long association of the site and the hospital with the Vickery family. Original gates and associated fencing of special note. (See accompanying forms for individual buildings and grounds). State significance.
Integrity/Intactness:	Substantially intact.
Assessment criteria:	Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of significance. Refer to the Listings below for the level of statutory protection.

Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Local Environmental Plan		42/6 - 0028	06 Dec 96		
Heritage study	Waverley Heritage Study	1990			

Study details

Title	Year	Number	Author	Inspected by	Guidelines used
Waverley Heritage Study	1990		Perumal Murphy Pty Limited		No

References, internet links & imagess

None

Note: internet links may be to web pages, documents or images.

(Click on thumbnail for full size image and image details)

Data source

The information for this entry comes from the following source:

Name: Local Government

Database number: 2620032

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Appendix I Hazardous Chemicals Search

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4325 0000 F 02 4325 4146
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D12/194578
Your Ref: Cathy Roberts

14 December 2012

Attention: Cathy Roberts
JBS Environmental
PO Box 940
Mascot NSW 1460

Dear Ms Roberts,

RE SITE: 125 Birrell St Waverley NSW

I refer to your site search request received by WorkCover NSW on 12 December 2012 requesting information on licences to keep dangerous goods for the above site.

Enclosed are copies of the documents that WorkCover NSW holds on Dangerous Goods Licences 35/028651 relating to the storage of dangerous goods at the above-mentioned premises, as listed on the Stored Chemical Information Database (SCID).

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Notification Team

WORK SAFE HOME SAFE

ATION OF DANGEROUS GOODS ON PREMISES FORM

CONTACT FOR NOTIFICATION INQUIRIES

Title: Mr / Miss / Ms / Mrs / Other (please specify) _____ Family name McI

Given name Susan Other names Marie

Gender Male / Female (please circle) Date of birth 24 / 2 / 55 Place of birth New

Postal address War Memorial Hosp. 125 Birrell St

Suburb Waverley State NSW Posto

Business phone 02 9369 0100 Business fax number 9387

Business email address susan.mciver@seslhs.health.nsw

WINDSOR NSW
92 SOUTH STREET
GOSFORD NSW 2250

06/06/06 11:41
0000308717 1002
13FR002

OTHER $100.00
GST TAX $100.00
DEBIT $9.09

TOTAL $100.00

Previous Licence Number or Acknowledgement Number (if known)

35/ 028651

Previous Occupier (if known)

WAR MEMORIAL HOSPITAL

Site on which dangerous goods are to be kept

Number: 125 Street: BIRRELL STREET WAVERLEY

Nearest cross Street

CARRINGTON ROAD WAVERLEY

Lot and DP if no street number

Is the site staffed? If yes state number of employees 120

Site staffing: Hours per day 24 Days per week 7

$ 100.00
Date 6.6.06
Rec. No 28624

Site Emergency Contact

Phone number (02) 9869 0100 Name Susan McIver

Nature of site (eg petrol station, warehouse etc)

AGED CARE REHABILITAD HOSPITAL

Nature of your primary business activity

AGED CARE REHABILITATION

ABN Number (if any) 314 274 124 1. Website details (if any)

What is the ANSZIC code most applicable to you business? (see guide for list of codes and further information)

Code 861 Description Hospital, Nursing Homes

Attach a site sketch(s) of the premises. Refer to the Guide for information on the requirements for the site sketch.

Attach a photocopy page from a local Street Directory or other map showing the locality of the premises. Mark the location of the premises with an X

...CATION OF DANGEROUS GOODS ON PREMISES FORM

FDG01

List the dangerous goods that will be stored and/or processed on these premises. Copy this page and attach additional sheets if there is insufficient space.

Identifier	Type of storage location or process	Class	Maximum Storage Capacity (L, kg, M³)
1	ROOFED STORE	8	500 LITRES

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Symbol	Typical Qty	Unit eg L, kg, M³
1791	SODIUM HYPOCHLORITE 13%	8	III	Chlorine	2X	500	L

Identifier	Type of storage location or process	Class	Maximum Storage Capacity (L, kg, M³)
2	ROOFLESS STORE	3	600 LITRES

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Symbol	Typical Qty	Unit eg L, kg, M³
1203	PETROLEUM	3	II	PETROL	3YE	600	L

Identifier	Type of storage location or process	Class	Maximum Storage Capacity (L, kg, M³)

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Symbol	Typical Qty	Unit eg L, kg, M³

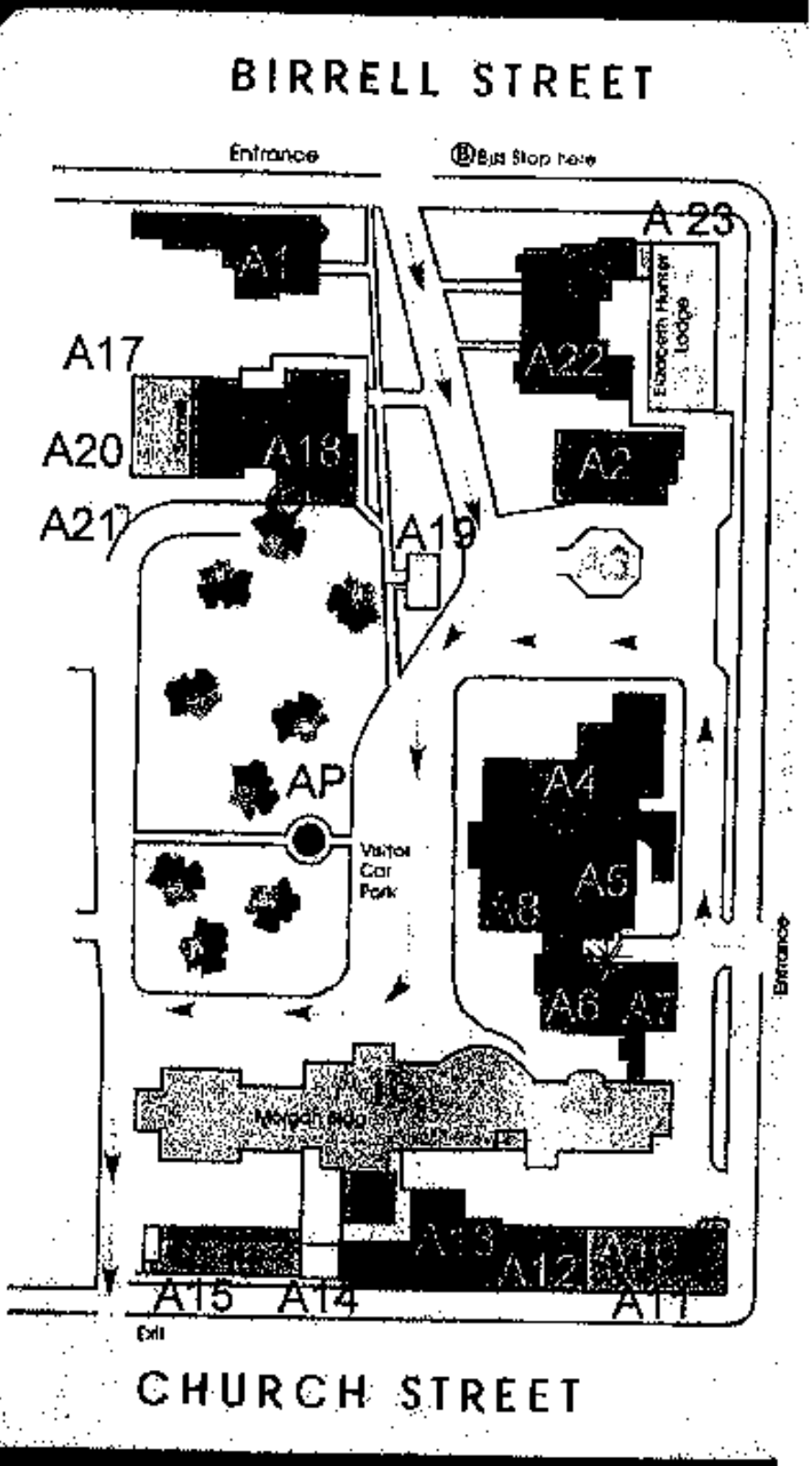
Identifier	Type of storage location or process	Class	Maximum Storage Capacity (L, kg, M³)

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Symbol	Typical Qty	Unit eg L, kg, M³

Identifier	Type of storage location or process	Class	Maximum Storage Capacity (L, kg, M³)

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Symbol	Typical Qty	Unit eg L, kg, M³

Locations



Roofless store

Roofed store

A 1 Administration O'Reilly Building
A 2 HA&RU Resource Building
A 3 Chapel
A 4 WMH Vickery Building
A 5 Computer Support Vickery Building
A 13 Therapy Rooms
A 14 ELP Store
A 15 Main Stores
A 16 Morgan Building
A 17 Hospital Store

Box No: 646

RECEIVED
SERVICE CENTRE
09 MAY 2000
NEW SOUTH WALES

WorkCover New South Wales, 400 Kent Street, Sydney 2000. Tel: 9370 5000 Fax: 9370 5999 ALL MAIL TO GPO BOX 5364 SYDNEY 2001

WORKCOVER
NEW SOUTH WALES

Licence No. 35/028651

APPLICATION FOR RENEWAL
OF LICENCE TO KEEP DANGEROUS GOODS

ISSUED UNDER AND SUBJECT TO THE PROVISIONS OF THE DANGEROUS GOODS ACT, 1975 AND REGULATION THEREUNDER

DECLARATION: Please renew licence number 35/028651 to 14/06/2001 . I confirm that all the licence details shown below are correct (amend if necessary).

(Signature)	IAN PATERSON (Please print name)	04/05/2000 (Date signed)

for: WAR MEMORIAL HOSPITAL (WAVERLEY)

THIS SIGNED DECLARATION SHOULD BE RETURNED TO: (please do not fax)

WorkCover New South Wales
Dangerous Goods Licensing Section
GPO BOX 5364
SYDNEY 2001

Enquiries: ph (02) 9370 5187
fax (02) 9370 6104

Details of licence on 29 April 2000

Licence Number 35/028651 **Expiry Date** 14/06/2000

DATA
24 MAY 2000
ENTERED

Licensee WAR MEMORIAL HOSPITAL (WAVERLEY)

Postal Address: 125 BIRRELL ST WAVERLEY NSW 2024

Licensee Contact IAN PATERSON Ph. 9369 0334 Fax. 9387 7018

Premises Licensed to Keep Dangerous Goods
WAR MEMORIAL HOSPITAL (WAVERLEY)
125 BIRRELL ST WAVERLEY 2024

Nature of Site HOSPITALS (EXCEPT PSYCHIATRIC HOSPITALS)

Major Supplier of Dangerous Goods LINDE

Emergency Contact for this Site IAN PATERSON Ph. 9387 1166

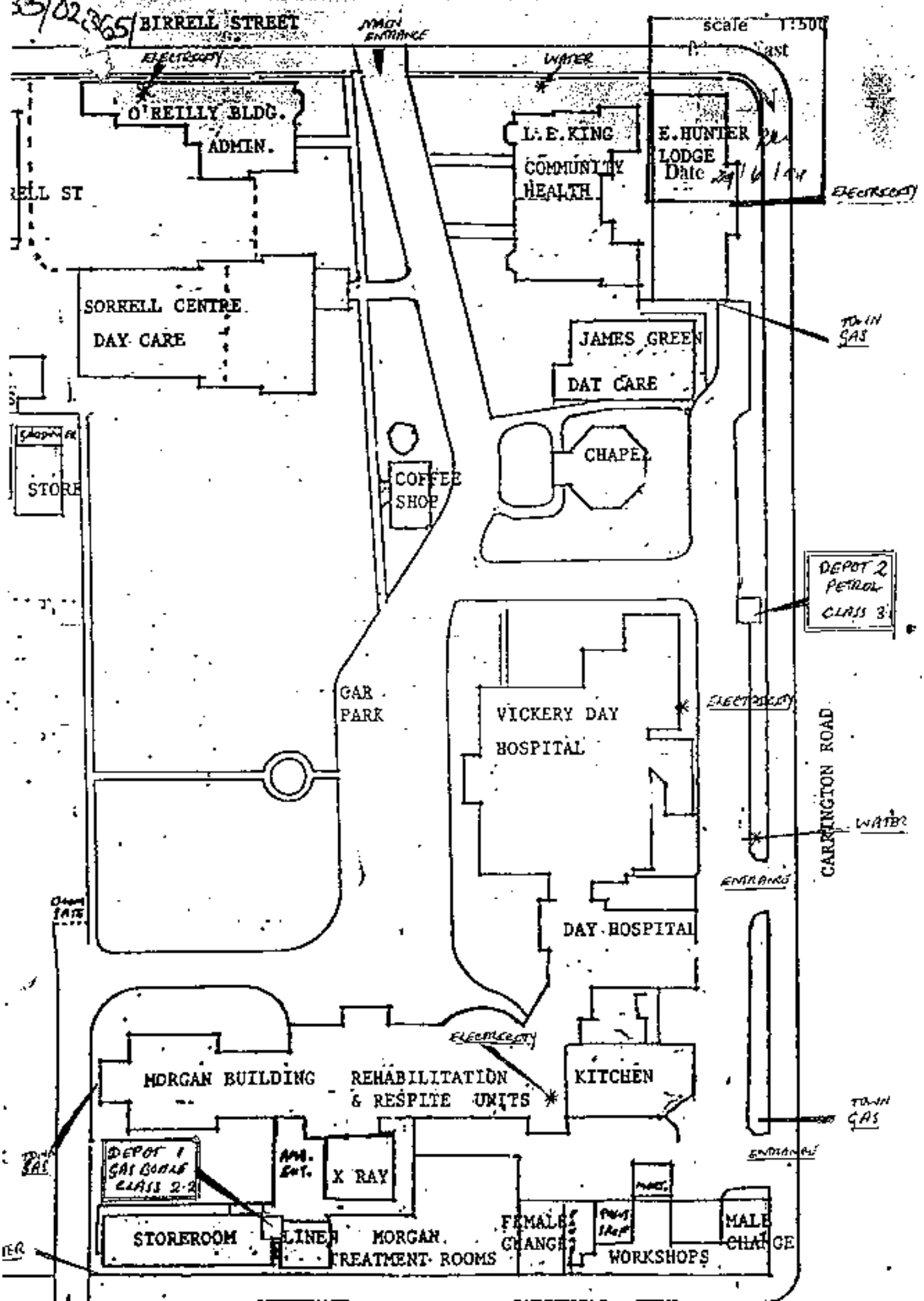
Site staffing 24 HRS 7 DAYS

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
2	ROOFLESS STORE	Class 3	1000 L
	UN 1203 PETROL		600 L

Form DG10

WAR MEMORIAL HOSPITAL (WAVERLEY)



PART A

WorkCover Authority

(Dangerous Goods Act 1975)

Application for new licence, amendment or transfer

Expiry: 15.6.95 Plan No. 890 Metro east

1. Name of applicant: WAR MEMORIAL HOSPITAL (WAVERLEY) ACN:

2. Site to be licensed
   No: 125 Street: Birrell Street
   Suburb/Town: WAVERLEY Postcode: 2024

3. Previous licence number (if known): 35/028651

4. Nature of site: PUBLIC HOSPITAL

5. Emergency contact on site:
   Phone: 387-1166 Name: Ian Paterson

6. Site staffing: Hours per day: 24 Days per week: 7

7. Major supplier of dangerous goods: Linde (Medical Oxygen Bottles)

8. If new site or significant modification
   Plan stamped by: Accredited consultant's name: N/A Date stamped:

9. Number of dangerous goods depots at site: 1

10. Trading name or occupier's name: War Memorial Hospital

11. Postal address of applicant: 125 Birrell Street Suburb/Town: Waverley Postcode: 2024

12. Contact for licence enquiries:
    Phone: 369-0334 Fax: 387-7018 Name: Ian Paterson

I certify that the details contained in this application (or the accompanying computer disk) are true and correct

13. Signature of applicant: Date: 3/6/93

Complete 1 section per depot

If you have more depots than the space provided, photocopy sufficient sheets first.

Depot number	Type of depot	Class	Licensed maximum storage capacity
1	Medical Gas Bottle Store	2.2	200 cum (40 x Size E Cylinders)

UN number	Shipping name	Pkg. Class	Pkg. Group	Pkg. EPG	Product or common name	Typical quantity	Unit eg. L, kg, m³
1002	Compressed Air	2.2	1	2CI	Medical Air	50 (10cyl)	cu Mtr.
1072	Medical Oxygen	2.2	1	2C6	Medical Oxygen	50 (10cyl)	cu Mtr.

