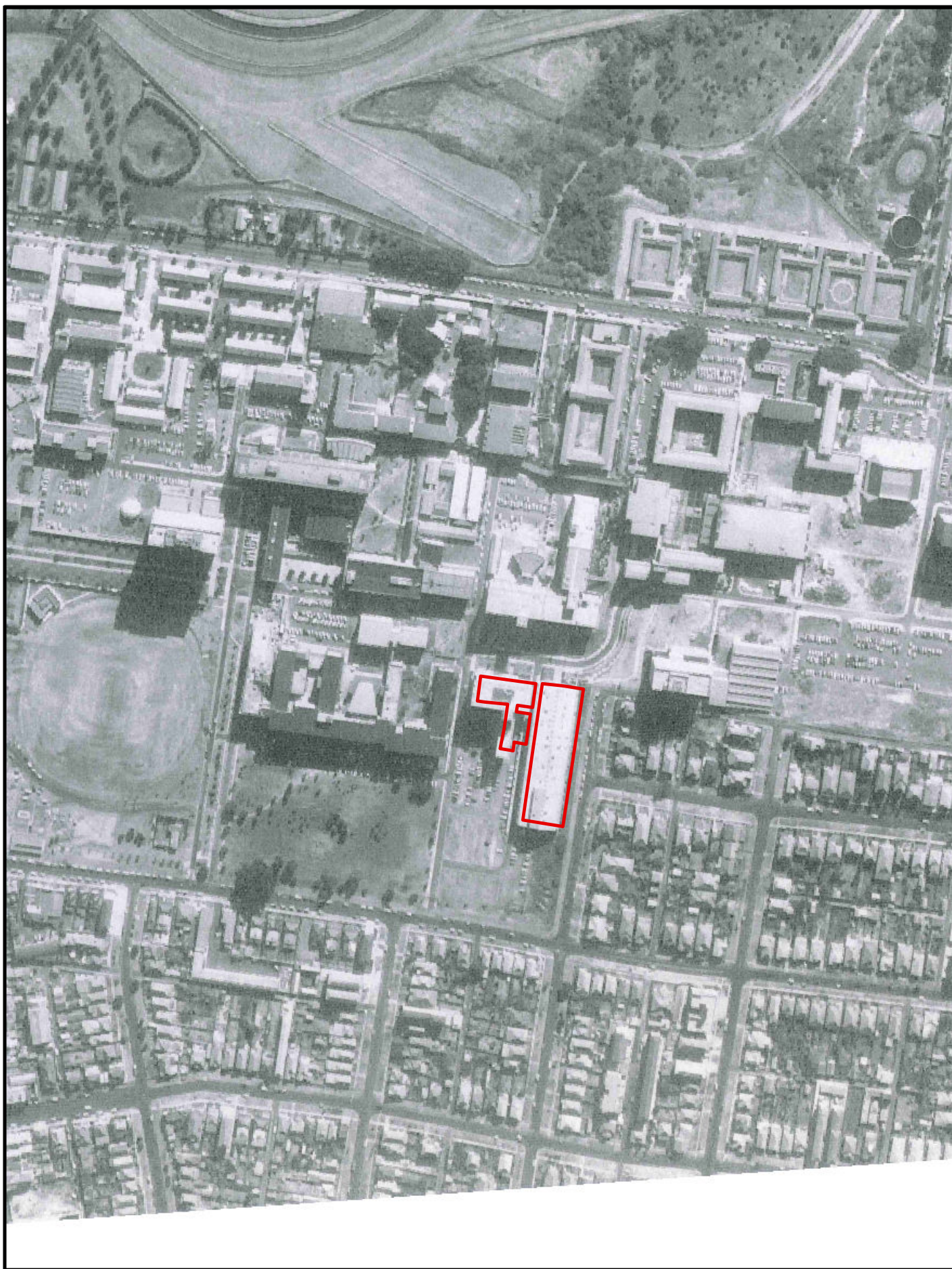




Source: Base Image - Department of Lands, Sydney, 07-07-1970, Run 19

© 2012 JBS Environmental Pty Ltd

0 40 80 160 m			
Scale: 1:4,000			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	SE	02-07-2012
Rev	Description	Dm.	Date:

Legend:
— Approximate Site Boundary



**Figure: University of NSW,
 July 1970, Run 19**

Client: Pells Sullivan Maynink

Project: Willis Lane, University of NSW, Kingsford, NSW

Job No: 42248

File Name: 42248_1970



Source: Base Image - Department of Lands, Sydney, 06-05-1978, Run 18

© 2012 JBS Environmental Pty Ltd

0 40 80 160 m			
Scale: 1:4,000			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	SE	02-07-2012
Rev	Description	Dm.	Date:

Legend:
— Approximate Site Boundary



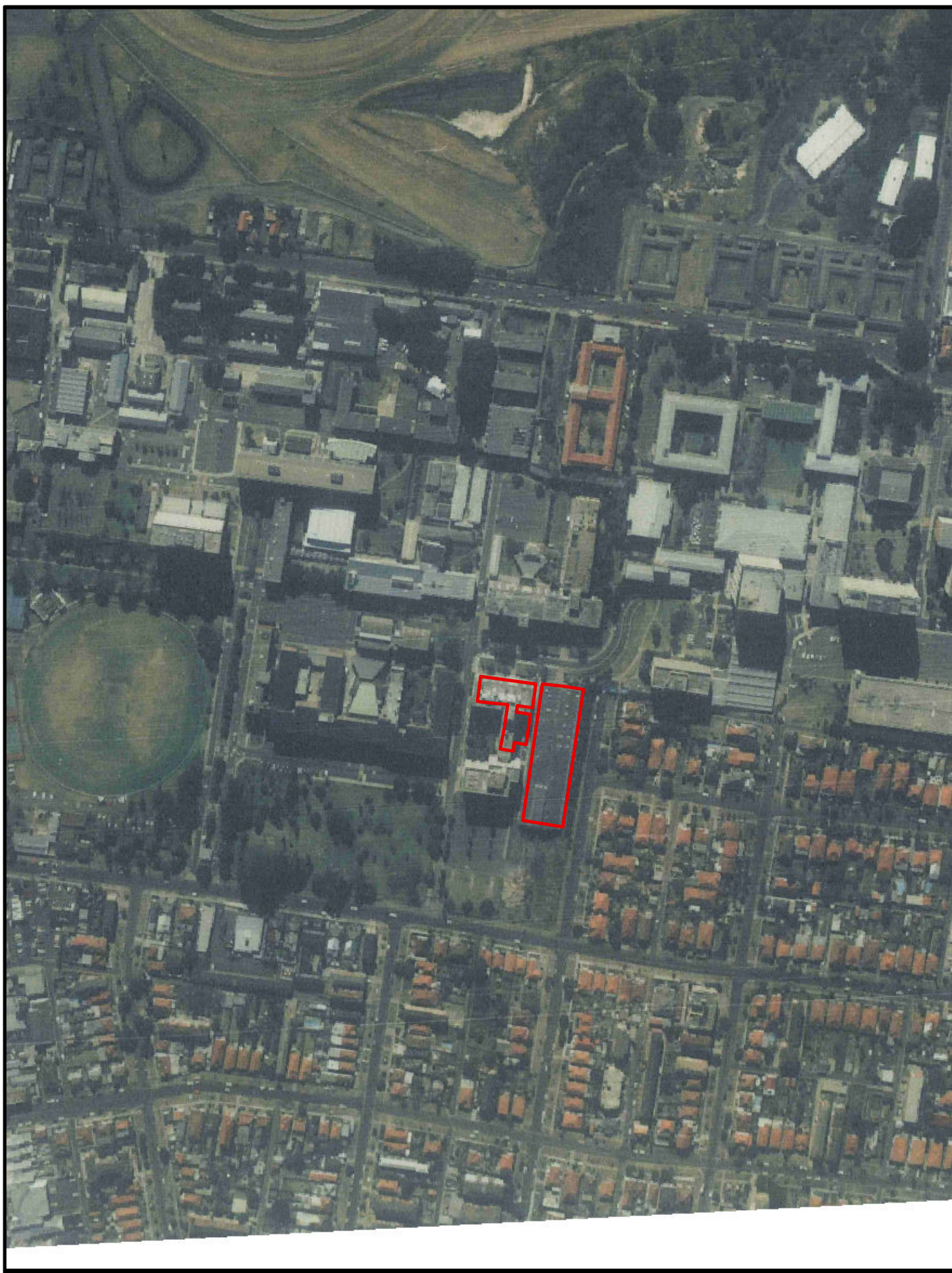
**Figure: University of NSW,
May 1978, Run 18**

