

17 December 2018

G0092:RPH

29327 Doc Review 52 Golf Rd, Oakleigh Sth-Rev01

Joe Khougaz

Golf Road Project Development Pty Ltd

C/o VIMG

Level 27/367 Collins Street

Melbourne VIC 3000

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Dear Joe,

## **Desktop Review of Environmental Assessment Reports for 52 Golf Road, Oakleigh South, Victoria**

Prensa Pty Ltd (Prensa) was engaged by Golf Road Project Development Pty Ltd (Golf Road Project Development) on behalf of VIC Investments Management Group Pty Ltd (VIMG) to review available environmental assessment reports for the former Oakleigh South Primary School located at 52 Golf Road, Oakleigh South (the Site). The review was requested to address potential data gaps in previously completed environmental assessment work.

### **1 Background**

Golf Road Project Development plans to develop the Site for residential purposes. The Site has an estimated land area of 20,193 m<sup>2</sup>.

Prensa previously completed an Environmental Site Assessment (ESA) at the Site (reference: Prensa, *Environmental Site Assessment, 1 Beryl Avenue, Oakleigh South Victoria* (Revision 1: August 2013)) on behalf of the Department of Treasury and Finance (DTF). It is noted that 1-17 Beryl Avenue was the former address and the Site is now identified as 52 Golf Road. The report involved the review of a number of previously completed assessment reports. Prensa also conducted additional targeted soil assessment works around the former location of two (2) underground storage tanks and completion of a groundwater monitoring event.

A Site Development Management Plan (SDMP) was subsequently developed for the Site by Prensa (reference: Prensa, *Site Development Management Plan, 1 Beryl Avenue, Oakleigh South Victoria*, August 2013) to assist in future management of asbestos at the Site.

Environmental Resources Management Australia Pty Ltd (ERM) was formerly commissioned by Currie & Brown to provide environmental advice related to the potential purchase of the Site (reference: ERM, *Re: Technical Review: 1-17 Beryl Avenue, Oakleigh South*, 8 August 2016 (ERM 2016)). The scope of review was limited to Prensa's ESA (2013) and SDMP (2013) as well as an ENSR | AECOM, *Additional Environmental Site Assessment, Former Oakleigh South Primary School, Beryl Avenue, Oakleigh, Victoria* (January 2008). The review concluded that, *"the requirement or otherwise for an Environmental Audit will be generally be determined in the first instance by the local Planning Authority. The environmental assessments described by Prensa (2013a) suggest a low level of environmental risk and that an Environmental Audit is not required. However, this case will be strengthened by addressing the data gaps identified in the previous section, either by reference to historical reports or by completing additional works.*

*These data gaps include:*

- *Extent and quality of shallow fill – close either by review of historical data or by intrusive works, include potential presence of ACM buried in fill, utilities constructed from ACM and aesthetics;*
- *Groundwater quality at i) lead "hotspot" and ii) in the western portion of the site – close by installing at least two new wells in the western portion of the (no existing wells) and then complete a groundwater monitoring event; and*
- *Status of landfill gas risk assessment – close by review of existing report."*

Given the amount of assessment work that has been conducted to date at the Site, and in light of the fact that ERM were provided with only three (3) of the eleven (11) previous environmental assessments of the Site as part of their review, Golf Road Project Development has requested Prensa conducts a detailed review to identify whether these gaps require further assessment work.

## 2 Objective

The objective of this review is to assist Golf Road Project Development in addressing potential data gaps in previously completed environmental assessment work.

## 3 Scope of Work

Prensa's scope of work included:

- Complete a desktop review of available documentation to close data gaps identified by ERM, where possible;
- Document the findings of the desktop review in this letter report; and
- Where data gaps are noted to remain, provide recommendations for further works.

## 4 Legislative Framework

In completing the above tasks, Prensa gave consideration to the following regulatory framework:

- *Environmental Protection Act 1970;*
- *Occupational Health and Safety (Asbestos) Regulations 2003, 2005*
- *Victorian Occupational Health and Safety Regulations 2017;*
- *State Environment Protection Policy (SEPP), Prevention and Management of Contamination of Land, 2002;*
- *State Environment Protection Policy (SEPP), Waters, 2018;*

- National Environmental Protection Council (NEPC), *National Environment Protection (Assessment of Site Contamination) Measure 1999*, May 2013, hereafter referred to as NEPC 2013;
- West Australian Department of Health, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*, May 2009 (WA DoH 2009);
- Australian Standard 4482.1, *Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 1: Non-volatile and Semi-volatile Compounds, 2005* (AS4482.1-2005); and
- Australian Standard 4482.2, *Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances*, 1999.

## 5 Data Gap Review

Prensa completed a review of the following documents, most of which were not available to ERM at the time of its review:

- Beveridge Williams, *Contamination Assessment Oakleigh South Primary School, Beryl Avenue, Oakleigh South*, February 2000;
- Beveridge Williams, *Validation Sampling and Testing, Oakleigh South Primary School, Beryl Avenue, Oakleigh*, June 2002;
- Beveridge Williams, *Contamination Assessment Oakleigh South Primary School, Beryl Avenue, Oakleigh South*, May 2003;
- Golder Associates, *Preliminary Contamination Assessment and Cost Estimate – DET site, Oakleigh South*, November 2005;
- HLA-Envirosciences, *Environmental Site Assessment, Former Oakleigh South Primary School, Beryl Avenue, Oakleigh South*, December 2006;
- HLA-Envirosciences, *Groundwater Assessment, Former Oakleigh South Primary School, Beryl Avenue, Oakleigh South*, January 2007;
- ENSR | AECOM, *Additional Environmental Site Assessment, Former Oakleigh South Primary School, Beryl Avenue, Oakleigh, Victoria*, January 2008;
- Prensa, *Phase 1 Preliminary Environmental Site Assessment, Former Oakleigh South Primary School, Oakleigh South VIC 3167*, August 2010;
- Prensa, *Environmental Site Assessment, 1 Beryl Avenue, Oakleigh South, Victoria*, August 2013;
- Prensa, *Desktop Landfill Gas Investigation, 1 Beryl Avenue, Oakleigh South, Victoria*, March 2014; and
- Prensa, *Review of Desktop Landfill Gas Investigation for 52 Golf Road, Oakleigh South, Victoria*, December 2018.

Some of these reports were commissioned by DTF. The majority of the reports were commissioned by the Department of Education and Training (DET) (also formerly known as the Department of Education, Employment, and Training Facilities or the Department of Education and Early Childhood Development) and were provided to Prensa during the divestment process facilitated by DTF.

DTF was contacted by Prensa on 29 November 2018 and consent was provided by DTF on 4 December 2018 for use of the reports by the current owner, Golf Road Project Development.

It is noted that Prensa has not completed a comprehensive review of all available reports. The focus of this data gap analysis is to address the data gaps specifically identified by ERM (2016).

## 5.1 Extent and quality of shallow fill

### 5.1.1 Beveridge Williams (2000 and 2003)

Beveridge Williams completed a contamination assessment at the Site in 2003, which included establishment of twenty-two (22) gridded boreholes (BH02-05 to BH02-26), with soil samples collected throughout the soil profile. A site plan depicting the sampling locations has been attached to this report (**Attachment B**). The figure also identifies four (4) boreholes (BH1 to BH4) previously established by Beveridge Williams in 2000.

Borehole logs indicate that the boreholes were established to variable depths from 0.2 to 1.5 m. Fill was identified at five (5) boreholes to a maximum depth of 0.4 m. The remaining boreholes comprised either natural or 'disturbed natural' from surface.

The boreholes generally comprised grey-brown silty sand or sandy silt, fine to medium, transitioning to silty or sandy clay at approximately 0.75 m. Red brick fragments were identified near surface in BH02-5 and BH02-12. Several boreholes contained quartz gravels or basalt chips in the near surface soils. The remaining boreholes did not identify foreign inclusions. No odours or staining were identified. Photoionisation detector (PID) readings ranged from 0.0 ppm to 1.0 ppm. The borehole logs have been attached to this report (**Attachment A and B**).

From the twenty-six (26) boreholes, forty-seven (47) samples were analysed, with at least one near-surface sample analysed from each borehole (0-0.2 m). The samples were analysed for the following:

- All samples were analysed for metals;
- Eighteen (18) near-surface and four (4) deeper samples were analysed for organochlorine pesticides (OCPs);
- Nine (9) samples were analysed for polycyclic aromatic hydrocarbons (PAH);
- Ten (10) samples were analysed for total petroleum hydrocarbons (TPH);
- Eight (8) samples were analysed for inorganics (cyanide, fluoride, sulfate), phenols, benzene, toluene, ethylbenzene, xylenes (BTEX), volatile organics, chlorinated hydrocarbons, and polychlorinated hydrocarbons.

The soil analytical results indicated that the contaminant concentrations were less than the adopted investigation levels, with the exception of a number of samples that reported elevated concentrations of nickel, copper, zinc and arsenic that exceeded the adopted ecological investigation levels (EILs), however these concentrations did not exceed the adopted NEPM A health investigation levels (HILs) (1999). The results tables from the assessments have been attached to this report (**Attachment A and B**).

### 5.1.2 HLA 2006

HLA completed an environmental site assessment at the Site in 2006. It is noted that Prensa only had access to the body of the report and limited attachments (one (1) figure and bore logs only). The assessment included excavation of 17 test-pits across the site, to target previously identified fill and to target two (2) former UST pits. A site plan depicting the sampling locations has been attached to this report (**Attachment C**).



Fill was encountered to depths of 0.4 m to 0.9m bgl in the west, central and southern areas of the site. Fill consisted of ‘reworked natural’ (silty sand and sandy clay) containing varying amounts of gravel, basalt fragments, brick fragments, and concrete. PID results were not recorded on the test pit logs. The test pit logs have been attached to this report (**Attachment C**).

Ten (10) primary samples were selectively analysed for metals (arsenic, cadmium, chromium, copper, nickel, lead, zinc and mercury), TPH, BTEX, PAH, OCPs and organophosphorous pesticides (OPPs). All reported concentrations were below the relevant objectives for ecosystems (NEPM EIL) and human health in a standard residential setting (NEPM HIL A (1999)).

HLA concluded that the presence of gravel, basalt fragments, brick fragments and other debris in fill may affect the aesthetic amenity of the soil in the context of a residential setting.

### 5.1.3 ENSR | AECOM 2008

ENSR | AECOM completed an *Additional Environmental Site Assessment* for the Site in 2008. The assessment included a site history review, targeted soil sampling (from the former UST pits) and groundwater sampling. The report noted that asbestos cement sheeting debris was previously identified in the surface soil surrounding the areas that comprised the former site buildings and in stockpiles of brick and building rubble at the site (in HLA 2006). A contractor was engaged to remove the asbestos cement sheeting and clearance certificate was issued. ENSR | AECOM recommended that an asbestos management plan be developed for the Site.

### 5.1.4 Review Discussion

#### Sampling Density

Based on AS4482.1-2005, the minimum sampling points required for site characterisation based on detection of circular hotspots using square grid for a site of this size (2.02 ha) is thirty-one (31). The sampling density employed at the Site included at least twenty-six (26) boreholes and seventeen (17) test-pits, which meets the required number of sampling locations. However, these were established in two (2) separate assessments, and many of the sample locations were in close vicinity to each other, whereby the sampling locations are not representative of a grid across the Site. Nevertheless, based on the historical use of the Site (as primary school), and targeted sampling completed around potentially contaminating features (former underground storage tanks), which was addressed separately in Prensa’s 2013 assessment, the sampling density is considered appropriate to provide an indication of the potential for contamination at this Site.

#### Analytical Results

It is noted that both the Beveridge Williams (2000 and 2003) and the HLA (2006) assessments compared the analytical results to the now superseded NEPC 1999. Where possible, Prensa compared the analytical results to the current NEPC 2013 investigation levels. The soil analytical results from the Beveridge Williams (2000 and 2003) assessments indicated that the contaminant concentrations were less than the adopted human health investigation levels for low-density residential setting. The analytical results table and laboratory certificates from the HLA (2006) assessment were not available for review. It is noted that for the contaminants of interest at this Site (metals, TRH, PAH, and OCPs), the majority of investigation levels have remained the same or increased from NEPC 1999 to NEPC 2013, with the exception of nickel, aldrin and dieldrin, and heptachlor.

### Aesthetics

Based on the borehole and test pit logs completed by Beveridge Williams (2000 and 2003) and HLA (2006), fill across the Site included gravel, basalt fragments, concrete and brick fragments and other debris. HLA indicated that the debris within the fill may affect the aesthetic amenity of the soil in the context of a residential setting. The presence of foreign materials such as gravel, basalt fragments, brick or concrete fragments, may not in itself affect the aesthetic amenity of the soil depending on size, and quantities of such materials. Additionally, soil logs completed by both Beveridge Williams (2000 and 2003) and HLA (2006) did not indicate the presence of waste within the soil profile, suggesting that the debris reported related to minor quantities.

### Asbestos

ACM had been historically identified on the surface of the Site and removed (ENSR | AECOM 2008). It is noted that asbestos removal and validation at the Site was undertaken based on *Occupational Health and Safety (Asbestos) Regulations 2003*. A clearance letter for asbestos removal works was provided in the ENSR | AECOM 2008 assessment report, based on standards stipulated in *Victorian Occupational Health and Safety Regulations 2007*. It is noted that both of these regulations have now been updated (*Victorian Occupational Health and Safety Regulations 2017*). In addition, neither NEPC 2013 nor WA DoH 2009 had been released at the time of the ENSR | AECOM 2008 assessment. It is noted that WA DOH 2009 recommends test pitting as the preferred method of identification of asbestos within soils. Based on the grid-based and targeted assessments completed by Beveridge Williams (2000 and 2003), HLA (2006) and ENSR | AECOM (2008), suspected ACM was not identified within the borehole or test pit logs. The method of identification, removal and clearance, is considered generally consistent with contemporary guidance.

## 5.2 Groundwater Quality

### 5.2.1 Lead

As noted in the Prensa 2013 report, the lead concentration reported in groundwater sampled from groundwater monitoring well, MW2A, was only slightly greater than the potable water supply criteria. Negligible concentrations of lead in groundwater were detected in samples collected from surrounding wells.

It is noted that the Site is not considered source of lead contamination due to the following:

- Concentrations of lead in grid-based soil samples collected during the Beveridge Williams (2000 and 2003) assessments ranged from <5 to 77 mg/kg, well below the HIL;
- Concentrations of lead in soil sampled during the ENSR | AECOM (2008) assessment targeting the two (2) former UST pits ranged from <5 to 8.5 mg/kg;
- Historical use of the Site (golf club and school) do not represent a known source of lead contamination; and
- Former USTs at the Site were understood to have contained heating oil, which is not a known source of lead.

It was noted that groundwater was unlikely to be used for drinking water due to a reticulated water supply and no existing domestic bores in the vicinity of the Site. Additionally, ERM (2016) regarded this impact as a localised impact delineated by surrounding wells. ERM acknowledged that given the reticulated supply available for the site, groundwater is unlikely to be extracted for potable supply.

### 5.2.2 Groundwater Condition in the Western Portion

Although no groundwater bores have been installed in the western area of the Site (sports oval), based on the history review, and findings of the soil assessment works, sources of contamination were not identified in this area of the Site that would warrant a groundwater assessment.

### 5.3 Status of Landfill Gas Risk Assessment

The *Desktop Landfill Gas Investigation* (Prensa 2014) was not available for review by ERM.

Prensa recently reviewed this document as reported in *Review of Desktop Landfill Gas Investigation for 52 Golf Road, Oakleigh South, Victoria* (Prensa 2018). Prensa concluded in the review that the risk of landfill gas migration occurring and causing an unacceptable human health or environmental impact on the proposed residential development at 52 Golf Road, Oakleigh South, is low.

## 6 Conclusions and Recommendations

Based on soil logs provided within previous environmental assessment reports, ACM has not been identified within fill at the Site. Prensa acknowledges that the presence of underground ACM piping has not been investigated at the Site. This type of infrastructure would normally be identified (if present) and removed during early works at the Site. Should such infrastructure, or ACM within fill, be identified during development works, reference should be made to the SMDP plan developed for the Site.

HLA indicated that the debris within the fill may affect the aesthetic amenity of the soil in the context of a residential setting. Based on soil logs completed for the Site, debris reported within fill was not indicative of quantities that would preclude the aesthetic beneficial use in a low-density residential land use setting. It is recommended that during early works completed for the development that cognisance be given to quantities of debris encountered in the fill and managed accordingly.

Further groundwater monitoring at the Site is not considered necessary based on the history of the Site and in the context of the proposed residential land use with reticulated water supply available in the area.

Prensa (2018) considers that the risk of landfill gas migration occurring and causing an unacceptable human health or environmental impact on the proposed residential development at 52 Golf Road, Oakleigh South, is low.

## 7 Closing

Should you have any questions or queries regarding the report, please do not hesitate to contact me on (03) 9508 0100.

Yours sincerely,



**Rachael Hofmann**  
**Senior Environmental Consultant**  
**Prensa Pty Ltd**

## Attachments

- Statement of Limitations
- Attachment A - Beveridge Williams 2000 (Bore Logs, Results Table, Laboratory Reports)
- Attachment B - Beveridge Williams 2003 (Figure, Bore Logs, Results Table, Laboratory Reports)
- Attachment C - HLA 2006 (Figure, Test Pit Logs)

## Statement of Limitations

This document has been prepared in response to specific instructions from Golf Road Project Development Pty Ltd to whom the report has been addressed. The work has been undertaken with the usual care and thoroughness of the consulting profession. The work is based on generally accepted standards, practices of the time the work was undertaken. No other warranty, expressed or implied, is made as to the professional advice included in this report.

The report has been prepared for the use by Golf Road Project Development Pty Ltd and the use of this report by other parties may lead to misinterpretation of the issues contained in this report. To avoid misuse of this report, Prensa advise that the report should only be relied upon by Golf Road Project Development Pty Ltd and those parties expressly referred to in the introduction of the report. The report should not be separated or reproduced in part and Prensa should be retained to assist other professionals who may be affected by the issues addressed in this report to ensure the report is not misused in any way.

Prensa is not a professional quantity surveyor (QS) organisation. Any areas, volumes, tonnages or any other quantities noted in this report are indicative estimates only. The services of a professional QS organisation should be engaged if quantities are to be relied upon.

### Sampling Risks

Prensa acknowledges that any scientifically designed sampling program cannot guarantee all sub-surface contamination will be detected. Sampling programs are designed based on known or suspected site conditions and the extent and nature of the sampling and analytical programs will be designed to achieve a level of confidence in the detection of known or suspected subsurface contamination. The sampling and analytical programs adopted will be those that maximises the probability of identifying contaminants. Golf Road Project Development Pty Ltd must therefore accept a level of risk associated with the possible failure to detect certain sub-surface contamination where the sampling and analytical program misses such contamination. Prensa will detail the nature and extent of the sampling and analytical program used in the investigation in the investigation report provided.

Environmental site assessments identify actual subsurface conditions only at those points where samples are taken and when they are taken. Soil contamination can be expected to be non-homogeneous across the stratified soils where present on site, and the concentrations of contaminants may vary significantly within areas where contamination has occurred. In addition, the migration of contaminants through groundwater and soils may follow preferential pathways, such as areas of higher permeability, which may not be intersected by sampling events. Subsurface conditions including contaminant concentrations can also change over time. For this reason, the results should be regarded as representative only.