Depot number	Type of depot	Class	Licensed maximum storage capacity
2	Reagents Store. ~~Bulk Store Solid~~	3	1000 Ltr (5 x 200 ltr Drums)

UN number	Shipping name	Pkg. Class	Pkg. Group	Pkg. EPG	Product or common name	Typical quantity	Unit eg. L, kg, m³
1203	Petrol	3.1	11	* 3(Y)	E Petrol	600	Ltr
					*Hazchem Code		

Appendix J Bore Logs

JBS ENVIRONMENTAL	**Borehole No: HA01**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 12/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.7	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, brown with white sands, heterogeneous, damp, loose, fine grained sand, sub-rounded with inclusions of plant matter. Imported topsoil.	HA01 0.0-0.1		D	Sample location targeting area of raised fill material.
		As above with concrete and sandstone gravels.	HA01 0.2-0.3		D	
			HA01 0.4-0.5		D	
		As above but light grey to brown with glass fragments.	HA01 0.6-0.7		D	
		END OF HOLE at 0.7 m bgs. Refusal on sandstone obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information

© JBS Environmental Pty Ltd

JBS ENVIRONMENTAL	**Borehole No: HA02**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 12/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 1.0	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, brown with white sand, heterogeneous, damp, loose, fine grained sand, sub-rounded with inclusions of plant matter. Imported topsoil.	HA02 0.0-0.1		D	
		FILL (FL) Silty, gravelly SAND, light grey with brown, heterogeneous, damp, loose, fine grained sand with fine to coarse sandstone, concrete and shale gravels.	HA02 0.2-0.3		D	
			HA02 0.4-0.5		D	
		As above but brown to white with glass fragments.	HA02 0.6-0.7		D	
			HA02 0.9-1.0		D	
1.0		**END OF HOLE at 1.0 m bgs.** Refusal on sandstone obstruction within fill material.				
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information

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JBS ENVIRONMENTAL	**Borehole No: HA03**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 12/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 1.1	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, brown with white sand, heterogeneous, damp, loose, fine grained sand, sub-rounded with inclusions of plant matter and slag. Imported topsoil.	HA03 0.0-0.1		D	QC01/QC01a.
		As above but with coarse sandstone and shale gravels.	HA03 0.2-0.3		D	
			HA03 0.4-0.5		D	
		SAND (SW) SAND, light brown, homogeneous, damp, loose, fine to medium grained sand, sub-angular.	HA03 0.8-0.9		D	
1.0			HA03 1.0-1.1		D	
		END OF HOLE at 1.1 m bgs. Program depth.				
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA04**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 12/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.3	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Leaf litter and grass
0.0		**FILL (FL)** Silty, gravelly SAND, brown with white sand, heterogeneous, damp, loose, fine grained sand with coarse igneous and sandstone gravels with inclusions of plant matter.	HA04 0.0-0.1		D	
		FILL (FL) SAND, yellow to brown, heterogeneous, damp.	HA04 0.2-0.3		D	
		END OF HOLE at 0.3 m bgs. Refusal on sandstone boulder within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA05**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.6	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, damp, loose, fine grained sand, sub-rounded with inclusions of rootlets and coarse sandstone gravel. Imported topsoil.	HA05 0.0-0.1		D	Sample location targeting workshed.
			HA05 0.2-0.3		D	
			HA05 0.4-0.5		D	
		END OF HOLE at 0.6 m bgs. Refusal on concrete obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA06**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.2	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, damp to moist, loose, fine grained sand, sub-rounded with inclusions of rootlets. Imported topsoil.	HA06 0.0-0.1		D	Sample location targeting suspected fill material.
		END OF HOLE at 0.2 m bgs. Refusal on concrete obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA07**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.5	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, damp, loose, fine grained sand, sub-rounded with inclusions of igneous and sandstone gravels and plant matter. Imported topsoil.	HA07 0.0-0.1		D	Sample location targeting suspected fill material.
			HA07 0.2-0.3		D	
		FILL (FL) SAND, grey to white, heterogeneous, damp, loose, fine grained sand, sub-rounded with inclusions of coarse sandstone gravel.	HA07 0.4-0.5		D	
		END OF HOLE at 0.5 m bgs. Refusal on sandstone obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA08**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.4	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, damp, loose, fine grained sand with inclusions of rootlets. Imported topsoil.	HA08 0.0-0.1		D	
		As above but light grey to brown.	HA08 0.2-0.3		D	
		As above but brown to white with inclusions of coarse sandstone gravels.	HA08 0.3-0.4		D	
		END OF HOLE at 0.4 m bgs. Refusal on sandstone obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA09**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.5	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, damp, loose, fine grained sand with inclusions of rootlets. Imported topsoil.	HA09 0.0-0.1		D	
			HA09 0.2-0.3		D	
		SAND (SW) SAND, light grey, homogeneous, damp, loose, medium grained sand.				
			HA09 0.4-0.5		D	
		END OF HOLE at 0.5 m bgs. Program depth.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA10**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.7	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, damp, loose, fine grained sand with inclusions of rootlets. Imported topsoil.	HA10 0.0-0.1		D	Sample location targeting garage. QC02/QC02a.
		As above but with inclusions of fine to coarse sandstone gravel.	HA10 0.2-0.3		D	
			HA10 0.4-0.5		D	
			HA10 0.6-0.7		D	
		END OF HOLE at 0.7 m bgs. Refusal on obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA11**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.4	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Dry/dead grass.
0.0		**FILL (FL)** Silty SAND, brown, heterogeneous, dry, loose, fine grained sand with inclusions of coarse igneous gravel, tile fragments and rootlets.	HA11 0.0-0.1		D	Sample location targeting footprint of former structure.
		As above but yellow to grey SAND with inclusions of fine to coarse sandstone gravel.	HA11 0.2-0.3		D	
			HA11 0.3-0.4		D	
		END OF HOLE at 0.4 m bgs. Refusal on sandstone obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA12**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 1.0	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Dry/dead grass.
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, dry, loose, fine grained sand with inclusions of rootlets. Imported topsoil.	HA12 0.0-0.1		D	
			HA12 0.2-0.3		D	
			HA12 0.4-0.5		D	
		SAND (SW) SAND, orange to red, homogeneous, dry, loose, medium grained sand.				
		SAND (SW) As above but yellow, damp.				
			HA12 0.9-1.0		D	
1.0		**END OF HOLE at 1.0 m bgs.** Natural.				
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA13**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.9	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, dry, loose, fine grained sand with inclusions of rootlets and shale gravel. Imported topsoil.	HA13 0.0-0.1		D	Sample location targeting fill adjacent to Chapel.
			HA13 0.2-0.3		D	
		As above but with wood.	HA13 0.4-0.5		D	
		FILL (FL) SAND, light brown to grey, heterogeneous, dry, loose, fine grained sand.				
			HA13 0.8-0.9		D	
		END OF HOLE at 0.9 m bgs. Refusal on obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA14**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.2	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Leaf litter/bark
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, dry, loose, fine grained sand with inclusions of rootlets, garden bedding fabric and sandstone and igneous gravels.	HA14 0.0-0.1		D	Sample location targeting former paint shed. QC03/QC03a.
		END OF HOLE at 0.2 m bgs. Refusal on obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA15**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.7	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, dry to damp, loose, fine grained sand with inclusions of rootlets, fine to coarse igneous gravel, glass and tile fragments.	HA15 0.0-0.1		D	
			HA15 0.2-0.3		D	
			HA15 0.4-0.5		D	
		As above but with inclusions of coarse sandstone gravel.	HA15 0.6-0.7		D	
		END OF HOLE at 0.7 m bgs. Refusal on sandstone obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA16**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.5	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Grass
0.0		**FILL (FL)** Silty SAND, dark brown to black with white, heterogeneous, damp, loose, fine to medium grained sand with inclusions of rootlets. Imported topsoil.	HA16 0.0-0.1		D	
		As above but with inclusions of coarse sandstone gravel.	HA16 0.2-0.3		D	
		As above but with increasing coarse sandstone gravels.	HA16 0.4-0.5		D	
1.0		**END OF HOLE at 0.5 m bgs.** Refusal on sandstone obstruction within fill material.				
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA17**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.3	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Leaf litter
0.0		**FILL (FL)** Silty SAND, dark brown with white, heterogeneous, damp, loose, fine grained sand with inclusions of coarse sandstone gravel. Imported topsoil.	HA17 0.0-0.1		D	
			HA17 0.2-0.3		D	
		END OF HOLE at 0.3 m bgs. Refusal on sandstone obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA18**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.6	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Leaf litter/bark
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, dry, loose, fine grained sand with inclusions of rootlets and igneous gravel. Imported topsoil.	HA18 0.0-0.1		D	Sample location targeting incinerator. QC04/QC04a.
		FILL (FL) Gravelly SAND, dark grey, heterogeneous, dry, medium grained sands with medium to coarse igneous gravels.	HA18 0.2-0.3		D	Slight hydrocarbon odour.
		FILL (FL) Silty SAND, dark brown, heterogeneous, dry, loose, medium grained sand with medium igneous gravel. Metallic appearence.	HA18 0.4-0.5		D	No odour.
		END OF HOLE at 0.6 m bgs. Refusal on obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

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JBS ENVIRONMENTAL	**Borehole No: HA19**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.4	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Leaf litter/bark
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, dry, loose, fine grained sand with inclusions of medium igneous and coarse sandstone gravel.	HA19 0.0-0.1		D	
			HA19 0.2-0.3		D	
		END OF HOLE at 0.4 m bgs. Refusal on sandstone obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information

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JBS ENVIRONMENTAL	**Borehole No: HA20**	**Project No:** 42458 **Client:** Uniting Care **Project Name:** War Memorial Hospital **Site Address:** 125 Birrell Street, Waverley

Date: 13/12/2012	**Eastings (MGA):** -
Contractor: -	**Northings (MGA):** -
Drill Rig: -	**Reference Level:** BGS
Method: HA	**Elevation - Surface (m):** Surface
Total Hole Depth (mbgs): 0.55	**Bore Diameter (mm):** 100mm

SUBSURFACE PROFILE			SAMPLE			
Depth	**Graphic Log**	**Lithologic Description**	**Sample ID**	**PID (ppm)**	**Sample Type**	**Comments**
		Ground Surface				Small garden pebbles
0.0		**FILL (FL)** Silty SAND, brown with white, heterogeneous, dry, loose, fine grained sand with inclusions of sandstone gravel. Imported topsoil.	HA20 0.0-0.1		D	
		FILL (FL) SAND, white, heterogeneous, damp, loose.				
		FILL (FL) Silty SAND, brown with white, heterogeneous, damp, loose, fine grained sand with inclusions of sandstone gravel.	HA20 0.2-0.3		D	
		FILL (FL) Silty SAND, brown, heterogeneous, damp, loose, fine grained sand with inclusions of ironstone gravel.	HA20 0.4-0.5		D	
		END OF HOLE at 0.55 m bgs. Refusal on obstruction within fill material.				
1.0						
2.0						

Drilling Method	*Sample Type*	*Reference Level*	*Log Details*
HA - Hand Auger	*U - Undisturbed tube sample*	*AHD - Australian Height Datum*	*Logged By:* M. Hodgins
SFA - Solid Flight Auger	*D - Disturbed sample*	*BGS - Below Ground Surface*	*Project Manager:* C. Roberts
HFA - Hollow Flight Auger	*CS - Core sample*		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information

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Appendix K Laboratory Documentation

Envirolab Services Pty Ltd
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CERTIFICATE OF ANALYSIS 83208

Client:
JBS Environmental Pty Ltd
P.O. Box 940
MASCOT
NSW 1460

Attention: C Roberts M Hodgins

Sample log in details:

Your Reference:	**42458, War Memorial Hospital**
No. of samples:	66 Soils, 1 Material, 2 Waters
Date samples received / completed instructions received	14/12/2012 / 14/12/2012

This report replaces the previous report due to changes in report comments.

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	21/12/12 / 8/01/13
Date of Preliminary Report:	Not issued

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Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Nancy Zhang
Chemist

Rhian Morgan
Reporting Supervisor

Hinoko Miyazaki
Chemist

Lulu Guo
Approved Signatory

Jeremy Faircloth
Chemist

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83208-1	83208-10	83208-17	83208-30	83208-34
Your Reference	----------	HA01	HA03	HA05	HA10	HA11
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		12/12/2012	12/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil & Material	Soil	Soil	Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	121	117	108	116	114

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83208-45	83208-55	83208-56	83208-57	83208-64
Your Reference	----------	HA14	HA18	HA18	HA18	QC01
Depth	----------	0.0-0.1	0.0-0.1	0.2-0.3	0.4-0.5	-
Date Sampled		13/12/2012	13/12/2012	13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	119	121	114	118	111

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83208-1	83208-10	83208-17	83208-30	83208-34
Your Reference	----------	HA01	HA03	HA05	HA10	HA11
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		12/12/2012	12/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil & Material	Soil	Soil	Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
TRHC_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRHC_{15} - C_{28}	mg/kg	<100	<100	140	<100	260
TRHC_{29} - C_{36}	mg/kg	<100	110	160	<100	290
TRH>C_{10}-C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH>C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C_{16}-C_{34}	mg/kg	<100	150	250	<100	430
TRH>C_{34}-C_{40}	mg/kg	<100	<100	<100	<100	130
Surrogate o-Terphenyl	%	101	100	102	90	102

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83208-45	83208-55	83208-56	83208-57	83208-64
Your Reference	----------	HA14	HA18	HA18	HA18	QC01
Depth	----------	0.0-0.1	0.0-0.1	0.2-0.3	0.4-0.5	-
Date Sampled		13/12/2012	13/12/2012	13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
TRHC_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRHC_{15} - C_{28}	mg/kg	<100	140	<100	<100	230
TRHC_{29} - C_{36}	mg/kg	160	110	<100	<100	170
TRH>C_{10}-C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH>C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C_{16}-C_{34}	mg/kg	170	210	130	130	350
TRH>C_{34}-C_{40}	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	95	96	98	93	100

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	83208-1 HA01 0.0-0.1 12/12/2012 Soil	83208-10 HA03 0.0-0.1 12/12/2012 Soil & Material	83208-17 HA05 0.0-0.1 13/12/2012 Soil	83208-30 HA10 0.0-0.1 13/12/2012 Soil	83208-34 HA11 0.0-0.1 13/12/2012 Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
Naphthalene	mg/kg	0.1	<0.1	0.1	<0.1	0.1
Acenaphthylene	mg/kg	<0.1	0.4	0.5	0.1	0.4
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Fluorene	mg/kg	<0.1	0.2	0.2	<0.1	0.2
Phenanthrene	mg/kg	0.5	2.6	3.2	1.0	5.2
Anthracene	mg/kg	0.1	0.6	0.7	0.2	0.8
Fluoranthene	mg/kg	1.2	5.0	7.0	2.3	12
Pyrene	mg/kg	1.3	5.2	7.3	2.3	12
Benzo(a)anthracene	mg/kg	0.6	2.6	4.1	1.2	5.3
Chrysene	mg/kg	0.7	2.4	3.9	1.1	5.5
Benzo(b+k)fluoranthene	mg/kg	1.3	4.2	7.6	2.2	11
Benzo(a)pyrene	mg/kg	0.87	3.1	5.5	1.5	7.7
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	1.7	3.2	0.9	5.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.3	0.7	0.1	0.9
Benzo(g,h,i)perylene	mg/kg	0.5	1.5	2.9	0.8	4.5
Benzo(a)pyrene TEQ	mg/kg	1	4.0	8.0	2	11
Surrogate p-Terphenyl-d_{14}	%	120	107	108	103	109

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	83208-45 HA14 0.0-0.1 13/12/2012 Soil	83208-55 HA18 0.0-0.1 13/12/2012 Soil	83208-56 HA18 0.2-0.3 13/12/2012 Soil	83208-57 HA18 0.4-0.5 13/12/2012 Soil	83208-64 QC01 - 12/12/2012 Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	1.3
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.7
Phenanthrene	mg/kg	0.6	0.3	0.2	0.5	9.2
Anthracene	mg/kg	0.1	<0.1	<0.1	0.1	2.3
Fluoranthene	mg/kg	1.1	0.7	0.5	1.3	14
Pyrene	mg/kg	1.2	0.8	0.5	1.3	14
Benzo(a)anthracene	mg/kg	0.6	0.4	0.2	0.7	7.8
Chrysene	mg/kg	0.5	0.4	0.2	0.6	6.3
Benzo(b+k)fluoranthene	mg/kg	1.0	0.9	0.4	1.3	10
Benzo(a)pyrene	mg/kg	0.71	0.56	0.23	0.90	7.4
Indeno(1,2,3-c,d)pyrene	mg/kg	0.4	0.4	0.1	0.5	3.6
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.8
Benzo(g,h,i)perylene	mg/kg	0.4	0.3	<0.1	0.5	3.0
Benzo(a)pyrene TEQ	mg/kg	1	1	<0.5	1	10
Surrogate p-Terphenyl-d_{14}	%	110	109	112	107	105