Client: Pells Sullivan Maynink

Project: Willis Lane, University of NSW, Kingsford, NSW

Job No: 42248

File Name: 42248_1978



Source: Base Image - Department of Lands, Sydney, 02-08-1986, Run 24E

© 2012 JBS Environmental Pty Ltd

0 40 80 160 m			
Scale: 1:4,000			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	SE	02-07-2012
Rev	Description	Dm.	Date:

Legend:
— Approximate Site Boundary



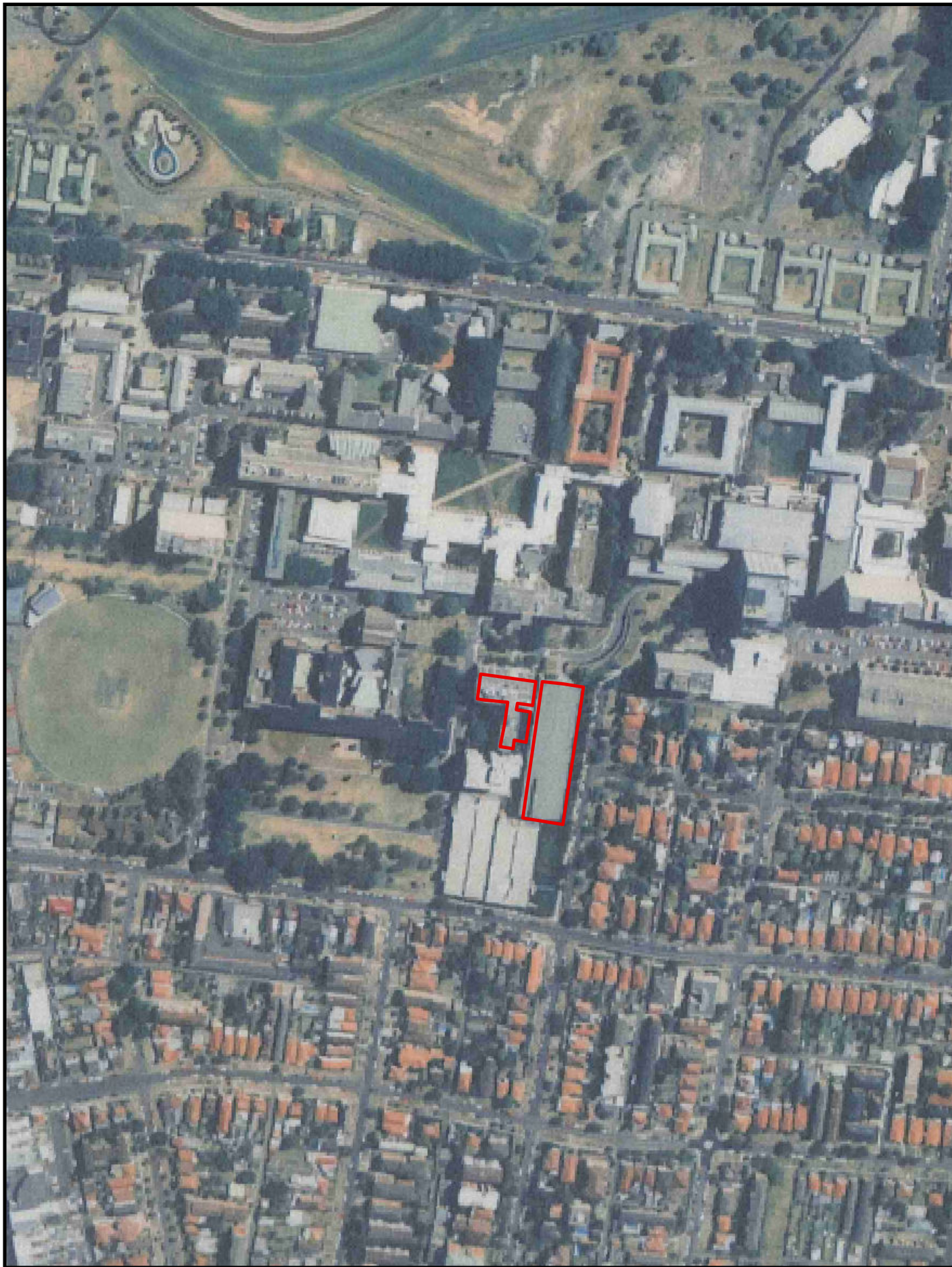
**Figure: University of NSW,
August 1986, Run 24E**

Client: Pells Sullivan Maynink

Project: Willis Lane, University of NSW, Kingsford, NSW

Job No: 42248

File Name: 42248_1986



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

© 2012 JBS Environmental Pty Ltd

0 40 80 160 m			
Scale: 1:4,000			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	SE	02-07-2012
Rev	Description	Dm.	Date:

Legend:
— Approximate Site Boundary



**Figure: University of NSW,
 October 1994, Run 11**

Client: Pells Sullivan Maynink

Project: Willis Lane, University of NSW, Kingsford, NSW

Job No: 42248

File Name: 42248_1994



Source: Base Image - Department of Lands, Sydney, 08-10-2004, Run 7

© 2012 JBS Environmental Pty Ltd

0 40 80 160 m			
Scale: 1:4,000			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
0	Original Issue - Aerials	SE	02-07-2012
Rev	Description	Dm.	Date:

Legend:
— Approximate Site Boundary



**Figure: University of NSW,
October 2004, Run 7**

Client: Pells Sullivan Maynink

Project: Willis Lane, University of NSW, Kingsford, NSW

Job No: 42248

File Name: 42248_2004

Appendix C

OEH Documentation

Rate
this
site



Environment
& Heritage

You are here: [Home](#) > [Contaminated land](#) > [Record of notices](#)

Search results

Your search for: LGA: Randwick City Council

Matched 23 notices relating to 5 sites.

[Search Again](#)

[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
Matraville	Bunnerong/Military Roads	Ampol Matraville Refinery	9 former
Matraville	Bumborah Point Road	Bunnerong Power Station	5 former
Matraville	133-149 Beauchamp Road	Former Golden Fleece Terminal No1	7 former
Matraville	151 Beauchamp Road	Former Golden Fleece Terminal No2	2 former
Randwick	128 Barker Street	7 Eleven Service Station	2 current

Page 1 of 1

27 June 2012

Rate
this
site



Environment
& Heritage

You are here: [Home](#) > [Environment protection licences](#) > [POEO Public Register](#) > [Search for licences, applications and notices](#)

Search results

Your search for: **General Search** with the following criteria

Suburb - KENSINGTON

returned 3 results

[Export to excel](#)

1 of 1 Pages

[Search Again](#)

Number	Name	Location	Type	Status	Issued date
11415	DENWIL PTY LIMITED	Level 1, 91 Anzac Parade, KENSINGTON, NSW 2033	POEO licence	Surrendered	16 Oct 2001
1038443	DENWIL PTY LIMITED	Level 1, 91 Anzac Parade, KENSINGTON, NSW 2033	S 58 Licence Variation	Issued	07 Jul 2004
5906	LEIGHTON CONTRACTORS PTY LIMITED	FROM CAHILL EXPRESSWAY, WOOLLOOMOOLOO TO LINK ROAD,, KENSINGTON, NSW 2033	POEO licence	Surrendered	30 Mar 2000

27 June 2012

Appendix D

Borelogs



Borehole No: BH01

Project No: 42248
Client: Pells Sullivan Maynink
Project Name: Willis Lane, University of NSW
Site Address: Willis Lane, Kingsford, NSW

Date: 03-07-2012

Contractor: Terratest

Drill Rig: Truck Mounted

Method: SFA

Total Hole Depth (mbgs): 2.7

Eastings (MGA): -

Northings (MGA): -

Reference Level: GS

Elevation - Surface (m): 0

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		BITUMINOUS CONCRETE (BC)				
		ROAD BASE	BH01 0.17-0.27	-	D	
		FILL (FL) Silty SAND, brown to yellow, heterogeneous, damp, medium dense, sub rounded, fine to coarse.	BH01 0.4-0.5	-	D	
1.0		FILL (FL) As above, dark brown with black and grey ribbons.	BH01 0.9-1.0	-	D	QC01
			BH01 1.4-1.5	-	D	
2.0		SANDSTONE (SS) Weathered SANDSTONE, red with grey and white, homogeneous, damp, dense, fine, silty sand.	BH01 1.9-2.0	-	D	
			BH01 2.0-2.4	-	D	SPOCAS Bag
			BH01 2.4-2.5	-	D	
		End of Hole at 2.7 m bgs - 1 m into Natural.				
3.0						
4.0						
5.0						
Drilling Method		Sample Type	Reference Level	Log Details		
HA - Hand Auger		U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: K. Sharp		
SFA - Solid Flight Auger		D - Disturbed sample	BGS - Below Ground Surface	Project Manager: K. Linz		
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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Borehole No: BH02