Golf Road Project Development Pty Ltd recognises that sampling of subsurface conditions may result in some cross contamination. All care will be taken and the industry standards used to minimise the risk of such cross contamination occurring, however, Golf Road Project Development Pty Ltd recognises this risk and waives any claims against Prensa and agrees to defend, indemnify and hold Prensa harmless from any claims or liability for injury or loss which may arise as a result of alleged cross contamination caused by sampling.

### Reliance on Information Provided by Others

Prensa notes that where information has been provided by other parties in order for the works to be undertaken, Prensa cannot guarantee the accuracy or completeness of this information. Golf Road Project Development Pty Ltd therefore waives any claim against the company and agrees to indemnify Prensa for any loss, claim or liability arising from inaccuracies or omissions in information provided to Prensa by third parties. No indications were found during our investigations that information contained in this report, as provided to Prensa, is false.

### Recommendations for Further Study

The industry recognised methods used in undertaking the works may dictate a staged approach to specific investigations. The findings therefore of this report may represent preliminary findings in accordance with these industry recognised methodologies. In accordance with these methodologies, recommendations contained in this report may include a need for further investigation or analytical analysis. The decision to accept these recommendations and incur additional costs in doing so will be at the sole discretion of Golf Road Project Development Pty Ltd and Prensa recognises that that Golf Road Project Development Pty Ltd will consider their specific needs and the business risks involved. Prensa does not accept any liability for losses incurred as a result of Golf Road Project Development Pty Ltd not accepting the recommendations made within this report.

## Attachment A: Beveridge Williams 2000

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- Bore Logs
- Results Table
- Laboratory Reports



**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no BH1  
 sheet no 1 of 1  
 job no D8610

client: Department of Education, Employment and Training Facilities	logged by: AS
project: Contamination Assessment	checked: JE
location: Oakleigh South Primary School, Beryl Avenue, Oakleigh South	date: 21/12/99

drill model : Hand Auger	slope 90°	RL surface	not measured
hole diameter : 65mm	bearing	datum	

depth m	material description	observations	sample details
		Background PID 0.6ppm	
0.25	SILTY SAND (SM) Grey brown, fine to medium, moist, contains crushed rock.	FILL PID 0.6ppm	#01 D CR=0
0.5	SILTY SAND (SM) Grey brown, fine to medium, moist.	NATURAL MATERIAL PID 0.6ppm	#02 D CR=0
1.0	Borehole BH1 terminated at 1.0m		
1.25			
1.5			
1.75			
2.0			

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no BH2  
 sheet no 1 of 1  
 job no D8610

client: Department of Education, Employment and Training Facilities	logged by: AS
project: Contamination Assessment	checked: JE
location: Oakleigh South Primary School, Beryl Avenue, Oakleigh South	date: 21/12/99

drill model : Hand Auger	slope 90°	RL surface	not measured
hole diameter : 65mm	bearing	datum	

depth m	material description	observations	sample details
		Background PID 0.6ppm	
0.25	SILTY SAND (SM) Grey brown, fine to medium, moist.	NATURAL MATERIAL	#03 D CR=0
0.5		PID 0.6ppm	#04 D CR=0
0.75			
1.0	Borehole BH2 terminated at 1.0m		
1.25			
1.5			
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no BH3  
 sheet no 1 of 1  
 job no D8610

client: Department of Education, Employment and Training Facilities	logged by: AS
project: Contamination Assessment	checked: JE
location: Oakleigh South Primary School, Beryl Avenue, Oakleigh South	date: 21/12/99

drill model : Hand Auger	slope 90°	RL surface	not measured
hole diameter : 65mm	bearing	datum	

depth m	material description	observations	sample details
		Background PID 0.6ppm	
0.25	SILTY SAND (SM) Grey brown, brown and cream, fine to medium, moist.	DISTURBED NATURAL MATERIAL PID 0.6ppm	#05 D CR=0
0.5	SILTY SAND (SM) Grey brown, fine to medium, moist.	NATURAL MATERIAL PID 0.6ppm	#06 D CR=0
0.75			
1.0	Borehole BH3 terminated at 1.0m		
1.25			
1.5			
1.75			
2.0			

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no BH4  
 sheet no 1 of 1  
 job no D8610

client: Department of Education, Employment and Training Facilities	logged by: AS
project: Contamination Assessment	checked: JE
location: Oakleigh South Primary School, Beryl Avenue, Oakleigh South	date: 21/12/99

drill model : Hand Auger	slope 90°	RL surface	not measured
hole diameter : 65mm	bearing	datum	

depth m	material description	observations	sample details
		Background PID 0.6ppm	
0.25	SILTY SAND (SM) Grey brown, fine to medium, moist.	NATURAL MATERIAL	#07 D CR=0
0.5			
0.75		PID 0.6ppm	#08 D CR=0
1.0	Borehole BH4 terminated at 1.0m		
1.25			
1.5			
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301

**Table 1**  
**Results of Chemical Testing**

				Inorganics (mg/kg)				Heavy Metals (mg/kg)																		
				Cyanide	Fluoride	Phenols	Sulphate	Arsenic As	Barium Ba	Beryllium Be	Boron B	Cadmium Cd	Cobalt Co	Chromium Cr	Copper Cu	Lead Pb	Manganese Mn	Mercury Hg	Molybdenum Mo	Nickel Ni	Antimony Sb	Tin Sn	Selenium Se	Zinc Zn		
ANZECC/NHMRC Environmental Investigation Guidelines							2000	20						3		50	60	300	500	1		60	20	50		200
Dutch B				50	400	1		30	400					5	50	250	100	150		2		100		50		500
EPAV Clean Fill Criteria				50	450	1		30						5	50	250	100	300		2		100		50	10	500
EPAV Low Level Contaminated Soil Criteria				500	4500	10		300						50	500	2500	1000	3000		20	40	1000		500	100	5000
NEHF Exposure Setting 'A' - Residential (Standard)				500		8500		100		20	3000		20	100		1000	300	1500		15		600				7000
NEHF Exposure Setting 'D' - Residential (Medium Density)				2000		34000		400		80	12000		80	400		4000	1200	6000		60		2400				28000
NEHF Exposure Setting 'E' - Open Space				1000		17000		200		40	6000		40	200		2000	600	3000		30		600				14000
NEHF Exposure Setting 'F' - Commercial/Industrial				2500		42500		500		100	15000		100	500		5000	1500	7500		75		3000				35000
Adopted Criteria				50	400	1	2000	20	400	20	3000		3	50	50	60	300	500		1	40	60	20	50	10	200
<b>Individual Samples</b>																										
Location	Depth (m)	Sample Number	Material Description																							
BH1	0.0-0.4m	1	FILL - Silty Sand	<5	<5	0.1	<10	<5	14	<5	<5	<0.2	<5	8	6	15	34	<0.05	<5	<5	<5	<5	<5	<5	35	
BH1	0.5-1.0m	2	SILTY SAND	<5	<5	<0.1	<10	46	35	<5	<5	<0.2	12	10	7	19	110	0.06	<5	7	<5	<5	<5	<5	61	
BH2	0.0-0.5m	3	SILTY SAND	<5	<5	<0.1	33	<5	12	<5	<5	<0.2	<5	<5	<5	14	35	<0.05	<5	<5	<5	<5	<5	<5	19	
BH2	0.5-1.0m	4	SILTY SAND	<5	<5	<0.1	41	<5	7	<5	<5	<0.2	<5	<5	<5	20	10	<0.05	<5	<5	<5	<5	<5	<5	6	
BH3	0.0-0.4m	5	FILL - Silty Sand	<5	<5	0.2	19	<5	17	<5	<5	<0.2	<5	6	7	19	31	0.06	<5	<5	<5	<5	<5	<5	56	
BH3	0.5-1.0m	6	SILTY SAND	<5	<5	<0.1	18	<5	11	<5	<5	<0.2	<5	6	<5	<5	12	<0.05	<5	<5	<5	<5	<5	<5	8	
BH4	0.0-0.5m	7	SILTY SAND	<5	<5	<0.1	<10	<5	16	<5	<5	<0.2	<5	<5	6	15	33	0.59	<5	<5	<5	<5	<5	<5	35	
BH4	0.5-1.0m	8	SILTY SAND	<5	<5	<0.1	<10	<5	6	<5	<5	<0.2	<5	<5	<5	<5	7	0.27	<5	<5	<5	<5	<5	<5	8	

46 Denotes concentrations exceeds the adopted criteria







VW:dh:15319

4 January, 2000

Beveridge Williams & Co. Pty Ltd  
1075 High Street  
ARMADALE VIC 3143

Job No : **D8610**  
Re : **Oakleigh South Primary School  
Soil Samples**

Attention: **Mr I. McKenzie**

**Certificate of Analysis**

WSL Report No: **265917**

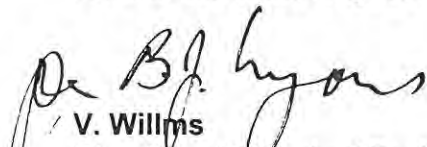
Date Sampled: 21.12.99  
Received by WSL Consultants: 23.12.99  
Instructions were received: 23.12.99  
Analyses were commenced: 23.12.99

The sample(s) referred to in this report were analysed by the following methods:

<b>Analyte(s)</b>	<b>Method</b>	<b>Analyte(s)</b>	<b>Method</b>
pH	WSL 062	Cyanide	APHA 4500-CN,E&C
Metals	WSL 023A & 032	Sulphate	WSL 076
TPH	WSL 030	PAH	WSL 8100B
MAH	WSL 3810B	OCP/PCB	WSL 8080B
Phenols (Total)	APHA 5530 C	Chlorinated Hydrocarbons	WSL 8120
Fluoride	WSL 077	Volatile Halogenated Organics	WSL3810A,B

Results pertain to samples as received.  
Details of this report were faxed on 4.1.2000.

Yours faithfully,  
**WSL Consultants Pty Ltd**

  
**V. Williams**  
Director of Chemical Technology



This Laboratory is accredited by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of accreditation. This document shall not be reproduced except in full.





Date : 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No./Depth (m)	pH	As	B	Ba	Be	Cd	Co	Cr	Cu	Hg	Mn	Mo	Ni	Pb	Sb	Se	Sn	Zn
265917	23-Dec-1999	01	BH1 0-0.4	5.8	<5	<5	14	<5	<0.2	<5	8	6	<0.05	34	<5	<5	15	<5	<5	<5	35
265918	23-Dec-1999	02	BH1 0.5-1.0	6.1	46	<5	35	<5	<0.2	12	10	7	0.06	110	<5	7	19	<5	<5	<5	61
265919	23-Dec-1999	03	BH2 0-0.5	5.6	<5	<5	12	<5	<0.2	<5	<5	<5	<0.05	35	<5	<5	14	<5	<5	<5	19
265920	23-Dec-1999	04	BH2 0.5-1.0	5.8	<5	<5	7	<5	<0.2	<5	<5	<5	<0.05	10	<5	<5	20	<5	<5	<5	6
265921	23-Dec-1999	05	BH3 0-0.4	6.2	<5	<5	17	<5	<0.2	<5	6	7	0.06	31	<5	<5	19	<5	<5	<5	56
265922	23-Dec-1999	06	BH3 0.5-1.0	5.7	<5	<5	11	<5	<0.2	<5	6	<5	<0.05	12	<5	<5	<5	<5	<5	<5	8
265923	23-Dec-1999	07	BH4 0-0.5	5.6	<5	<5	16	<5	<0.2	<5	<5	6	0.59	33	<5	<5	15	<5	<5	<5	35
265924	23-Dec-1999	08	BH4 0.5-1.0	4.9	<5	<5	6	<5	<0.2	<5	<5	<5	0.27	7	<5	<5	<5	<5	<5	<5	8

A blank space indicates no test performed

Results expressed as mg/kg dry weight





Date : 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No./Depth (m)	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE	1,2,4-TRI- METHYL BENZENE	TOTAL PHENOLS	FLUORIDE	CYANIDE	SULPHATE
265917	23-Dec-1999	01	BH1 0-0.4	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.1	<5	<5	<10
265918	23-Dec-1999	02	BH1 0.5-1.0	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5	<10
265919	23-Dec-1999	03	BH2 0-0.5	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5	33
265920	23-Dec-1999	04	BH2 0.5-1.0	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5	41
265921	23-Dec-1999	05	BH3 0-0.4	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.2	<5	<5	19
265922	23-Dec-1999	06	BH3 0.5-1.0	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5	18
265923	23-Dec-1999	07	BH4 0-0.5	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5	<10
265924	23-Dec-1999	08	BH4 0.5-1.0	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5	<10

A blank space indicates no test performed

Results expressed as mg/kg dry weight





Date: 4-Jan-2000  
WSL Report No: 265917  
WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No./Depth (m)	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL PAH	
265917	23-Dec-1999	01	BH1 0-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265918	23-Dec-1999	02	BH1 0.5-1.0	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.6	0.7	0.3	0.3	0.3	0.3	0.4	<0.1	0.3	0.3	4	4
265919	23-Dec-1999	03	BH2 0-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265920	23-Dec-1999	04	BH2 0.5-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265921	23-Dec-1999	05	BH3 0-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265923	23-Dec-1999	07	BH4 0-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265924	23-Dec-1999	08	BH4 0.5-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1

A blank space indicates no test performed

Results expressed as mg/kg dry weight





Date: 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No./Depth (m)	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR-EPOXIDE	DDE	DIELDRIN
265917	23-Dec-1999	01	BH1 0-0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265918	23-Dec-1999	02	BH1 0.5-1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265919	23-Dec-1999	03	BH2 0-0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265920	23-Dec-1999	04	BH2 0.5-1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265921	23-Dec-1999	05	BH3 0-0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265923	23-Dec-1999	07	BH4 0-0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08
265924	23-Dec-1999	08	BH4 0.5-1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

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Results expressed as mg/kg dry weight





Date: 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No./Depth (m)	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
265917	23-Dec-1999	01	BH1 0-0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265918	23-Dec-1999	02	BH1 0.5-1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265919	23-Dec-1999	03	BH2 0-0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265920	23-Dec-1999	04	BH2 0.5-1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265921	23-Dec-1999	05	BH3 0-0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265923	23-Dec-1999	07	BH4 0-0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265924	23-Dec-1999	08	BH4 0.5-1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight







Date : 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No./Depth (m)	AROCLOR 1016	AROCLOR 1221	AROCLOR 1232	AROCLOR 1242	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	TOTAL PCBs
265917	23-Dec-1999	01	BH1 0-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265918	23-Dec-1999	02	BH1 0.5-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265919	23-Dec-1999	03	BH2 0-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265920	23-Dec-1999	04	BH2 0.5-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265921	23-Dec-1999	05	BH3 0-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265923	23-Dec-1999	07	BH4 0-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265924	23-Dec-1999	08	BH4 0.5-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1

A blank space indicates no test performed

Results expressed as mg/kg dry weight





Date : 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No./Depth (m)	1 1-DI CHLORO ETHANE	DI CHLORO METHANE	TRI CHLORO METHANE	1 2-DI CHLORO ETHANE	BROMO DICHLORO METHANE	CHLORO BENZENE	1 1 2-TRI CHLORO ETHANE	CHLORO DIBROMO METHANE	1 2-DI CHLORO PROPANE	111-TRI CHLORO ETHANE
265917	23-Dec-1999	01	BH1 0-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265918	23-Dec-1999	02	BH1 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265919	23-Dec-1999	03	BH2 0-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265920	23-Dec-1999	04	BH2 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265921	23-Dec-1999	05	BH3 0-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265923	23-Dec-1999	07	BH4 0-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265924	23-Dec-1999	08	BH4 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

A blank space indicates no test performed

Results expressed as mg/kg dry weight





Date : 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No./Depth	BENZAL CHLORIDE	BENZOTRI CHLORIDE	2 CHLORO NAPHTHALENE	HEXA- CHLORO BUTADIENE	HEXACHLORO CYCLO PENTADIENE	HEXA- CHLORO ETHANE	PENTA- CHLORO BENZENE	1,2-DI CHLORO BENZENE	1,3-DI CHLORO BENZENE	1,4-DI CHLORO BENZENE
265917	23-Dec-1999	01	BH1 0-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265918	23-Dec-1999	02	BH1 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265919	23-Dec-1999	03	BH2 0-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265920	23-Dec-1999	04	BH2 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265921	23-Dec-1999	05	BH3 0-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265923	23-Dec-1999	07	BH4 0-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265924	23-Dec-1999	08	BH4 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

A blank space indicates no test performed

Results expressed as mg/kg dry weight





Date: 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No./Depth (m)	1 2 3-TRI CHLORO BENZENE	1 2 4-TRI CHLORO BENZENE	1 3 5-TRI CHLORO BENZENE	1 2 3 4-TETRA CHLORO BENZENE	1 2 3 5-TETRA CHLORO BENZENE	1 2 4 5-TETRA CHLORO BENZENE
265917	23-Dec-1999	01	BH1 0-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265918	23-Dec-1999	02	BH1 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265919	23-Dec-1999	03	BH2 0-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265920	23-Dec-1999	04	BH2 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265921	23-Dec-1999	05	BH3 0-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265923	23-Dec-1999	07	BH4 0-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265924	23-Dec-1999	08	BH4 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

A blank space indicates no test performed

Results expressed as mg/kg dry weight



## QUALITY ASSURANCE REPORT

Date : 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No./Depth (m)	pH	As	B	Ba	Be	Cd	Co	Cr	Cu	Hg	Mn	Mo	Ni	Pb	Sb	Se	Sn	Zn
266135	23-Dec-1999	BLANK			<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	<5	<5	<5	<5	<5	<5	<5	<5
266119	(Duplicate of 265922)			5.6																	
265922	23-Dec-1999	06	BH3 0.5-1.0	5.7																	
% RPD				1.8																	
266133	(Duplicate of 265917)				<5	<5	14	<5	<0.2	<5	7	5	<0.05	35	<5	<5	17	<5	<5	<5	34
265917	23-Dec-1999	01	BH1 0-0.4		<5	<5	14	<5	<0.2	<5	8	6	<0.05	34	<5	<5	15	<5	<5	<5	35
% RPD					0	0	0	0	0	0	13.3	18.2	0	2.9	0	0	12.5	0	0	0	2.9
266134	(Spike of 265917)				96	84	98	87	89	84	93	90	0.84	120	85	88	100	79	91	89	120
Expected					84	85	94	80	80	82	88	86	0.80	110	80	84	95	80	80	80	110
% Recovery					114	98.8	105	109	111	102	106	105	105	113	106	105	106	98.8	114	111	113
265917	23-Dec-1999	01	BH1 0-0.4		<5	<5	14	<5	<0.2	<5	8	6	<0.05	34	<5	<5	15	<5	<5	<5	35