Organochlorine Pesticides in soil						
Our Reference:	UNITS	83208-1	83208-10	83208-17	83208-30	83208-34
Your Reference	----------	HA01	HA03	HA05	HA10	HA11
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		12/12/2012	12/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil & Material	Soil	Soil	Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	97	87	92	79	81

Organochlorine Pesticides in soil				
Our Reference:	UNITS	83208-45	83208-55	83208-64
Your Reference	----------	HA14	HA18	QC01
Depth	----------	0.0-0.1	0.0-0.1	-
Date Sampled		13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012
HCB	mg/kg	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	90	88

Organophosphorus Pesticides						
Our Reference:	UNITS	83208-1	83208-10	83208-17	83208-30	83208-34
Your Reference	----------	HA01	HA03	HA05	HA10	HA11
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		12/12/2012	12/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil & Material	Soil	Soil	Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	97	87	92	79	81

Organophosphorus Pesticides				
Our Reference:	UNITS	83208-45	83208-55	83208-64
Your Reference	----------	HA14	HA18	QC01
Depth	----------	0.0-0.1	0.0-0.1	-
Date Sampled		13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	90	88

PCBs in Soil						
Our Reference:	UNITS	83208-1	83208-10	83208-17	83208-30	83208-34
Your Reference	----------	HA01	HA03	HA05	HA10	HA11
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		12/12/2012	12/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil & Material	Soil	Soil	Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.5	<0.1	0.5
Arochlor 1260	mg/kg	<0.1	<0.1	<0.5	<0.1	<0.1
Surrogate TCLMX	%	97	87	92	79	81

PCBs in Soil				
Our Reference:	UNITS	83208-45	83208-55	83208-64
Your Reference	----------	HA14	HA18	QC01
Depth	----------	0.0-0.1	0.0-0.1	-
Date Sampled		13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil
Date extracted	-	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1
Surrogate TCLMX	%	86	90	88

Acid Extractable metals in soil						
Our Reference:	UNITS	83208-1	83208-5	83208-10	83208-15	83208-17
Your Reference	----------	HA01	HA02	HA03	HA04	HA05
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil & Material	Soil	Soil
Date digested	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Arsenic	mg/kg	<4	4	<4	<4	7
Cadmium	mg/kg	<0.5	1.2	<0.5	<0.5	<0.5
Chromium	mg/kg	5	15	7	27	8
Copper	mg/kg	25	140	36	25	44
Lead	mg/kg	370	550	190	91	390
Mercury	mg/kg	0.2	0.4	0.3	0.1	0.5
Nickel	mg/kg	4	16	5	30	6
Zinc	mg/kg	130	550	160	110	210

Acid Extractable metals in soil						
Our Reference:	UNITS	83208-20	83208-21	83208-24	83208-27	83208-30
Your Reference	----------	HA06	HA07	HA08	HA09	HA10
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		13/12/2012	13/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Arsenic	mg/kg	5	7	8	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	10	15	10	8	6
Copper	mg/kg	31	19	99	37	21
Lead	mg/kg	740	280	510	200	210
Mercury	mg/kg	0.2	0.2	3.0	0.5	0.4
Nickel	mg/kg	5	2	4	2	2
Zinc	mg/kg	150	140	200	76	150

Acid Extractable metals in soil						
Our Reference:	UNITS	83208-34	83208-37	83208-41	83208-45	83208-46
Your Reference	----------	HA11	HA12	HA13	HA14	HA15
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		13/12/2012	13/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Arsenic	mg/kg	9	<4	4	<4	5
Cadmium	mg/kg	0.8	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	11	8	8	14	13
Copper	mg/kg	87	30	34	83	62
Lead	mg/kg	1,500	1,300	570	320	1,400
Mercury	mg/kg	0.3	0.9	0.6	0.1	0.7
Nickel	mg/kg	21	3	3	7	8
Zinc	mg/kg	720	170	150	730	270

Acid Extractable metals in soil						
Our Reference:	UNITS	83208-50	83208-53	83208-55	83208-56	83208-57
Your Reference	----------	HA16	HA17	HA18	HA18	HA18
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.4-0.5
Date Sampled		13/12/2012	13/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Arsenic	mg/kg	5	<4	<4	<4	<4
Cadmium	mg/kg	<0.5	<0.5	0.7	<0.5	<0.5
Chromium	mg/kg	8	8	21	12	15
Copper	mg/kg	33	55	62	120	58
Lead	mg/kg	180	270	160	100	120
Mercury	mg/kg	0.2	0.3	0.4	0.3	0.2
Nickel	mg/kg	6	5	18	10	10
Zinc	mg/kg	170	340	190	120	180

Acid Extractable metals in soil						
Our Reference:	UNITS	83208-58	83208-60	83208-64	83208-65	83208-70
Your Reference	----------	HA19	HA20	QC01	QC02	HA12 - Triplicate
Depth	----------	0.0-0.1	0.0-0.1	-	-	0.0-0.1
Date Sampled		13/12/2012	13/12/2012	12/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.5	0.7	<0.5	<0.5	<0.5
Chromium	mg/kg	13	4	7	6	8
Copper	mg/kg	46	17	39	22	30
Lead	mg/kg	510	65	240	240	1,100
Mercury	mg/kg	0.2	<0.1	0.3	0.3	0.7
Nickel	mg/kg	11	2	7	2	4
Zinc	mg/kg	150	83	180	180	170

Moisture						
Our Reference:	UNITS	83208-1	83208-5	83208-10	83208-15	83208-17
Your Reference	----------	HA01	HA02	HA03	HA04	HA05
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil & Material	Soil	Soil
Date prepared	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
Moisture	%	11	14	7.3	11	23

Moisture						
Our Reference:	UNITS	83208-20	83208-21	83208-24	83208-27	83208-30
Your Reference	----------	HA06	HA07	HA08	HA09	HA10
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		13/12/2012	13/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
Moisture	%	16	8.9	22	14	5.4

Moisture						
Our Reference:	UNITS	83208-34	83208-37	83208-41	83208-45	83208-46
Your Reference	----------	HA11	HA12	HA13	HA14	HA15
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		13/12/2012	13/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
Moisture	%	12	7.3	11	9.2	12

Moisture						
Our Reference:	UNITS	83208-50	83208-53	83208-55	83208-56	83208-57
Your Reference	----------	HA16	HA17	HA18	HA18	HA18
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3	0.4-0.5
Date Sampled		13/12/2012	13/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
Moisture	%	18	10	9.1	8.4	9.5

Moisture					
Our Reference:	UNITS	83208-58	83208-60	83208-64	83208-65
Your Reference	----------	HA19	HA20	QC01	QC02
Depth	----------	0.0-0.1	0.0-0.1	-	-
Date Sampled		13/12/2012	13/12/2012	12/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	17/12/2012	17/12/2012	17/12/2012	17/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012
Moisture	%	12	9.5	13	8.6

Asbestos ID - soils						
Our Reference:	UNITS	83208-1	83208-10	83208-17	83208-30	83208-34
Your Reference	----------	HA01	HA03	HA05	HA10	HA11
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		12/12/2012	12/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil & Material	Soil	Soil	Soil
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Sample mass tested	g	Approx 50g	Approx 50g	Approx 50g	Approx 50g	Approx 50g
Sample Description	-	Brown coarse-grained sandy soil	Brown coarse-grained sandy soil	Brown coarse-grained sandy soil	Brown coarse-grained sandy soil	Brown coarse-grained sandy soil
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils				
Our Reference:	UNITS	83208-45	83208-55	83208-64
Your Reference	----------	HA14	HA18	QC01
Depth	----------	0.0-0.1	0.0-0.1	-
Date Sampled		13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil
Date analysed	-	19/12/2012	19/12/2012	19/12/2012
Sample mass tested	g	Approx 50g	Approx 50g	Approx 50g
Sample Description	-	Brown coarse-grained sandy soil	Brown coarse-grained sandy soil	Brown coarse-grained sandy soil
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - materials			
Our Reference:	UNITS	83208-10	83208-63
Your Reference	----------	HA03	ACM01
Depth	----------	0.0-0.1	-
Date Sampled		12/12/2012	13/12/2012
Type of sample		Soil & Material	Material
Date analysed	-	19/12/2012	19/12/2012
Mass / Dimension of Sample	-	17x16x7mm	95x75x5mm
Sample Description	-	Black shiny brittle bituminous material	Beige layered fibre cement material
Asbestos ID in materials	-	No asbestos detected	No asbestos detected

Metals in Water - Dissolved		
Our Reference:	UNITS	83208-68
Your Reference	----------	RB01
Depth	----------	-
Date Sampled		13/12/2012
Type of sample		Water
Date digested	-	17/12/2012
Date analysed	-	17/12/2012
Arsenic - Dissolved	mg/L	<0.05
Cadmium - Dissolved	mg/L	<0.01
Chromium - Dissolved	mg/L	<0.01
Copper - Dissolved	mg/L	<0.01
Lead - Dissolved	mg/L	<0.03
Mercury - Dissolved	mg/L	<0.0005
Nickel - Dissolved	mg/L	<0.02
Zinc - Dissolved	mg/L	<0.02

vTRH(C6-C10)/BTEXN in Water		
Our Reference:	UNITS	83208-69
Your Reference	----------	TS
Depth	----------	-
Date Sampled		13/12/2012
Type of sample		Water
Date extracted	-	17/12/2012
Date analysed	-	18/12/2012
Benzene	µg/L	103%
Toluene	µg/L	109%
Ethylbenzene	µg/L	111%
m+p-xylene	µg/L	113%
o-xylene	µg/L	112%
Surrogate Dibromofluoromethane	%	102
Surrogate toluene-d8	%	99
Surrogate 4-BFB	%	104

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 draft Guideline on Investigation Levels for Soil and Groundwater.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 draft Guideline on Investigation Levels for Soil and Groundwater.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM draft B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/12/2012	83208-1	17/12/2012 || 17/12/2012	LCS-3	17/12/2012
Date analysed	-			18/12/2012	83208-1	18/12/2012 || 18/12/2012	LCS-3	18/12/2012
TRH C_6 - C_9	mg/kg	25	Org-016	<25	83208-1	<25 || <25	LCS-3	122%
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	83208-1	<25 || <25	LCS-3	122%
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	25	Org-016	[NT]	83208-1	<25 || <25	[NR]	[NR]
Benzene	mg/kg	0.2	Org-016	<0.2	83208-1	<0.2 || <0.2	LCS-3	130%
Toluene	mg/kg	0.5	Org-016	<0.5	83208-1	<0.5 || <0.5	LCS-3	124%
Ethylbenzene	mg/kg	1	Org-016	<1	83208-1	<1 || <1	LCS-3	106%
m+p-xylene	mg/kg	2	Org-016	<2	83208-1	<2 || <2	LCS-3	124%
o-Xylene	mg/kg	1	Org-016	<1	83208-1	<1 || <1	LCS-3	126%
naphthalene	mg/kg	1	Org-014	<1	83208-1	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	117	83208-1	121 || 117 || RPD: 3	LCS-3	118%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/12/2012	83208-1	17/12/2012 || 17/12/2012	LCS-3	17/12/2012
Date analysed	-			18/12/2012	83208-1	18/12/2012 || 18/12/2012	LCS-3	18/12/2012
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	83208-1	<50 || <50	LCS-3	96%
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	83208-1	<100 || <100	LCS-3	108%
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	83208-1	<100 || <100	LCS-3	91%
TRH>C_{10}-C_{16}	mg/kg	50	Org-003	<50	83208-1	<50 || <50	LCS-3	96%
TRH>C_{10} - C_{16} less Naphthalene (F2)	mg/kg	50	Org-003	[NT]	83208-1	<50 || <50	[NR]	[NR]
TRH>C_{16}-C_{34}	mg/kg	100	Org-003	<100	83208-1	<100 || <100	LCS-3	91%
TRH>C_{34}-C_{40}	mg/kg	100	Org-003	<100	83208-1	<100 || <100	LCS-3	98%
Surrogate o-Terphenyl	%		Org-003	94	83208-1	101 || 97 || RPD: 4	LCS-3	103%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/12/2012	83208-1	17/12/2012 || 17/12/2012	LCS-3	17/12/2012
Date analysed	-			18/12/2012	83208-1	18/12/2012 || 18/12/2012	LCS-3	18/12/2012
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	0.1 || <0.1	LCS-3	107%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	<0.1 || <0.1	LCS-3	109%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	0.5 || 0.5 || RPD: 0	LCS-3	106%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	0.1 || 0.1 || RPD: 0	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	1.2 || 1.2 || RPD: 0	LCS-3	106%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	1.3 || 1.2 || RPD: 8	LCS-3	106%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	0.6 || 0.6 || RPD: 0	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	0.7 || 0.6 || RPD: 15	LCS-3	108%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	83208-1	1.3 || 1.2 || RPD: 8	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	83208-1	0.87 || 0.82 || RPD: 6	LCS-3	117%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	0.5 || 0.5 || RPD: 0	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	83208-1	0.5 || 0.5 || RPD: 0	[NR]	[NR]
Benzo(a)pyrene TEQ	mg/kg	0.5	Org-012 subset	[NT]	83208-1	1 || 1 || RPD: 0	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012 subset	108	83208-1	120 || 105 || RPD: 13	LCS-3	100%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/12/2012	83208-1	17/12/2012 || 17/12/2012	LCS-3	17/12/2012
Date analysed	-			19/12/2012	83208-1	19/12/2012 || 19/12/2012	LCS-3	19/12/2012
HCB	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	LCS-3	105%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	LCS-3	92%
Heptachlor	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	LCS-3	88%
delta-BHC	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	LCS-3	90%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	LCS-3	94%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	LCS-3	98%
Dieldrin	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	LCS-3	97%
Endrin	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	LCS-3	88%
pp-DDD	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	LCS-3	84%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	LCS-3	94%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	92	83208-1	97 || 88 || RPD: 10	LCS-3	78%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/12/2012	83208-1	17/12/2012 || 17/12/2012	LCS-3	17/12/2012
Date analysed	-			19/12/2012	83208-1	19/12/2012 || 19/12/2012	LCS-3	19/12/2012
Diazinon	mg/kg	0.1	Org-008	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	Org-008	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	Org-008	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	83208-1	<0.1 || <0.1	LCS-3	85%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	83208-1	<0.1 || <0.1	LCS-3	84%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	83208-1	<0.1 || <0.1	LCS-3	88%
Surrogate TCMX	%		Org-008	92	83208-1	97 || 88 || RPD: 10	LCS-3	73%

QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/12/2012	83208-1	17/12/2012 || 17/12/2012	LCS-3	17/12/2012
Date analysed	-			19/12/2012	83208-1	19/12/2012 || 19/12/2012	LCS-3	19/12/2012
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	83208-1	<0.1 || <0.1	LCS-3	104%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	83208-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	92	83208-1	97 || 88 || RPD: 10	LCS-3	81%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date digested	-			17/12/2012	83208-1	17/12/2012 || 17/12/2012	LCS-1	17/12/2012
Date analysed	-			17/12/2012	83208-1	17/12/2012 || 17/12/2012	LCS-1	17/12/2012
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	83208-1	<4 || <4	LCS-1	103%
Cadmium	mg/kg	0.5	Metals-020 ICP-AES	<0.5	83208-1	<0.5 || <0.5	LCS-1	98%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	83208-1	5 || 5 || RPD: 0	LCS-1	100%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	83208-1	25 || 26 || RPD: 4	LCS-1	97%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	83208-1	370 || 370 || RPD: 0	LCS-1	104%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	83208-1	0.2 || 0.1 || RPD: 67	LCS-1	98%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	83208-1	4 || 4 || RPD: 0	LCS-1	98%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	83208-1	130 || 130 || RPD: 0	LCS-1	97%

QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]

QUALITY CONTROL Asbestos ID - soils	UNITS	PQL	METHOD	Blank
Date analysed	-			[NT]

QUALITY CONTROL Asbestos ID - materials	UNITS	PQL	METHOD	Blank
Date analysed	-			[NT]