Project No: 42248

Client: Pells Sullivan Maynink

Project Name: Willis Lane, University of NSW

Site Address: Willis Lane, Kingsford, NSW

Date: 03-07-2012

Contractor: Terratest

Drill Rig: Truck Mounted

Method: SFA

Total Hole Depth (mbgs): 4.4

Eastings (MGA): -

Northings (MGA): -

Reference Level: GS

Elevation - Surface (m): 0

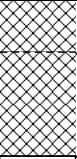
Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		BITUMINOUS CONCRETE (BC)				
		ROAD BASE	BH02 0.12-0.22	-	D	
		FILL (FL) Possibly Natural Silty clayey SAND, red with grey and white, heterogeneous, damp, medium dense, fine sands.	BH02 0.4-0.5	-	D	
			BH02 0.7-0.9	-	D	
			BH02 0.9-1.0	-	D	
1.0						SPOCAS Bag
		FILL (FL) Possibly Natural Silty SAND, brown, heterogeneous, damp, medium plasticity, medium dense, fine.	BH02 1.4-1.5	-	D	
		FILL (FL) Possibly Natural As above, dark brown to black.				
2.0		FILL (FL) Possibly Natural As above, brown with yellow.	BH02 1.9-2.0	-	D	
		FILL (FL) Possibly Natural As above, yellow with brown.	BH02 2.4-2.5	-	D	
3.0		FILL (FL) Possibly Natural As above, saturated.	BH02 2.9-3.0	-	D	
		SANDSTONE (SS) Weathered SANDSTONE, silty clayey sand, red, homogeneous, moist, dense.	BH02 3.4-3.5	-	D	
4.0						3.4-3.6 bag
		End of Hole at 4.4 m bgs - 1 m into Natural.				
5.0						

Drilling Method	Sample Type	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: K. Sharp
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: K. Linz
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

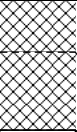
	Borehole No: BH03	Project No: 42248 Client: Pells Sullivan Maynink Project Name: Willis Lane, University of NSW Site Address: Willis Lane, Kingsford, NSW
	Date: 03-07-2012 Contractor: Terratest Drill Rig: Truck Mounted Method: SFA Total Hole Depth (mbgs): 0.6	
Eastings (MGA): - Northings (MGA): - Reference Level: GS Elevation - Surface (m): 0 Bore Diameter (mm): 150		

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL (FL) Silty SAND, medium brown and white, heterogeneous, damp, medium dense, includes sandstone gravels, tile fragments, some brick fragments and some blue metal gravels.	BH03 0.0-0.1	-	D	Augered horizontally into retaining wall.
		FILL (FL) As above, with some dark brown mottles.	BH03 0.4-0.5	-	D	
		End of Hole at 0.6 m bgs.				
1.0						
2.0						
3.0						
4.0						
5.0						

Drilling Method	Sample Type	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: K. Sharp
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: K. Linz
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

	Borehole No: BH04	Project No: 42248 Client: Pells Sullivan Maynink Project Name: Willis Lane, University of NSW Site Address: Willis Lane, Kingsford, NSW
	Date: 03-07-2012 Contractor: Terratest Drill Rig: Truck Mounted Method: SFA Total Hole Depth (mbgs): 0.5	
Eastings (MGA): - Northings (MGA): - Reference Level: GS Elevation - Surface (m): 0 Bore Diameter (mm): 150		

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL (FL) Silty SAND, orange, brown and white, heterogeneous, damp, fine to medium grain, medium density, includes some brick fragments and sandstone gravels.	BH04 0.0-0.1	-	D	Augered horizontally into retaining wall.
		FILL (FL) As above, with dark brown mottling, increasing sandstone inclusions End of Hole at 0.5 m bgs.	BH04 0.4-0.5	-	D	
1.0						
2.0						
3.0						
4.0						
5.0						

Drilling Method	Sample Type	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: K. Sharp
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: K. Linz
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

Appendix E

Field Notes

Field Reporting Cover Sheet



PROJECT NAME: Willis Ln, UNSW	PROJECT NO: 42248
FIELD DATES: 3/7/12	JBS PM: K. Linz
FIELD STAFF: K. Sharp + K. Linz	
WEATHER: Fine	
PROPOSED WORKS: Site inspection w sampling	
SUMMARY OF FIELDWORK:	
- Inspected site - Completed 2 BH with SH SFA - Completed 2 BH from retaining wall	
IMPORTANT OUTCOMES TO NOTE:	
- Collected BH01-BH04 - QCO1 collected w BH01: QCO1	
COC SENT? Yes	DATE SAMPLES SENT: 3/7/12
PRIMARY LAB: EnviroLab.	SECONDARY LAB: NA

POST-FIELDWORK CHECKLIST
☐ COC checked with PM ☐ Site map updated and attached ☐ Field data sheets attached (bore logs, well monitoring sheets) ☐ Calibration and decontamination sheets attached ☐ Field notes attached ☐ Photos downloaded to file ☐ Electronic bore logs completed and checked
OUTSTANDING ACTIONS:



Daily Field Report

Page ___ of ___

Date: 3/7/12
Arrival Time: 7:30am
Depart Time: 10:40am
Site Address: Willis Ln, UNSW

Completed by: K. Sharp
Weather: Fine
Subcontractor(s): _____

Purpose of Visit: site inspection w soil sampling

Notes

(include sketch
or attach site
map/plan)

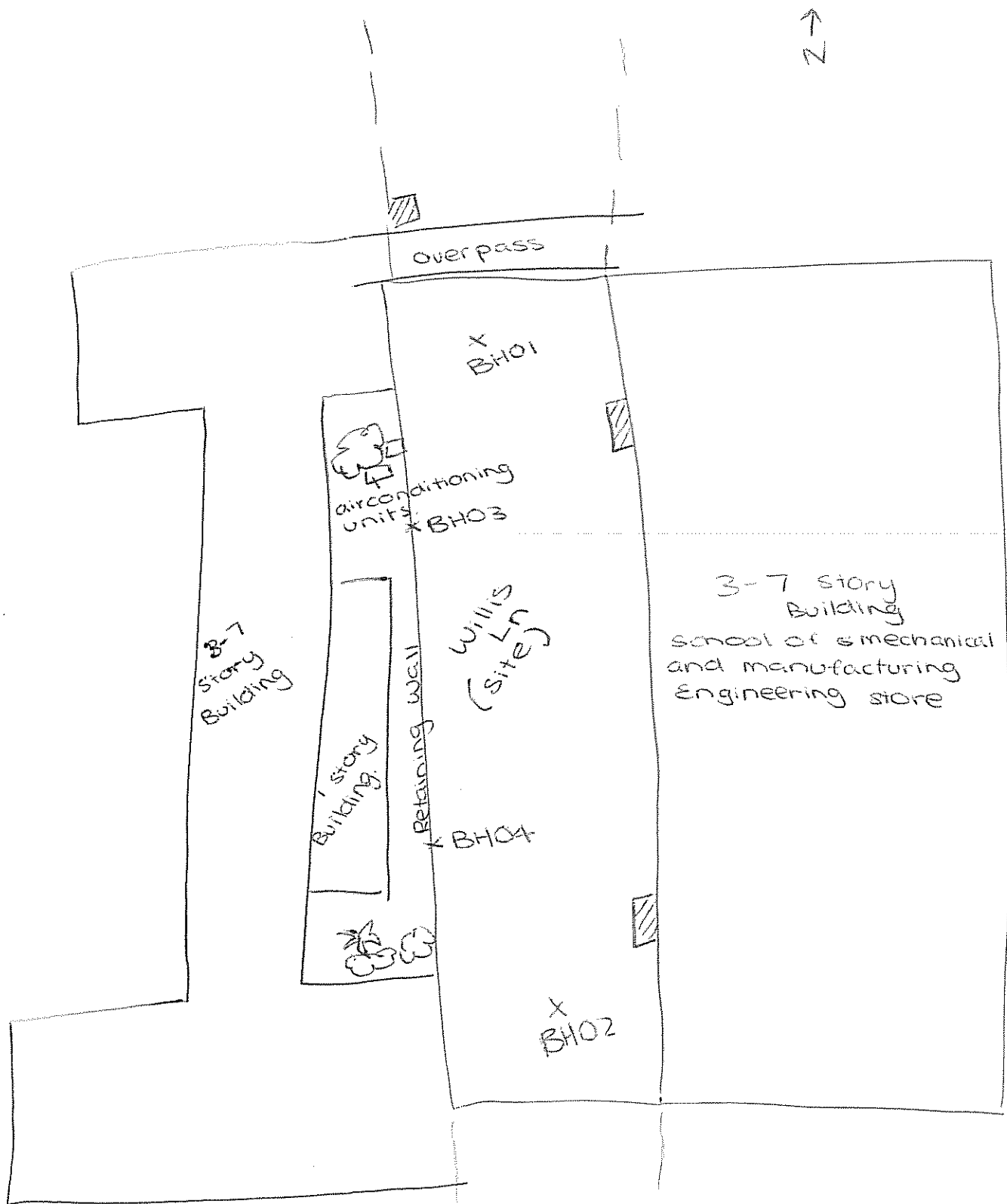
- Arrived 7:30am meet with Katie
- Locator working on site discussed site boundaries
- Level site with ground water flowing into 3 storm water pits along either side of the road.
- Eastern boundary is St School of mechanical and manufacturing engineering shore
- Western boundary 4m retaining wall with access to fill behind the wall. behind this two small vegetated areas one with 5 airconditioning units stored and a small one story building
- further to the west large C shaped building.
- the site is 100% concrete or bitumen.
- BH01 + BH02 completed w terratest rig and SFA
- BH03 + BH04 material removed from retaining wall
- Katie left site 10:00am
- Katie left site 10:40am after b drilling to natural completed Geo-techs continue to drill.