A blank space indicates no test performed

Results expressed as mg/kg dry weight



## QUALITY ASSURANCE REPORT

Date : 4-Jan-2000

Wsl Report No: 265917

Wsl JobNumber: 15319 Client: BEVERIDGE WILLIAMS

Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No./Depth (m)	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE	1,2,4-TRIMETHYL BENZENE	TOTAL PHENOLS	FLUORIDE	CYANIDE	SULPHATE
266087	23-Dec-1999	BLANK						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5	<10
266092	23-Dec-1999	BLANK		<20	<20	<50	<50											
266119	<i>(Duplicate of 265922)</i>																	
265922	23-Dec-1999	06	BH3 0.5-1.0													<5	<5	
% RPD																0		
266184	<i>(Duplicate of 265919)</i>							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				
265919	23-Dec-1999	03	BH2 0-0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				
% RPD								0	0	0	0	0	0	0				
266190	<i>(Duplicate of 265918)</i>							<20	<20	<50	<50							
265918	23-Dec-1999	02	BH1 0.5-1.0	<20	<20	<50	<50											
% RPD				0	0	0	0											
266088	<i>(Spike of 266087)</i>														9.8	99	1	
Expected															10	100	1	
% Recovery															98.0	99.0	100	
266087	23-Dec-1999	QC SPIKE													<0.1	<5	<5	
266183	<i>(Spike of 265918)</i>							3.9	3.7	3.7	12	3.3	3.7	3.7				
Expected								4.0	4.0	4.0	12	4.0	4.0	4.0				
% Recovery								97.5	92.5	92.5	100	82.5	92.5	92.5				
265918	23-Dec-1999	02	BH1 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				
266191	<i>(Spike of 265922)</i>																	
Expected																		
% Recovery																		
265922	23-Dec-1999	06	BH3 0.5-1.0			370	<50											

A blank space indicates no test performed

Results expressed as mg/kg dry weight





## QUALITY ASSURANCE REPORT

Date: 4-Jan-2000  
 WSL Report No: 265917  
 WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No./Depth (m)	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL PAH
266087	23-Dec-1999	BLANK		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
266133	<i>(Duplicate of 265917)</i>			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265917	23-Dec-1999	01	BH1 0-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
% RPD				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
266191	<i>(Spike of 265922)</i>			1.3	1.4	1.3	1.2	1.5	1.4	1.4	1.5	1.4	1.0	1.0	1.6	1.2	1.0	1.4	1.4	21
Expected				1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	22
% Recovery				92.9	100	92.9	85.7	107	100	100	107	100	71.4	71.4	114	85.7	71.4	100	100	95.5
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1

A blank space indicates no test performed

Results expressed as mg/kg dry weight



## QUALITY ASSURANCE REPORT

Date : 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No./Depth (m)	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR- EPOXIDE	DDE	DIELDRIN
266087	23-Dec-1999	BLANK		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
266133	<i>(Duplicate of 265917)</i>			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265917	23-Dec-1999	01	BH1 0-0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
% RPD				0	0	0	0	0	0	0	0	0	0
266191	<i>(Spike of 265922)</i>			2.7	2.6	2.5	1.5	1.5	2.0	2.9	1.5	1.3	1.4
Expected				2.8	2.8	2.8	1.4	1.4	2.8	2.8	1.4	1.4	1.4
% Recovery				96.4	92.9	89.3	107	107	71.4	104	107	92.9	100
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight





## QUALITY ASSURANCE REPORT

Date : 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No./Depth (m)	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
266087	23-Dec-1999	BLANK		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
266133	<i>(Duplicate of 265917)</i>			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
265917	23-Dec-1999	01	BH1 0-0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
% RPD				0	0	0	0	0	0	0	0	0
266191	<i>(Spike of 265922)</i>			1.2	1.0	1.3	1.0	2.8	1.3	1.4	1.0	1.3
Expected				1.4	1.4	1.4	1.4	2.8	1.4	1.4	1.4	1.4
% Recovery				85.7	71.4	92.9	71.4	100	92.9	100	71.4	92.9
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

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## QUALITY ASSURANCE REPORT

Date: 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No./Depth (m)	AROCLOR 1016	AROCLOR 1221	AROCLOR 1232	AROCLOR 1242	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	TOTAL PCBs
266087	23-Dec-1999	BLANK		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
266133	<i>(Duplicate of 265917)</i>			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
265917	23-Dec-1999	01	BH1 0-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
% RPD				0	0	0	0	0	0	0	0
266191	<i>(Spike of 265922)</i>			2.8						2.3	
Expected				2.8						2.8	
% Recovery				100						82.1	
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.1						<0.1	

A blank space indicates no test performed

Results expressed as mg/kg dry weight

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## QUALITY ASSURANCE REPORT

Date: 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No./Depth (m)	1 1-DI CHLORO ETHANE	DI CHLORO METHANE	TRI CHLORO METHANE	1 2-DI CHLORO ETHANE	BROMO DICHLORO METHANE	CHLORO BENZENE	1 1 2-TRI CHLORO ETHANE	CHLORO DIBROMO METHANE	1 2-DI CHLORO PROPANE	1 1 1-TRI CHLORO ETHANE
266087	23-Dec-1999	BLANK		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
266184	<i>(Duplicate of 265919)</i>			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265919	23-Dec-1999	03	BH2 0-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
% RPD				0	0	0	0	0	0	0	0	0	0
266183	<i>(Spike of 265918)</i>			3.9	3.2	4.0	3.8	3.8	3.9	3.9	3.7	3.7	3.8
Expected				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
% Recovery				97.5	80.0	100	95.0	95.0	97.5	97.5	92.5	92.5	95.0
265918	23-Dec-1999	02	BH1 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

A blank space indicates no test performed

Results expressed as mg/kg dry weight

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## QUALITY ASSURANCE REPORT

Date : 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS

Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No./Depth	BENZAL CHLORIDE	BENZOTRI CHLORIDE	2 CHLORO NAPHTHALENE	HEXA- CHLORO BUTADIENE	HEXACHLORO CYCLO PENTADIENE	HEXA- CHLORO ETHANE	PENTA- CHLORO BENZENE	1 2-DI CHLORO BENZENE	1 3-DI CHLORO BENZENE	1 4-DI CHLORO BENZENE
266087	23-Dec-1999	BLANK		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
266190	<i>(Duplicate of 265918)</i>			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
265918	23-Dec-1999	02	BH1 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
% RPD				0	0	0	0	0	0	0	0	0	0
266191	<i>(Spike of 265922)</i>			1.2	1.2	1.3	1.4	1.3	1.4	1.5	1.2	1.3	1.5
Expected				1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
% Recovery				85.7	85.7	92.9	100	92.9	100	107	85.7	92.9	107
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

A blank space indicates no test performed

Results expressed as mg/kg dry weight

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## QUALITY ASSURANCE REPORT

Date : 4-Jan-2000

WSL Report No: 265917

WSL JobNumber: 15319 Client: BEVERIDGE WILLIAMS Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No./Depth (m)	1 2 3-TRI CHLORO BENZENE	1 2 4-TRI CHLORO BENZENE	1 3 5-TRI CHLORO BENZENE	1 2 3 4-TETRA CHLORO BENZENE	1 2 3 5-TETRA CHLORO BENZENE	1 2 4 5-TETRA CHLORO BENZENE
266087	23-Dec-1999	BLANK		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
266190	<i>(Duplicate of 265918)</i>				<0.5				<0.5
265918	23-Dec-1999	02	BH1 0.5-1.0	<0.5	<0.5				<0.5
% RPD					0				0
266191	<i>(Spike of 265922)</i>				1.4				2.7
Expected					1.4				2.8
% Recovery					100				96.4
265922	23-Dec-1999	06	BH3 0.5-1.0	<0.5	<0.5				<0.5

A blank space indicates no test performed

Results expressed as mg/kg dry weight

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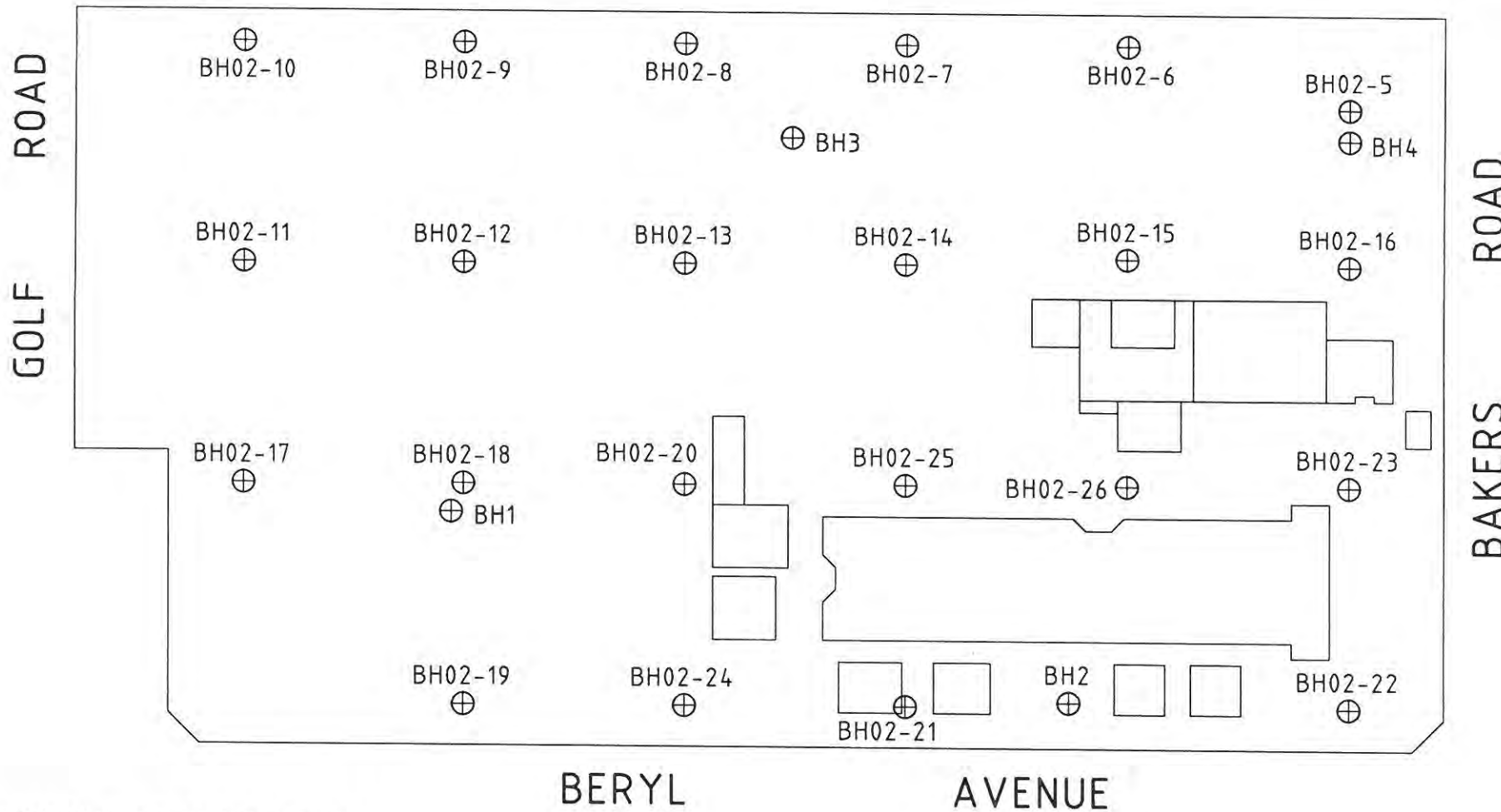
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## Attachment B: Beveridge Williams 2003

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- Figure
- Bore Logs
- Results Table
- Laboratory Reports





27/01/00

APPROXIMATE SCALE 1:1000

⊕ BH1 DENOTES APPROXIMATE LOCATION OF BOREHOLES.



**BEVERIDGE WILLIAMS & CO.  
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31 MURRAY STREET WONTHAGGI (03)56721505

## SITE PLAN SHOWING APPROXIMATE LOCATIONS OF BOREHOLES OAKLEIGH SOUTH PRIMARY SCHOOL BERYL AVENUE, OAKLEIGH SOUTH

FIGURE 2

REF. NO. D8610

K:\ENVIRON\PROJECT FILES\8610\BHOLES.DGN

# Beveridge Williams & Co Pty Ltd

## Engineering Log

### Borehole

borehole no BH02-5

sheet no 1 of 1

job no D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	18-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Grey to brown. Rootlets present at surface with occasional red brick fragments. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.  Becoming lighter brown with depth. Becoming grey with depth.	DISTURBED NATURAL MATERIAL	02-5-1 02-5-1A 0.0-0.2m, CR=0 PID=0.2ppm
0.5	End of borehole at 0.5m depth.		02-5-2 0.4-0.5m, CR=0 PID=0.4ppm
0.75			
1.0			
1.25			
1.5			
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301

# Beveridge Williams & Co Pty Ltd

## Engineering Log

### Borehole

borehole no BH02-6  
 sheet no 1 of 1  
 job no D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	18-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	Slightly CLAYEY SANDY SILT. Brown to dark brown. Contains rootlets and bark close to the surface. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.	DISTURBED NATURAL MATERIAL	02-6-1 0.0-0.2m, CR=0 PID=0.4ppm
0.5	Becoming lighter brown with depth. SILT. Light brown. Contains very fine, uniform, subrounded quartz gravel. Dry. No odour.		02-6-2, 0.4-0.5m CR=0, PID=0.2ppm
0.75	SILTY CLAY. Orange mottled dark grey. Contains fragments of cemented sandy silt in the upper level. Very stiff. Low plasticity. Dry. No odour. Increased yellow mottling with depth. Occasional red mottling with depth.		02-6-3 0.5-0.6m, CR=0 PID=0.1ppm
1.0	End of borehole at 0.9m depth (auger refusal).		02-6-4 0.8-0.9m, CR=0 PID=0.2ppm
1.25			
1.5			
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-7  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	18-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Grey to brown. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.  Becoming lighter grey/brown with depth.	DISTURBED NATURAL MATERIAL	02-7-1 0.0-0.2m, CR=0 PID=0.4ppm
0.5	End of borehole at 0.5m depth.		02-7-2 0.4-0.5m, CR=0 PID=0.4ppm
0.75			
1.0			
1.25			
1.5			
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-8  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	18-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Grey to brown. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.	DISTURBED NATURAL MATERIAL	02-8-1 02-8-2 (DUP) 0.0-0.2m, CR=0 PID=0.8ppm
0.5	Becoming dark brown occasionally mottled orange with depth. Becoming dark grey with depth. Contains fine, uniform, subrounded quartz gravel. Dry. No odour. Becoming brown with depth.	NATURAL MATERIAL	02-8-3 0.5-0.6m, CR=0 PID=0.2ppm
0.75	End of borehole at 0.6m depth.		
1.0			
1.25			
1.5			
1.75			
2.0			

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-9  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	18-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Grey to brown. Contains large, angular basalt fragments/ screenings and fine, uniform, subrounded quartz gravel. Dry. No odour.	DISTURBED NATURAL MATERIAL	02-9-1 0.0-0.2m, CR=0 PID=0.3ppm
0.5			02-9-2 0.4-0.5m, CR=0 PID=0.2ppm
0.75	End of borehole at 0.5m depth (auger refusal).		
1.0			
1.25			
1.5			
1.75			
2.0			

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-10  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	18-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Brown. Contains fine, uniform, subrounded quartz gravel, rootlets, and occasional basalt fragments. Dry. No odour.	DISTURBED NATURAL MATERIAL	02-10-1 0.0-0.2m, CR=0 PID=0.2ppm
0.5	Becoming light brown to beige with depth.		02-10-2 0.4-0.5m, CR=0 PID=0.2ppm
0.75	End of borehole at 0.5m depth.		
1.0			
1.25			
1.5			
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301

# Beveridge Williams & Co Pty Ltd

## Engineering Log

### Borehole

borehole no BH02-11

sheet no 1 of 1

job no D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	18-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Brown. Contains rootlets and very fine quartz gravel. Dry. No odour.	NATURAL MATERIAL	02-11-1 0.0-0.2m, CR=0 PID=0.2ppm
0.5	SILTY CLAY. Orange mottled brown. Stiff. Low plasticity. Dry. No odour.		02-11-2 0.4-0.5m, CR=0 PID=0.1ppm
0.75	End of borehole at 0.5m depth.		
1.0			
1.25			
1.5			
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301



**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-12  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	18-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SILT. Brown to dark brown. Contains rootlets and fine, uniform, subrounded quartz gravel. Contains large basalt fragments and red brick fragments. Dry. No odour.	DISTURBED NATURAL MATERIAL	02-12-1 0.0-0.2m, CR=0 PID=0.2ppm
	Becoming brown to orange with depth. Coarser quartz gravel with depth.	NATURAL MATERIAL	
0.5	End of borehole at 0.4m depth (auger refusal).		02-12-2 0.35-0.4m, CR=0 PID=0.1ppm
0.75			
1.0			
1.25			
1.5			
1.75			
2.0			

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-13  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	18-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	CLAYEY SANDY SILT. Brown to dark brown. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.	NATURAL MATERIAL	02-13-1 02-13-2(DUP) 0.0-0.2m, CR=0 PID=0.0ppm
0.5	Becoming light brown to beige with depth.		02-13-3 0.4-0.5m, CR=0 PID=0.0ppm
0.75	End of borehole at 0.5m depth.		
1.0			
1.25			
1.5			
1.75			
2.0			

Date 5.5.97

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**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-14  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	18-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Grey to brown. Contains rootlets. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.	NATURAL MATERIAL	02-14-1 02-14-1A 0.0-0.2m, CR=0 PID=0.3ppm
0.5	Becoming light brown occasionally mottled brown with depth.		02-14-2 0.4-0.5m, CR=0 PID=0.2ppm
0.75	End of borehole at 0.5m depth.		
1.0			
1.25			
1.5			
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-15  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	18-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Grey to brown. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.	NATURAL MATERIAL	02-15-1 0.0-0.2m, CR=0 PID=0.2ppm
0.5	Becoming lighter brown with depth.		02-15-2 0.5-0.6m, CR=0 PID=0.0ppm
0.75	Becoming beige and mottled orange with depth.		02-15-3 0.8-0.9m, CR=0 PID=0.0ppm
1.0	SANDY CLAY. Light grey to beige mottled orange. Contains fine, uniform, subrounded quartz gravel. Dry. No odour. End of borehole at 0.9m depth.		
1.25			
1.5			
1.75			
2.0			

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-16  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	19-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Brown to light brown. Contains fine, uniform, subrounded quartz gravel and rootlets. Dry. No odour.	NATURAL MATERIAL	02-16-1 02-16-2 (DUP) 0.0-0.2m, CR=0 PID=0.5ppm
0.5	Becoming brown to grey with depth. Becoming mottled light brown to beige with depth.		02-16-3 0.4-0.5m, CR=0 PID=0.8ppm
0.75	End of borehole at 0.5m depth.		
1.0			
1.25			
1.5			
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-17  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	19-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
	SANDY SILT. Brown. Contains fine, uniform, subrounded quartz gravel and basalt screenings. Contains rootlets. Dry. No odour.	DISTURBED NATURAL MATERIAL	02-17-1 02-17-1A 0.0-0.2m, CR=0 PID=0.6ppm
0.25	End of borehole at 0.2m depth (auger refusal).		
0.5			
0.75			
1.0			
1.25			
1.5			
1.75			
2.0			