QUALITY CONTROL Metals in Water - Dissolved	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date digested	-			17/12/2012	[NT]	[NT]	LCS-W1	17/12/2012
Date analysed	-			17/12/2012	[NT]	[NT]	LCS-W1	17/12/2012
Arsenic - Dissolved	mg/L	0.05	Metals-020 ICP-AES	<0.05	[NT]	[NT]	LCS-W1	100%
Cadmium - Dissolved	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	98%
Chromium - Dissolved	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	101%
Copper - Dissolved	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	101%
Lead - Dissolved	mg/L	0.03	Metals-020 ICP-AES	<0.03	[NT]	[NT]	LCS-W1	98%
Mercury - Dissolved	mg/L	0.0005	Metals-021 CV-AAS	<0.0005	[NT]	[NT]	LCS-W1	96%
Nickel - Dissolved	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[NT]	LCS-W1	103%
Zinc - Dissolved	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[NT]	LCS-W1	101%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			17/12/2012	[NT]	[NT]	LCS-W1	17/12/2012
Date analysed	-			18/12/2012	[NT]	[NT]	LCS-W1	18/12/2012
TRHC$_6$ - C$_9$	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	107%
TRHC$_6$ - C$_{10}$	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	107%
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	106%
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	107%
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	107%
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	LCS-W1	107%
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	106%
Naphthalene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluoromethane	%		Org-016	98	[NT]	[NT]	LCS-W1	94%
Surrogate toluene-d8	%		Org-016	89	[NT]	[NT]	LCS-W1	101%
Surrogate 4-BFB	%		Org-016	95	[NT]	[NT]	LCS-W1	100%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83208-10	17/12/2012
Date analysed	-	[NT]	[NT]	83208-10	18/12/2012
TRHC$_6$ - C$_9$	mg/kg	[NT]	[NT]	83208-10	119%
TRHC$_6$ - C$_{10}$	mg/kg	[NT]	[NT]	83208-10	119%
vTPH C$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	[NT]	[NT]	83208-10	128%
Toluene	mg/kg	[NT]	[NT]	83208-10	120%
Ethylbenzene	mg/kg	[NT]	[NT]	83208-10	103%
m+p-xylene	mg/kg	[NT]	[NT]	83208-10	122%
o-Xylene	mg/kg	[NT]	[NT]	83208-10	124%
naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	83208-10	116%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83208-10	17/12/2012
Date analysed	-	[NT]	[NT]	83208-10	18/12/2012
TRHC_{10} - C_{14}	mg/kg	[NT]	[NT]	83208-10	96%
TRHC_{15} - C_{28}	mg/kg	[NT]	[NT]	83208-10	117%
TRHC_{29} - C_{36}	mg/kg	[NT]	[NT]	83208-10	91%
TRH>C_{10}-C_{16}	mg/kg	[NT]	[NT]	83208-10	96%
TRH>C_{10} - C_{16} less Naphthalene (F2)	mg/kg	[NT]	[NT]	[NR]	[NR]
TRH>C_{16}-C_{34}	mg/kg	[NT]	[NT]	83208-10	91%
TRH>C_{34}-C_{40}	mg/kg	[NT]	[NT]	83208-10	80%
Surrogate o-Terphenyl	%	[NT]	[NT]	83208-10	106%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83208-10	17/12/2012
Date analysed	-	[NT]	[NT]	83208-10	18/12/2012
Naphthalene	mg/kg	[NT]	[NT]	83208-10	115%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	83208-10	113%
Phenanthrene	mg/kg	[NT]	[NT]	83208-10	126%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	83208-10	#
Pyrene	mg/kg	[NT]	[NT]	83208-10	#
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	83208-10	137%
Benzo(b+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	83208-10	#
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene TEQ	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%	[NT]	[NT]	83208-10	105%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83208-10	17/12/2012
Date analysed	-	[NT]	[NT]	83208-10	19/12/2012
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	83208-10	88%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	83208-10	92%
Heptachlor	mg/kg	[NT]	[NT]	83208-10	78%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	83208-10	92%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	83208-10	97%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	83208-10	102%
Dieldrin	mg/kg	[NT]	[NT]	83208-10	100%
Endrin	mg/kg	[NT]	[NT]	83208-10	88%
pp-DDD	mg/kg	[NT]	[NT]	83208-10	87%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	83208-10	96%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	83208-10	79%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83208-10	17/12/2012
Date analysed	-	[NT]	[NT]	83208-10	19/12/2012
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	[NT]	[NT]	83208-10	96%
Fenitrothion	mg/kg	[NT]	[NT]	83208-10	93%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	83208-10	99%
Surrogate TCMX	%	[NT]	[NT]	83208-10	83%

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83208-10	17/12/2012
Date analysed	-	[NT]	[NT]	83208-10	19/12/2012
Arochlor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	[NT]	[NT]	83208-10	108%
Arochlor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	83208-10	92%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	83208-37	17/12/2012 || 17/12/2012	LCS-2	17/12/2012
Date analysed	-	83208-37	17/12/2012 || 17/12/2012	LCS-2	17/12/2012
Arsenic	mg/kg	83208-37	<4 || <4	LCS-2	103%
Cadmium	mg/kg	83208-37	<0.5 || <0.5	LCS-2	100%
Chromium	mg/kg	83208-37	8 || 8 || RPD: 0	LCS-2	102%
Copper	mg/kg	83208-37	30 || 30 || RPD: 0	LCS-2	99%
Lead	mg/kg	83208-37	1300 || 3200 || RPD: 84	LCS-2	104%
Mercury	mg/kg	83208-37	0.9 || 1.0 || RPD: 11	LCS-2	102%
Nickel	mg/kg	83208-37	3 || 4 || RPD: 29	LCS-2	98%
Zinc	mg/kg	83208-37	170 || 180 || RPD: 6	LCS-2	97%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	83208-10	17/12/2012
Date analysed	-	[NT]	[NT]	83208-10	17/12/2012
Arsenic	mg/kg	[NT]	[NT]	83208-10	116%
Cadmium	mg/kg	[NT]	[NT]	83208-10	100%
Chromium	mg/kg	[NT]	[NT]	83208-10	109%
Copper	mg/kg	[NT]	[NT]	83208-10	111%
Lead	mg/kg	[NT]	[NT]	83208-10	115%
Mercury	mg/kg	[NT]	[NT]	83208-10	100%
Nickel	mg/kg	[NT]	[NT]	83208-10	102%
Zinc	mg/kg	[NT]	[NT]	83208-10	113%

Report Comments:

Asbestos in Soil: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicativeof the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteriae has been exceeded for 83208-37 for Pb. Therefore a triplicate result has been issued as laboratory sample number 83208-70.

PAHs in Soil: # Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference.

PCB's in soil: PQL has been raised due to interference from analytes(other than those being tested) in the sample/s.

Asbestos ID was analysed by Approved Identifier:	Kim Femia, Paul Ching
Asbestos ID was authorised by Approved Signatory:	Lulu Guo

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

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CERTIFICATE OF ANALYSIS 83208-A

Client:
JBS Environmental Pty Ltd
P.O. Box 940
MASCOT
NSW 1460

Attention: C Roberts M Hodgins

Sample log in details:

Your Reference:	**42458, War Memorial Hospital**
No. of samples:	Additional Testing on 10 Soils
Date samples received / completed instructions received	14/12/2012 / 02/01/13

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	9/01/13 / 9/01/13
Date of Preliminary Report:	Not issued

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Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Nancy Zhang
Chemist

Rhian Morgan
Reporting Supervisor

Jeremy Faircloth
Chemist

NATA
ACCREDITED FOR TECHNICAL COMPETENCE

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	83208-A-11 HA03 0.2-0.3 12/12/2012 Soil	83208-A-18 HA05 0.2-0.3 13/12/2012 Soil	83208-A-35 HA11 0.2-0.3 13/12/2012 Soil
Date extracted	-	03/01/2012	03/01/2012	03/01/2012
Date analysed	-	03/01/2012	03/01/2012	03/01/2012
Naphthalene	mg/kg	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.8	0.4	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.4	0.2	<0.1
Phenanthrene	mg/kg	5.8	2.6	0.2
Anthracene	mg/kg	1.4	0.5	<0.1
Fluoranthene	mg/kg	9.1	4.3	0.8
Pyrene	mg/kg	9.1	4.5	0.9
Benzo(a)anthracene	mg/kg	4.5	2.1	0.4
Chrysene	mg/kg	4.1	2.0	0.4
Benzo(b+k)fluoranthene	mg/kg	6.4	3.4	0.9
Benzo(a)pyrene	mg/kg	4.4	2.4	0.59
Indeno(1,2,3-c,d)pyrene	mg/kg	1.7	1.0	0.3
Dibenzo(a,h)anthracene	mg/kg	0.4	0.3	<0.1
Benzo(g,h,i)perylene	mg/kg	1.6	1.0	0.3
Benzo(a)pyrene TEQ	mg/kg	6.0	3.0	1
Surrogate p-Terphenyl-d_{14}	%	92	97	99

Acid Extractable metals in soil				
Our Reference:	UNITS	83208-A-35	83208-A-38	83208-A-47
Your Reference	----------	HA11	HA12	HA15
Depth	----------	0.2-0.3	0.2-0.3	0.2-0.3
Date Sampled		13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil
Date digested	-	03/01/2013	03/01/2013	03/01/2013
Date analysed	-	03/01/2013	03/01/2013	03/01/2013
Arsenic	mg/kg	<4	<4	5
Cadmium	mg/kg	<0.5	<0.5	<0.5
Chromium	mg/kg	4	6	11
Copper	mg/kg	25	15	45
Lead	mg/kg	570	770	1,200
Mercury	mg/kg	0.3	0.6	0.7
Nickel	mg/kg	7	3	5
Zinc	mg/kg	160	98	230

Moisture						
Our Reference:	UNITS	83208-A-11	83208-A-18	83208-A-35	83208-A-38	83208-A-47
Your Reference	----------	HA03	HA05	HA11	HA12	HA15
Depth	----------	0.2-0.3	0.2-0.3	0.2-0.3	0.2-0.3	0.2-0.3
Date Sampled		12/12/2012	13/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/01/2013	03/01/2013	03/01/2013	03/01/2013	03/01/2013
Date analysed	-	04/01/2013	04/01/2013	04/01/2013	04/01/2013	04/01/2013
Moisture	%	11	21	8.5	9.5	12

Metals in TCLP USEPA1311 Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	83208-A-17 HA05 0.0-0.1 13/12/2012 Soil	83208-A-34 HA11 0.0-0.1 13/12/2012 Soil	83208-A-37 HA12 0.0-0.1 13/12/2012 Soil	83208-A-46 HA15 0.0-0.1 13/12/2012 Soil
Date extracted	-	04/01/2013	04/01/2013	04/01/2013	04/01/2013
Date analysed	-	[NA]	04/01/2013	04/01/2013	04/01/2013
pH of soil for fluid# determ.	pH units	6.7	6.2	6.0	7.4
pH of soil for fluid # determ. (acid)	pH units	1.6	1.6	1.6	1.6
Extraction fluid used	-	1	1	1	1
pH of final Leachate	pH units	5.0	4.9	4.9	5.0
Arsenic in TCLP	mg/L	[NA]	<0.05	<0.05	<0.05
Cadmium in TCLP	mg/L	[NA]	<0.01	<0.01	<0.01
Chromium in TCLP	mg/L	[NA]	<0.01	<0.01	<0.01
Copper in TCLP	mg/L	[NA]	<0.01	<0.01	0.03
Lead in TCLP	mg/L	[NA]	1	1.1	0.7
Mercury in TCLP	mg/L	[NA]	<0.0005	<0.0005	<0.0005
Nickel in TCLP	mg/L	[NA]	0.03	<0.02	<0.02
Zinc in TCLP	mg/L	[NA]	6.1	1.2	0.9

PAHs in TCLP (USEPA 1311)			
Our Reference:	UNITS	83208-A-17	83208-A-34
Your Reference	----------	HA05	HA11
Depth	----------	0.0-0.1	0.0-0.1
Date Sampled		13/12/2012	13/12/2012
Type of sample		Soil	Soil
Date extracted	-	04/01/2012	04/01/2012
Date analysed	-	04/01/2012	04/01/2012
Naphthalene in TCLP	mg/L	<0.001	<0.001
Acenaphthylene in TCLP	mg/L	<0.001	<0.001
Acenaphthene in TCLP	mg/L	<0.001	<0.001
Fluorene in TCLP	mg/L	<0.001	<0.001
Phenanthrene in TCLP	mg/L	<0.001	<0.001
Anthracene in TCLP	mg/L	<0.001	<0.001
Fluoranthene in TCLP	mg/L	<0.001	<0.001
Pyrene in TCLP	mg/L	<0.001	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001	<0.001
Chrysene in TCLP	mg/L	<0.001	<0.001
Benzo(b+k)fluoranthene in TCLP	mg/L	<0.002	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001	<0.001
Surrogate p-Terphenyl-d_{14}	%	86	95

Metals-ASLP Neutral (ICP-MS)						
Our Reference:	UNITS	83208-A-10	83208-A-17	83208-A-34	83208-A-37	83208-A-46
Your Reference	----------	HA03	HA05	HA11	HA12	HA15
Depth	----------	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		12/12/2012	13/12/2012	13/12/2012	13/12/2012	13/12/2012
Type of sample		Soil & Material	Soil	Soil	Soil	Soil
Date extracted	-	04/01/2013	04/01/2013	04/01/2013	04/01/2013	04/01/2013
Date analysed	-	[NA]	[NA]	04/01/2013	04/01/2013	04/01/2013
pH of final Leachate	pH units	6.0	6.5	6.3	6.1	7.5
Arsenic in ASLP	µg/L	[NA]	[NA]	1	<1	2
Cadmium in ASLP	µg/L	[NA]	[NA]	<0.1	<0.1	<0.1
Chromium in ASLP	µg/L	[NA]	[NA]	<1	<1	<1
Copper in ASLP	µg/L	[NA]	[NA]	4	5	7
Lead in ASLP	µg/L	[NA]	[NA]	11	33	9
Mercury in ASLP	µg/L	[NA]	[NA]	<0.050	0.060	0.20
Nickel in ASLP	µg/L	[NA]	[NA]	1	<1	<1
Zinc in ASLP	µg/L	[NA]	[NA]	120	41	8

PAHs in water leach Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	83208-A-10 HA03 0.0-0.1 12/12/2012 Soil & Material	83208-A-17 HA05 0.0-0.1 13/12/2012 Soil	83208-A-34 HA11 0.0-0.1 13/12/2012 Soil
Date extracted	-	04/01/2012	04/01/2012	04/01/2012
Date analysed	-	04/01/2012	04/01/2012	04/01/2012
Naphthalene in ASLP	mg/L	<0.001	<0.001	<0.001
Acenaphthylene in ASLP	mg/L	<0.001	<0.001	<0.001
Acenaphthene in ASLP	mg/L	<0.001	<0.001	<0.001
Fluorene in ASLP	mg/L	<0.001	<0.001	<0.001
Phenanthrene in ASLP	mg/L	<0.001	<0.001	<0.001
Anthracene in ASLP	mg/L	<0.001	<0.001	<0.001
Fluoranthene in ASLP	mg/L	<0.001	<0.001	<0.001
Pyrene in ASLP	mg/L	<0.001	<0.001	<0.001
Benzo(a)anthracene in ASLP	mg/L	<0.001	<0.001	<0.001
Chrysene in ASLP	mg/L	<0.001	<0.001	<0.001
Benzo(b+k)fluoranthene in ASLP	mg/L	<0.002	<0.002	<0.002
Benzo(a)pyrene in ASLP	mg/L	<0.001	<0.001	<0.001
Indeno(1,2,3-c,d)pyrene - ASLP	mg/L	<0.001	<0.001	<0.001
Dibenzo(a,h)anthracene in ASLP	mg/L	<0.001	<0.001	<0.001
Benzo(g,h,i)perylene in ASLP	mg/L	<0.001	<0.001	<0.001
Surrogate p-Terphenyl-d_{14}	%	90	99	92

Method ID	Methodology Summary
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM draft B1 Guideline on Investigation Levels for Soil and Groundwater.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439 and USEPA 1311.
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP).
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA 22nd ED, 4500-H+.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Org-012 subset	Leachates are extracted with Dichloromethane and analysed by GC-MS.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Metals-022 ICP-MS	Determination of various metals by ICP-MS following leaching using neutralised deionised water by AS 4439.3 - 1997.
Metals-021 ASLP	Determination of Mercury by Cold Vapour AAS following neutral water leaching by AS 4439.3 - 1997.
Org-012 ASLP	ASLP Leachates are extracted with Dichloromethane and analysed by GC-MS.