Associated
Completed
Forms

(eg, bore logs,
PID/XRF
calibration
forms)

Note

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PO Box 940, Mascot NSW 1460 • Phone: 8338 1013 • Fax: 8338 1700 • E-mail: jbs@jbsgroup.com.au



Car park
mult story.

Appendix F

Laboratory Reports and Chain of Custody Documentation



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

CERTIFICATE OF ANALYSIS

75636

Client:

JBS Environmental Pty Ltd
P.O. Box 940
MASCOT
NSW 1460

Attention: Katie Linz

Sample log in details:

Your Reference:	42248, Willis Ln
No. of samples:	22 Soils, 1 Water
Date samples received / completed instructions received	03/07/12 / 04/07/12

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:

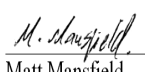
Date results requested by: / Issue Date:	11/07/12 / 11/07/12
Date of Preliminary Report:	Not issued

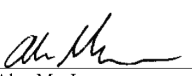
NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

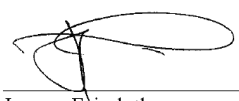

Rhian Morgan
Reporting Supervisor


Nick Sarlamis
Inorganics Supervisor


Matt Mansfield
Approved Signatory


Alex MacLean
Chemist


Paul Ching
Approved Signatory


Jeremy Faircloth
Chemist



Envirolab Reference: 75636
Revision No: R 00

vTRH & BTEX in Soil	UNITS	75636-3	75636-8	75636-10	75636-16	75636-17
Our Reference:	-----	BH01	BH02	BH02	BH03	BH04
Your Reference	-----	0.9-1.0	0.4-0.5	1.4-1.5	0.4-0.5	0.0-0.1
Depth		3/07/2012	3/07/2012	3/07/2012	3/07/2012	3/07/2012
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	06/07/2012	06/07/2012	06/07/2012	06/07/2012	06/07/2012
Date analysed	-	08/07/2012	08/07/2012	08/07/2012	08/07/2012	08/07/2012
vTRHC ₆ - C ₉	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
Surrogate aaa-Trifluorotoluene	%	95	98	97	94	98

vTRH & BTEX in Soil	UNITS	75636-23
Our Reference:	-----	QC01
Your Reference	-----	-
Depth		3/07/2012
Date Sampled		Soil
Type of sample		
Date extracted	-	06/07/2012
Date analysed	-	08/07/2012
vTRHC ₆ - C ₉	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	101

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	75636-3	75636-8	75636-10	75636-16	75636-17
Your Reference	-----	BH01	BH02	BH02	BH03	BH04
Depth	-----	0.9-1.0	0.4-0.5	1.4-1.5	0.4-0.5	0.0-0.1
Date Sampled		3/07/2012	3/07/2012	3/07/2012	3/07/2012	3/07/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/07/2012	06/07/2012	06/07/2012	06/07/2012	06/07/2012
Date analysed	-	07/07/2012	07/07/2012	07/07/2012	07/07/2012	07/07/2012
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	96	100	95	97	94

sTRH in Soil (C10-C36)		
Our Reference:	UNITS	75636-23
Your Reference	-----	QC01
Depth	-----	-
Date Sampled		3/07/2012
Type of sample		Soil
Date extracted	-	06/07/2012
Date analysed	-	07/07/2012
TRHC ₁₀ - C ₁₄	mg/kg	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100
Surrogate o-Terphenyl	%	95

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	75636-3 BH01 0.9-1.0 3/07/2012 Soil	75636-8 BH02 0.4-0.5 3/07/2012 Soil	75636-10 BH02 1.4-1.5 3/07/2012 Soil	75636-16 BH03 0.4-0.5 3/07/2012 Soil	75636-17 BH04 0.0-0.1 3/07/2012 Soil
Date extracted	-	06/07/2012	06/07/2012	06/07/2012	06/07/2012	06/07/2012
Date analysed	-	08/07/2012	08/07/2012	08/07/2012	08/07/2012	08/07/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.07	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	109	105	99	101	101

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	75636-23 QC01 - 3/07/2012 Soil
Date extracted	-	06/07/2012
Date analysed	-	08/07/2012
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Surrogate p-Terphenyl-d14	%	105

Organochlorine Pesticides in soil						
Our Reference:	UNITS	75636-3	75636-8	75636-10	75636-16	75636-17
Your Reference	-----	BH01	BH02	BH02	BH03	BH04
Depth	-----	0.9-1.0	0.4-0.5	1.4-1.5	0.4-0.5	0.0-0.1
Date Sampled		3/07/2012	3/07/2012	3/07/2012	3/07/2012	3/07/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/07/2012	06/07/2012	06/07/2012	06/07/2012	06/07/2012
Date analysed	-	07/07/2012	07/07/2012	07/07/2012	07/07/2012	07/07/2012
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 TCLMX	%	96	96	98	97	94

Organochlorine Pesticides in soil		
Our Reference:	UNITS	75636-23
Your Reference	-----	QC01
Depth	-----	-
Date Sampled		3/07/2012
Type of sample		Soil
Date extracted	-	06/07/2012
Date analysed	-	07/07/2012
HCb	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCLMX	%	99

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	75636-3 BH01 0.9-1.0 3/07/2012 Soil	75636-8 BH02 0.4-0.5 3/07/2012 Soil	75636-10 BH02 1.4-1.5 3/07/2012 Soil	75636-16 BH03 0.4-0.5 3/07/2012 Soil	75636-17 BH04 0.0-0.1 3/07/2012 Soil
Date extracted	-	06/07/2012	06/07/2012	06/07/2012	06/07/2012	06/07/2012
Date analysed	-	07/07/2012	07/07/2012	07/07/2012	07/07/2012	07/07/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	96	96	98	97	94

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	75636-23 QC01 - 3/07/2012 Soil
Date extracted	-	06/07/2012
Date analysed	-	07/07/2012
Arochlor 1016	mg/kg	<0.1
Arochlor 1221	mg/kg	<0.1
Arochlor 1232	mg/kg	<0.1
Arochlor 1242	mg/kg	<0.1
Arochlor 1248	mg/kg	<0.1
Arochlor 1254	mg/kg	<0.1
Arochlor 1260	mg/kg	<0.1
Surrogate TCLMX	%	99

Acid Extractable metals in soil						
Our Reference:	UNITS	75636-3	75636-8	75636-10	75636-16	75636-17
Your Reference	-----	BH01	BH02	BH02	BH03	BH04
Depth	-----	0.9-1.0	0.4-0.5	1.4-1.5	0.4-0.5	0.0-0.1
Date Sampled		3/07/2012	3/07/2012	3/07/2012	3/07/2012	3/07/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	06/07/2012	06/07/2012	06/07/2012	06/07/2012	06/07/2012
Date analysed	-	06/07/2012	06/07/2012	06/07/2012	06/07/2012	06/07/2012
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	5	30	1	3	4
Copper	mg/kg	<1	9	10	2	4
Lead	mg/kg	3	9	54	10	43
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	17	<1	<1	2
Zinc	mg/kg	2	13	15	9	21

Acid Extractable metals in soil		
Our Reference:	UNITS	75636-23
Your Reference	-----	QC01
Depth	-----	-
Date Sampled		3/07/2012
Type of sample		Soil
Date digested	-	06/07/2012
Date analysed	-	06/07/2012
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.5
Chromium	mg/kg	4
Copper	mg/kg	2
Lead	mg/kg	4
Mercury	mg/kg	<0.1
Nickel	mg/kg	3
Zinc	mg/kg	6