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-18  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	19-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SILTY SAND. Dark brown. Contains basalt screenings and fine, uniform, subrounded quartz gravel. Dry. No odour.	FILL MATERIAL	02-18-1 0.0-0.2m, CR=0 PID=0.6ppm
0.5	SANDY SILT. Brown mottled orange. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.	NATURAL MATERIAL	02-18-2 0.4-0.5m, CR=0 PID=0.3ppm
0.75	Grades to SANDY CLAY. Dark brown mottled orange and occasionally black. Soft. Medium plasticity. Dry to moist. No odour.		02-18-3 0.6-0.7m, CR=0 PID=0.6ppm
1.0	VERY SILTY CLAY. Dark grey to black. Contains fine, uniform, subrounded quartz gravel. Moist. No odour.		02-18-4 0.8-0.9m, CR=0 PID=0.5ppm
1.25	SAND. Tan. Contains fine, uniform, subrounded quartz gravel. Moist. No odour.		02-18-5 1.2-1.3m, CR=0 PID=0.5ppm
1.5	CLAY. Orange mottled light brown and occasionally red. Firm to stiff. Medium to high plasticity. Moist. No odour. End of borehole at 1.5m depth.		02-18-6 1.4-1.5m, CR=0 PID=0.8ppm
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-19  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	19-Dec-02

drill model :	Hand auger	slope	90°	RL surface	not measured
hole diameter :	65mm	bearing		datum	

depth m	material description	observations	sample details
	SANDY SILT. Brown to grey. Contains crushed basalt rock/screenings and fine, uniform, subrounded quartz gravel. Dry. No odour.	DISTURBED NATURAL MATERIAL	02-19-1 0.0-0.2m, CR=0 PID=1.0ppm
0.25	End of borehole at 0.2m depth (auger refusal).		
0.5			
0.75			
1.0			
1.25			
1.5			
1.75			
2.0			



**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-20  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	19-Dec-02

drill model :	Hand auger	slope	90°	RL surface	not measured
hole diameter :	65mm	bearing		datum	

depth m	material description	observations	sample details
	SANDY SILT. Brown. Contains fine, uniform, subrounded quartz gravel and crushed basalt rock/screenings.	DISTURBED NATURAL MATERIAL	02-20-1 0.0-0.2m, CR=0 PID=1.0ppm
0.25	End of borehole at 0.2m depth (auger refusal).		
0.5			
0.75			
1.0			
1.25			
1.5			
1.75			
2.0			

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-21  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	19-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Brown to grey. Contains fine, uniform, subrounded quartz gravel and rootlets. Dry. No odour.	NATURAL MATERIAL	02-21-1 0.0-0.2m, CR=0 PID=0.4ppm
0.5	Becoming brown with depth. Contains pockets of light brown sand. Dry. No odour.		02-21-2 0.5-0.6m, CR=0 PID=0.2ppm
0.75	Becoming lighter brown with depth.		02-21-3 0.9-1.0m, CR=0 PID=0.6ppm
1.0	Mottled brown to light brown with depth. End of borehole at 1.0m depth.		
1.25			
1.5			
1.75			
2.0			

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-22  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	19-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Grey to light brown. Contains rootlets and fine, uniform, subrounded quartz gravel. Dry. No odour.	NATURAL MATERIAL	02-22-1 0.0-0.2m, CR=0 PID=0.2ppm
0.5	Grades to VERY CLAYEY SILT. Dark brown. Contains rootlets. Dry. No odour		02-22-2 0.4-0.5m, CR=0 PID=0.1ppm
0.75	Grades to SANDY SILT. Light brown becoming lighter brown with depth. Dry to moist. No odour.		
1.0	End of borehole at 1.0m depth.		02-22-3 0.9-1.0m, CR=0 PID=0.0ppm
1.25			
1.5			
1.75			
2.0			

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-23  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	19-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.25	SANDY SILT. Grey brown mottled brown. Contains rootlets and fine, uniform, subrounded quartz gravel. Dry. No odour.	NATURAL MATERIAL	02-23-1 02-23-2 (DUP) 0.0-0.2m, CR=0 PID=0.2ppm
0.5	Becoming brown with depth.		02-23-3 0.4-0.5m, CR=0 PID=0.2ppm
1.0	SANDY CLAY. Mottled tan and orange. Soft. Low plasticity. Moist. No odour.		02-23-4 0.9-1.0m, CR=0 PID=0.1ppm
1.25	End of borehole at 1.0m depth.		
1.5			
1.75			
2.0			

# Beveridge Williams & Co Pty Ltd

## Engineering Log

### Borehole

borehole no BH02-24  
 sheet no 1 of 1  
 job no D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	19-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
	ASPHALT	FILL MATERIAL	
	SANDY SILT. Brown to grey. Contains crushed basalt rock/screenings and some asphalt fragments. Dry. No odour.		02-24-1, 02-24-1A 0.05-0.2m, CR=1 PID=0.0ppm
0.25	VERY CLAYEY SILT. Dark grey occasionally mottled red. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.	NATURAL MATERIAL	02-24-2 0.2-0.3m, CR=0 PID=0.4ppm
0.5			
	Becoming brown with depth. Becoming light brown with depth.		
0.75			
	SANDY SILT. Tan mottled brown. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.		02-24-3 0.8-1.0m, CR=0 PID=0.2ppm
1.0	End of borehole at 1.0m depth.		
1.25			
1.5			
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no BH02-25  
 sheet no 1 of 1  
 job no D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	19-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
	ASPHALT	FILL MATERIAL	
0.25	SAND. Tan. Abundant fine, uniform, subrounded quartz gravel. Dry. No odour.		02-25-1 0.1-0.2m, CR=0 PID=0.2ppm
0.5	SILT. Dark grey occasionally mottled green near surface. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.	NATURAL MATERIAL	02-25-2 0.3-0.4m, CR=0 PID=0.7ppm
0.75	SANDY SILT. Tan to grey. Contains fine, uniform, subrounded quartz gravel. Moist. No odour.		02-25-3 0.6-0.7m, CR=0 PID=0.0ppm
1.0	SILTY CLAY. Grey mottled brown. Firm. Medium plasticity. Moist. No odour.		02-25-4 0.9-1.0m, CR=0 PID=0.0ppm
1.25	End of borehole at 1.0m depth.		
1.5			
1.75			
2.0			

**Beveridge Williams & Co Pty Ltd**  
**Engineering Log**  
**Borehole**

borehole no      BH02-26  
sheet no            1 of 1  
job no                D8610

client:	Department of Education and Training	logged by:	D. Pendergast
project:	Contamination Assessment	checked:	M. Schulz
location:	Oakleigh South Primary School, Oakleigh South	date:	19-Dec-02

drill model :	Hand auger	slope 90°	RL surface	not measured
hole diameter :	65mm	bearing	datum	

depth m	material description	observations	sample details
0.	Asphalt covering at the surface to 0.03m depth. SILT. Grey to brown. Contains abundant basalt screenings/crushed rock fragments. Dry. No odour.	FILL MATERIAL	02-26-1, 0.03-0.1m CR=0, PID=0.2ppm
	CLAYEY SILT. Dark grey. Contains fine, uniform, subrounded quartz gravel. Dry. No odour.	NATURAL MATERIAL	02-26-2 0.1-0.3m, CR=0 PID=0.5ppm
0.5	SANDY SILT. Tan. Contains fine, uniform, subrounded quartz gravel. Moist. No odour.  Becoming light tan with depth.		02-26-3 0.4-0.5m, CR=0 PID=0.2ppm
0.75	SILTY CLAY. Grey mottled orange. Firm. Medium plasticity. Moist. No odour.  Becoming grey occasionally mottled orange. Stiff. Moist. No odour.		02-26-4 0.75-0.85m, CR=0 PID=0.2ppm
1.0			02-26-5 0.95-1.05m, CR=0 PID=0.1ppm
1.25	End of borehole at 1.05m depth.		
1.5			
1.75			
2.0			

Date 5.5.97

QAP 401 Work Instruction 301



**Table 2**  
**Results of Chemical Testing**  
**Soil Samples**

1 Denotes concentration exceeds adopted or modified criteria  
 10 Denotes concentration exceeds EPA Fill criteria  
 100 Denotes concentration exceeds NEPM health investigation level (Residential)

\* NEPM and Dutch B criteria for complexed cyanide  
 † ANZECC B, NEPM and Dutch B criteria for Chromium (III)

					Heavy Metals (mg/kg)																	
					Arsenic As	Boron B	Barium Ba	Beryllium Be	Cadmium Cd	Cobalt Co	Chromium† Cr	Copper Cu	Mercury Hg	Manganese Mn	Molybdenum Mo	Nickel Ni	Lead Pb	Antimony Sb	Selenium Se	Tin Sn	Zinc Zn	
ANZECC B Criteria					20	-	-	-	3	-	50	60	1	500	-	60	300	20	-	50	200	
Dutch B					30	-	400	-	5	50	250	100	2	-	-	100	150	-	-	50	500	
EPA Fill Criteria					30	-	-	-	5	50	250	100	2	-	40	100	300	-	10	50	500	
EPA Low Level Contaminated Soil Criteria					300	-	-	-	50	500	1000	20	-	400	1000	3000	-	100	50	500	5000	
NEPM Ecological Investigation Levels - Interim Urban					20	-	300	-	3	-	400	100	1	500	-	60	600	-	-	-	200	
NEPM Health Investigation Level 'A' - Residential					100	3000	-	20	20	100	120000	1000	15	1500	-	600	300	-	-	-	7000	
NEPM Health Investigation Level 'D' - Residential - Minimal Access to Soil					400	12000	-	80	80	400	480000	4000	60	6000	-	2400	1200	-	-	-	28000	
NEPM Health Investigation Level 'E' - Parks, Open Space and Playing Fields					200	6000	-	40	40	200	240000	2000	30	3000	-	600	600	-	-	-	14000	
NEPM Health Investigation Level 'F' - Commercial/Industrial					500	15000	-	100	100	500	600000	5000	75	7500	-	3000	1500	-	-	-	35000	
Adopted Criteria					20	3000	300	20	3	50	400	100	1	500	40	60	600	20	10	50	200	
Modified Criteria 2 part Composite					10	1500	150	10	1.5	25	200	50	0.5	250	20	30	300	10	5	25	100	
Modified Criteria 3 part Composite					7	1000	100	7	1	17	133	33	0.33	167	13	20	200	7	3	17	67	
Modified Criteria 4 part Composite					5	750	75	5	0.75	12.5	100	25	0.25	125	10	15	150	5	2.5	12.5	50	
<b>Individual Samples</b>																						
Location	Depth (m)	Sample Number	Sample Date	Material Description																		
BH02-5	0.0-0.2	02-5-1	18-Dec-02	Sandy Silt	<5	<5	14	<5	<0.2	<5	6	<5	0.49	32	<5	<5	12	<5	<5	<5	<5	12
BH02-6	0.0-0.2	02-6-1	18-Dec-02	Sandy Silt	9	<5	9	<5	<0.2	<5	7	<5	0.12	9	<5	<5	24	<5	<5	<5	<5	<5
BH02-6	0.4-0.5	02-6-2	18-Dec-02	Silt	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	5	<5	<5	<5	<5	<5	<5	<5	<5
BH02-6	0.5-0.6	02-6-3	18-Dec-02	Silty Clay	<5	7	25	<5	<0.2	9	57	<5	<0.05	21	<5	20	11	<5	<5	<5	<5	<5
BH02-6	0.8-0.9	02-6-4	18-Dec-02	Silty Clay	<5	<5	31	<5	<0.2	7	44	<5	<0.05	10	<5	13	9	<5	<5	<5	<5	<5
BH02-7	0.0-0.2	02-7-1	18-Dec-02	Sandy Silt	<5	<5	9	<5	<0.2	<5	8	8	0.18	17	<5	<5	14	<5	<5	<5	<5	7
BH02-8	0.0-0.2	02-8-1	18-Dec-02	Sandy Silt	<5	<5	14	<5	<0.2	<5	7	9	<0.05	31	<5	<5	23	<5	<5	<5	<5	33
BH02-9	0.0-0.2	02-9-1	18-Dec-02	Sandy Silt	5	<5	92	<5	<0.2	<5	22	13	<0.05	110	<5	11	24	<5	<5	<5	<5	43
BH02-10	0.0-0.2	02-10-1	18-Dec-02	Sandy Silt	15	<5	18	<5	<0.2	<5	14	7	<0.05	56	<5	10	26	<5	<5	<5	<5	25
BH02-10	0.4-0.5	02-10-2	18-Dec-02	Sandy Silt	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	7	<5	<5	<5	<5	<5	<5	<5	<5
BH02-11	0.0-0.2	02-11-1	18-Dec-02	Sandy Silt	12	<5	19	<5	<0.2	<5	21	7	0.09	88	<5	11	77	<5	<5	<5	<5	24
BH02-11	0.4-0.5	02-11-2	18-Dec-02	Silty Clay	22	<5	15	<5	<0.2	<5	22	7	0.08	69	<5	12	23	<5	<5	<5	<5	15
BH02-12	0.0-0.2	02-12-1	18-Dec-02	Silt	14	<5	14	<5	<0.2	<5	14	<5	<0.05	52	<5	9	19	<5	<5	<5	<5	12
BH02-12	0.35-0.4	02-12-2	18-Dec-02	Silt	30	<5	12	<5	<0.2	<5	16	<5	<0.05	28	<5	7	9	<5	<5	<5	<5	<5
BH02-13	0.0-0.2	02-13-1	18-Dec-02	Sandy Silt	<5	<5	19	<5	0.4	<5	7	280	0.09	39	<5	8	48	<5	<5	<5	<5	320
BH02-14	0.0-0.2	02-14-1	18-Dec-02	Sandy Silt	<5	<5	10	<5	<0.2	<5	<5	6	<0.05	16	<5	<5	15	<5	<5	<5	<5	10
BH02-15	0.0-0.2	02-15-1	18-Dec-02	Sandy Silt	<5	<5	12	<5	<0.2	<5	<5	<5	0.57	21	<5	<5	13	<5	<5	<5	<5	12
BH02-15	0.5-0.6	02-15-2	18-Dec-02	Sandy Silt	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	<5	<5	<5	<5	<5	<5	<5	<5	<5



Table 2  
 Results of Chemical Testing  
 Soil Samples

1 Denotes concentration exceeds adopted or modified criteria  
 101 Denotes concentration exceeds EPA Fill criteria  
 100 Denotes concentration exceeds NEPM health investigation level (Residential)

\* NEPM and Dutch B criteria for complexed cyanide  
 † ANZECC B, NEPM and Dutch B criteria for Chromium (III)

					Heavy Metals (mg/kg)																
					Arsenic As	Boron B	Barium Ba	Beryllium Be	Cadmium Cd	Cobalt Co	Chromium† Cr	Copper Cu	Mercury Hg	Manganese Mn	Molybdenum Mo	Nickel Ni	Lead Pb	Antimony Sb	Selenium Se	Tin Sn	Zinc Zn
ANZECC B Criteria					20	-	-	-	3	-	50	60	1	500	-	60	300	20	-	50	200
Dutch B					30	-	400	-	5	50	250	100	2	-	100	150	-	-	50	500	
EPA Fill Criteria					30	-	-	-	5	50	250	100	2	-	40	100	300	-	10	50	500
EPA Low Level Contaminated Soil Criteria					300	-	-	-	50	500	2500	1000	20	-	400	1000	3000	-	100	500	5000
NEPM Ecological Investigation Levels - Interim Urban					20	-	300	-	3	-	400	100	1	500	-	60	600	-	-	-	200
NEPM Health Investigation Level 'A' - Residential					100	3000	-	20	20	100	120000	1000	15	1500	-	600	300	-	-	-	7000
NEPM Health Investigation Level 'D' - Residential - Minimal Access to Soil					400	12000	-	80	80	400	480000	4000	60	6000	-	2400	1200	-	-	-	28000
NEPM Health Investigation Level 'E' - Parks, Open Space and Playing Fields					200	6000	-	40	40	200	240000	2000	30	3000	-	600	600	-	-	-	14000
NEPM Health Investigation Level 'F' - Commercial/Industrial					500	15000	-	100	100	500	600000	5000	75	7500	-	3000	1500	-	-	-	35000
Adopted Criteria					20	3000	300	20	3	50	400	100	1	500	40	60	600	20	10	50	200
Modified Criteria 2 part Composite					10	1500	150	10	1.5	25	200	50	0.5	250	20	30	300	10	5	25	100
Modified Criteria 3 part Composite					7	1000	100	7	1	17	133	33	0.33	167	13	20	200	7	3	17	67
Modified Criteria 4 part Composite					5	750	75	5	0.75	12.5	100	25	0.25	125	10	15	150	5	2.5	12.5	50
<b>Individual Samples</b>																					
Location	Depth (m)	Sample Number	Sample Date	Material Description	As	B	Ba	Be	Cd	Co	Cr	Cu	Hg	Mn	Mo	Ni	Pb	Sb	Se	Sn	Zn
BH02-15	0.8-0.9	02-15-3	18-Dec-02	Sandy Clay	<5	<5	5	<5	<0.2	9	15	<5	<0.05	9	<5	8	7	<5	<5	<5	<5
BH02-16	0.0-0.2	02-16-1	19-Dec-02	Sandy Silt	<5	<5	12	<5	0.3	<5	11	<5	0.68	34	<5	<5	16	<5	<5	<5	5
BH02-17	0.0-0.2	02-17-1	19-Dec-02	Sandy Silt	19	<5	14	<5	<0.2	5	20	6	<0.05	69	<5	16	20	<5	<5	<5	20
BH02-18	0.0-0.2	02-18-1	19-Dec-02	Silty Sand	7	<5	12	<5	<0.2	<5	9	<5	<0.05	27	<5	<5	13	<5	<5	<5	<5
BH02-18	0.4-0.5	02-18-2	19-Dec-02	Sandy Silt	6	<5	12	<5	<0.2	<5	7	<5	<0.05	34	<5	<5	<5	<5	<5	<5	<5
BH02-18	0.6-0.7	02-18-3	19-Dec-02	Sandy Clay	65	<5	10	<5	<0.2	<5	13	<5	<0.05	59	<5	11	9	<5	<5	<5	<5
BH02-18	0.8-0.9	02-18-4	19-Dec-02	Very Silty Clay	16	<5	<5	<5	<0.2	<5	<5	<5	<0.05	8	<5	<5	<5	<5	<5	<5	<5
BH02-19	0.0-0.2	02-19-1	19-Dec-02	Sandy Silt	21	<5	14	<5	0.3	<5	16	6	<0.05	56	<5	10	20	<5	<5	<5	9
BH02-20	0.0-0.2	02-20-1	19-Dec-02	Sandy Silt	7	<5	13	<5	<0.2	<5	11	<5	<0.05	43	<5	6	18	<5	<5	<5	15
BH02-21	0.0-0.2	02-21-1	19-Dec-02	Sandy Silt	<5	<5	9	<5	<0.2	<5	<5	6	<0.05	28	<5	<5	17	<5	<5	<5	16
BH02-21	0.9-1.0	02-21-3	19-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02-22	0.0-0.2	02-22-1	19-Dec-02	Sandy Silt	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	7	<5	<5	7	<5	<5	<5	<5
BH02-23	0.0-0.2	02-23-1	19-Dec-02	Sandy Silt	<5	<5	11	<5	<0.2	<5	<5	<5	<0.05	24	<5	<5	12	<5	<5	<5	13
BH02-23	0.9-1.0	02-23-4	19-Dec-02	Sandy Clay	<5	<5	5	<5	<0.2	<5	8	<5	<0.05	7	<5	<5	<5	<5	<5	<5	<5
BH02-24	0.05-0.2	02-24-1	19-Dec-02	Sandy Silt	27	5	23	<5	<0.2	8	33	6	<0.05	120	<5	20	17	<5	<5	<5	18
BH02-24	0.2-0.3	02-24-2	19-Dec-02	Very Clayey Silt	<5	<5	15	<5	<0.2	<5	<5	<5	<0.05	10	<5	<5	11	<5	<5	<5	<5
BH02-25	0.1-0.2	02-25-1	19-Dec-02	Sand	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	54	<5	7	<5	<5	<5	<5	<5
BH02-25	0.3-0.4	02-25-2	19-Dec-02	Silt	<5	<5	24	<5	<0.2	<5	<5	<5	<0.05	73	<5	<5	12	<5	<5	<5	20
BH02-26	0.03-0.1	02-26-1	19-Dec-02	Asphalt Gravel	<5	<5	14	<5	<0.2	23	13	26	<0.05	460	<5	83	<5	<5	<5	<5	33
BH02-26	0.2-0.3	02-26-2	19-Dec-02	Clayey Silt	7	<5	6	<5	<0.2	<5	<5	18	<0.05	19	<5	<5	13	<5	<5	<5	<5
BH02-26	0.75-0.85	02-26-4	19-Dec-02	Silty Clay	<5	<5	13	<5	<0.2	<5	20	<5	<0.05	19	<5	7	6	<5	<5	<5	<5