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			03/01/2012	[NT]	[NT]	LCS-2	03/01/2012
Date analysed	-			03/01/2012	[NT]	[NT]	LCS-2	03/01/2012
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-2	117%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-2	120%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-2	121%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-2	124%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-2	127%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-2	110%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	[NT]	[NT]	LCS-2	110%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene TEQ	mg/kg	0.5	Org-012 subset	[NT]	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012 subset	102	[NT]	[NT]	LCS-2	93%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date digested	-			03/01/2013	[NT]	[NT]	LCS-1	03/01/2013
Date analysed	-			03/01/2013	[NT]	[NT]	LCS-1	03/01/2013
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	LCS-1	94%
Cadmium	mg/kg	0.5	Metals-020 ICP-AES	<0.5	[NT]	[NT]	LCS-1	96%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	95%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	96%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	94%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	LCS-1	104%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	97%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	98%

QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]

QUALITY CONTROL Metals in TCLP USEPA1311	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			04/01/2012	83208-A-46	04/01/2013 || 04/01/2013	LCS-W1	07/01/2013
Date analysed	-			04/01/2012	83208-A-46	04/01/2013 || 04/01/2013	LCS-W1	07/01/2013
Arsenic in TCLP	mg/L	0.05	Metals-020 ICP-AES	<0.05	83208-A-46	<0.05 || <0.05	LCS-W1	106%
Cadmium in TCLP	mg/L	0.01	Metals-020 ICP-AES	<0.01	83208-A-46	<0.01 || <0.01	LCS-W1	97%
Chromium in TCLP	mg/L	0.01	Metals-020 ICP-AES	<0.01	83208-A-46	<0.01 || <0.01	LCS-W1	100%
Copper in TCLP	mg/L	0.01	Metals-020 ICP-AES	<0.01	83208-A-46	0.03 || 0.03 || RPD: 0	LCS-W1	100%
Lead in TCLP	mg/L	0.03	Metals-020 ICP-AES	<0.03	83208-A-46	0.7 || 0.7 || RPD: 0	LCS-W1	96%
Mercury in TCLP	mg/L	0.0005	Metals-021 CV-AAS	<0.0005	83208-A-46	<0.0005 || <0.0005	LCS-W1	116%
Nickel in TCLP	mg/L	0.02	Metals-020 ICP-AES	<0.02	83208-A-46	<0.02 || <0.02	LCS-W1	99%
Zinc in TCLP	mg/L	0.02	Metals-020 ICP-AES	<0.02	83208-A-46	0.9 || 0.9 || RPD: 0	LCS-W1	101%

QUALITY CONTROL PAHs in TCLP (USEPA 1311)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			04/01/2012	[NT]	[NT]	LCS-W2	04/01/2012
Date analysed	-			04/01/2012	[NT]	[NT]	LCS-W2	04/01/2012
Naphthalene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	LCS-W2	82%
Acenaphthylene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Acenaphthene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Fluorene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	LCS-W2	82%
Phenanthrene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	LCS-W2	85%
Anthracene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Fluoranthene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	LCS-W2	83%
Pyrene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	LCS-W2	83%
Benzo(a)anthracene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Chrysene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	LCS-W2	82%
Benzo(b+k)fluoranthene in TCLP	mg/L	0.002	Org-012 subset	<0.002	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	LCS-W2	80%
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene in TCLP	mg/L	0.001	Org-012 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012	66	[NT]	[NT]	LCS-W2	68%

QUALITY CONTROL Metals-ASLP Neutral (ICP-MS)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			07/01/2013	83208-A-34	04/01/2013 || 04/01/2013	LCS-W1	07/01/2013
Date analysed	-			07/01/2013	83208-A-34	04/01/2013 || 04/01/2013	LCS-W1	07/01/2013
Arsenic in ASLP	µg/L	1	Metals-022 ICP-MS	<1	83208-A-34	1 || 1 || RPD: 0	LCS-W1	96%
Cadmium in ASLP	µg/L	0.1	Metals-022 ICP-MS	<0.1	83208-A-34	<0.1 || <0.1	LCS-W1	98%
Chromium in ASLP	µg/L	1	Metals-022 ICP-MS	<1	83208-A-34	<1 || <1	LCS-W1	86%
Copper in ASLP	µg/L	1	Metals-022 ICP-MS	<1	83208-A-34	4 || 3 || RPD: 29	LCS-W1	90%
Lead in ASLP	µg/L	1	Metals-022 ICP-MS	<1	83208-A-34	11 || 8 || RPD: 32	LCS-W1	100%
Mercury in ASLP	µg/L	0.05	Metals-021 ASLP	<0.050	83208-A-34	<0.050 || <0.050	LCS-W1	96%
Nickel in ASLP	µg/L	1	Metals-022 ICP-MS	<1	83208-A-34	1 || <1	LCS-W1	94%
Zinc in ASLP	µg/L	1	Metals-022 ICP-MS	<1	83208-A-34	120 || 110 || RPD: 9	LCS-W1	96%

QUALITY CONTROL PAHs in water leach	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			04/01/2013	[NT]	[NT]	LCS-W2	04/01/2012
Date analysed	-			04/01/2013	[NT]	[NT]	LCS-W2	04/01/2012
Naphthalene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	LCS-W2	82%
Acenaphthylene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Acenaphthene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Fluorene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	LCS-W2	82%
Phenanthrene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	LCS-W2	85%
Anthracene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Fluoranthene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	LCS-W2	83%
Pyrene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	LCS-W2	83%
Benzo(a)anthracene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Chrysene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	LCS-W2	82%
Benzo(b+k)fluoranthene in ASLP	mg/L	0.002	Org-012 ASLP	<0.002	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	LCS-W2	80%

QUALITY CONTROL PAHs in water leach	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Indeno(1,2,3-c,d)pyrene - ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene in ASLP	mg/L	0.001	Org-012 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012	66	[NT]	[NT]	LCS-W2	68%

QUALITY CONTROL Metals-ASLP Neutral (ICP-MS)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83208-A-37	07/01/2013
Date analysed	-	[NT]	[NT]	83208-A-37	07/01/2013
Arsenic in ASLP	µg/L	[NT]	[NT]	83208-A-37	98%
Cadmium in ASLP	µg/L	[NT]	[NT]	83208-A-37	101%
Chromium in ASLP	µg/L	[NT]	[NT]	83208-A-37	94%
Copper in ASLP	µg/L	[NT]	[NT]	83208-A-37	92%
Lead in ASLP	µg/L	[NT]	[NT]	83208-A-37	110%
Mercury in ASLP	µg/L	[NT]	[NT]	83208-A-37	108%
Nickel in ASLP	µg/L	[NT]	[NT]	83208-A-37	96%
Zinc in ASLP	µg/L	[NT]	[NT]	83208-A-37	97%

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

CHAIN OF CUSTODY

JBS ENVIRONMENTAL

PROJECT NO.: 42458
PROJECT NAME: War Memorial Hospital
SEND REPORT TO: C. Roberts, M. Hodgins — SEND INVOICE TO: Grace Ng
DATE NEEDED BY: Standard TAT
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

LABORATORY BATCH NO.:
SAMPLERS: M. Hodgins
PHONE: 02 8338 1011 — EMAIL: mhodgins@jbsgroup.com.au
QC LEVEL: NEPM 1999 (X) — croberts@jbsgroup.com.au

	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Combo 6A	8 metals	TPH/BTEX	PAHs	OCP/OPP	PCBs	Asbestos							NOTES
1	HA01 0.0-0.1	soil	12/12/12		Jar, bag + ice		X													
2	HA01 0.2-0.3																			
3	HA01 0.4-0.5																			
4	HA01 0.6-0.7																			
5	HA02 0.0-0.1							X												
6	HA02 0.2-0.3																			
7	HA02 0.4-0.5																			
8	HA02 0.6-0.7																			
9	HA02 0.9-1.0																			
10	HA03 0.0-0.1						X													
11	HA03 0.2-0.3																			
12	HA03 0.4-0.5																			
13	HA03 0.8-0.9																			
14	HA03 1.0-1.1																			
15	HA04 0.0-0.1							X												
16	HA04 0.2-0.3		12/12/12																	
17	HA05 0.0-0.1		13/12/12		Jar, bag + ice		X													
18	HA05 0.2-0.3		13/12/12		Jar, bag + ice															

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 8200

Job No: 83208
Date Received: 14/12/12
Time Received: 1800
Received by: WP
Temp: Cool/Ambient
Cooling: Ice/icepack
Security: Intact/Broken/None

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY
NAME: Michelle Baldwin DATE: 14/12/12	CONSIGNMENT NOTE NO.	NAME: Morgan Philp DATE: 14/12/12 @ 1800	COOLER SEAL - Yes..... No..... Intact..... Broken.....
OF: JBS Environmental	TRANSPORT CO.	OF: ELS	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

Container & Preservative Codes: P = Plastic; J = Soil Jar; G = Glass Bottle; N = Nitric Acid Preval.; C = Sodium Hydroxide Preval; VC = Hydrochloric Acid Preval Vial; VS = Sulfuric Acid Preval Vial; S = Sulfuric Acid Preval; Z = Zinc Preval; E = EDTA Preval; SF = Sterile Bottle; O = Other

JBS Environmental Pty Ltd ABN 67 071 842 638
Phone: (02) 8338-1011
Fax (02) 8338-1700
128 Orkiandan St, MASCOT NSW 2020
PO Box 940 MASCOT NSW 1460
www.jbsgroup.com.au

CHAIN OF CUSTODY

JBS ENVIRONMENTAL

PROJECT NO.: 42458
PROJECT NAME: War Memorial Hospital
SEND REPORT TO: C. Roberts, M. Hodgins — SEND INVOICE TO: Grace Ng
DATE NEEDED BY: Standard TAT

LABORATORY BATCH NO.
SAMPLERS: M. Hodgins
PHONE: 02 8338 1011 — EMAIL: mhodgins@jbsgroup.com.au
QC LEVEL: NEPM 1999 (X) — croberts@jbsgroup.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Combo 6A	8 metals	TPH/BTEX	PAHs	OCPs/OPPs	PCBs	Asbestos	NOTES
19	HA05 0.4-0.5	soil	13/12/12		jar, bag + ice									
20	HA06 0.0-0.1							X						
21	HA07 0.0-0.1							X						
22	HA07 0.2-0.3													
23	HA07 0.4-0.5													
24	HA08 0.0-0.1							X						
25	HA08 0.2-0.3													
26	HA08 0.3-0.4													
27	HA09 0.0-0.1							X						
28	HA09 0.2-0.3													
29	HA09 0.4-0.5													
30	HA10 0.0-0.1						X							
31	HA10 0.2-0.3													
32	HA10 0.4-0.5													
33	HA10 0.6-0.7													
34	HA11 0.0-0.1						X							
35	HA11 0.2-0.3													
36	HA11 0.3-0.4													

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: Michael Hodgins DATE: 14/12/12 OF: JBS Environmental	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: Morgan Philp DATE: 14/12/12 OF: ELS # 85208 1800	COOLER SEAL – Yes ..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C
NAME: DATE: OF:	CONSIGNMENT NOTE NO. TRANSPORT CO	NAME: DATE: OF:	COOLER SEAL – Yes ..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C

Container & Preservative Codes: P = Plastic, J = Soil Jar, B = Glass Bottle; N = Nitric Acid Preval.; C = Sodium Hydroxide Preval; VC = Hydrochloric Acid Preval Vial; VS = Sulfuric Acid Preval Vial; S = Sulfuric Acid Preval, Z = Zinc Preval; E = EDTA Preval; ST = Sterile Bottle; O = Other

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CHAIN OF CUSTODY

JBS ENVIRONMENTAL

PROJECT NO.: 42458
PROJECT NAME: War Memorial Hospital
SEND REPORT TO: C. Roberts, M. Hodgins
SEND INVOICE TO: Grace Ng
DATE NEEDED BY: Standard TAT
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

LABORATORY BATCH NO.
SAMPLERS: M. Hodgins
PHONE: 02 8338 1011 EMAIL: mhodgins@jbsgroup.com.au
QC LEVEL: NEPM 1999 (X) croberts@jbsgroup.com.au

	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Contaminants	Z metals	TPH/BTEX	PAHs	OCs/OPs	PCBs	Asbestos	NOTES
37	HA12 00-0.1	Soil	13/12/18		bag/jar + ice			X						
38	HA12 0.2-0.3													
39	HA12 0.4-0.5													
40	HA12 0.9-1.0													
41	HA13 00-0.1							X						
42	HA13 0.2-0.3													
43	HA13 0.4-0.5													
44	HA13 0.8-0.9													
45	HA14 00-0.1						X							
46	HA15 00-0.1							X						
47	HA15 0.2-0.3													
48	HA15 0.4-0.5													
49	HA15 0.6-0.7													
50	HA16 00-0.1							X						
51	HA16 0.2-0.3													
52	HA16 0.4-0.5													
53	HA17 0.0-0.1													
54	HA17 0.2-0.3							X						

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: M Hodgins DATE: 14/12/18	CONSIGNMENT NOTE NO.	NAME: Morgan Philp DATE: 14/12/18	COOLER SEAL – Yes. .... No .... Intact ..... Broken .....
OF: JBS Environmental	TRANSPORT CO.	OF: ELS #83208 1800	COOLER TEMP. .... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL – Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP. ..... deg C

Containers & Preservatives Codes: P = Plastic; J = Soil Jar; G = Glass Bottle; N = Nitric Acid Preval; C = Sodium Hydroxide Preval; VC = Hydrochloric Acid Preval Vial; VS = Sulfuric Acid Preval Vial; S = Sulfuric Acid Preval; Z = Zinc Preval; E = EDTA Preval; ST = Sterile Bottle; O = Other

CHAIN OF CUSTODY

JBS ENVIRONMENTAL

PROJECT NO.: 42458 | LABORATORY BATCH NO.
PROJECT NAME: War Memorial Hospital | SAMPLERS M. Hodgins
SEND REPORT TO: C. Roberts, M. Hodgins | SEND INVOICE TO: Grace Ng | PHONE: 02 8338 1011 | EMAIL: mhodgins@jbsgroup.com.au
DATE NEEDED BY: Standard TAT | QC LEVEL: NEPM 1999 (X) | croberts@jbsgroup.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Jumbo 6H	Bonded/A	TPH/BTEX	OPH	OCPs/OPPs	PCBs	Asbestos								NOTES
S5	HA18 0.0-0.1	soil	13/12/12		bag/jar/ice		X														
S6	HA18 0.2-0.3							X	X	X											
S7	HA18 0.4-0.5							X	X	X											
S8	HA19 0.0-0.1							X													
S9	HA19 0.2-0.3																				
S10	HA20 0.0-0.1							X													
S11	HA20 0.2-0.3																				
S12	HA20 0.4-0.5																				
S13	ACM01	fragment	12/12/12		bag								X								

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: Mitchell Hodgins DATE: 13/12/12	CONSIGNMENT NOTE NO.	NAME: Morgan Philp DATE: 14/12/12	COOLER SEAL - Yes ... No ..... Intact ... Broken .....
OF: JBS Environmental	TRANSPORT CO.	OF: ELS # 83208 1800	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL - Yes ... No ... Intact ... Broken ...
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

Container & Preservative Codes: P = Plastic; J = Soil Jar; G = Glass Bottle, N = Nitric Acid Preval., C = Sodium Hydroxide Preval. VC = Hydrochloric Acid Preval Vial, VS = Sulfuric Acid Preval Vial, S = Sulfuric Acid Preval; Z = Zinc Preval; E = EDTA Preval, ST = Sterile Bottle, O = Other

JBS Environmental Pty Ltd ABN 67 071 842 638
Phone: (02) 8338-1011
Fax: (02) 8338-1700
128 O'Riordan St, MASCOT NSW 2020
PO Box 940 MASCOT NSW 1460
www.jbsgroup.com.au

CHAIN OF CUSTODY

JBS ENVIRONMENTAL

PROJECT NO.: 42458
PROJECT NAME: War Memorial Hospital
SEND REPORT TO: C. Roberts, M. Hodgins — SEND INVOICE TO: Grace Ng
DATE NEEDED BY: Standard TAT

LABORATORY BATCH NO.
SAMPLERS: M. Hodgins
PHONE: 02 8338 1011 — EMAIL: mhodgins@jbsgroup.com.au
QC LEVEL: NEPM 1999 (X) — croberts@jbsgroup.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Carb (C6-C9)	8 Metals	TPH/BTEX	NOTES
64	QC01	soil	12/12/12		Jar, bag + ice		X			
65	QC02	↓	13/12/12		↓			X		
66	QC03	↓	↓		↓					
67	QC04	↓	↓		↓					
68	RB01	water	↓					X		
69	TB	water	↓						X	

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: Michael Hodgins DATE: 14/12/12	CONSIGNMENT NOTE NO.	NAME: Morgan Philip DATE: 14/12/12	COOLER SEAL - Yes... No ... Intact ..... Broken .....
OF: JBS Environmental	TRANSPORT CO.	OF: ELS # 83208 1800	COOLER TEMP ..... deg C
NAME: DATE:	CONSIGNMENT NOTE NO.	NAME: DATE:	COOLER SEAL - Yes..... No ..... Intact ..... Broken .....
OF:	TRANSPORT CO	OF:	COOLER TEMP ..... deg C

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Preved.; C = Sodium Hydroxide Preved; VC = Hydrochloric Acid Preved Vial; VS = Sulfuric Acid Preved Vial; S = Sulfuric Acid Preved; Z = Zinc Preved; E = EDTA Preved; ST = Sterile Bottle; O = Other

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Phone: (02) 8338-1011
Fax: (02) 8338-1700
128 O'Riordan St, MASCOT NSW 2020
PO Box 940 MASCOT NSW 2460
www.jbsgroup.com.au

Yes we can do this although the PAH's will be out of holding time.