Moisture						
Our Reference:	UNITS	75636-3	75636-8	75636-10	75636-16	75636-17
Your Reference	-----	BH01	BH02	BH02	BH03	BH04
Depth	-----	0.9-1.0	0.4-0.5	1.4-1.5	0.4-0.5	0.0-0.1
Date Sampled		3/07/2012	3/07/2012	3/07/2012	3/07/2012	3/07/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	06/07/12	06/07/12	06/07/12	06/07/12	06/07/12
Date analysed	-	09/07/12	09/07/12	09/07/12	09/07/12	09/07/12
Moisture	%	8.0	9.2	5.7	9.5	6.2

Moisture		
Our Reference:	UNITS	75636-23
Your Reference	-----	QC01
Depth	-----	-
Date Sampled		3/07/2012
Type of sample		Soil
Date prepared	-	06/07/12
Date analysed	-	09/07/12
Moisture	%	6.8

Asbestos ID - soils						
Our Reference:	UNITS	75636-3	75636-8	75636-10	75636-16	75636-17
Your Reference	-----	BH01	BH02	BH02	BH03	BH04
Depth	-----	0.9-1.0	0.4-0.5	1.4-1.5	0.4-0.5	0.0-0.1
Date Sampled		3/07/2012	3/07/2012	3/07/2012	3/07/2012	3/07/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	09/07/2012	09/07/2012	09/07/2012	09/07/2012	09/07/2012
Sample mass tested	g	Approx 40g	Approx 40g	Approx 40g	Approx 40g	Approx 40g
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

Miscellaneous Inorg - soil			
Our Reference:	UNITS	75636-6	75636-10
Your Reference	-----	BH01	BH02
Depth	-----	2.4-2.5	1.4-1.5
Date Sampled		3/07/2012	3/07/2012
Type of sample		Soil	Soil
Date prepared	-	09/07/2012	09/07/2012
Date analysed	-	09/07/2012	09/07/2012
pH 1:5 soil:water	pH Units	5.3	5.1
Electrical Conductivity 1:5 soil:water	µS/cm	45	57
Chloride, Cl 1:5 soil:water	mg/kg	10	5
Sulphate, SO4 1:5 soil:water	mg/kg	17	54

sPOCAS		
Our Reference:	UNITS	75636-19
Your Reference	-----	BH01
Depth	-----	2.0-2.4
Date Sampled		3/07/2012
Type of sample		Soil
Date prepared	-	09/07/2012
Date analysed	-	09/07/2012
pH _{KCl}	pH units	5.1
TAA pH 6.5	moles H ⁺ /t	12
s-TAA pH 6.5	%w/w S	0.02
pH _α	pH units	5.0
TPA pH 6.5	moles H ⁺ /t	<5
s-TPA pH 6.5	%w/w S	<0.01
TSA pH 6.5	moles H ⁺ /t	<5
s-TSA pH 6.5	%w/w S	<0.01
ANCE	% CaCO ₃	<0.05
a-ANCE	moles H ⁺ /t	<5
s-ANCE	%w/w S	<0.05
SKCl	%w/w S	0.01
SP	%w/w	0.02
SPOS	%w/w	0.007
a-SPOS	moles H ⁺ /t	<5
CaKCl	%w/w	0.06
CaP	%w/w	0.07
CaA	%w/w	0.009
MgKCl	%w/w	0.006
MgP	%w/w	0.009
MgA	%w/w	<0.005
Fineness Factor	-	<1.5
a-Net Acidity	moles H ⁺ /t	17
Liming rate	kg	1.2
	CaCO ₃ /t	
a-Net Acidity without ANCE	moles H ⁺ /t	NA
Liming rate without ANCE	kg	NA
	CaCO ₃ /t	

vTRH & BTEX in Water		
Our Reference:	UNITS	75636-22
Your Reference	-----	Rinsate
Depth	-----	-
Date Sampled		3/07/2012
Type of sample		Water
Date extracted	-	09/07/2012
Date analysed	-	09/07/2012
TRHC ₆ - C ₉	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Surrogate Dibromofluoromethane	%	107
Surrogate toluene-d8	%	99
Surrogate 4-BFB	%	95

STRH in Water (C10-C36)		
Our Reference:	UNITS	75636-22
Your Reference	-----	Rinsate
Depth	-----	-
Date Sampled		3/07/2012
Type of sample		Water
Date extracted	-	06/07/2012
Date analysed	-	06/07/2012
TRHC ₁₀ - C ₁₄	µg/L	<50
TRHC ₁₅ - C ₂₈	µg/L	<100
TRHC ₂₉ - C ₃₆	µg/L	<100
Surrogate o-Terphenyl	%	94

PAHs in Water Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	75636-22 Rinsate - 3/07/2012 Water
Date extracted	-	06/07/2012
Date analysed	-	06/07/2012
Naphthalene	µg/L	<1
Acenaphthylene	µg/L	<1
Acenaphthene	µg/L	<1
Fluorene	µg/L	<1
Phenanthrene	µg/L	<1
Anthracene	µg/L	<1
Fluoranthene	µg/L	<1
Pyrene	µg/L	<1
Benzo(a)anthracene	µg/L	<1
Chrysene	µg/L	<1
Benzo(b+k)fluoranthene	µg/L	<2
Benzo(a)pyrene	µg/L	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1
Dibenzo(a,h)anthracene	µg/L	<1
Benzo(g,h,i)perylene	µg/L	<1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	108

Metals in Water - Dissolved		
Our Reference:	UNITS	75636-22
Your Reference	-----	Rinsate
Depth	-----	-
Date Sampled		3/07/2012
Type of sample		Water
Date digested	-	06/07/2012
Date analysed	-	06/07/2012
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

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.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-005	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.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA 21st ED, 4500-H+.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell and dedicated meter, in accordance with APHA 21st ED 2510 and Rayment & Higginson.
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA 21st ED, 4110-B.
Inorg-064	sPOCAS determined using titrimetric and ICP-AES techniques. Based on Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH & BTEX in Soil						Base II Duplicate II %RPD		
Date extracted	-			06/07/2012	75636-3	06/07/2012 06/07/2012	LCS-3	06/07/2012
Date analysed	-			08/07/2012	75636-3	08/07/2012 08/07/2012	LCS-3	08/07/2012
vTRHC ₆ - C ₉	mg/kg	25	Org-016	<25	75636-3	<25 <25	LCS-3	101%
Benzene	mg/kg	0.2	Org-016	<0.2	75636-3	<0.2 <0.2	LCS-3	91%
Toluene	mg/kg	0.5	Org-016	<0.5	75636-3	<0.5 <0.5	LCS-3	100%
Ethylbenzene	mg/kg	1	Org-016	<1	75636-3	<1 <1	LCS-3	102%
m+p-xylene	mg/kg	2	Org-016	<2	75636-3	<2 <2	LCS-3	106%
o-Xylene	mg/kg	1	Org-016	<1	75636-3	<1 <1	LCS-3	111%
Surrogate aaa-Trifluorotoluene	%		Org-016	105	75636-3	95 98 RPD: 3	LCS-3	107%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTRH in Soil (C10-C36)						Base II Duplicate II %RPD		
Date extracted	-			06/07/2012	75636-3	06/07/2012 06/07/2012	LCS-3	06/07/2012
Date analysed	-			07/07/2012	75636-3	07/07/2012 07/07/2012	LCS-3	07/07/2012
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	75636-3	<50 <50	LCS-3	106%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	75636-3	<100 <100	LCS-3	106%
TRHC ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	75636-3	<100 <100	LCS-3	89%
Surrogate o-Terphenyl	%		Org-003	105	75636-3	96 97 RPD: 1	LCS-3	98%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			06/07/2012	75636-3	06/07/2012 06/07/2012	LCS-4	06/07/2012
Date analysed	-			08/07/2012	75636-3	08/07/2012 08/07/2012	LCS-4	08/07/2012
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	LCS-4	103%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	LCS-4	100%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	LCS-4	91%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	LCS-4	95%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	LCS-4	98%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	LCS-4	97%

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QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	75636-3	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	75636-3	<0.05 <0.05	LCS-4	94%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	119	75636-3	109 103 RPD: 6	LCS-4	96%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			06/07/2012	75636-3	06/07/2012 06/07/2012	LCS-4	06/07/2012
Date analysed	-			07/07/2012	75636-3	07/07/2012 07/07/2012	LCS-4	07/07/2012
HCB	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	LCS-4	101%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	LCS-4	97%
Heptachlor	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	LCS-4	98%
delta-BHC	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	LCS-4	103%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	LCS-4	101%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	LCS-4	94%
Dieldrin	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	LCS-4	101%
Endrin	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	LCS-4	99%
pp-DDD	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	LCS-4	95%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	LCS-4	100%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-005	102	75636-3	96 93 RPD: 3	LCS-4	94%