Table 2  
 Results of Chemical Testing  
 Soil Samples

1 Denotes concentration exceeds adopted or modified criteria  
 10 Denotes concentration exceeds EPA Fill criteria  
 100 Denotes concentration exceeds NEPM health investigation level (Residential)

\* NEPM and Dutch B criteria for complexed cyanide  
 † ANZECC B, NEPM and Dutch B criteria for Chromium (III)

					Total Petroleum Hydrocarbons							Polycyclic Aromatic Hydrocarbons						Organics (mg/kg)						
																		Organochlorine Pesticides						
					C <sub>8</sub> -C <sub>9</sub>	C <sub>10</sub> -C <sub>14</sub>	C <sub>15</sub> -C <sub>28</sub>	C <sub>29</sub> -C <sub>36</sub>	>C <sub>9</sub>	Total PAH	B(a)p	Naphthalene	Anthracene	Phenanthrene	Fluoranthene	Pyrene	Dieldrin	Aldrin + Dieldrin	Chlordane	DDT + DDD + DDE	Hepachlor	Total OC Pesticides		
ANZECC B Criteria					-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	
Dutch B					-	-	-	-	-	20	1	5	10	10	10	10	-	-	-	-	-	-	-	
EPA Fill Criteria					100	-	-	-	1000	20	-	-	-	-	-	-	-	-	-	-	-	-	-	
EPA Low Level Contaminated Soil Criteria					1000	-	-	-	10000	200	-	-	-	-	-	-	-	-	-	-	-	-	10	
NEPM Ecological Investigation Levels - Interim Urban					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM Health Investigation Level 'A' - Residential					-	-	-	-	-	20	1	-	-	-	-	-	-	-	10	50	200	10	-	-
NEPM Health Investigation Level 'D' - Residential - Minimal Access to Soil					-	-	-	-	-	80	4	-	-	-	-	-	-	-	40	200	800	40	-	-
NEPM Health Investigation Level 'E' - Parks, Open Space and Playing Fields					-	-	-	-	-	40	2	-	-	-	-	-	-	-	20	100	400	20	-	-
NEPM Health Investigation Level 'F' - Commercial/Industrial					-	-	-	-	-	100	5	-	-	-	-	-	-	-	50	250	1000	50	-	-
Adopted Criteria					100	-	-	-	1000	20	1	5	10	10	10	10	0.2	10	50	200	10	1	-	
Modified Criteria 2 part Composite					50	-	-	-	500	10	0.5	2.5	5	5	5	0.1	5	25	100	5	0.5	-	-	
Modified Criteria 3 part Composite					33	-	-	-	333	7	0.33	1.7	3.3	3.3	3.3	0.07	3	17	67	3	0.33	-	-	
Modified Criteria 4 part Composite					25	-	-	-	250	5	0.25	1.25	2.5	2.5	2.5	0.05	2.5	12.5	50	2.5	0.25	-	-	
<b>Individual Samples</b>																								
Location	Depth (m)	Sample Number	Sample Date	Material Description																				
BH02-5	0.0-0.2	02-5-1	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95	-		
BH02-6	0.0-0.2	02-6-1	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95	-		
BH02-6	0.4-0.5	02-6-2	18-Dec-02	Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-6	0.5-0.6	02-6-3	18-Dec-02	Silty Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-6	0.8-0.9	02-6-4	18-Dec-02	Silty Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-7	0.0-0.2	02-7-1	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-8	0.0-0.2	02-8-1	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-9	0.0-0.2	02-9-1	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95	-		
BH02-10	0.0-0.2	02-10-1	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-10	0.4-0.5	02-10-2	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95	-		
BH02-11	0.0-0.2	02-11-1	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-11	0.4-0.5	02-11-2	18-Dec-02	Silty Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-12	0.0-0.2	02-12-1	18-Dec-02	Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-12	0.35-0.4	02-12-2	18-Dec-02	Silt	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95	-		
BH02-13	0.0-0.2	02-13-1	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-14	0.0-0.2	02-14-1	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-15	0.0-0.2	02-15-1	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95	-		
BH02-15	0.5-0.6	02-15-2	18-Dec-02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

**Table 2**  
**Results of Chemical Testing**  
**Soil Samples**

1 Denotes concentration exceeds adopted or modified criteria  
 10 Denotes concentration exceeds EPA Fill criteria  
 100 Denotes concentration exceeds NEPM health investigation level (Residential)

\* NEPM and Dutch B criteria for complexed cyanide  
 † ANZECC B, NEPM and Dutch B criteria for Chromium (III)

					Total Petroleum Hydrocarbons							Polycyclic Aromatic Hydrocarbons						Organics (mg/kg)					
					C <sub>6</sub> -C <sub>9</sub>	C <sub>10</sub> -C <sub>14</sub>	C <sub>15</sub> -C <sub>28</sub>	C <sub>29</sub> -C <sub>36</sub>	>C <sub>37</sub>	Total PAH	B(a)p	Naphthalene	Anthracene	Phenanthrene	Fluoranthene	Pyrene	Organochlorine Pesticides						
																Dieldrin	Aldrin + Dieldrin	Chlordane	DDT + DDD + DDE	Heptachlor	Total OC Pesticides		
ANZECC B Criteria					-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	
Dutch B					-	-	-	-	-	20	1	5	10	10	10	10	-	-	-	-	-	-	
EPA Fill Criteria					100	-	-	-	1000	20	-	-	-	-	-	-	-	-	-	-	-	-	
EPA Low Level Contaminated Soil Criteria					1000	-	-	-	10000	200	-	-	-	-	-	-	-	-	-	-	-	1	
NEPM Ecological Investigation Levels - Interim Urban					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	
NEPM Health Investigation Level 'A' - Residential					-	-	-	-	-	20	1	-	-	-	-	-	-	10	50	200	10	-	
NEPM Health Investigation Level 'D' - Residential - Minimal Access to Soil					-	-	-	-	-	80	4	-	-	-	-	-	-	40	200	800	40	-	
NEPM Health Investigation Level 'E' - Parks, Open Space and Playing Fields					-	-	-	-	-	40	2	-	-	-	-	-	-	20	100	400	20	-	
NEPM Health Investigation Level 'F' - Commercial/Industrial					-	-	-	-	-	100	5	-	-	-	-	-	-	50	250	1000	50	-	
Adopted Criteria					100	-	-	-	1000	20	1	5	10	10	10	10	0.2	10	50	200	10	1	
Modified Criteria 2 part Composite					50	-	-	-	500	10	0.5	2.5	5	5	5	5	0.1	5	25	100	5	0.5	
Modified Criteria 3 part Composite					33	-	-	-	333	7	0.33	1.7	3.3	3.3	3.3	3.3	0.07	3	17	67	3	0.33	
Modified Criteria 4 part Composite					25	-	-	-	250	5	0.25	1.25	2.5	2.5	2.5	2.5	0.05	2.5	12.5	50	2.5	0.25	
<b>Individual Samples</b>																							
Location	Depth (m)	Sample Number	Sample Date	Material Description																			
BH02-15	0.8-0.9	02-15-3	18/Dec/02	Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-16	0.0-0.2	02-16-1	19/Dec/02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-17	0.0-0.2	02-17-1	19/Dec/02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95		
BH02-18	0.0-0.2	02-18-1	19/Dec/02	Silty Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-18	0.4-0.5	02-18-2	19/Dec/02	Sandy Silt	-	-	-	-	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95		
BH02-18	0.6-0.7	02-18-3	19/Dec/02	Sandy Clay	-	-	-	-	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-		
BH02-18	0.8-0.9	02-18-4	19/Dec/02	Very Silty Clay	-	-	-	-	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-		
BH02-19	0.0-0.2	02-19-1	19/Dec/02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-20	0.0-0.2	02-20-1	19/Dec/02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-21	0.0-0.2	02-21-1	19/Dec/02	Sandy Silt	<20	<20	<50	<50	<120	-	-	-	-	-	-	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95		
BH02-21	0.9-1.0	02-21-3	19/Dec/02	Sandy Silt	<20	<20	<50	<50	<120	-	-	-	-	-	-	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95		
BH02-22	0.0-0.2	02-22-1	19/Dec/02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-23	0.0-0.2	02-23-1	19/Dec/02	Sandy Silt	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95		
BH02-23	0.9-1.0	02-23-4	19/Dec/02	Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95		
BH02-24	0.05-0.2	02-24-1	19/Dec/02	Sandy Silt	-	-	-	-	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95		
BH02-24	0.2-0.3	02-24-2	19/Dec/02	Very Clayey Silt	-	-	-	-	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95		
BH02-25	0.1-0.2	02-25-1	19/Dec/02	Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BH02-25	0.3-0.4	02-25-2	19/Dec/02	Silt	-	-	-	-	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95		
BH02-26	0.03-0.1	02-26-1	19/Dec/02	Asphalt Gravel	-	-	-	-	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95		
BH02-26	0.2-0.3	02-26-2	19/Dec/02	Clayey Silt	-	-	-	-	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.05	<0.15	<0.05	<0.95		
BH02-26	0.75-0.85	02-26-4	19/Dec/02	Silty Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

XI:15319

Your Ref: **D8610 - OAKLEIGH STH PRIMARY  
SCHOOL**

6 January 2003

Beveridge Williams & Co. Pty. Ltd.  
PO Box 2205  
CAUFELD JUNCTION VIC 3161

Date Received: 23/12/2002

Date Sampled: 18 & 19/12/2002

Attention: **M. Ian McKenzie**

### Certificate of Analysis

WSL Report Number: **522805**

The sample(s) referred to in this report were analysed by the following methods:

<b>Analyte(s)</b>	<b>Method</b>
Metals	WSL-032
OCs	WSL8000
PAHs	WSL8000
TPH	WSL030

Results pertain to samples as received

Details of this report were faxed on: 6/01/2003

Yours faithfully

**WSL Consultants Pty Ltd**



per  
**Nick Bray**  
Manager Of Chemistry



This Laboratory is accredited by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of accreditation. This document shall not be reproduced except in full.

Accreditation No's 1201 & 1205

Date: 6-Jan-2003

WSL Report No: 522805

WSL JobNumber: 15319 Client: Beveridge Williams & Co. Pty. Ltd.

Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No.	Depth (m)	As	B	Ba	Be	Cd	Co	Cr	Cu	Hg	Mn	Mo	Ni	Pb	Sb	Se	Sn	Zn
522805	23-Dec-2002	02-5-1	BH02-5	0.0-0.2	<5	<5	14	<5	<0.2	<5	6	<5	0.49	32	<5	<5	12	<5	<5	<5	12
522808	23-Dec-2002	02-6-1	BH02-6	0.0-0.2	9	<5	9	<5	<0.2	<5	7	<5	0.12	9	<5	<5	24	<5	<5	<5	<5
522809	23-Dec-2002	02-6-2	BH02-6	0.4-0.5	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	5	<5	<5	<5	<5	<5	<5	<5
522810	23-Dec-2002	02-6-3	BH02-6	0.5-0.6	<5	7	25	<5	<0.2	9	57	<5	<0.05	21	<5	20	11	<5	<5	<5	<5
522811	23-Dec-2002	02-6-4	BH02-6	0.8-0.9	<5	<5	31	<5	<0.2	7	44	<5	<0.05	10	<5	13	9	<5	<5	<5	<5
522812	23-Dec-2002	02-7-1	BH02-7	0.0-0.2	<5	<5	9	<5	<0.2	<5	8	8	0.18	17	<5	<5	14	<5	<5	<5	7
522814	23-Dec-2002	02-8-1	BH02-8	0.0-0.2	<5	<5	14	<5	0.2	<5	7	9	<0.05	31	<5	<5	23	<5	<5	<5	33
522815	23-Dec-2002	02-8-2	BH02-8		11	<5	12	<5	<0.2	<5	7	8	<0.05	36	<5	<5	26	<5	<5	<5	33
522817	23-Dec-2002	02-9-1	BH02-9	0.0-0.2	5	<5	92	<5	<0.2	<5	22	13	<0.05	110	<5	11	24	<5	<5	<5	43
522819	23-Dec-2002	02-10-1	BH02-10	0.0-0.2	15	<5	18	<5	<0.2	<5	14	7	<0.05	56	<5	10	26	<5	<5	<5	25
522820	23-Dec-2002	02-10-2	BH02-10	0.4-0.5	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	7	<5	<5	<5	<5	<5	<5	<5
522821	23-Dec-2002	02-11-1	BH02-11	0.0-0.2	12	<5	19	<5	<0.2	<5	21	7	0.09	88	<5	11	77	<5	<5	<5	24
522822	23-Dec-2002	02-11-2	BH02-11	0.4-0.5	22	<5	15	<5	<0.2	<5	22	7	0.08	69	<5	12	23	<5	<5	<5	15
522823	23-Dec-2002	02-12-1	BH02-12	0.0-0.2	14	<5	14	<5	<0.2	<5	14	<5	<0.05	52	<5	9	19	<5	<5	<5	12
522824	23-Dec-2002	02-12-2	BH02-12	0.35-0.4	30	<5	12	<5	<0.2	<5	16	<5	<0.05	28	<5	7	9	<5	<5	<5	<5
522825	23-Dec-2002	02-13-1	BH02-13	0.0-0.2	<5	<5	19	<5	0.4	<5	7	280	0.09	39	<5	8	48	<5	<5	<5	320
522828	23-Dec-2002	02-14-1	BH02-14	0.0-0.2	<5	<5	10	<5	<0.2	<5	<5	6	<0.05	16	<5	<5	15	<5	<5	<5	10
522830	23-Dec-2002	02-15-1	BH02-15	0.0-0.2	<5	<5	12	<5	<0.2	<5	<5	<5	0.57	21	<5	<5	13	<5	<5	<5	12
522831	23-Dec-2002	02-15-2	BH02-15	0.5-0.6	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	<5	<5	<5	<5	<5	<5	<5	<5
522832	23-Dec-2002	02-15-3	BH02-15	0.8-0.9	<5	<5	5	<5	<0.2	9	15	<5	<0.05	9	<5	8	7	<5	<5	<5	<5

A blank space indicates no test performed

Results expressed as mg/kg dry weight.



Date : 6-Jan-2003

WSL Report No: 522805

WSL JobNumber: 15319 Client: Beveridge Williams &amp; Co. Pty. Ltd. Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No.	Depth (m)	As	B	Ba	Be	Cd	Co	Cr	Cu	Hg	Mn	Mo	Ni	Pb	Sb	Se	Sn	Zn
522834	23-Dec-2002	02-16-1	BH02-16	0.0-0.2	<5	<5	12	<5	0.3	<5	11	<5	0.68	34	<5	<5	16	<5	<5	<5	5
522835	23-Dec-2002	02-16-2	BH02-16		<5	<5	21	<5	0.3	<5	12	<5	1.2	43	<5	6	20	<5	<5	<5	15
522837	23-Dec-2002	02-17-1	BH02-17	0.0-0.2	19	<5	14	<5	<0.2	5	20	6	<0.05	69	<5	16	20	<5	<5	<5	20
522838	23-Dec-2002	02-18-1	BH02-18	0.0-0.2	7	<5	12	<5	<0.2	<5	9	<5	<0.05	27	<5	<5	13	<5	<5	<5	<5
522839	23-Dec-2002	02-18-2	BH02-18	0.4-0.5	6	<5	12	<5	<0.2	<5	7	<5	<0.05	34	<5	<5	<5	<5	<5	<5	<5
522840	23-Dec-2002	02-18-3	BH02-18	0.6-0.7	65	<5	10	<5	<0.2	<5	13	<5	<0.05	59	<5	11	9	<5	<5	<5	<5
522841	23-Dec-2002	02-18-4	BH02-18	0.8-0.9	16	<5	<5	<5	<0.2	<5	<5	<5	<0.05	8	<5	<5	<5	<5	<5	<5	<5
522844	23-Dec-2002	02-19-1	BH02-19	0.0-0.2	21	<5	14	<5	0.3	<5	16	6	<0.05	56	<5	10	20	<5	<5	<5	9
522845	23-Dec-2002	02-20-1	BH02-20	0.0-0.2	7	<5	13	<5	<0.2	<5	11	<5	<0.05	43	<5	6	18	<5	<5	<5	15
522846	23-Dec-2002	02-21-1	BH02-21	0.0-0.2	<5	<5	9	<5	<0.2	<5	<5	6	<0.05	28	<5	<5	17	<5	<5	<5	16
522849	23-Dec-2002	02-22-1	BH02-22	0.0-0.2	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	7	<5	<5	7	<5	<5	<5	<5
522852	23-Dec-2002	02-23-1	BH02-23	0.0-0.2	<5	<5	11	<5	<0.2	<5	<5	<5	<0.05	24	<5	<5	12	<5	<5	<5	13
522855	23-Dec-2002	02-23-4	BH02-23	0.9-1.0	<5	<5	5	<5	<0.2	<5	8	<5	<0.05	7	<5	<5	<5	<5	<5	<5	<5
522856	23-Dec-2002	02-24-1	BH02-24	0.0-0.2	27	5	23	<5	<0.2	8	33	6	<0.05	120	<5	20	17	<5	<5	<5	18
522857	23-Dec-2002	02-24-2	BH02-24	0.2-0.3	<5	<5	15	<5	<0.2	<5	<5	<5	<0.05	10	<5	<5	11	<5	<5	<5	<5
522859	23-Dec-2002	02-25-1	BH02-25	0.0-0.2	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	54	<5	7	<5	<5	<5	<5	<5
522860	23-Dec-2002	02-25-2	BH02-25	0.3-0.4	<5	<5	24	<5	<0.2	<5	<5	<5	<0.05	73	<5	<5	12	<5	<5	<5	20
522863	23-Dec-2002	02-26-1	BH02-26	0.0-0.1	<5	<5	14	<5	<0.2	23	13	26	<0.05	460	<5	83	<5	<5	<5	<5	33
522864	23-Dec-2002	02-26-2	BH02-26	0.1-0.3	7	<5	6	<5	<0.2	<5	<5	18	<0.05	19	<5	<5	13	<5	<5	<5	<5
522866	23-Dec-2002	02-26-4	BH02-26	0.75-0.85	<5	<5	13	<5	<0.2	<5	20	<5	<0.05	19	<5	7	6	<5	<5	<5	<5

A blank space indicates no test performed

Results expressed as mg/kg dry weight.