Regards,

Rhian Morgan | Reporting Supervisor ¦ Envirolab Services Pty Ltd

Great Chemistry.Great Service

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200 F 612 9910 6201
mailto:rmorgan@envirolab.com.au | http://www.envirolab.com.au

-----Original Message-----
From: Cathy Roberts [mailto:CRoberts@jbsgroup.com.au]
Sent: Wednesday, 2 January 2013 09:36
To: Rhian Morgan
Cc: Mitchell Hodgins
Subject: RE: Results for registration '83208 - 42458, War Memorial Hospital'

Hi Rhian,

Can I get some additional analyses done please? I need:

HA03-0.0-0.1 for ASLP PAHs
HA03-0.2-0.3 for PAHs
HA05-0.0-0.1 for ASLP and TCLP PAHs
HA05-0.2-0.3 for PAHs
~~HA06-0.3 for lead~~
HA11-0-0.1 for ASLP and TCLP PAHs and 8 metals
HA11-0.2-0.3 for PAHs and 8 metals
HA12-0-0.1 for ASLP and TCLP 8 metals
HA12-0.2-0.3 for 8 metals
HA15-0-0.1 for ASLP and TCLP 8 metals
HA15-0.2-0.3 for 8 metals

Envirolab Ref: 83208A
Due: 9/1/13
Std TAT.

Standard TAT is fine.

Thanks
Cathy

Cathy Roberts | Senior Environmental Sciertist | JBS Environmental Pty Ltd
128 O'Riordan St Mascot NSW | Level 1, 50 Margaret St Sydney NSW | PO Box 940 Mascot NSW 1460
T: 02 8338 1011 | F: 02 8338 1700 | M: 0401 530 177 www.jbsgroup.com.au Groundwater | Contaminated Land | Planning and Approvals | Auditing and Compliance | Hazardous Materials and Air Monitoring
*****
Please note: Our offices will be shut down from 22nd December 2012 until 2nd January 2013 for the Christmas and New Year break.
Our Mascot office will close permanently on 22nd December and when we re-open on 2nd January, our east coast operations will be operating soley from our new and larger City office located at Level 1, 50 Margaret Street, Sydney, 2000
*****
If you would like to send me large electronic files (>10MB), please use JBS Environmental's secure internet-based file delivery system located at http://dropbox.yousendit.com/JBSENVIRONMENTAL
This message is intended solely for the individual(s) and entity(s) addressed. It is confidential and may contain legally privileged information.

Please note that JBS Environmental Pty Ltd does not make any commitments through emails not confirmed by fax, letter or report.

-----Original Message-----
From: Rhian Morgan [mailto:RMorgan@envirolab.com.au]
Sent: Friday, 21 December 2012 11:44 AM
To: Cathy Roberts; Mitchell Hodgins; Reception
Subject: Results for registration '8320B - 42458, War Memorial Hospital'

Please refer to attached for:
a copy of the Certificate of Analysis
a copy of the Invoice
a copy of the COC
an excel file containing the results

See new info on: NEPM TRH Fractions (F1 & F2), Naphthalene reporting and Benzo(a)Pyrene TEQ

http://www.envirolabservices.com.au/downloads/editor/nepm-and-b-a-p-reporting.pdf

Please note that a hard copy will not be posted.

Enquiries should be made directly to:
Jacinta Hurst on jhurst@envirolabservices.com.au or Rhian Morgan on rmorgan@envirolabservices.com.au or David Springer on dspringer@envirolabservices.com.au or
Tania Notaras on tnotaras@envirolabservices.com.au

Regards

Envirolab Services
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
www.envirolabservices.com.au

Regards,

Rhian Morgan | Reporting Supervisor | Envirolab Services Pty Ltd

Great Chemistry.Great Service

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200 F 612 9910 6201
mailto:rmorgan@envirolab.com.au | http://www.envirolab.com.au

Regards,

Rhian Morgan | Reporting Supervisor | Envirolab Services Pty Ltd

Great Chemistry.Great Service

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200 F 612 9910 6201
rmorgan@envirolab.com.au | www.envirolab.com.au

Aileen Hie

From: Rhian Morgan
Sent: Wednesday, 2 January 2013 9:43 AM
To: Aileen Hie
Subject: FW: Results for registration '83208 - 42458, War Memorial Hospital'

Regards,

Rhian Morgan | Reporting Supervisor | Envirolab Services Pty Ltd

Great Chemistry.Great Service

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200 F 612 9910 6201
mailto:rmorgan@envirolab.com.au | http://www.envirolab.com.au

-----Original Message-----
From: Cathy Roberts [mailto:CRoberts@jbsgroup.com.au]
Sent: Wednesday, 2 January 2013 09:43
To: Rhian Morgan
Cc: Mitchell Hodgins
Subject: RE: Results for registration '83208 - 42458, War Memorial Hospital'

Yeah that's fine, ta

Cathy Roberts | Senior Environmental Scientist | JBS Environmental Pty Ltd
128 O'Riordan St Mascot NSW | Level 1, 50 Margaret St Sydney NSW | PO Box 940 Mascot NSW 1460
T: 02 8338 1011 | F: 02 8338 1700 | M: 0401 530 177 www.jbsgroup.com.au Groundwater | Contaminated Land | Planning and Approvals | Auditing and Compliance | Hazardous Materials and Air Monitoring
*****
Please note: Our offices will be shut down from 22nd December 2012 until 2nd January 2013 for the Christmas and New Year break.
Our Mascot office will close permanently on 22nd December and when we re-open on 2nd January, our east coast operations will be operating soley from our new and larger City office located at Level 1, 50 Margaret Street, Sydney, 2000
*****
If you would like to send me large electronic files (>10MB), please use JBS Environmental's secure internet-based file delivery system located at http://dropbox.yousendit.com/JBSENVIRONMENTAL
This message is intended solely for the individual(s) and entity(s) addressed. It is confidential and may contain legally privileged information.
Please note that JBS Environmental Pty Ltd does not make any commitments through emails not confirmed by fax, letter or report.

-----Original Message-----
From: Rhian Morgan [mailto:RMorgan@envirolab.com.au]
Sent: Wednesday, 2 January 2013 9:41 AM
To: Cathy Roberts
Cc: Mitchell Hodgins
Subject: RE: Results for registration '83208 - 42458, War Memorial Hospital'

Hi Cathy,

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

SAMPLE RECEIPT ADVICE

Client:

JBS Environmental Pty Ltd
P.O. Box 940
MASCOT NSW 1460

ph: 8338 1013
Fax: 8338 1700

Attention: C Roberts M Hodgins

Sample log in details:

Your reference:	**42458, War Memorial Hospital**
Envirolab Reference:	**83208**
Date received:	14/12/2012
Date results expected to be reported:	**21/12/12**

Samples received in appropriate condition for analysis:	YES
No. of samples provided	66 Soils, 1 Material, 2 Waters
Turnaround time requested:	Standard
Temperature on receipt	Cool
Cooling Method:	Ice
Sampling Date Provided:	YES

Comments:

Samples will be held for 1 month for water samples and 2 months for soil samples from date of receipt of samples.

Contact details:

Please direct any queries to Aileen Hie or Jacinta Hurst
ph: 02 9910 6200 fax: 02 9910 6201
email: ahie@envirolabservices.com.au or jhurst@envirolabservices.com.au

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

SAMPLE RECEIPT ADVICE

Client:

JBS Environmental Pty Ltd
P.O. Box 940
MASCOT NSW 1460

ph: 8338 1013
Fax: 8338 1700

Attention: C Roberts M Hodgins

Sample log in details:

Your reference:	**42458, War Memorial Hospital**
Envirolab Reference:	**83208-A**
Date received:	14/12/2012
Date results expected to be reported:	**9/01/13**

Samples received in appropriate condition for analysis:	YES
No. of samples provided	Additional Testing on 10 Soils
Turnaround time requested:	Standard
Temperature on receipt	Cool
Cooling Method:	Ice
Sampling Date Provided:	YES

Comments:

Samples will be held for 1 month for water samples and 2 months for soil samples from date of receipt of samples.

Sample 10-Soil and Material in seperate bags

Contact details:

Please direct any queries to Aileen Hie or Jacinta Hurst
ph: 02 9910 6200 fax: 02 9910 6201
email: ahie@envirolabservices.com.au or jhurst@envirolabservices.com.au

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES1229744**	Page	: 1 of 7
Client	: **JBS ENVIRONMENTAL**	Laboratory	: Environmental Division Sydney
Contact	: CATHY ROBERTS	Contact	: Client Services
Address	: LEVEL 1, 50 MARGARET STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: croberts@jbsgroup.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 8338 1011	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 8338 1700	Facsimile	: +61-2-8784 8500
Project	: 42458 WAR MEMORIAL HOSPITAL	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 17-DEC-2012
Sampler	: M.HODGINS	Issue Date	: 27-DEC-2012
Site	: ----		
		No. of samples received	: 4
Quote number	: SY/291/12	No. of samples analysed	: 2

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics
Evie.Sidarta	Inorganic Chemist	Sydney Inorganics
Peter Rennie	Team Leader - Asbestos	Newcastle
Raymond Commodor	Instrument Chemist	Sydney Inorganics
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **EA200 Legend for Asbestos Type:**
- **EA200 'Am' Amosite (brown asbestos)**
- **EA200 'Ch' Chrysotile (white asbestos)**
- **EA200 'Cr' Crocidolite (blue asbestos)**
- **EA200 't' Trace levels**
- **EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.**
- **EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.**
- **EA200: Negative results for vinyl tiles should be confirmed by an independent analytical technique.**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	QC01a	QC02a	----	----	----
			Client sampling date / time	12-DEC-2012 15:00	13-DEC-2012 15:00	----	----	----
Compound	CAS Number	LOR	Unit	ES1229744-001	ES1229744-002	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	13.2	13.5	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	----
Asbestos Type	1332-21-4	0.1	--	-	----	----	----	----
Sample weight (dry)	----	0.01	g	38.6	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	P.RENNIE	----	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg	6	6	----	----	----
Copper	7440-50-8	5	mg/kg	42	21	----	----	----
Lead	7439-92-1	5	mg/kg	187	218	----	----	----
Nickel	7440-02-0	2	mg/kg	5	2	----	----	----
Zinc	7440-66-6	5	mg/kg	179	165	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.3	0.3	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	QC01a	QC02a	----	----	----
			Client sampling date / time	12-DEC-2012 15:00	13-DEC-2012 15:00	----	----	----
Compound	CAS Number	LOR	Unit	ES1229744-001	ES1229744-002	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	**1.0**	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	QC01a	QC02a	----	----	----
			Client sampling date / time	12-DEC-2012 15:00	13-DEC-2012 15:00	----	----	----
Compound	CAS Number	LOR	Unit	ES1229744-001	ES1229744-002	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	**5.3**	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	**1.9**	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	**11.0**	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	**11.0**	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	**5.3**	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	**5.0**	----	----	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**5.7**	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	**2.1**	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**4.8**	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	**2.3**	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	**0.5**	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	**2.8**	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	**58.7**	----	----	----	----
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg	**6.9**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg	**180**	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg	**120**	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	**300**	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	**260**	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	**260**	----	----	----	----
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	QC01a	QC02a	----	----	----
			Client sampling date / time	12-DEC-2012 15:00	13-DEC-2012 15:00	----	----	----
Compound	CAS Number	LOR	Unit	ES1229744-001	ES1229744-002	----	----	----
EP080: BTEX - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----
EP080: BTEXN								
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**82.4**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	**113**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	**72.6**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**106**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	**105**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	**102**	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**106**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%	**100**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**110**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**92.5**	----	----	----	----
Toluene-D8	2037-26-5	0.1	%	**89.6**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	**88.5**	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	QC01a - 12-DEC-2012 15:00	Pale brown sandy soil plus a trace of vegetation

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	29.4	145
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	145
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	32	142
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	127
2-Chlorophenol-D4	93951-73-6	64	126
2.4.6-Tribromophenol	118-79-6	36	136
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	64	130
Anthracene-d10	1719-06-8	69	135
4-Terphenyl-d14	1718-51-0	64	136
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72.8	133.2
Toluene-D8	2037-26-5	73.9	132.1
4-Bromofluorobenzene	460-00-4	71.6	130.0

Environmental Division

QUALITY CONTROL REPORT

Work Order	: **ES1229744**	Page	: 1 of 12
Client	: **JBS ENVIRONMENTAL**	Laboratory	: Environmental Division Sydney
Contact	: CATHY ROBERTS	Contact	: Client Services
Address	: LEVEL 1, 50 MARGARET STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: croberts@jbsgroup.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 8338 1011	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 8338 1700	Facsimile	: +61-2-8784 8500
Project	: 42458 WAR MEMORIAL HOSPITAL	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 17-DEC-2012
Sampler	: M.HODGINS	Issue Date	: 27-DEC-2012
Order number	: ----		
		No. of samples received	: 4
Quote number	: SY/291/12	No. of samples analysed	: 2

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics
Evie.Sidarta	Inorganic Chemist	Sydney Inorganics
Peter Rennie	Team Leader - Asbestos	Newcastle
Raymond Commodor	Instrument Chemist	Sydney Inorganics
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (QC Lot: 2652632)									
ES1229428-002	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	4.9	5.5	11.7	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2652524)									
ES1229744-001	QC01a	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	8	28.3	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	5	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	42	38	7.8	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	187	203	8.5	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	179	191	6.3	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2652525)									
ES1229744-001	QC01a	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.3	0.3	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 2656104)									
ES1229450-011	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1229450-013	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2656103)									
ES1229450-011	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2656103) - continued									
ES1229450-011	Anonymous	EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2656103)									
ES1229450-011	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2657297)									
ES1229684-003	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2657297) - continued									
ES1229737-002	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2654200)									
ES1229642-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1229642-011	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2657296)									
ES1229684-003	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1229737-002	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2654200)									
ES1229642-001	Anonymous	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1229642-011	Anonymous	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2657296)									
ES1229684-003	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1229737-002	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 2654200)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080: BTEXN (QC Lot: 2654200) - continued									
ES1229642-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES1229642-011	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2652524)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	105	84	128
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	99.4	79	119
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	98.9	70	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	105	83	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	97.8	81	117
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	103	79	127
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	114	78	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2652525)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	88.3	72	114
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2656104)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	75.0	57.4	117
EP068A: Organochlorine Pesticides (OC) (QCLot: 2656103)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	99.0	60.8	116
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	107	59.4	115
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	87.1	59.8	117
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	59.8	118
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.9	65.8	114
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.9	65.6	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	67	113
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	85.1	65.6	113
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	60.7	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.1	65.8	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	57.3	120
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	84.6	67.4	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	67.5	114
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	63	121
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	66.1	117
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	103	65.3	116
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	107	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	110	63.6	119
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	98.2	58.4	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.3	63.6	117
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	107	50.4	132
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2656103)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2656103) - continued								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	75.9	25.5	124
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	103	10.1	159
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	78.2	2.88	149
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	48.6	126
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	103	64.9	111
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	81.0	65.1	111
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	105	61.4	113
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.8	60.4	127
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.1	64.7	110
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	80.2	64.2	111
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	88.6	60	116
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.6	64.8	111
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	88.9	64.3	114
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	87.5	45.5	128
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	65.4	111
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	87.1	62	116
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.9	59.5	119
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	102	29.8	137
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2657297)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	104	81.9	113
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	101	79.6	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	102	81.5	112
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	102	79.9	112
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	105	79.4	114
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	106	81.1	112
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	104	78.8	113
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	106	78.9	113
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	101	77.2	112
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	106	79.8	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	99.9	71.8	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	107	74.2	117
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	99.5	76.4	113
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	98.0	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	96.9	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	96.8	72.4	114
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2654200)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	105	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2657296)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	103	59	131