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QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			06/07/2012	75636-3	06/07/2012 06/07/2012	LCS-4	06/07/2012
Date analysed	-			07/07/2012	75636-3	07/07/2012 07/07/2012	LCS-4	07/07/2012
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	75636-3	<0.1 <0.1	LCS-4	98%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	75636-3	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	102	75636-3	96 93 RPD: 3	LCS-4	97%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			[NT]	75636-3	06/07/2012 06/07/2012	LCS-1	06/07/2012
Date analysed	-			[NT]	75636-3	06/07/2012 06/07/2012	LCS-1	06/07/2012
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	75636-3	<4 <4	LCS-1	98%
Cadmium	mg/kg	0.5	Metals-020 ICP-AES	<0.5	75636-3	<0.5 <0.5	LCS-1	101%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	75636-3	5 5 RPD: 0	LCS-1	100%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	75636-3	<1 <1	LCS-1	101%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	75636-3	3 3 RPD: 0	LCS-1	97%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	75636-3	<0.1 <0.1	LCS-1	102%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	75636-3	2 2 RPD: 0	LCS-1	101%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	75636-3	2 1 RPD: 67	LCS-1	100%

QUALITYCONTROL Moisture	UNITS	PQL	METHOD	Blank				
Date prepared	-			[NT]				
Date analysed	-			[NT]				
Moisture	%	0.1	Inorg-008	[NT]				
QUALITYCONTROL Asbestos ID - soils	UNITS	PQL	METHOD	Blank				
Date analysed	-			[NT]				
QUALITYCONTROL Miscellaneous Inorg - soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			09/07/2012	75636-6	09/07/2012 09/07/2012	LCS-1	09/07/2012
Date analysed	-			09/07/2012	75636-6	09/07/2012 09/07/2012	LCS-1	09/07/2012
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	75636-6	5.3 5.3 RPD: 0	LCS-1	100%
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	<1	75636-6	45 38 RPD: 17	LCS-1	108%
Chloride, Cl 1:5 soil:water	mg/kg	2	Inorg-081	<2	75636-6	10 13 RPD: 26	LCS-1	99%
Sulphate, SO4 1:5 soil:water	mg/kg	2	Inorg-081	<2	75636-6	17 23 RPD: 30	LCS-1	110%
QUALITYCONTROL sPOCAS	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			09/07/2012	[NT]	[NT]	LCS	9/7/2012
Date analysed	-			09/07/2012	[NT]	[NT]	LCS	9/7/2012
pH _{kcl}	pH units		Inorg-064	[NT]	[NT]	[NT]	LCS	101%
TAA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	LCS	81%
s-TAA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	[NT]	[NT]	[NR]	[NR]
pH _α	pH units		Inorg-064	[NT]	[NT]	[NT]	LCS	100%
TPA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	LCS	121%
s-TPA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	[NT]	[NT]	[NR]	[NR]
TSA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	LCS	123%
s-TSA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	[NT]	[NT]	[NR]	[NR]
ANCE	% CaCO ₃	0.05	Inorg-064	<0.05	[NT]	[NT]	[NR]	[NR]
a-ANCE	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	[NR]	[NR]
s-ANCE	%w/w S	0.05	Inorg-064	<0.05	[NT]	[NT]	[NR]	[NR]
SKCl	%w/w S	0.005	Inorg-064	<0.005	[NT]	[NT]	LCS	85%
SP	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	LCS	92%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sPOCAS						Base II Duplicate II %RPD		
SPOS	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	LCS	94%
a-SPOS	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	LCS	94%
Ca _K Cl	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	LCS	90%
CaP	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NR]	[NR]
CaA	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NR]	[NR]
Mg _K Cl	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	LCS	85%
MgP	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NR]	[NR]
MgA	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NR]	[NR]
SHCl	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NR]	[NR]
S								
SNAS	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NR]	[NR]
S								
a-SNAS	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	[NR]	[NR]
S-SNAS	%w/w	0.01	Inorg-064	<0.01	[NT]	[NT]	[NR]	[NR]
S								
Fineness Factor	-	1.5	Inorg-064	<1.5	[NT]	[NT]	[NR]	[NR]
a-Net Acidity	moles H ⁺ /t	10	Inorg-064	<10	[NT]	[NT]	LCS	94%
Liming rate	kg CaCO ₃ /t	0.75	Inorg-064	<0.75	[NT]	[NT]	LCS	93%
a-Net Acidity without ANCE	moles H ⁺ /t	10	Inorg-064	<10	[NT]	[NT]	[NR]	[NR]
Liming rate without ANCE	kg CaCO ₃ /t	0.75	Inorg-064	<0.75	[NT]	[NT]	[NR]	[NR]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH & BTEX in Water						Base II Duplicate II %RPD		
Date extracted	-			09/07/2012	[NT]	[NT]	LCS-W1	09/07/2012
Date analysed	-			09/07/2012	[NT]	[NT]	LCS-W1	09/07/2012
TRHC ₆ - C ₉	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	93%
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	95%
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	96%
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	92%
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	LCS-W1	92%
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	89%
Surrogate	%		Org-016	91	[NT]	[NT]	LCS-W1	90%
Dibromofluoromethane								
Surrogate toluene-d8	%		Org-016	99	[NT]	[NT]	LCS-W1	100%
Surrogate 4-BFB	%		Org-016	98	[NT]	[NT]	LCS-W1	99%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTRH in Water (C10-C36)						Base II Duplicate II %RPD		
Date extracted	-			06/07/2012	[NT]	[NT]	LCS-W3	06/07/2012
Date analysed	-			06/07/2012	[NT]	[NT]	LCS-W3	06/07/2012
TRHC ₁₀ - C ₁₄	µg/L	50	Org-003	<50	[NT]	[NT]	LCS-W3	90%
TRHC ₁₅ - C ₂₈	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W3	108%
TRHC ₂₈ - C ₃₆	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W3	89%
Surrogate o-Terphenyl	%		Org-003	95	[NT]	[NT]	LCS-W3	139%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Water						Base II Duplicate II %RPD		
Date extracted	-			06/07/2012	[NT]	[NT]	LCS-W1	06/07/2012
Date analysed	-			07/07/2012	[NT]	[NT]	LCS-W1	07/07/2012
Naphthalene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	101%
Acenaphthylene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Fluorene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	109%
Phenanthrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	97%
Anthracene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	100%
Pyrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	103%
Benzo(a)anthracene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Chrysene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	98%
Benzo(b+k)fluoranthene	µg/L	2	Org-012 subset	<2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	129%
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d ₁₄	%		Org-012 subset	119	[NT]	[NT]	LCS-W1	109%

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Metals in Water - Dissolved						Base II Duplicate II %RPD		
Date digested	-			06/07/2012	[NT]	[NT]	LCS-W1	06/07/2012
Date analysed	-			06/07/2012	[NT]	[NT]	LCS-W1	06/07/2012
Arsenic - Dissolved	mg/L	0.05	Metals-020 ICP-AES	<0.05	[NT]	[NT]	LCS-W1	98%
Cadmium - Dissolved	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	100%
Chromium - Dissolved	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	99%
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	99%
Mercury - Dissolved	mg/L	0.0005	Metals-021 CV-AAS	<0.0005	[NT]	[NT]	LCS-W1	84%
Nickel - Dissolved	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[NT]	LCS-W1	101%
Zinc - Dissolved	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[NT]	LCS-W1	102%
QUALITYCONTROL PCBs in Soil	UNITS	Dup. Sm#		Duplicate Base + Duplicate + %RPD		Spike Sm#	Spike % Recovery	
Date extracted	-	[NT]		[NT]		75636-8	06/07/2012	
Date analysed	-	[NT]		[NT]		75636-8	07/07/2012	
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]		75636-8	102%	
Arochlor 1260	mg/kg	[NT]		[NT]		[NR]	[NR]	
Surrogate TCLMX	%	[NT]		[NT]		75636-8	108%	

Report Comments:

Asbestos ID was analysed by Approved Identifier: Paul Ching
 Asbestos ID was authorised by Approved Signatory: Paul Ching

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 batches 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 and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

CHAIN OF CUSTODY



PROJECT NO.: 42248						LABORATORY BATCH NO.											
PROJECT NAME: Willis Ln						SAMPLERS: K Sharp						ksharp@jbsgroup.com.au					
SEND REPORT TO: K Linz						SEND INVOICE TO: A Traynor						PHONE: 02 8338 1011					
DATE NEEDED BY: Standard Turn Around						QC LEVEL: NEPM 1999 ()						EMAIL: ksharp@jbsgroup.com.au					
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																	