Date : 6-Jan-2003

WSL Report No: 522805

WSL JobNumber: 15319 Client: Beveridge Williams & Co. Pty. Ltd. Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	As	B	Ba	Be	Cd	Co	Cr	Cu	Hg	Mn	Mo	Ni	Pb	Sb	Se	Sn	Zn
522807	23-Dec-2002	RINS 18/12/02	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.0005	<0.001	<0.001
522833	23-Dec-2002	RINS 19/12/02	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.0005	<0.001	<0.001

Date : 6-Jan-2003

WSL Report No: 522805

WSL JobNumber: 15319 Client: Beveridge Williams & Co. Pty. Ltd. Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No.	Depth (m)	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36
522846	23-Dec-2002	02-21-1	BH02-21	0.0-0.2	<20	<20	<50	<50
522848	23-Dec-2002	02-21-3	BH02-21	0.9-1.0	<20	<20	<50	<50



**Date:** 6-Jan-2003  
**WSL Report No:** 522805  
**WSL JobNumber:** 15319 **Client:** Beveridge Williams & Co. Pty. Ltd. **Job Reference:** D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No.	Depth (m)	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL* PAH
522839	23-Dec-2002	02-18-2	BH02-18	0.4-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<1
522840	23-Dec-2002	02-18-3	BH02-18	0.6-0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
522856	23-Dec-2002	02-24-1	BH02-24	0.0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
522860	23-Dec-2002	02-25-2	BH02-25	0.3-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
522864	23-Dec-2002	02-26-2	BH02-26	0.1-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1

\* Total PAH's refers only to the sum of individual PAH's tested above.

A blank space indicates no test performed

Results expressed as mg/kg dry weight

Date : 6-Jan-2003

WSL Report No: 522805

WSL JobNumber: 15319 Client: Beveridge Williams & Co. Pty. Ltd. Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No.	Depth (m)	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR- EPOXIDE	DDE	DIELDRIN
522805	23-Dec-2002	02-5-1	BH02-5	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522808	23-Dec-2002	02-6-1	BH02-6	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522814	23-Dec-2002	02-8-1	BH02-8	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522819	23-Dec-2002	02-10-1	BH02-10	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522823	23-Dec-2002	02-12-1	BH02-12	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522828	23-Dec-2002	02-14-1	BH02-14	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522834	23-Dec-2002	02-16-1	BH02-16	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522838	23-Dec-2002	02-18-1	BH02-18	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522846	23-Dec-2002	02-21-1	BH02-21	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522849	23-Dec-2002	02-22-1	BH02-22	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522852	23-Dec-2002	02-23-1	BH02-23	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522856	23-Dec-2002	02-24-1	BH02-24	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522860	23-Dec-2002	02-25-2	BH02-25	0.3-0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522864	23-Dec-2002	02-26-2	BH02-26	0.1-0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

Date: 6-Jan-2003

WSL Report No: 522805

WSL JobNumber: 15319 Client: Beveridge Williams & Co. Pty. Ltd. Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Received	Sample	BH No.	Depth (m)	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
522805	23-Dec-2002	02-5-1	BH02-5	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522808	23-Dec-2002	02-6-1	BH02-6	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522814	23-Dec-2002	02-8-1	BH02-8	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522819	23-Dec-2002	02-10-1	BH02-10	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522823	23-Dec-2002	02-12-1	BH02-12	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522828	23-Dec-2002	02-14-1	BH02-14	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522834	23-Dec-2002	02-16-1	BH02-16	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522838	23-Dec-2002	02-18-1	BH02-18	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522846	23-Dec-2002	02-21-1	BH02-21	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522849	23-Dec-2002	02-22-1	BH02-22	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522852	23-Dec-2002	02-23-1	BH02-23	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522856	23-Dec-2002	02-24-1	BH02-24	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522860	23-Dec-2002	02-25-2	BH02-25	0.3-0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522864	23-Dec-2002	02-26-2	BH02-26	0.1-0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

## QUALITY ASSURANCE REPORT

Date : 6-Jan-2003

WSL Report No: 522805

WSL JobNumber: 15319 Client: Beveridge Williams & Co. Pty. Ltd. Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No.	Depth (m)	As	B	Ba	Be	Cd	Co	Cr	Cu	Hg	Mn	Mo	Ni	Pb	Sb	Se	Sn	Zn
523728	23-Dec-2002	BLANK			<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	<5	<5	<5	<5	<5	<5	<5	<5
524191 522805	<i>(Duplicate of 522805)</i> 23-Dec-2002	02-5-1	BH02-5	0.0-0.2	<5	<5	15	<5	<0.2	<5	5	<5	0.46	31	<5	<5	12	<5	<5	<5	12
% RPD					<5	<5	14	<5	<0.2	<5	6	<5	0.49	32	<5	<5	12	<5	<5	<5	12
					0	0	6.9	0	0	0	18.2	0	6.3	3.2	0	0	0	0	0	0	0
524193 522820	<i>(Duplicate of 522820)</i> 23-Dec-2002	02-10-2	BH02-10	0.4-0.5	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	7	<5	<5	<5	<5	<5	<5	<5
% RPD					<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	7	<5	<5	<5	<5	<5	<5	<5
					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
524195 522834	<i>(Duplicate of 522834)</i> 23-Dec-2002	02-16-1	BH02-16	0.0-0.2	<5	<5	12	<5	0.2	<5	11	<5	0.69	33	<5	<5	13	<5	<5	<5	5
% RPD					<5	<5	12	<5	0.3	<5	11	<5	0.68	34	<5	<5	16	<5	<5	<5	5
					0	0	0	0	40.0	0	0	0	1.5	3.0	0	0	20.7	0	0	0	0
524197 522849	<i>(Duplicate of 522849)</i> 23-Dec-2002	02-22-1	BH02-22	0.0-0.2	<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	6	<5	<5	7	<5	<5	<5	<5
% RPD					<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	7	<5	<5	7	<5	<5	<5	<5
					0	0	0	0	0	0	0	0	0	15.4	0	0	0	0	0	0	0
524192 Expected	<i>(Spike of 522805)</i>				94	80	110	84	85	85	82	81	1.3	110	81	85	91	87	77	82	98
% Recovery					82	85	94	80	80	82	86	84	1.3	110	80	83	92	80	80	81	92
522805	23-Dec-2002	02-5-1	BH02-5	0.0-0.2	115	94.1	120	105	106	104	95.0	96.4	100	100	101	102	98.8	109	96.3	101	108
					<5	<5	14	<5	<0.2	<5	6	<5	0.49	32	<5	<5	12	<5	<5	<5	12
524194 Expected	<i>(Spike of 522820)</i>				80	86	70	76	77	83	88	71	0.85	84	77	79	82	83	76	79	81
% Recovery					80	83	83	80	80	81	83	80	0.80	87	81	81	83	80	80	81	80
522820	23-Dec-2002	02-10-2	BH02-10	0.4-0.5	100	104	84.3	95.0	96.3	102	106	88.8	106	96.3	95.1	97.5	98.8	104	95.0	97.5	101
					<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	7	<5	<5	<5	<5	<5	<5	<5
524196 Expected	<i>(Spike of 522834)</i>				81	93	83	75	78	92	100	76	1.4	120	78	88	95	83	82	82	84
% Recovery					82	84	92	80	80	85	91	84	1.5	110	81	84	96	80	80	81	85
522834	23-Dec-2002	02-16-1	BH02-16	0.0-0.2	98.8	111	88.8	93.8	97.5	108	111	90.5	87.8	113	96.3	105	98.8	104	103	101	98.8
					<5	<5	12	<5	0.3	<5	11	<5	0.68	34	<5	<5	16	<5	<5	<5	5
524198 Expected	<i>(Spike of 522849)</i>				77	85	79	73	76	84	89	74	0.81	87	75	80	89	82	80	79	77
% Recovery					80	81	85	80	80	80	82	83	0.80	87	81	81	87	80	80	81	80
522849	23-Dec-2002	02-22-1	BH02-22	0.0-0.2	96.3	105	92.9	91.3	95.0	105	109	89.2	101	100	92.6	98.8	103	103	100	97.5	96.3
					<5	<5	<5	<5	<0.2	<5	<5	<5	<0.05	7	<5	<5	7	<5	<5	<5	<5

A blank space indicates no test performed

Results expressed as mg/kg dry weight.

## QUALITY ASSURANCE REPORT

Date : 6-Jan-2003

WSL Report No: 522805

WSL JobNumber: 15319 Client: Beveridge Williams & Co. Pty. Ltd. Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No.	Depth (m)	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36
523728	23-Dec-2002	BLANK			<20	<20	<50	<50
523729	<i>(Spike of 523728)</i>						280	
<b>Expected</b>							310	
<b>% Recovery</b>							90.3	
523728	23-Dec-2002	QC SPIKE					<50	

## QUALITY ASSURANCE REPORT

Date : 6-Jan-2003

WSL Report No: 522805

WSL JobNumber: 15319 Client: Beveridge Williams & Co. Pty. Ltd. Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No.	Depth (m)	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL* PAH	
523728	23-Dec-2002	BLANK			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
523751	<i>(Duplicate of 522856)</i>				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
522856	23-Dec-2002	02-24-1	BH02-24	0.0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
% RPD					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
523729	<i>(Spike of 523728)</i>				1.1	1.1	1.1	1.0	1.1	1.1	1.2	1.3	1.4	1.2	1.1	1.3	1.2	1.1	1.1	1.3	1.3	19
Expected					1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	20
% Recovery					84.6	84.6	84.6	76.9	84.6	84.6	92.3	100	108	92.3	84.6	100	92.3	84.6	84.6	100	95.0	
523728	23-Dec-2002	QC SPIKE			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1
523752	<i>(Spike of 522856)</i>				1.2	1.4	1.3	1.3	1.3	1.4	1.5	1.5	1.4	1.4	1.3	1.5	1.4	1.4	1.4	1.3	1.3	22
Expected					1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	22
% Recovery					85.7	100	92.9	92.9	92.9	100	107	107	100	100	92.9	107	100	100	100	100	92.9	100
522856	23-Dec-2002	02-24-1	BH02-24	0.0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1

\* Total PAH's refers only to the sum of individual PAH's tested above.

A blank space indicates no test performed

Results expressed as mg/kg dry weight

## QUALITY ASSURANCE REPORT

**Date:** 6-Jan-2003  
**WSL Report No:** 522805  
**WSL JobNumber:** 15319 **Client:** Beveridge Williams & Co. Pty. Ltd. **Job Reference:** D8610 - OAKLEIGH STH PRIMARY SCHOOL

LAB NUM	Reference	Sample	BH No.	Depth (m)	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR-EPOXIDE	DDE	DIELDRIN
523728	23-Dec-2002	BLANK			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
523750	<i>(Duplicate of 522805)</i>				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522805	23-Dec-2002	02-5-1	BH02-5	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<b>% RPD</b>					0	0	0	0	0	0	0	0	0	0
523751	<i>(Duplicate of 522856)</i>				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522856	23-Dec-2002	02-24-1	BH02-24	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<b>% RPD</b>					0	0	0	0	0	0	0	0	0	0
523729	<i>(Spike of 523728)</i>				2.1	2.2	2.1		1.4	2.2	2.5	1.3	1.2	1.2
<b>Expected</b>					2.5	2.5	2.5		1.3	2.5	2.5	1.3	1.3	1.3
<b>% Recovery</b>					84.0	88.0	84.0		108	88.0	100	100	92.3	92.3
523728	23-Dec-2002	QC SPIKE			<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
523752	<i>(Spike of 522856)</i>				1.3	1.3	1.3	1.2	1.3	1.2	1.1	1.3	1.3	1.3
<b>Expected</b>					1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
<b>% Recovery</b>					92.9	92.9	92.9	85.7	92.9	85.7	78.6	92.9	92.9	92.9
522856	23-Dec-2002	02-24-1	BH02-24	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05



## QUALITY ASSURANCE REPORT

**Date : 6-Jan-2003**
**WSL Report No: 522805**
**WSL JobNumber: 15319 Client: Beveridge Williams & Co. Pty. Ltd. Job Reference: D8610 - OAKLEIGH STH PRIMARY SCHOOL**

LAB NUM	Reference	Sample	BH No.	Depth (m)	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
523728	23-Dec-2002	BLANK			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
523750	<i>(Duplicate of 522805)</i>				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522805	23-Dec-2002	02-5-1	BH02-5	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<b>% RPD</b>					0	0	0	0	0	0	0	0	0
523751	<i>(Duplicate of 522856)</i>				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
522856	23-Dec-2002	02-24-1	BH02-24	0.0-0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<b>% RPD</b>					0	0	0	0	0	0	0	0	0
523729	<i>(Spike of 523728)</i>				1.0				2.7	1.2	1.2	1.2	1.2
<b>Expected</b>					1.3				2.5	1.3	1.3	1.3	1.3
<b>% Recovery</b>					76.9				108	92.3	92.3	92.3	92.3
523728	23-Dec-2002	QC SPIKE			<0.05				<0.05	<0.05	<0.05	<0.05	<0.05
523752	<i>(Spike of 522856)</i>				1.5		1.3		2.8	1.3	1.3		1.3
<b>Expected</b>					1.4		1.4		2.8	1.4	1.4		1.4
<b>% Recovery</b>					107		92.9		100	92.9	92.9		92.9
522856	23-Dec-2002	02-24-1	BH02-24	0.0-0.2	<0.05		<0.05		<0.05	<0.05	<0.05		<0.05





**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

**CONTACT:** MR DARREN PENDERGAST  
**CLIENT:** BEVERIDGE WILLIAMS & CO P/L  
**ADDRESS:**  
P.O.BOX 2205  
CAULFIELD JUNCTION VIC 3161  
**ORDER No.:** D8610  
**PROJECT:** OAKLEIGH SOUTH

**BATCH:** EM15149  
**SUB BATCH:** 0  
**LABORATORY:** MELBOURNE  
**DATE RECEIVED:** 18/12/2002  
**DATE COMPLETED:** 03/01/2003  
**SAMPLE TYPE:** SOIL  
**No. of SAMPLES:** 1

**COMMENTS**

All analysis and Laboratory QC conducted in accordance with Schedule B(3) NEPM Guideline on Laboratory Analysis of Potentially Contaminated Soil (December 1999). Samples analysed on an as received basis.  
Results reported on a dry weight basis.

**NOTES**

This is the Final Report and supersedes any preliminary reports with this batch number.  
All pages of this report have been checked and approved for release.

**ISSUING LABORATORY: MELBOURNE**

**Address**

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Signatory

**LABORATORIES**

**AUSTRALASIA**

Brisbane  
Melbourne  
Sydney  
Newcastle  
Auckland

Hong Kong  
Singapore  
Kuala Lumpur  
Bogor  
Mumbai

**AMERICAS**

Vancouver  
Santiago  
Antofagasta  
Lima

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Batch: EM15149  
 Sub Batch: 0  
 Date of Issue: 03/01/2003  
 Client: BEVERIDGE WILLIAMS & CO P/L  
 Client Reference: OAKLEIGH SOUTH

# CERTIFICATE OF ANALYSIS



		SAMPLE IDENTIFICATION											
		Laboratory I.D.		1									
		Date Sampled		18/12/2002									
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	02-5-1A									
EA-055	Moisture Content (dried @ 103°C)	%	0.1	4.9									
EG-005T	Arsenic - Total	mg/kg	1	3									
EG-005T	Boron - Total	mg/kg	1	6									
EG-005T	Barium - Total	mg/kg	1	12									
EG-005T	Beryllium - Total	mg/kg	1	<1									
EG-005T	Cadmium - Total	mg/kg	1	<1									
EG-005T	Cobalt - Total	mg/kg	1	1									
EG-005T	Chromium - Total	mg/kg	1	3									
EG-005T	Copper - Total	mg/kg	1	4									
EG-005T	Manganese - Total	mg/kg	1	23									
EG-005T	Molybdenum - Total	mg/kg	1	<1									
EG-005T	Nickel - Total	mg/kg	1	2									
EG-005T	Lead - Total	mg/kg	1	11									
EG-005T	Antimony - Total	mg/kg	1	<1									
EG-005T	Selenium - Total	mg/kg	1	<1									
EG-005T	Tin - Total	mg/kg	1	<1									
EG-005T	Zinc - Total	mg/kg	1	19									
EG-035T	Mercury - Total	mg/kg	0.1	0.4									

# QUALITY CONTROL REPORT



**Batch:** EM15149  
**Sub Batch:** 0  
**Date of Issue:** 03/01/2003  
**Client:** BEVERIDGE WILLIAMS & CO P/L  
**Client Reference:** OAKLEIGH SOUTH

METHOD	ANALYSIS DESCRIPTION	SAMPLE IDENTIFICATION				CHECKS AND SPIKES
		Laboratory I.D.	200	201	202	
		Date Sampled	18/12/2002	18/12/2002	18/12/2002	
		UNIT	METHOD	LCS	MS	
		LOR	BLANK			
EA-055	Moisture Content (dried @ 103°C)	%	0.1	<1	111%	95.0%
EG-005T	Arsenic - Total	mg/kg	1	<1	111%	95.0%
EG-005T	Boron - Total	mg/kg	1	<1	99.0%	92.0%
EG-005T	Barium - Total	mg/kg	1	<1	99.0%	Not Det'd
EG-005T	Beryllium - Total	mg/kg	1	<1	102%	95.0%
EG-005T	Cadmium - Total	mg/kg	1	<1	97.0%	94.0%
EG-005T	Cobalt - Total	mg/kg	1	<1	98.0%	96.0%
EG-005T	Chromium - Total	mg/kg	1	<1	98.0%	97.0%
EG-005T	Copper - Total	mg/kg	1	<1	99.0%	86.0%
EG-005T	Manganese - Total	mg/kg	1	<1	99.0%	94.0%
EG-005T	Molybdenum - Total	mg/kg	1	<1	99.0%	103%
EG-005T	Nickel - Total	mg/kg	1	<1	99.0%	94.0%
EG-005T	Lead - Total	mg/kg	1	<1	99.0%	103%
EG-005T	Antimony - Total	mg/kg	1	<1	99.0%	94.0%
EG-005T	Selenium - Total	mg/kg	1	<1	99.0%	94.0%
EG-005T	Tin - Total	mg/kg	1	<1	99.0%	94.0%
EG-005T	Zinc - Total	mg/kg	1	<1	99.0%	94.0%
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	102%	82.0%



**CERTIFICATE OF ANALYSIS**

**CONTACT:** MR DARREN PENDERGAST  
**CLIENT:** BEVERIDGE WILLIAMS & CO P/L  
**ADDRESS:**  
P.O.BOX 2205  
CAULFIELD JUNCTION VIC 3161  
**ORDER No.:** D8610  
**PROJECT:** OAKLEIGH SOUTH

**BATCH:** EM15149  
**SUB BATCH:** 1  
**LABORATORY:** MELBOURNE  
**DATE RECEIVED:** 18/12/2002  
**DATE COMPLETED:** 03/01/2003  
**SAMPLE TYPE:** SOIL  
**No. of SAMPLES:** 1

**COMMENTS**

All analysis and Laboratory QC conducted in accordance with Schedule B(3) NEPM Guideline on Laboratory Analysis of Potentially Contaminated Soil (December 1999). Samples analysed on an as received basis.  
Results reported on a dry weight basis.

**NOTES**

This is the Final Report and supersedes any preliminary reports with this batch number. All pages of this report have been checked and approved for release.