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2657296) - continued								
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	105	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	96.9	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2654200)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	31 mg/kg	108	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2657296)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	250 mg/kg	106	59	131
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	101	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
		50	mg/kg	----	150 mg/kg	89.6	63	131
EP080: BTEXN (QCLot: 2654200)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	90.2	62	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	78.0	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	80.4	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	77.5	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	83.4	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	64.8	62	138

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005T: Total Metals by ICP-AES (QCLot: 2652524)							
ES1229744-001	QC01a	EG005T: Arsenic	7440-38-2	50 mg/kg	101	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.6	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	99.5	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	98.1	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	98.9	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	97.8	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	91.1	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2652525)							
ES1229744-001	QC01a	EG035T: Mercury	7439-97-6	5 mg/kg	98.9	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2656104)							
ES1229450-011	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	95.0	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 2656103)							

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%) MS	Recovery Limits (%) Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 2656103) - continued							
ES1229450-011	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	98.2	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	105	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	97.4	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	90.6	70	130
		EP068: Endrin	72-20-8	2 mg/kg	86.1	70	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	87.8	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2656103)							
ES1229450-011	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	105	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	101	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	88.8	70	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	97.2	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	87.4	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2657297)							
ES1229684-003	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	93.9	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	96.2	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2654200)							
ES1229642-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	106	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2657296)							
ES1229684-003	Anonymous	EP071: C10 - C14 Fraction	----	640 mg/kg	99.9	73	137
		EP071: C15 - C28 Fraction	----	3140 mg/kg	121	53	131
		EP071: C29 - C36 Fraction	----	2860 mg/kg	92.1	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2654200)							
ES1229642-001	Anonymous	EP080: C6 - C10 Fraction	----	37.5 mg/kg	108	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2657296)							
ES1229684-003	Anonymous	EP071: >C10 - C16 Fraction	----	850 mg/kg	132	73	137
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	110	53	131
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	56.2	52	132
EP080: BTEXN (QCLot: 2654200)							
ES1229642-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	89.1	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	83.1	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	87.3	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	82.5	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	88.4	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	72.2	70	130

The quality control term Matrix Spike (MS) and Matrix Spike Duplicate (MSD) refers to intralaboratory split samples spiked with a representative set of target analytes. The purpose of these QC parameters are to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
EG005T: Total Metals by ICP-AES (QCLot: 2652524)										
ES1229744-001	QC01a	EG005T: Arsenic	7440-38-2	50 mg/kg	101	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.6	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	99.5	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	98.1	----	70	130	----	----
		EG005T: Lead	7439-92-1	250 mg/kg	98.9	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	97.8	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	91.1	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2652525)										
ES1229744-001	QC01a	EG035T: Mercury	7439-97-6	5 mg/kg	98.9	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2654200)										
ES1229642-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	106	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2654200)										
ES1229642-001	Anonymous	EP080: C6 - C10 Fraction	----	37.5 mg/kg	108	----	70	130	----	----
EP080: BTEXN (QCLot: 2654200)										
ES1229642-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	89.1	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	83.1	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	87.3	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	82.5	----	70	130	----	----
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	88.4	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	72.2	----	70	130	----	----
EP068A: Organochlorine Pesticides (OC) (QCLot: 2656103)										
ES1229450-011	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	98.2	----	70	130	----	----
		EP068: Heptachlor	76-44-8	0.5 mg/kg	105	----	70	130	----	----
		EP068: Aldrin	309-00-2	0.5 mg/kg	97.4	----	70	130	----	----
		EP068: Dieldrin	60-57-1	0.5 mg/kg	90.6	----	70	130	----	----
		EP068: Endrin	72-20-8	2 mg/kg	86.1	----	70	130	----	----
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	87.8	----	70	130	----	----
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2656103)										
ES1229450-011	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	105	----	70	130	----	----
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	101	----	70	130	----	----
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	88.8	----	70	130	----	----
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	97.2	----	70	130	----	----
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	87.4	----	70	130	----	----
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2656104)										
ES1229450-011	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	95.0	----	70	130	----	----

Sub-Matrix: **SOIL**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2657296)										
ES1229684-003	Anonymous	EP071: C10 - C14 Fraction	----	640 mg/kg	99.9	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	3140 mg/kg	121	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	2860 mg/kg	92.1	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2657296)										
ES1229684-003	Anonymous	EP071: >C10 - C16 Fraction	----	850 mg/kg	132	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	110	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	56.2	----	52	132	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2657297)										
ES1229684-003	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	93.9	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	96.2	----	70	130	----	----

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **ES1229744**	Page	: 1 of 6
Client	: JBS ENVIRONMENTAL	Laboratory	: Environmental Division Sydney
Contact	: CATHY ROBERTS	Contact	: Client Services
Address	: LEVEL 1, 50 MARGARET STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: croberts@jbsgroup.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 8338 1011	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 8338 1700	Facsimile	: +61-2-8784 8500
Project	: 42458 WAR MEMORIAL HOSPITAL	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 17-DEC-2012
Sampler	: M.HODGINS	Issue Date	: 27-DEC-2012
Order number	: ----		
		No. of samples received	: 4
Quote number	: SY/291/12	No. of samples analysed	: 2

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non -volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / *Container / Client Sample ID(s)*	*Sample Date*	*Extraction / Preparation*			*Analysis*		
		Date extracted	*Due for extraction*	*Evaluation*	*Date analysed*	*Due for analysis*	*Evaluation*
EA055: Moisture Content							
Soil Glass Jar - Unpreserved (EA055-103) QC01a	**12-DEC-2012**	**----**	----	----	**17-DEC-2012**	26-DEC-2012	✓
Soil Glass Jar - Unpreserved (EA055-103) QC02a	**13-DEC-2012**	**----**	----	----	**17-DEC-2012**	27-DEC-2012	✓
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples							
Snap Lock Bag (EA200) QC01a	**12-DEC-2012**	**---**	10-JUN-2013	----	**21-DEC-2012**	19-JUN-2013	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) QC01a	**12-DEC-2012**	**17-DEC-2012**	10-JUN-2013	✓	**18-DEC-2012**	10-JUN-2013	✓
Soil Glass Jar - Unpreserved (EG005T) QC02a	**13-DEC-2012**	**17-DEC-2012**	11-JUN-2013	✓	**18-DEC-2012**	11-JUN-2013	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) QC01a	**12-DEC-2012**	**17-DEC-2012**	09-JAN-2013	✓	**18-DEC-2012**	09-JAN-2013	✓
Soil Glass Jar - Unpreserved (EG035T) QC02a	**13-DEC-2012**	**17-DEC-2012**	10-JAN-2013	✓	**18-DEC-2012**	10-JAN-2013	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066) QC01a	**12-DEC-2012**	**19-DEC-2012**	26-DEC-2012	✓	**20-DEC-2012**	28-JAN-2013	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) QC01a	**12-DEC-2012**	**19-DEC-2012**	26-DEC-2012	✓	**20-DEC-2012**	28-JAN-2013	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) QC01a	**12-DEC-2012**	**19-DEC-2012**	26-DEC-2012	✓	**20-DEC-2012**	28-JAN-2013	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
Soil Glass Jar - Unpreserved (EP071) QC01a	**12-DEC-2012**	**20-DEC-2012**	26-DEC-2012	✓	**21-DEC-2012**	29-JAN-2013	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
QC01a	**12-DEC-2012**	**20-DEC-2012**	26-DEC-2012	✓	**20-DEC-2012**	29-JAN-2013	✓
EP080: BTEX							
Soil Glass Jar - Unpreserved (EP080)							
QC01a	**12-DEC-2012**	**18-DEC-2012**	26-DEC-2012	✓	**20-DEC-2012**	26-DEC-2012	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
QC01a	**12-DEC-2012**	**18-DEC-2012**	26-DEC-2012	✓	**20-DEC-2012**	26-DEC-2012	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
QC01a	**12-DEC-2012**	**18-DEC-2012**	26-DEC-2012	✓	**20-DEC-2012**	26-DEC-2012	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	1	12	8.3	10.0	×	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	2	18	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	8	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	2	18	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	3	33.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	3	33.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	18	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	18	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	3	33.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	3	33.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	18	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	18	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	3	33.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	3	33.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	18	5.6	5.0	✓	ALS QCS3 requirement
Pesticides by GCMS	EP068	1	8	12.5	5.0	✓	ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	18	5.6	5.0	✓	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	3	33.3	5.0	✓	ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	3	33.3	5.0	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Asbestos Identification in bulk solids	EA200	SOIL	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (1999) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 504)
Pesticides by GCMS	EP068	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (1999) Schedule B(3) (Method 504,505)
TPH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with NEPM (1999) Schedule B(3) (Method 506.1)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 502 and 507)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)

Preparation Methods	Method	Matrix	Method Descriptions
Methanolic Extraction of Soils for Purge and Trap	* ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na2SO4 and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**
- **For all matrices, no Laboratory Control outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- **No Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

Matrix: **SOIL**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Moisture Content	1	12	8.3	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Environmental Division

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **ES1229744**

Client	: **JBS ENVIRONMENTAL**	Laboratory	: Environmental Division Sydney
Contact	: CATHY ROBERTS	Contact	: Client Services
Address	: 128 ORIORDAN STREET MASCOT NSW, AUSTRALIA 2020	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: croberts@jbsgroup.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 8338 1011	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 8338 1700	Facsimile	: +61-2-8784 8500
Project	: 42458 WAR MEMORIAL HOSPITAL	Page	: 1 of 2
Order number	: ----		
C-O-C number	: ----	Quote number	: ES2012JBSENV0326 (SY/291/12)
Site	: ----		
Sampler	: M.HODGINS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 17-DEC-2012	Issue Date	: 17-DEC-2012 18:06
Client Requested Due Date	: 28-DEC-2012	Scheduled Reporting Date	: **28-DEC-2012**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 13.2'C - Ice bricks present
No. of coolers/boxes	: 1 HARD	No. of samples received	: 4
Security Seal	: Intact.	No. of samples analysed	: 2

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Asbestos analysis will be conducted by ALS Newcastle.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (14 days), Solid (60 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exist.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - EA200 Asbestos Identification in Soils	SOIL - S-02 8 Metals (incl. Digestion)	SOIL - S-16 TPH/BTEX/PAH/OC/OP/PCB/8Metals
ES1229744-001	12-DEC-2012 15:00	QC01a		✓		✓
ES1229744-002	13-DEC-2012 15:00	QC02a			✓	
ES1229744-003	13-DEC-2012 15:00	QC03a	✓			
ES1229744-004	13-DEC-2012 15:00	QC04a	✓			

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ANA TRAYNOR		
- A4 - AU Tax Invoice (INV)	Email	atraynor@jbsgroup.com.au
CATHY ROBERTS		
- *AU Certificate of Analysis - NATA (COA)	Email	croberts@jbsgroup.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	croberts@jbsgroup.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	croberts@jbsgroup.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	croberts@jbsgroup.com.au
- A4 - AU Tax Invoice (INV)	Email	croberts@jbsgroup.com.au
- Chain of Custody (CoC) (COC)	Email	croberts@jbsgroup.com.au
- EDI Format - ENMRG (ENMRG)	Email	croberts@jbsgroup.com.au
- EDI Format - ESDAT (ESDAT)	Email	croberts@jbsgroup.com.au
INVOICES		
- A4 - AU Tax Invoice (INV)	Email	gng@jbsgroup.com.au
MITCH HODYINS		
- *AU Certificate of Analysis - NATA	Email	mhodyins@jbsgroup.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep)	Email	mhodyins@jbsgroup.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA	Email	mhodyins@jbsgroup.com.au
- A4 - AU Sample Receipt Notification - Environmental HT	Email	mhodyins@jbsgroup.com.au
- Chain of Custody (CoC)	Email	mhodyins@jbsgroup.com.au
- EDI Format - ENMRG	Email	mhodyins@jbsgroup.com.au
- EDI Format - ESDAT	Email	mhodyins@jbsgroup.com.au
MR SAMAN TAEIDI		
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	saman.taeidi@alsglobal.com
- Chain of Custody (CoC) (COC)	Email	saman.taeidi@alsglobal.com

* Please send to ALS
* Please send Asbestos to Richford + Snyder

CHAIN OF CUSTODY

JBS ENVIRONMENTAL

PROJECT NO.: 42458	LABORATORY BATCH NO.
PROJECT NAME: War Memorial Hospital	SAMPLERS M. Hodgins
SEND REPORT TO: C. Roberts, M. Hodgins — SEND INVOICE TO: Grace Ng	PHONE: 02 8338 1011 — EMAIL: mhodgins@jbsgroup.com.au
DATE NEEDED BY: Standard TAT	QC LEVEL: NEPM 1999 (X) — croberts@jbsgroup.com.au
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:	

SAMPLE ID	MATRIX	DATE TIME	TYPE & PRESERVATIVE	pH	8 metals	TRH/BTEX	PAHs	OC/OPs	PCBs	Asbestos	NOTES
QC01a 1	soil	13/12/12	bag jar + ice		X	X	X	X	X	X	
QC02a 2	↓	13/12/12	↓		X					HOLD	8 metals: - As - Cd - Cr - Cu - Hg - Pb - Ni - Zn
QC03a 3	↓	↓	↓		HOLD						
QC04a 4	↓	↓	↓		HOLD						

Subcon / Forward Lab / Split WO
Lab / Analysis: ALS New Castle
Organised By / Date: Asbestos
Relinquished By / Date:
Connote / Courier:
WO No:
Attach Internal Sheet:

Environmental Division
Sydney
Work Order
ES1229744
Telephone : +61-2-8784 8555

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: M Hodgins DATE: 14/12/12 OF: JBS Environmental	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: Morgan Philp DATE: 14/12/12 OF: ELS #83208 1800	COOLER SEAL - Yes . No . Intact . Broken COOLER TEMP ... deg C
NAME: DATE: 17/12/12 OF: ELS	CONSIGNMENT NOTE NO. TRANSPORT CO	NAME: DATE: 17/12/12 OF: 1620	COOLER SEAL - Yes . No . Intact . Broken COOLER TEMP 13.2 deg C

Container & Preservative Codes: P = Plastic; J = Solvent Jar; G = Glass Bottle; N = Nitric Acid Preservative; C = Sodium Hydroxide Preservative; VC = Hydrochloric Acid Preserved Vial; VS = Sulfuric Acid Preserved Vial; S = Sulfuric Acid Preservative; Z = Zinc Preservative; E = EDTA Preservative; ST = Sterile Bottle; O = Other

JBS Environmental Pty Ltd ABN 67 071 842 638
Phone: (02) 8338-1011
Fax: (02) 8338-1702
128 O'Riordan St, MASCOT NSW 2020
PO Box 540 MASCOT NSW 1460
www.jbsgroup.com.au

PICKFORD & RHYDER CONSULTING PTY LTD
ABN: 17 109 946 076
Occupational Hygiene Measurements and Solutions

PO Box 1422 Lane Cove 1595
Rear - 244 Burns Bay Road
Lane Cove NSW Australia
Phone: (02) 9418 9151
Fax: (02) 9418 9150

2 January 2013
Replaces Certificate Ref. 72855-ID. dated 20 December 2012

Ms Cathy Roberts & M. Hodgins
JBS Environmental
PO Box 940
MASCOT NSW 1460

Email: croberts@jbsgroup.com.au, mhodgins@jbsgroup.com.au

CERTIFICATE OF ANALYSIS – ASBESTOS IDENTIFICATION

YOUR REFERENCE/JOB No: 42458
TYPE OF SAMPLES: Bulk sample - received from Envirolab Services
SITE LOCATION: War Memorial Hospital
DATE SAMPLED: 12 December 2012 **DATE RECEIVED:** 19 December 2012
OUR REFERENCE: 72855-ID-a

TEST METHOD: Soil samples examined by Stereomicroscopy and Polarized Light Microscopy (with Dispersion Staining) in accordance with AS 4964-2004: - 'Method for the qualitative identification of asbestos in bulk samples' as outlined in Laboratory Method ID/1. The Reporting Limit for the results in this Certificate is numerically equal to the lowest detection limit of 0.1 g/kg. Trace asbestos analysis has been conducted on each sample, which is generally designed to detect 'respirable' asbestos fibres (ie less than 3 micrometres in width) distributed throughout the sample.

Sample No	*Lab No*	*Sample Information*	*Analysis Result*	*Description*
QC01A	72855	Soil sample received	as No asbestos detected	The sample was a dark brown soil with stones and plant matter of approximate weight 100 g. Organic fibres were detected in the sample. Asbestos fibres were not found above the Reporting Limit of 0.1 g/kg.

All sampling and site work has been undertaken by the client - the analytical procedures and results reported on this Certificate have been conducted by Pickford & Rhyder Consulting.