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Heavy Metals	PAH	TPH/BTEX	OCF	PCB	Asbestos	Soil Aggressivity											NOTES
1 BH01 017-027	Soil	3/7/12		Jar, Bag, Ice																			
2 BH01 04-05																							
3 BH01 09-10																							
4 BH01 14-15																							
5 BH01 19-15																							
6 BH01 20-24																							
7 BH01 21-25																							
8 BH02 012-027																							
9 BH02 04-05																							
10 BH02 09-10																							
11 BH02 14-15																							
12 BH02 19-20																							
13 BH02 24-25																							
14 BH02 29-30																							
15 BH02 34-35																							
16 BH03 00-01																							
17 BH03 04-05																							
18 BH04 00-01																							

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME: K Sharp	DATE: 3/7/12	CONSIGNMENT NOTE NO.		NAME: JO ELS	DATE: 3/7/12	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF: JBS Environmental		TRANSPORT CO.		OF:		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	

EnviroLab Services
 12 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9910 6200

 Job No: 75636

 Date Received: 3/7/12
 Time Received: 16:20
 Received by: JHL
 Temp: Cool Ambient
 Cooling: Ice/icepack
 Security: Intact/Broken/None



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: Katie Linz

Sample log in details:

Your reference:	42248, Willis Ln
Envirolab Reference:	75636
Date received:	03/07/12
Date results expected to be reported:	11/07/12

Samples received in appropriate condition for analysis:	YES
No. of samples provided	22 Soils, 1 Water
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

Appendix G

Quality Assurance / Quality Control

ESDAT QA Checker
Project:42248
Filter: SDG in('75636')

Overview Summary

[Count of Samples](#)

[Summary By Compound](#)

[Count of Results](#)

Holding Times

Holding Time Errors (0)

Blanks

Field Blanks

Detects in Lab Blanks (0)

SDG's without Method Blanks (0)

Duplicates

[Field and Interlab Dupes](#)

Lab Duplicates with high RPDs (0)

Duplicate Samples with incorrect or missing Parent Samples (0)

Samples at the same Location/Depth/Time not specified as duplicates (0)

Surrogates

[Surrogate Variation > 30% or outside lab LCL or UCL or outside lab LCL or UCL \(1\)](#)

Lab Control Samples

SDG's without a Laboratory Control Sample (0)

[Laboratory Control Samples, Error > 30% \(1\)](#)

Certified and Standard Reference Materials

Certified Reference Materials - Error > 30% (0)

Matrix Spikes

SDG's without a Matrix Spike (0)

Trip Spikes with invalid Control Sample (0)

[Less than 1 matrix spike in 20 samples, or less than 1 matrix duplicate in 20 samples \(2\)](#)

Matrix Spike Recoveries less than 70% or greater than 130% or outside lab LCL or UCL (0)

Trip Spike Recoveries (70% - 130% is acceptable) (0)

Inorganic

Other

Unit Conversion Problems (0)

[OriginalChemNames Requiring Validation \(4\)](#)

Samples with no Results (0)

Samples associated with Wells which are not specified in the Well Table (0)

Aborted Analysis (0)

[Contents](#)

Count of Samples

Matrix Type	soil	water
First Sample Date	3/07/2012	3/07/2012
Last Sample Date	3/07/2012	3/07/2012
Sampling Period (days)	1	1
Number of Samples Submitted	8	1
Number of Non QA Samples Submitted	7	1
Number of Field Blanks	0	0
Number of Trip Blanks	0	0
Number of Rinsates	0	0
Number of Field Duplicates	1	0
Number of Interlab Duplicates	0	0
Number of Trip Spikes	0	0
Number of Lab Duplicates	2	0
Number of LCSS	4	2
Number of CRMs	0	0
Number of Method Blanks	1	1
Number of Storage Blanks	0	0
Number of Matrix Spikes	1	0
Number of Matrix Spike Dupes	0	0

Method Type	ChemName	EQL		Num Results		Holding Times (days)		Lab Control Samples		Method and Storage Blanks		Laboratory Duplicates		Surrogates		Matrix, Trip and Compound Spikes		Field Rinsate and Trip Blanks		Field Duplicates			
		Range	Max QA Composite	Recovery %	Stability Group	Sample to Retention	Sample to Analysis	Recovery %	Num Reported	Acceptable	Range	Num Reported	Acceptable	Recovery %	Num Reported	Acceptable	Recovery %	Num Reported	Acceptable	Range	Num Reported	Acceptable	
8 metals in soil	Arsenic	4 mg/kg	5	Other	3	3	Y	98 to 98	1	Y	ND	1	Y	1	Y	0	0	0	0	0	1	Y	
	Cadmium	0.5 mg/kg	5	Other	3	3	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	0	1	Y	
	Chromium (III+VI)	1 mg/kg	5	Other	3	3	Y	100 to 100	1	Y	ND	1	Y	0	1	Y	0	0	0	22	1	Y	
	Copper	1 mg/kg	5	Other	3	3	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	0	1	Y	
	Lead	1 mg/kg	5	Other	3	3	Y	97 to 97	1	Y	ND	1	Y	1	Y	0	0	0	0	29	1	Y	
	Mercury	0.1 mg/kg	5	Specific	3	3	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	0	1	Y	
	Nickel	1 mg/kg	5	Other	3	3	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	0	1	Y	
Zinc	1 mg/kg	5	Other	3	3	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	100	1	N		
Asbestos ID - soils	Asbestos fibres		5	Other	6	6	Y		0		0	0	N	0		0	0	0	0	0	N		
Miscellaneous Inorg - soil	Chloride	2 mg/kg	2	Low Stability	6	6	Y	99 to 99	1	Y	ND	1	Y	26	1	Y	0	0	0	0	0	N	
	Conductivity (1:5 aqueous extract)	1 mg/kg	2		6	6	Y	110 to 110	1	Y	ND	1	Y	17	1	Y	0	0	0	0	0	N	
	pH (aqueous extract)		2	Other	6	6	Y	100 to 100	1	Y	0	0	Y	1	Y	0	0	0	0	0	0	N	
	Sulphate	2 mg/kg	2	Low Stability	6	6	Y	110 to 110	1	Y	ND	1	Y	30	1	Y	0	0	0	0	0	N	
Moisture	Moisture	0.1 %	5	Other	3	6	Y		0		0	0	N	0		0	0	0	0	16	1	Y	
Organochlorine Pesticides	4,4-DDE	0.1 mg/kg	5	SVOC	3	4	Y	94 to 94	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	a-BHC	0.1 mg/kg	5	SVOC	3	4	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Aldrin	0.1 mg/kg	5	SVOC	3	4	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	b-BHC	0.1 mg/kg	5	SVOC	3	4	Y	97 to 97	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Chlordane (cis)	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Chlordane (trans)	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	d-BHC	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	DDD	0.1 mg/kg	5	SVOC	3	4	Y	95 to 95	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	DDT	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Dieldrin	0.1 mg/kg	5	SVOC	3	4	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Endosulfan I	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Endosulfan II	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Endosulfan sulphate	0.1 mg/kg	5	SVOC	3	4	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Endrin	0.1 mg/kg	5	SVOC	3	4	Y	99 to 99	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Endrin aldehyde	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	g-BHC (Lindane)	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Heptachlor	0.1 mg/kg	5	SVOC	3	4	Y	98 to 98	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Heptachlor epoxide	0.1 mg/kg	5	SVOC	3	4	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Hexachlorobenzene	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Methoxychlor	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Tetrachloroethylene		0	SVOC			Y	94 to 94	1	Y	0	0	N	93 to 102	9	Y	0	0	0	0	0	N	
PAHs in Soil	Acenaphthene	0.1 mg/kg	5	SVOC	3	5	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Acenaphthylene	0.1 mg/kg	5	SVOC	3	5	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Anthracene	0.1 mg/kg	5	SVOC	3	5	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Benzo(a)anthracene	0.1 mg/kg	5	SVOC	3	5	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Benzo(a)pyrene	0.05 mg/kg	5	SVOC	3	5	Y	94 to 94	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Benzo(b)fluoranthene	0.2 mg/kg	5	SVOC	3	5	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Benzo(g,h,i)perylene	0.1 mg/kg	5	SVOC	3	5	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Chrysene	0.1 mg/kg	5	SVOC	3	5	Y	97 to 97	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Dibenz(a,h)anthracene	0.1 mg/kg	5	SVOC	3	5	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Fluoranthene	0.1 mg/kg	5	SVOC	3	5	Y	95 to 95	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Fluorene	0.1 mg/kg	5	SVOC	3	5	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Indeno(1,2,3-c,d)pyrene	0.1 mg/kg	5	SVOC	3	5	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Naphthalene	0.1 mg/kg	5	SVOC	3	5	Y	100 to 100	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Phenanthrene	0.1 mg/kg	5	SVOC	3	5	Y	91 to 91	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	p-Terphenyl	0.1 mg/kg	0	SVOC	3	5	Y	96 to 96	1	Y	ND	1	Y	0	N	96 to 119	9	Y	0	0	0	0	N
	Pyrene	0.1 mg/kg	5	SVOC	3	5	Y	98 to 98	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
PCBs in Soil	Arochlor 1016	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Arochlor 1221	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Arochlor 1232	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Arochlor 1242	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Arochlor 1248	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Arochlor 1254	0.1 mg/kg	5	SVOC	3	4	Y	98 to 98	1	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Arochlor 1260	0.1 mg/kg	5	SVOC	3	4	Y	0	0	Y	ND	1	Y	1	Y	0	0	0	0	0	0	1	Y
	Tetrachloroethylene		0	SVOC			Y	97 to 97	1	Y	0	0	N	93 to 108	10	Y	0	0	0	0	0	N	
	Tetrachloroethylene		0	SVOC			Y	97 to 97	1	Y	0	0	N	93 to 108	10	Y	0	0	0	0	0	N	
	Tetrachloroethylene		0	SVOC			Y	97 to 97	1	Y	0	0	N	93 to 108	10	Y	0	0	0	0	0	N	
gPOCAS	Acid Reacted Calcium	0.005 %	1	Other	6	6	Y	0	0	Y	ND	1	Y	0	N	0	0	0	0	0	0	0	N
	Acid Reacted Magnesium	0.005 pH Unit	1	Other	6	6	Y	0	0	Y	ND	1	Y	0	N	0	0	0	0	0	0	0	N
	acidty - Excess Acid Neutralising Capacity	5 mole H+lt	1	Other	6	6	Y	0	0	Y	ND	1	Y	0	N	0	0	0	0	0	0		