**ISSUING LABORATORY: MELBOURNE**

**Address**  
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**Phone:** 61-3-9538 4444  
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Lima

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**Batch:** EM15149  
**Sub Batch:** 1  
**Date of Issue:** 03/01/2003  
**Client:** BEVERIDGE WILLIAMS & CO P/L  
**Client Reference:** OAKLEIGH SOUTH

# CERTIFICATE OF ANALYSIS



		SAMPLE IDENTIFICATION											
		Laboratory I.D.		1									
		Date Sampled		18/12/2002									
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	02-5-1A									
EA-055	Moisture Content (dried @ 103°C)	%	0.1	4.9									
<b>EP-068A-SS</b>	<b>ORGANOCHLORINE PESTICIDES</b>												
EP-068A-SS	alpha-BHC	mg/kg	0.05	<0.05									
EP-068A-SS	HCB	mg/kg	0.05	<0.05									
EP-068A-SS	beta-BHC & gamma-BHC	mg/kg	0.1	<0.1									
EP-068A-SS	delta-BHC	mg/kg	0.05	<0.05									
EP-068A-SS	Heptachlor	mg/kg	0.05	<0.05									
EP-068A-SS	Aldrin	mg/kg	0.05	<0.05									
EP-068A-SS	Heptachlor epoxide	mg/kg	0.05	<0.05									
EP-068A-SS	Chlordane - trans	mg/kg	0.05	<0.05									
EP-068A-SS	Endosulfan 1	mg/kg	0.05	<0.05									
EP-068A-SS	Chlordane - cis	mg/kg	0.05	<0.05									
EP-068A-SS	Dieldrin	mg/kg	0.05	0.11									
EP-068A-SS	DDE	mg/kg	0.05	<0.05									
EP-068A-SS	Endrin	mg/kg	0.05	<0.05									
EP-068A-SS	Endosulfan 2	mg/kg	0.05	<0.05									
EP-068A-SS	DDD	mg/kg	0.05	<0.05									
EP-068A-SS	Endrin aldehyde	mg/kg	0.05	<0.05									
EP-068A-SS	Endosulfan sulfate	mg/kg	0.05	<0.05									
EP-068A-SS	DDT	mg/kg	0.2	<0.2									
EP-068A-SS	Endrin ketone	mg/kg	0.05	<0.05									
EP-068A-SS	Methoxychlor	mg/kg	0.2	<0.2									
<b>EP-068S-SS</b>	<b>ORGANOCHLORINE PESTICIDE SURROGATE</b>												
EP-068S-SS	Dibromo-DDE	%	1	108									

Batch: EM15149  
 Sub Batch: 1  
 Date of Issue: 03/01/2003  
 Client: BEVERIDGE WILLIAMS & CO P/L  
 Client Reference: OAKLEIGH SOUTH

# QUALITY CONTROL REPORT



				SAMPLE IDENTIFICATION										
				Laboratory I.D.	100	101	102	103	104					
				Date Sampled	18/12/2002	18/12/2002	18/12/2002	18/12/2002	18/12/2002					
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	METHOD BLANK	VOCOPS311 SCS	VOCOPS311 DCS	VOCOPS311 MS	VOCOPS311 MSD						
				CHECKS AND SPIKES										
EA-055	Moisture Content (dried @ 103°C)	%	0.1	---	---	---	---	---						
<b>EP-068A-SS</b>	<b>ORGANOCHLORINE PESTICIDES</b>													
EP-068A-SS	alpha-BHC	mg/kg	0.05	<0.05	105%	118%	---	---						
EP-068A-SS	HCB	mg/kg	0.05	<0.05	111%	121%	---	---						
EP-068A-SS	beta-BHC & gamma-BHC	mg/kg	0.1	<0.1	107%	125%	110%	112%						
EP-068A-SS	delta-BHC	mg/kg	0.05	<0.05	109%	121%	---	---						
EP-068A-SS	Heptachlor	mg/kg	0.05	<0.05	110%	120%	121%	114%						
EP-068A-SS	Aldrin	mg/kg	0.05	<0.05	109%	120%	97.4%	94.2%						
EP-068A-SS	Heptachlor epoxide	mg/kg	0.05	<0.05	111%	119%	---	---						
EP-068A-SS	Chlordane - trans	mg/kg	0.05	<0.05	115%	121%	---	---						
EP-068A-SS	Endosulfan 1	mg/kg	0.05	<0.05	116%	119%	---	---						
EP-068A-SS	Chlordane - cis	mg/kg	0.05	<0.05	115%	120%	---	---						
EP-068A-SS	Dieldrin	mg/kg	0.05	<0.05	115%	124%	149%	148%						
EP-068A-SS	DDE	mg/kg	0.05	<0.05	115%	120%	---	---						
EP-068A-SS	Endrin	mg/kg	0.05	<0.05	119%	124%	154%	153%						
EP-068A-SS	Endosulfan 2	mg/kg	0.05	<0.05	135%	123%	---	---						
EP-068A-SS	DDD	mg/kg	0.05	<0.05	117%	121%	---	---						
EP-068A-SS	Endrin aldehyde	mg/kg	0.05	<0.05	119%	122%	---	---						
EP-068A-SS	Endosulfan sulfate	mg/kg	0.05	<0.05	121%	122%	---	---						
EP-068A-SS	DDT	mg/kg	0.2	<0.2	126%	120%	245%	228%						
EP-068A-SS	Endrin ketone	mg/kg	0.05	<0.05	117%	121%	---	---						
EP-068A-SS	Methoxychlor	mg/kg	0.2	<0.2	127%	111%	---	---						
<b>EP-068S-SS</b>	<b>ORGANOCHLORINE PESTICIDE SURROGATE</b>													
EP-068S-SS	Dibromo-DDE	%	1	125	106	113	88	84						



## ORGANICS QUALITY CONTROL REPORT

**BATCH NO:** EM15149

**DATE BATCH RECEIVED:** 18/12/2002

**CLIENT:** Beveridge Williams

**DATE BATCH COMPLETED:** 3/01/2003

**PROJECT:** Oakleigh South

Method Code	Test	Matrix	Method Reference		QC Lot Number	Date Samples Extracted	Date Samples Analysed
			Extraction	Analysis			
EP-068	Pesticides	Soil	Tumbler	USEPA 8270B	VOCOPS311	24/12/2002	24/12/2002

Where applicable, internal standards are added to sample extracts prior to instrumental analysis. Absolute peak areas and retention times fall within the criteria specified in the individual methods. Continuing Calibration (CC) standards are run at the frequency of 1 in every 20 samples.

Abbreviations: SV = semivolatile, V = volatile

\*: In-house methods



BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		VOCOPS311				ANALYST S.MCGRATH			
MATRIX:		Soils							
COMPOUND	Blank	Spike	SPIKE QC RESULTS				Control Limits		
	Conc	Level	SCS	DCS	Average	RPD	Rec.		RPD
	mg/kg	mg/kg	Rec.	Rec.	Rec.	%	Low	High	%
<b>EP068A : OC Pesticides</b>									
a-BHC	<0.2	0.25	105	118	112	11.7	67.5	126	0 - 20
HCB	<0.2	0.25	111	121	116	8.62	66.4	128	0 - 20
b- & g-BHC	<0.4	0.5	107	125	116	15.5	69.3	129	0 - 20
d-BHC	<0.2	0.25	109	121	115	10.4	77.4	128	0 - 20
Heptachlor	<0.2	0.25	110	120	115	8.7	71.7	129	0 - 20
Aldrin	<0.2	0.25	109	120	115	9.61	78.3	129	0 - 20
Heptachlor epoxide	<0.2	0.25	111	119	115	6.96	73.9	133	0 - 20
Chlordane peak no 1	<0.2	0.25	115	121	118	5.08	76.7	134	0 - 20
Endosulfan 1	<0.2	0.25	116	119	118	2.55	76	132	0 - 20
Chlordane peak no. 2	<0.2	0.25	115	120	118	4.26	73.5	135	0 - 20
Dieldrin	<0.2	0.25	115	123	119	6.72	78.5	134	0 - 20
DDE	<0.2	0.25	115	120	118	4.26	81.3	127	0 - 20
Endrin	<0.2	0.25	119	124	122	4.12	71.5	139	0 - 20
Endosulfan 2	<0.2	0.25	135	123	129	9.3	76.7	131	0 - 20
DDD	<0.2	0.25	117	121	119	3.36	79.1	129	0 - 20
Endrin aldehyde	<0.2	0.25	119	122	121	2.49	75.7	132	1 - 20
Endosulfan sulfate	<0.2	0.25	121	122	122	0.82	72.7	139	0 - 20
DDT	<0.2	0.25	126	120	123	4.88	66.4	136	0 - 20
Endrin ketone	<0.2	0.25	117	121	119	3.36	67.6	136	0 - 20
Methoxychlor	<0.2	0.25	127	111	119	13.4	63.9	130	0 - 20
<b>EP068S : OC Surrogate</b>									
Dibromo-DDE	125%	0.5	106	113	110	6.39	77.6	122	0 - 20

COMMENTS:

- 1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) The control limits on RPD (relative percent deviation) are fixed.
- 3) \* : Recovery or RPD falls outside of the recommended control limits.



**BATCH QUALITY CONTROL – DUPLICATE**

**ALS EP-068 : Pesticides**

QC LOT No. : VOCOPS311  
 MATRIX : Soils  
 ANALYST: S.MCGRATH

COMPOUND	LOR mg/kg	QC DUPLICATE RESULTS			
		EM15059 23	EM15059 23D	RPD	Cont. Limit
		mg/kg	mg/kg	%	
<b>EP068A : OC Pesticides</b>					
a-BHC	0.025	<0.025	<0.025	n/a	
HCB	0.025	<0.025	<0.025	n/a	
b- & g-BHC	0.05	<0.05	<0.05	n/a	
d-BHC	0.025	<0.025	<0.025	n/a	
Heptachlor	0.025	<0.025	<0.025	n/a	
Aldrin	0.025	<0.025	<0.025	n/a	
Heptachlor epoxide	0.025	<0.025	<0.025	n/a	
Chlordane peak no 1	0.025	<0.025	<0.025	n/a	
Endosulfan 1	0.025	<0.025	<0.025	n/a	
Chlordane peak no. 2	0.025	<0.025	<0.025	n/a	
Dieldrin	0.025	<0.025	<0.025	n/a	
DDE	0.025	<0.025	<0.025	n/a	
Endrin	0.025	<0.025	<0.025	n/a	
Endosulfan 2	0.025	<0.025	<0.025	n/a	
DDD	0.025	<0.025	<0.025	n/a	
Endrin aldehyde	0.025	<0.025	<0.025	n/a	
Endosulfan sulfate	0.025	<0.025	<0.025	n/a	
DDT	0.1	<0.1	<0.1	n/a	
Endrin ketone	0.025	<0.025	<0.025	n/a	
Methoxychlor	0.1	<0.1	<0.1	n/a	
<b>EP068S : OC Surrogate</b>					
Dibromo-DDE	1%	92.3%	107%	14.8	0 - 20

Note: The permitted range for RPD (relative percent deviation) is specified in ALS Method QWI-EN/38 and is 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%.

Results > 20 times LOR, 0% - 20%.

BATCH QUALITY CONTROL -- MATRIX SPIKE/DUPLICATE							
ALS EP-068 : Semivolatile Organic Compounds							
QC LOT No. :	VOCOPS311			ANALYST : S.MCGRATH			
MATRIX:	Soils			Sample ID: EM15059-1			
COMPOUND	Sample Results	Spike Level	SPIKE QC RESULTS				Cont. Limit
			MS Rec.	MSD Rec.	Average Rec.	RPD	RPD
	mg/kg	mg/kg	%	%	%	%	%
<b>EP068A : OC Pesticides</b>							
b- & g-BHC	<0.05	0.25	110	112	111	1.8	0 - 20
Heptachlor	<0.025	0.25	121	114	118	5.96	0 - 20
Aldrin	<0.025	0.25	97.4	94.2	95.8	3.34	0 - 20
Dieldrin	<0.025	0.25	149	148	149	0.673	0 - 20
Endrin	<0.025	0.25	154	153	154	0.651	0 - 20
DDT	<0.1	0.25	245	228	237	7.19	0 - 20
<b>EP068S : OC Surrogate</b>							
Dibromo-DDE	83.9%	0.5	87.8	84	85.9	4.42	0 - 20

COMMENTS:

- 1) The RPD control limits are fixed.
- 2) \*: RPD falls outside the recommended control limit.



**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

<b>CONTACT:</b>	MR DARREN PENDERGAST	<b>BATCH:</b>	EM15150
<b>CLIENT:</b>	BEVERIDGE WILLIAMS & CO P/L	<b>SUB BATCH:</b>	0
<b>ADDRESS:</b>		<b>LABORATORY:</b>	MELBOURNE
	P.O.BOX 2205	<b>DATE RECEIVED:</b>	19/12/2002
	CAULFIELD JUNCTION VIC 3161	<b>DATE COMPLETED:</b>	09/01/2003
<b>ORDER No.:</b>	D8610	<b>SAMPLE TYPE:</b>	SOIL
<b>PROJECT:</b>	OAKLEIGH SOUTH	<b>No. of SAMPLES:</b>	1

**COMMENTS**

All analysis and Laboratory QC conducted in accordance with Schedule B(3) NEPM Guideline on Laboratory Analysis of Potentially Contaminated Soil (December 1999). Samples as received digested by USEPA method 200.2 (modified) prior to the determination of metals. Results reported on a dry weight basis.

**NOTES**

This is the Final Report and supersedes any preliminary reports with this batch number. All pages of this report have been checked and approved for release.

**ISSUING LABORATORY: MELBOURNE**

**Address**  
Unit 6 / Adamco Business Park  
2 Sarton Road  
Clayton VIC 3168

**Phone:** 61-3-9538 4444  
**Fax:** 61-3-9538 4400  
**Email:** keith.evans@alsenviro.com

Signatory

**LABORATORIES**

**AUSTRALASIA**

Brisbane  
Melbourne  
Sydney  
Newcastle  
Auckland

Hong Kong  
Singapore  
Kuala Lumpur  
Bogor  
Mumbai

**AMERICAS**

Vancouver  
Santiago  
Antofagasta  
Lima

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Batch: EM1515U  
 Sub Batch: 0  
 Date of Issue: 09/01/2003  
 Client: BEVERIDGE WILLIAMS & CO P/L  
 Client Reference: OAKLEIGH SOUTH

# CERTIFICATE OF ANALYSIS



		Laboratory I.D.			SAMPLE IDENTIFICATION								
		Date Sampled											
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	02-24-1A									
EA-055	Moisture Content (dried @ 103°C)	%	0.1	6.5									
EG-005T	Arsenic - Total	mg/kg	1	6									
EG-005T	Boron - Total	mg/kg	1	<1									
EG-005T	Barium - Total	mg/kg	1	24									
EG-005T	Beryllium - Total	mg/kg	1	<1									
EG-005T	Cadmium - Total	mg/kg	1	<1									
EG-005T	Cobalt - Total	mg/kg	1	7									
EG-005T	Chromium - Total	mg/kg	1	20									
EG-005T	Copper - Total	mg/kg	1	11									
EG-005T	Manganese - Total	mg/kg	1	195									
EG-005T	Molybdenum - Total	mg/kg	1	1									
EG-005T	Nickel - Total	mg/kg	1	29									
EG-005T	Lead - Total	mg/kg	1	10									
EG-005T	Antimony - Total	mg/kg	1	<1									
EG-005T	Selenium - Total	mg/kg	1	1									
EG-005T	Tin - Total	mg/kg	1	<1									
EG-005T	Zinc - Total	mg/kg	1	25									
EG-035T	Mercury - Total	mg/kg	0.1	<0.1									

**Batch:** EM15150  
**Sub Batch:** 0  
**Date of Issue:** 09/01/2003  
**Client:** BEVERIDGE WILLIAMS & CO P/L  
**Client Reference:** OAKLEIGH SOUTH

## QUALITY CONTROL REPORT



METHOD				ANALYSIS DESCRIPTION				SAMPLE IDENTIFICATION									
								Laboratory I.D.		200	201	202					
								Date Sampled		19/12/2002	19/12/2002	19/12/2002					
		UNIT	LOR	METHOD BLANK	LCS	MS											
				CHECKS AND SPIKES													
EA-055	Moisture Content (dried @ 103°C)			%	0.1	<0.1	----	----									
EG-005T	Arsenic - Total			mg/kg	1	<1	103%	82.0%									
EG-005T	Boron - Total			mg/kg	1	<1	----	----									
EG-005T	Barium - Total			mg/kg	1	<1	96.0%	117%									
EG-005T	Beryllium - Total			mg/kg	1	<1	----	81.0%									
EG-005T	Cadmium - Total			mg/kg	1	<1	97.0%	98.0%									
EG-005T	Cobalt - Total			mg/kg	1	<1	----	101%									
EG-005T	Chromium - Total			mg/kg	1	<1	98.0%	100%									
EG-005T	Copper - Total			mg/kg	1	<1	98.0%	119%									
EG-005T	Manganese - Total			mg/kg	1	<1	----	95.0%									
EG-005T	Molybdenum - Total			mg/kg	1	<1	----	83.0%									
EG-005T	Nickel - Total			mg/kg	1	<1	97.0%	105%									
EG-005T	Lead - Total			mg/kg	1	<1	101%	99.0%									
EG-005T	Antimony - Total			mg/kg	1	<1	----	----									
EG-005T	Selenium - Total			mg/kg	1	<1	----	92.0%									
EG-005T	Tin - Total			mg/kg	1	<1	----	----									
EG-005T	Zinc - Total			mg/kg	1	<1	92.0%	99.0%									
EG-035T	Mercury - Total			mg/kg	0.1	<0.1	101%	108%									



**CERTIFICATE OF ANALYSIS**

**CONTACT:** MR DARREN PENDERGAST  
**CLIENT:** BEVERIDGE WILLIAMS & CO P/L  
**ADDRESS:**  
P.O.BOX 2205  
CAULFIELD JUNCTION VIC 3161  
**ORDER No.:** D8610  
**PROJECT:** OAKLEIGH SOUTH

**BATCH:** EM15150  
**SUB BATCH:** 1  
**LABORATORY:** MELBOURNE  
**DATE RECEIVED:** 19/12/2002  
**DATE COMPLETED:** 09/01/2003  
**SAMPLE TYPE:** SOIL  
**No. of SAMPLES:** 1

**COMMENTS**

All analysis and Laboratory QC conducted in accordance with Schedule B(3) NEPM Guideline on Laboratory Analysis of Potentially Contaminated Soil (December 1999). Samples analysed on an as received basis.  
Results reported on a dry weight basis.

**NOTES**

This is the Final Report and supersedes any preliminary reports with this batch number. All pages of this report have been checked and approved for release.