Sampling is not covered by the scope of accreditation.

Analysed and reported by:

L. Apthorpe,
Approved Identifier and Signatory.

NATA
TECHNICAL COMPETENCE

Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced except in full.

Accreditation number 2515

Appendix L 95% UCL Calculations

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			25/08/2016 5:05:45 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	BaP TEQ											
12												
13	General Statistics											
14	Total Number of Observations					11	Number of Distinct Observations					11
15							Number of Missing Observations					0
16	Minimum					0.313	Mean					3.885
17	Maximum					9.74	Median					1.829
18	SD					3.683	Std. Error of Mean					1.111
19	Coefficient of Variation					0.948	Skewness					0.653
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic					0.825	Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value					0.85	Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic					0.257	Lilliefors GOF Test					
25	5% Lilliefors Critical Value					0.267	Data appear Normal at 5% Significance Level					
26	Data appear Approximate Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL					5.898	95% Adjusted-CLT UCL (Chen-1995)					5.945
31							95% Modified-t UCL (Johnson-1978)					5.935
32												
33	Gamma GOF Test											
34	A-D Test Statistic					0.567	Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value					0.751	Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic					0.219	Kolmogrov-Smirnoff Gamma GOF Test					
37	5% K-S Critical Value					0.262	Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)					1.033	k star (bias corrected MLE)					0.812
42	Theta hat (MLE)					3.76	Theta star (bias corrected MLE)					4.785
43	nu hat (MLE)					22.73	nu star (bias corrected)					17.86
44	MLE Mean (bias corrected)					3.885	MLE Sd (bias corrected)					4.312
45							Approximate Chi Square Value (0.05)					9.293
46	Adjusted Level of Significance					0.0278	Adjusted Chi Square Value					8.303
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50))					7.469	95% Adjusted Gamma UCL (use when n<50)					8.359
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic					0.911	Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value					0.85	Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic					0.191	Lilliefors Lognormal GOF Test					
55	5% Lilliefors Critical Value					0.267	Data appear Lognormal at 5% Significance Level					
56	Data appear Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											

	A	B	C	D	E	F	G	H	I	J	K	L
59					Minimum of Logged Data	-1.162				Mean of logged Data		0.801
60					Maximum of Logged Data	2.276				SD of logged Data		1.199
61												
62					Assuming Lognormal Distribution							
63					95% H-UCL	16.53				90% Chebyshev (MVUE) UCL		8.958
64					95% Chebyshev (MVUE) UCL	11.14				97.5% Chebyshev (MVUE) UCL		14.16
65					99% Chebyshev (MVUE) UCL	20.11						
66												
67					Nonparametric Distribution Free UCL Statistics							
68					Data appear to follow a Discernible Distribution at 5% Significance Level							
69												
70					Nonparametric Distribution Free UCLs							
71					95% CLT UCL	5.712				95% Jackknife UCL		5.898
72					95% Standard Bootstrap UCL	5.591				95% Bootstrap-t UCL		6.348
73					95% Hall's Bootstrap UCL	5.622				95% Percentile Bootstrap UCL		5.709
74					95% BCA Bootstrap UCL	5.74						
75					90% Chebyshev(Mean, Sd) UCL	7.217				95% Chebyshev(Mean, Sd) UCL		8.726
76					97.5% Chebyshev(Mean, Sd) UCL	10.82				99% Chebyshev(Mean, Sd) UCL		14.94
77												
78					Suggested UCL to Use							
79					95% Student's-t UCL	5.898						
80												
81					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
82					These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)							
83					and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.							
84					For additional insight the user may want to consult a statistician.							
85												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			17/08/2016 12:07:20 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	TRH C16-C34											
11												
12	General Statistics											
13	Total Number of Observations					11	Number of Distinct Observations					9
14	Number of Detects					9	Number of Non-Detects					2
15	Number of Distinct Detects					8	Number of Distinct Non-Detects					1
16	Minimum Detect					130	Minimum Non-Detect					100
17	Maximum Detect					430	Maximum Non-Detect					100
18	Variance Detects					10761	Percent Non-Detects					18.18%
19	Mean Detects					231.1	SD Detects					103.7
20	Median Detects					210	CV Detects					0.449
21	Skewness Detects					0.97	Kurtosis Detects					0.128
22	Mean of Logged Detects					5.359	SD of Logged Detects					0.428
23												
24	Normal GOF Test on Detects Only											
25	Shapiro Wilk Test Statistic					0.893	Shapiro Wilk GOF Test					
26	5% Shapiro Wilk Critical Value					0.829	Detected Data appear Normal at 5% Significance Level					
27	Lilliefors Test Statistic					0.168	Lilliefors GOF Test					
28	5% Lilliefors Critical Value					0.295	Detected Data appear Normal at 5% Significance Level					
29	Detected Data appear Normal at 5% Significance Level											
30												
31	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
32	Mean					207.3	Standard Error of Mean					32.59
33	SD					101.9	95% KM (BCA) UCL					262.7
34	95% KM (t) UCL					266.3	95% KM (Percentile Bootstrap) UCL					261.8
35	95% KM (z) UCL					260.9	95% KM Bootstrap t UCL					286.3
36	90% KM Chebyshev UCL					305	95% KM Chebyshev UCL					349.3
37	97.5% KM Chebyshev UCL					410.8	99% KM Chebyshev UCL					531.5
38												
39	Gamma GOF Tests on Detected Observations Only											
40	A-D Test Statistic					0.313	Anderson-Darling GOF Test					
41	5% A-D Critical Value					0.723	Detected data appear Gamma Distributed at 5% Significance Level					
42	K-S Test Statistic					0.165	Kolmogrov-Smirnoff GOF					
43	5% K-S Critical Value					0.28	Detected data appear Gamma Distributed at 5% Significance Level					
44	Detected data appear Gamma Distributed at 5% Significance Level											
45												
46	Gamma Statistics on Detected Data Only											
47	k hat (MLE)					6.133	k star (bias corrected MLE)					4.163
48	Theta hat (MLE)					37.68	Theta star (bias corrected MLE)					55.52
49	nu hat (MLE)					110.4	nu star (bias corrected)					74.93
50	MLE Mean (bias corrected)					231.1	MLE Sd (bias corrected)					113.3
51												
52	Gamma Kaplan-Meier (KM) Statistics											
53	k hat (KM)					4.138	nu hat (KM)					91.03
54	Approximate Chi Square Value (91.03, α)					70.03	Adjusted Chi Square Value (91.03, β)					67.03
55	95% Gamma Approximate KM-UCL (use when n>=50)					269.4	95% Gamma Adjusted KM-UCL (use when n<50)					281.5
56												
57	Gamma ROS Statistics using Imputed Non-Detects											
58	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											

	A	B	C	D	E	F	G	H	I	J	K	L
59	GROS may not be used when kstar of detected data is small such as < 0.1											
60	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
61	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
62					Minimum	9.737				Mean		194
63					Maximum	430				Median		170
64					SD	124.4				CV		0.641
65					k hat (MLE)	1.656				k star (bias corrected MLE)		1.265
66					Theta hat (MLE)	117.1				Theta star (bias corrected MLE)		153.4
67					nu hat (MLE)	36.44				nu star (bias corrected)		27.83
68					MLE Mean (bias corrected)	194				MLE Sd (bias corrected)		172.5
69										Adjusted Level of Significance (β)		0.0278
70					Approximate Chi Square Value (27.83, α)	16.8				Adjusted Chi Square Value (27.83, β)		15.41
71					95% Gamma Approximate UCL (use when n>=50)	321.5				95% Gamma Adjusted UCL (use when n<50)		350.3
72												
73	**Lognormal GOF Test on Detected Observations Only**											
74					Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk GOF Test**					
75					5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level					
76					Lilliefors Test Statistic	0.143	**Lilliefors GOF Test**					
77					5% Lilliefors Critical Value	0.295	Detected Data appear Lognormal at 5% Significance Level					
78	**Detected Data appear Lognormal at 5% Significance Level**											
79												
80	**Lognormal ROS Statistics Using Imputed Non-Detects**											
81					Mean in Original Scale	202.7				Mean in Log Scale		5.168
82					SD in Original Scale	112.4				SD in Log Scale		0.576
83					95% t UCL (assumes normality of ROS data)	264.1				95% Percentile Bootstrap UCL		256.4
84					95% BCA Bootstrap UCL	264.5				95% Bootstrap t UCL		284.4
85					95% H-UCL (Log ROS)	313.6						
86												
87	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
88					KM Mean (logged)	5.222				95% H-UCL (KM -Log)		283.2
89					KM SD (logged)	0.467				95% Critical H Value (KM-Log)		2.134
90					KM Standard Error of Mean (logged)	0.149						
91												
92	**DL/2 Statistics**											
93	**DL/2 Normal**						**DL/2 Log-Transformed**					
94					Mean in Original Scale	198.2				Mean in Log Scale		5.096
95					SD in Original Scale	118.2				SD in Log Scale		0.7
96					95% t UCL (Assumes normality)	262.8				95% H-Stat UCL		360
97	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
98												
99	**Nonparametric Distribution Free UCL Statistics**											
100	**Detected Data appear Normal Distributed at 5% Significance Level**											
101												
102	**Suggested UCL to Use**											
103					95% KM (t) UCL	266.3				95% KM (Percentile Bootstrap) UCL		261.8
104												
105	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
106	Recommendations are based upon data size, data distribution, and skewness.											
107	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
108	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
109												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			17/08/2016 2:00:14 PM								
5	From File			WorkSheet_a.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	Copper											
12												
13	General Statistics											
14	Total Number of Observations					27	Number of Distinct Observations					23
15							Number of Missing Observations					0
16	Minimum					17	Mean					48.81
17	Maximum					140	Median					37
18	SD					31.79	Std. Error of Mean					6.118
19	Coefficient of Variation					0.651	Skewness					1.509
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic					0.83	Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value					0.923	Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic					0.202	Lilliefors GOF Test					
25	5% Lilliefors Critical Value					0.171	Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL					59.25	95% Adjusted-CLT UCL (Chen-1995)					60.78
31							95% Modified-t UCL (Johnson-1978)					59.55
32												
33	Gamma GOF Test											
34	A-D Test Statistic					0.662	Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value					0.751	Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic					0.132	Kolmogrov-Smirnoff Gamma GOF Test					
37	5% K-S Critical Value					0.169	Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)					3.103	k star (bias corrected MLE)					2.783
42	Theta hat (MLE)					15.73	Theta star (bias corrected MLE)					17.54
43	nu hat (MLE)					167.5	nu star (bias corrected)					150.3
44	MLE Mean (bias corrected)					48.81	MLE Sd (bias corrected)					29.26
45							Approximate Chi Square Value (0.05)					122.9
46	Adjusted Level of Significance					0.0401	Adjusted Chi Square Value					121.3
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50)					59.67	95% Adjusted Gamma UCL (use when n<50)					60.45
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic					0.958	Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value					0.923	Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic					0.0935	Lilliefors Lognormal GOF Test					
55	5% Lilliefors Critical Value					0.171	Data appear Lognormal at 5% Significance Level					
56	Data appear Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											

	A	B	C	D	E	F	G	H	I	J	K	L
59					Minimum of Logged Data	2.833					Mean of logged Data	3.718
60					Maximum of Logged Data	4.942					SD of logged Data	0.575
61												
62					Assuming Lognormal Distribution							
63					95% H-UCL	61.15					90% Chebyshev (MVUE) UCL	65.15
64					95% Chebyshev (MVUE) UCL	72.81					97.5% Chebyshev (MVUE) UCL	83.43
65					99% Chebyshev (MVUE) UCL	104.3						
66												
67					Nonparametric Distribution Free UCL Statistics							
68					Data appear to follow a Discernible Distribution at 5% Significance Level							
69												
70					Nonparametric Distribution Free UCLs							
71					95% CLT UCL	58.88					95% Jackknife UCL	59.25
72					95% Standard Bootstrap UCL	59.01					95% Bootstrap-t UCL	62.09
73					95% Hall's Bootstrap UCL	61.51					95% Percentile Bootstrap UCL	59.07
74					95% BCA Bootstrap UCL	61.15						
75					90% Chebyshev(Mean, Sd) UCL	67.17					95% Chebyshev(Mean, Sd) UCL	75.48
76					97.5% Chebyshev(Mean, Sd) UCL	87.02					99% Chebyshev(Mean, Sd) UCL	109.7
77												
78					Suggested UCL to Use							
79					95% Adjusted Gamma UCL	60.45						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3			User Selected Options									
4			Date/Time of Computation		17/08/2016 2:01:43 PM							
5			From File		WorkSheet_b.xls							
6			Full Precision		OFF							
7			Confidence Coefficient		95%							
8			Number of Bootstrap Operations		2000							
9												
10												
11	Lead											
12												
13	General Statistics											
14			Total Number of Observations			27	Number of Distinct Observations					25
15							Number of Missing Observations					0
16			Minimum			65	Mean					444.9
17			Maximum			1500	Median					270
18			SD			412.2	Std. Error of Mean					79.33
19			Coefficient of Variation			0.927	Skewness					1.58
20												
21	Normal GOF Test											
22			Shapiro Wilk Test Statistic			0.769	Shapiro Wilk GOF Test					
23			5% Shapiro Wilk Critical Value			0.923	Data Not Normal at 5% Significance Level					
24			Lilliefors Test Statistic			0.22	Lilliefors GOF Test					
25			5% Lilliefors Critical Value			0.171	Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29			95% Normal UCL				95% UCLs (Adjusted for Skewness)					
30			95% Student's-t UCL			580.2	95% Adjusted-CLT UCL (Chen-1995)					601.1
31							95% Modified-t UCL (Johnson-1978)					584.2
32												
33	Gamma GOF Test											
34			A-D Test Statistic			0.823	Anderson-Darling Gamma GOF Test					
35			5% A-D Critical Value			0.762	Data Not Gamma Distributed at 5% Significance Level					
36			K-S Test Statistic			0.159	Kolmogrov-Smirnoff Gamma GOF Test					
37			5% K-S Critical Value			0.171	Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data follow Appr. Gamma Distribution at 5% Significance Level											
39												
40	Gamma Statistics											
41			k hat (MLE)			1.57	k star (bias corrected MLE)					1.42
42			Theta hat (MLE)			283.4	Theta star (bias corrected MLE)					313.3
43			nu hat (MLE)			84.77	nu star (bias corrected)					76.69
44			MLE Mean (bias corrected)			444.9	MLE Sd (bias corrected)					373.3
45							Approximate Chi Square Value (0.05)					57.51
46			Adjusted Level of Significance			0.0401	Adjusted Chi Square Value					56.45
47												
48	Assuming Gamma Distribution											
49			95% Approximate Gamma UCL (use when n>=50)			593.1	95% Adjusted Gamma UCL (use when n<50)					604.3
50												
51	Lognormal GOF Test											
52			Shapiro Wilk Test Statistic			0.964	Shapiro Wilk Lognormal GOF Test					
53			5% Shapiro Wilk Critical Value			0.923	Data appear Lognormal at 5% Significance Level					
54			Lilliefors Test Statistic			0.108	Lilliefors Lognormal GOF Test					
55			5% Lilliefors Critical Value			0.171	Data appear Lognormal at 5% Significance Level					
56	Data appear Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											

	A	B	C	D	E	F	G	H	I	J	K	L
59					Minimum of Logged Data	4.174					Mean of logged Data	5.747
60					Maximum of Logged Data	7.313					SD of logged Data	0.842
61												
62					Assuming Lognormal Distribution							
63					95% H-UCL	655.2					90% Chebyshev (MVUE) UCL	674.9
64					95% Chebyshev (MVUE) UCL	781.9					97.5% Chebyshev (MVUE) UCL	930.4
65					99% Chebyshev (MVUE) UCL	1222						
66												
67					Nonparametric Distribution Free UCL Statistics							
68					Data appear to follow a Discernible Distribution at 5% Significance Level							
69												
70					Nonparametric Distribution Free UCLs							
71					95% CLT UCL	575.3					95% Jackknife UCL	580.2
72					95% Standard Bootstrap UCL	570.3					95% Bootstrap-t UCL	635.1
73					95% Hall's Bootstrap UCL	587.3					95% Percentile Bootstrap UCL	578.1
74					95% BCA Bootstrap UCL	596.6						
75					90% Chebyshev(Mean, Sd) UCL	682.8					95% Chebyshev(Mean, Sd) UCL	790.6
76					97.5% Chebyshev(Mean, Sd) UCL	940.3					99% Chebyshev(Mean, Sd) UCL	1234
77												
78					Suggested UCL to Use							
79					95% Adjusted Gamma UCL	604.3						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												

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