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Count of Results

Matrix_Type	Sample_Type	Reg	Leached	Spike_Compounds	Surrogate
soil	Normal	337	0	0	25
soil	MB	88	0	0	5
soil	LAB_D	63	0	0	5
soil	Field_D	60	0	0	5
soil	LCS	52	0	0	5
soil	MS	1	0	0	1
water	Normal	32	0	0	5
water	MB	32	0	0	5
water	LCS	24	0	0	5

soil

Field Duplicates (soil)
Filter: SDG in('75636')

SDG	75636	75636	
Field_ID	BH01	QC01	RPD
Sampled_Date-Time	3/07/2012	3/07/2012	

Filter	Method_Type	ChemName	Units	EQL			
8 metals in soil	8 metals in soil	Arsenic	mg/kg	4	<4.0	<4.0	0
8 metals in soil		Cadmium	mg/kg	0.5	<0.5	<0.5	0
8 metals in soil		Chromium (III+VI)	mg/kg	1	5.0	4.0	22
8 metals in soil		Copper	mg/kg	1	<1.0	2.0	67
8 metals in soil		Lead	mg/kg	1	3.0	4.0	29
8 metals in soil		Mercury	mg/kg	0.1	<0.1	<0.1	0
8 metals in soil		Nickel	mg/kg	1	2.0	3.0	40
8 metals in soil		Zinc	mg/kg	1	2.0	6.0	100
Moisture	Moisture	Moisture	%	0.1	8.0	6.8	16
Moisture							
Organochlorine Pesticides	Organochlorine Pesticides	4,4-DDE	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		a-BHC	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Aldrin	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		b-BHC	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Chlordane (cis)	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Chlordane (trans)	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		d-BHC	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		DDD	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		DDT	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Dieldrin	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Endosulfan I	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Endosulfan II	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Endrin	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		g-BHC (Lindane)	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Heptachlor	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Hexachlorobenzene	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides		Methoxychlor	mg/kg	0.1	<0.1	<0.1	0
Organochlorine Pesticides							
PAHs in Soil	PAHs in Soil	Acenaphthene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Anthracene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Benz(a)anthracene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Benzo(a) pyrene	mg/kg	0.05	<0.05	<0.05	0
PAHs in Soil		Benzo(b)&(k)fluoranthene	mg/kg	0.2	<0.2	<0.2	0
PAHs in Soil		Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Chrysene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Dibenz(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Fluoranthene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Fluorene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Naphthalene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Phenanthrene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil		Pyrene	mg/kg	0.1	<0.1	<0.1	0
PAHs in Soil							
PCBs in Soil	PCBs in Soil	Arochlor 1016	mg/kg	0.1	<0.1	<0.1	0
PCBs in Soil		Arochlor 1221	mg/kg	0.1	<0.1	<0.1	0
PCBs in Soil		Arochlor 1232	mg/kg	0.1	<0.1	<0.1	0
PCBs in Soil		Arochlor 1242	mg/kg	0.1	<0.1	<0.1	0
PCBs in Soil		Arochlor 1248	mg/kg	0.1	<0.1	<0.1	0
PCBs in Soil		Arochlor 1254	mg/kg	0.1	<0.1	<0.1	0
PCBs in Soil		Arochlor 1260	mg/kg	0.1	<0.1	<0.1	0
PCBs in Soil							
sTRH in Soil (C10-C36)	sTRH in Soil (C10-C36)	C15 - C28	mg/kg	100	<100.0	<100.0	0
sTRH in Soil (C10-C36)		C29-C36	mg/kg	100	<100.0	<100.0	0
sTRH in Soil (C10-C36)		TRH	mg/kg	50	<50.0	<50.0	0
sTRH in Soil (C10-C36)							
vTRH & BTEX in Soil	vTRH & BTEX in Soil	Benzene	mg/kg	0.2	<0.2	<0.2	0
vTRH & BTEX in Soil		Ethylbenzene	mg/kg	1	<1.0	<1.0	0
vTRH & BTEX in Soil		Toluene	mg/kg	0.5	<0.5	<0.5	0
vTRH & BTEX in Soil		C6 - C9	mg/kg	25	<25.0	<25.0	0
vTRH & BTEX in Soil		Xylene (m & p)	mg/kg	2	<2.0	<2.0	0
vTRH & BTEX in Soil		Xylene (o)	mg/kg	1	<1.0	<1.0	0

*RPDs have only been considered where a concentration is greater than 4 times the EQL.

**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 50 (4-10 x EQL); 50 (10-30 x EQL); 50 (> 30

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row

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Surrogate Variation > 30% or outside lab LCL or UCL or outside lab LCL or UCL

SDG	Sample_Type	Matrix_Type	SampleCode	Field_ID	Depth
75636	LCS	water	75636LCS-W3		

Sampled_Date-Time	Compound	Recovery %	Unit	Comments
3/07/2012	Surrogate o-Terphenyl	139	%	

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Laboratory Control Samples, Error > 30%

SDG	Matrix_Type	SampleCode	Method_Name
75636	water	75636LCS-W3	Org-003 - Semi-volatile TRH in waters and soil

OriginalChemName	Recovery %	Unit	Result_Type	Comments
Surrogate o-Terphenyl	139	%	SUR	

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Less than 1 matrix spike in 20 samples, or less than 1 matrix duplicate in 20 samples

Matrix_Type	Number_of_Samples	Number_of_Matrix_Spike_Samples	
soil	16		1
water	4		0

Number_of_Matrix_Spike_Dupe_Samples

0

0

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OriginalChemNames Requiring Validation

OriginalChemName	ChemCode	ChemName	AlternativeName1
gamma-Chlordane	5103-74-2	Chlordane (trans)	trans-chlordane
pp-DDE	72-55-9	4,4-DDE	4,4'-DDE
Sulphate, SO4 1:5 soil:water	14808-79-8	Sulphate	Sulphate as SO4 2-
Surrogate TCLMX	877-09-8	Tetrachlorometaxylene	

*This listing indicates results where the OriginalChemName may not be the equivalent of the ChemName. caused by an incorrectly assigned ChemCode.

This has been detected because A) the OriginalChemName does not match either the ChemName or an A specified in the[Chemistry_Results]Lookup Table.

If the OriginalChemName is the equivalent of the ChemName then no further action is required.

If the OriginalChemName isn't the equivalent of the ChemName the wrong ChemCode has been assigned ChemCode by looking through the[Chemistry_Results]Lookup Table (Data Tables -[Chemistry_Results]Lo Results); filter for the incorrect OriginalChemName; correct the ChemCode.

AlternativeName2

AlternativeName3

AlternativeName4

This means that the ChemName as output may be incorrect for the relevant result and is

Alternative Name for the ChemCode and 2)the Validate_OriginalChemName check is

and will need to be fixed. To fix an incorrect ChemCode do the following: Find the correct
okup); Select the[Chemistry_Results]Results table (Data Tables - Chemistry/Chemistry

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Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
A	Kate Sharp/ Katie Linz	Matthew Bennett	Draft for internal review		17/07/2012
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1	Kate Sharp/ Katie Linz	Matthew Bennett	Matthew Bennett		15/10/2012