**ISSUING LABORATORY: MELBOURNE**

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Signatory \_\_\_\_\_

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Lima

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**Batch:** EM15150  
**Sub Batch:** 1  
**Date of Issue:** 09/01/2003  
**Client:** BEVERIDGE WILLIAMS & CO P/L  
**Client Reference:** OAKLEIGH SOUTH

# CERTIFICATE OF ANALYSIS



		Laboratory I.D.			SAMPLE IDENTIFICATION								
		Date Sampled		1									
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	02-24-1A									
EA-055	Moisture Content (dried @ 103°C)	%	0.1	6.5									
<b>EP-068A-SS</b>	<b>ORGANOCHLORINE PESTICIDES</b>												
EP-068A-SS	alpha-BHC	mg/kg	0.05	<0.05									
EP-068A-SS	HCB	mg/kg	0.05	<0.05									
EP-068A-SS	beta-BHC & gamma-BHC	mg/kg	0.1	<0.1									
EP-068A-SS	delta-BHC	mg/kg	0.05	<0.05									
EP-068A-SS	Heptachlor	mg/kg	0.05	<0.05									
EP-068A-SS	Aldrin	mg/kg	0.05	<0.05									
EP-068A-SS	Heptachlor epoxide	mg/kg	0.05	<0.05									
EP-068A-SS	Chlordane - trans	mg/kg	0.05	<0.05									
EP-068A-SS	Endosulfan 1	mg/kg	0.05	<0.05									
EP-068A-SS	Chlordane - cis	mg/kg	0.05	<0.05									
EP-068A-SS	Dieldrin	mg/kg	0.05	<0.05									
EP-068A-SS	DDE	mg/kg	0.05	<0.05									
EP-068A-SS	Endrin	mg/kg	0.05	<0.05									
EP-068A-SS	Endosulfan 2	mg/kg	0.05	<0.05									
EP-068A-SS	DDD	mg/kg	0.05	<0.05									
EP-068A-SS	Endrin aldehyde	mg/kg	0.05	<0.05									
EP-068A-SS	Endosulfan sulfate	mg/kg	0.05	<0.05									
EP-068A-SS	DDT	mg/kg	0.2	<0.2									
EP-068A-SS	Endrin ketone	mg/kg	0.05	<0.05									
EP-068A-SS	Methoxychlor	mg/kg	0.2	<0.2									
<b>EP-068S-SS</b>	<b>ORGANOCHLORINE PESTICIDE SURROGATE</b>												
EP-068S-SS	Dibromo-DDE	%	1	76									



Batch: EM15150  
 Sub Batch: 1  
 Date of Issue: 09/01/2003  
 Client: BEVERIDGE WILLIAMS & CO P/L  
 Client Reference: OAKLEIGH SOUTH

## QUALITY CONTROL REPORT



				SAMPLE IDENTIFICATION									
				Laboratory I.D.	1	100	101	102	103	104			
				Date Sampled	19/12/2002	19/12/2002	19/12/2002	19/12/2002	19/12/2002	19/12/2002			
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	02-24-1A CHK	METHOD BLANK	VOCOPS311 SCS	VOCOPS311 DCS	VOCOPS311 MS	VOCOPS311 MSD				
				CHECKS AND SPIKES									
EA-055	Moisture Content (dried @ 103°C)	%	0.1	6.5	---	---	---	---	---				
<b>EP-068A-SS</b>	<b>ORGANOCHLORINE PESTICIDES</b>												
EP-068A-SS	alpha-BHC	mg/kg	0.05	<0.05	<0.20	105%	118%	---	---				
EP-068A-SS	HCB	mg/kg	0.05	<0.05	<0.20	111%	121%	---	---				
EP-068A-SS	beta-BHC & gamma-BHC	mg/kg	0.1	<0.1	<0.4	107%	125%	110%	112%				
EP-068A-SS	delta-BHC	mg/kg	0.05	<0.05	<0.20	109%	121%	---	---				
EP-068A-SS	Heptachlor	mg/kg	0.05	<0.05	<0.20	110%	120%	121%	114%				
EP-068A-SS	Aldrin	mg/kg	0.05	<0.05	<0.20	109%	120%	97.4%	94.2%				
EP-068A-SS	Heptachlor epoxide	mg/kg	0.05	<0.05	<0.20	111%	119%	---	---				
EP-068A-SS	Chlordane - trans	mg/kg	0.05	<0.05	<0.20	115%	121%	---	---				
EP-068A-SS	Endosulfan 1	mg/kg	0.05	<0.05	<0.20	116%	119%	---	---				
EP-068A-SS	Chlordane - cis	mg/kg	0.05	<0.05	<0.20	115%	120%	---	---				
EP-068A-SS	Dieldrin	mg/kg	0.05	<0.05	<0.20	115%	124%	149%	148%				
EP-068A-SS	DDE	mg/kg	0.05	<0.05	<0.20	115%	120%	---	---				
EP-068A-SS	Endrin	mg/kg	0.05	<0.05	<0.20	119%	124%	154%	153%				
EP-068A-SS	Endosulfan 2	mg/kg	0.05	<0.05	<0.20	135%	123%	---	---				
EP-068A-SS	DDD	mg/kg	0.05	0.07	<0.20	117%	121%	---	---				
EP-068A-SS	Endrin aldehyde	mg/kg	0.05	<0.05	<0.20	119%	122%	---	---				
EP-068A-SS	Endosulfan sulfate	mg/kg	0.05	<0.05	<0.20	121%	122%	---	---				
EP-068A-SS	DDT	mg/kg	0.2	<0.2	<0.2	126%	120%	245%	228%				
EP-068A-SS	Endrin ketone	mg/kg	0.05	<0.05	<0.20	117%	121%	---	---				
EP-068A-SS	Methoxychlor	mg/kg	0.2	<0.2	<0.2	127%	111%	---	---				
<b>EP-068S-SS</b>	<b>ORGANOCHLORINE PESTICIDE SURROGATE</b>												
EP-068S-SS	Dibromo-DDE	%	1	107	125	106	113	88	84				





## ORGANICS QUALITY CONTROL REPORT

**BATCH NO:** EM15150

**DATE BATCH RECEIVED:** 19/12/2002

**CLIENT:** Beveridge Williams

**DATE BATCH COMPLETED:** 9/01/2003

**PROJECT:** Oakleigh South

Method Code	Test	Matrix	Method Reference		QC Lot Number	Date Samples Extracted	Date Samples Analysed
			Extraction	Analysis			
EP-068	Pesticides	Soil	Tumbler	USEPA 8270B	VOCOPS311	24/12/2002	24/12/2002

Where applicable, internal standards are added to sample extracts prior to instrumental analysis. Absolute peak areas and retention times fall within the criteria specified in the individual methods. Continuing Calibration (CC) standards are run at the frequency of 1 in every 20 samples.

Abbreviations: SV = semivolatile, V = volatile

\*: In-house methods

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		VOCOPS311			ANALYST S.MCGRATH				
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
<b>EP068A : OC Pesticides</b>									
a-BHC	<0.2	0.25	105	118	112	11.7	67.5	126	0 - 20
HCB	<0.2	0.25	111	121	116	8.62	66.4	128	0 - 20
b- & g-BHC	<0.4	0.5	107	125	116	15.5	69.3	129	0 - 20
d-BHC	<0.2	0.25	109	121	115	10.4	77.4	128	0 - 20
Heptachlor	<0.2	0.25	110	120	115	8.7	71.7	129	0 - 20
Aldrin	<0.2	0.25	109	120	115	9.61	78.3	129	0 - 20
Heptachlor epoxide	<0.2	0.25	111	119	115	6.96	73.9	133	0 - 20
Chlordane peak no 1	<0.2	0.25	115	121	118	5.08	76.7	134	0 - 20
Endosulfan 1	<0.2	0.25	116	119	118	2.55	76	132	0 - 20
Chlordane peak no. 2	<0.2	0.25	115	120	118	4.26	73.5	135	0 - 20
Dieldrin	<0.2	0.25	115	123	119	6.72	78.5	134	0 - 20
DDE	<0.2	0.25	115	120	118	4.26	81.3	127	0 - 20
Endrin	<0.2	0.25	119	124	122	4.12	71.5	139	0 - 20
Endosulfan 2	<0.2	0.25	135	123	129	9.3	76.7	131	0 - 20
DDD	<0.2	0.25	117	121	119	3.36	79.1	129	0 - 20
Endrin aldehyde	<0.2	0.25	119	122	121	2.49	75.7	132	1 - 20
Endosulfan sulfate	<0.2	0.25	121	122	122	0.82	72.7	139	0 - 20
DDT	<0.2	0.25	126	120	123	4.88	66.4	136	0 - 20
Endrin ketone	<0.2	0.25	117	121	119	3.36	67.6	136	0 - 20
Methoxychlor	<0.2	0.25	127	111	119	13.4	63.9	130	0 - 20
<b>EP068S : OC Surrogate</b>									
Dibromo-DDE	125%	0.5	106	113	110	6.39	77.6	122	0 - 20

COMMENTS:

- 1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) The control limits on RPD (relative percent deviation) are fixed.
- 3) \* : Recovery or RPD falls outside of the recommended control limits.

**BATCH QUALITY CONTROL - DUPLICATE**

**ALS EP-068 : Pesticides**

QC LOT No. : VOCOPS311  
 MATRIX : Soils  
 ANALYST: S.MCGRATH

COMPOUND	LOR mg/kg	QC DUPLICATE RESULTS			
		EM15150 1	EM15150 1D	RPD	Cont. Limit
		mg/kg	mg/kg		%
<b>EP068A : OC Pesticides</b>					
a-BHC	0.025	<0.025	<0.025	n/a	
HCB	0.025	<0.025	<0.025	n/a	
b- & g-BHC	0.05	<0.05	<0.05	n/a	
d-BHC	0.025	<0.025	<0.025	n/a	
Heptachlor	0.025	<0.025	<0.025	n/a	
Aldrin	0.025	<0.025	<0.025	n/a	
Heptachlor epoxide	0.025	<0.025	<0.025	n/a	
Chlordane peak no 1	0.025	<0.025	<0.025	n/a	
Endosulfan 1	0.025	<0.025	<0.025	n/a	
Chlordane peak no. 2	0.025	<0.025	<0.025	n/a	
Dieldrin	0.025	<0.025	<0.025	n/a	
DDE	0.025	0.025	0.0279	11	No limit
Endrin	0.025	<0.025	<0.025	n/a	
Endosulfan 2	0.025	<0.025	<0.025	n/a	
DDD	0.025	0.043	0.0666	43.1	No limit
Endrin aldehyde	0.025	<0.025	<0.025	n/a	
Endosulfan sulfate	0.025	<0.025	<0.025	n/a	
DDT	0.1	<0.1	<0.1	n/a	
Endrin ketone	0.025	<0.025	<0.025	n/a	
Methoxychlor	0.1	<0.1	<0.1	n/a	
<b>EP068S : OC Surrogate</b>					
Dibromo-DDE	1%	75.9%	107%	34 *	0 - 20

Note: The permitted range for RPD (relative percent deviation) is specified in ALS Method QWI-EN/38 and is 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%.

Results > 20 times LOR, 0% - 20%.

BATCH QUALITY CONTROL -- MATRIX SPIKE/DUPLICATE							
ALS EP-068 : Semivolatile Organic Compounds							
QC LOT No. :		VOCOPS311		ANALYST :		S.MCGRATH	
MATRIX:		Soils		Sample ID:		EM15059-1	
COMPOUND	Sample Results	Spike Level	SPIKE QC RESULTS				Cont. Limit
			MS Rec.	MSD Rec.	Average Rec.	RPD	RPD
	mg/kg	mg/kg	%	%	%	%	%
<b>EP068A : OC Pesticides</b>							
b- & g-BHC	<0.05	0.25	110	112	111	1.8	0 - 20
Heptachlor	<0.025	0.25	121	114	118	5.96	0 - 20
Aldrin	<0.025	0.25	97.4	94.2	95.8	3.34	0 - 20
Dieldrin	<0.025	0.25	149	148	149	0.673	0 - 20
Endrin	<0.025	0.25	154	153	154	0.651	0 - 20
DDT	<0.1	0.25	245	228	237	7.19	0 - 20
<b>EP068S : OC Surrogate</b>							
Dibromo-DDE	83.9%	0.5	87.8	84	85.9	4.42	0 - 20

COMMENTS:

- 1) The RPD control limits are fixed.
- 2) \*: RPD falls outside the recommended control limit.




## Attachment C: HLA 2006

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- Figure
- Test Pit Logs

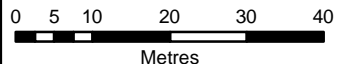


**Legend**

-  Approximate Test Pit Location
-  Cyclone Fence
-  Site Boundary



DATUM GDA 1994, PROJECTION MGA ZONE 55



0 5 10 20 30 40  
Metres

**Test Pit Location Plan**  
**VicUrban**  
 Environmental Site Assessment  
 Former Oakleigh South Primary School  
 Beryl Avenue, Oakleigh South VIC





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# TEST PIT LOG TP01

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal

COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL / fill, silty sand, grey	
							FILL, grey silty sand with gravel and boulder sized basalt fragments, concrete and brick fragments, dry	0.10
							FILL, sandy silty clay, gravel, brick and basalt fragments, dry, sand increasing with depth	0.25
0.0			TP01_0.5					0.60
							SILTY SAND, grey, dry, loose	
					1		Becoming light grey	
0.0			TP01_1.1				Becoming brown-grey, very fine grained silty sand	
							Total Depth: 1.20 m	1.20

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06





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# TEST PIT LOG TP02

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal

**COMMENTS** \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.0			TP02_0.2	*			TOPSOIL / fill, grey silty sand, loose, dry	0.10
							FILL, sandy clay, yellow-brown with red and black mottling, dry, low plasticity, stiff, contains brick and basalt inclusions (< 50 mm)	
							Silty SAND, light grey, very dry, loose, becoming denser with depth	0.60
0.0			TP02_1.1		1			
							Total Depth: 1.20 m	1.20

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06



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# TEST PIT LOG TP03

PROJECT NUMBER M405601 DATE 31/10/2006

PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_

LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_

DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_

SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_

SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_

WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_

LOGGED BY E. Pritchard, T.Sproal

COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.0			TP03_0.2	*	0.10		TOPSOIL / fill, grey silty sand, loose, dry	0.10
					0.40		FILL, sandy clay, yellow-brown with red and black mottling, dry, low plasticity, stiff, contains brick and basalt inclusions (< 50 mm)	0.40
0.0			TP03_0.7		0.80		Silty SAND, light grey, very dry, loose, becoming denser with depth	0.80
					1.00		sandy CLAY, yellow-grey, stiff, very dry, low plasticity, homogeneous	1.00
					1		Total Depth: 1.00 m	



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# TEST PIT LOG TP04

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal  
 COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL, silty sand, grey, dry, contains rootlets	0.10
							Silty SAND, light grey, very dry, loose, becoming denser with depth	
0.0			TP04_0.4					
							Silty CLAY, mottled orange-brown, medium plasticity, dry, contains rootlets interbedded with grey sandy clay	0.60
0.0			TP04_0.7					
							Total Depth: 0.80 m	0.80

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06



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# TEST PIT LOG TP05

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal  
 COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL / fill, grey silty sand, loose, dry	0.10
							Silty SAND, light grey, very dry, loose, becoming denser with depth	
0.0			TP05_0.5	*				
							Sandy CLAY (with some silty clay), grey with orange-brown mottling, slightly moist, medium plasticity	0.80
0.0			TP05_0.9					
					1		Total Depth: 1.00 m	1.00

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# TEST PIT LOG TP06

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal  
 COMMENTS \_\_\_\_\_

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL / fill, grey silty clay, dry	0.10
							FILL, silty sand, grey, loose, dry, contains brick inclusions	0.30
							FILL, silty clay, grey-brown, dry, contains bitumen and brick inclusions, very heterogeneous	0.70
0.0			TP06_0.5					
							Sandy CLAY, mottled brown-orange-grey, moist, possibly disturbed/re-worked natural material	1.10
0.0			TP06_0.8					
					1			
							Silty CLAY, dark grey, loose, slightly moist	1.40
			TP06_1.3					
							Total Depth: 1.40 m	



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# TEST PIT LOG TP07

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal  
 COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.0			TP07_0.2	*			TOPSOIL / fill, grey silts sand, roots	0.10
							FILL, gravel sized crushed rock in silty sandy matrix, contains concrete pieces and brick fragments	0.40
							FILL, silty sand, dark grey, contains brick and concrete pieces	0.70
							FILL, sandy clay, brown and orange mottling	0.80
							Silty SAND, fine grained, dark grey/grey-brown.	1.00
0.0			TP07_1.1		1		Becoming light grey fine grained silty sand	1.30
							Total Depth: 1.30 m	

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06



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# TEST PIT LOG TP08

PROJECT NUMBER M405601 DATE 31/10/2006

PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_

LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_

DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_

SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_

SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_

WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_

LOGGED BY E. Pritchard, T.Sproal

COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL / fill, grey silty clay, dry	0.10
							FILL, dark brown clay with orange mottling and large concrete pieces.  Thin layer of concrete/sand at 0.2 m.	
0.0			TP08_0.3	*				
							SILTY SAND, dark grey, dry, loose	0.50
							----- Becoming becoming light grey - white, becoming coarser.	0.80
					1			
0.0			TP08_1.1					
							Total Depth: 1.20 m	1.20

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06





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# TEST PIT LOG TP09

PROJECT NUMBER M405601 DATE 31/10/2006

PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_

LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_

DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_

SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_

SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_

WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_

LOGGED BY E. Pritchard, T.Sproal

COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL / fill, silty sand, brown-grey, contains rootlets	0.10
			TP09_0.4	*			FILL, sandy clay, grey brown with orange and red mottling, basalt, brick and concrete inclusions (< 50mm)	
0.0								
			TP09_1.0		1		Silty SAND, dark grey, loose, dry	0.90
0.0								
							Total Depth: 1.20 m	1.20

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06



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# TEST PIT LOG TP10

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal  
 COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL / fill, silty sand, grey	0.10
							FILL, sandy clay, brown-orange with red mottling	
0.0			TP10_0.3				Silty SAND, dark grey, loose, dry	0.50
							Becoming pale grey silty sand	0.80
0.0			TP10_1.0		1		Total Depth: 1.10 m	1.10

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06



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# TEST PIT LOG TP11

PROJECT NUMBER M405601 DATE 31/10/2006

PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_

LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_

DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_

SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_

SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_

WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_

LOGGED BY E. Pritchard, T.Sproal

COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.0			TP11_0.3				TOPSOIL / fill, grey silty sand with rootlets	0.10
							FILL, sandy clay, grey with orange and brown mottling, contains brick fragments, concrete pieces, large roots and rootlets	0.50
					1		Silty SAND, dark grey, dry, loose, contains roots and rootlets	
0.0			TP11_1.1				Total Depth: 1.20 m	1.20

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06



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# TEST PIT LOG TP12

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal  
 COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL / fill, grey silty sand	0.10
			TP12_0.3				FILL, sandy clay, brown with dark grey mottling	
0.0							Silty SAND, dark grey, loose, dry	0.50
							Becoming very moist with depth	
					1			
0.0			TP12_1.1				Sandy silty CLAY, green and orange, moist, medium to high plasticity	1.10
							Total Depth: 1.20 m	1.20

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06



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# TEST PIT LOG TP13

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal  
 COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.0			TP13_0.2	*			TOPSOIL / fill, grey silty sand with rootlets	0.10
							Silty SAND, grey, dry, loose, contains abundant roots	
							----- Becoming brown and moist	0.80
0.0			TP13_1.0		1			
							Total Depth: 1.20 m	1.20

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06



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# TEST PIT LOG TP14

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal  
 COMMENTS \_\_\_\_\_

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL / fill, grey silty sand with rootlets	0.10
							FILL, silty sand, grey-brown	
							FILL, grey sandy clay with dark grey and orange mottling	0.50
					1		FILL, crushed rock backfill, yellow-grey, becoming wet with depth	1.00
0.0			TP14_1.4	*				
							Sandy CLAY, mottled grey - brown and orange	1.70
0.0			TP14_1.7					1.80
							Total Depth: 1.80 m	



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# TEST PIT LOG TP15

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal  
 COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL / fill, grey silty sand with rootlets	0.10
							FILL, grey silty sand , dry, loose	
							FILL, sandy clay, grey with dark grey and orange mottling, diesel odour noted	0.50
					1		FILL, crushed rock backfill, yellow-grey	1.10
0.0			TP15_1.3	*				
0.0			TP15_1.6				Sandy CLAY, mottled grey - brown and orange	1.50
							Total Depth: 1.60 m	1.60

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06





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# TEST PIT LOG TP16

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal  
 COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL / fill, grey silty sand, loose, dry	0.10
							FILL, brown-grey sandy clay, rootlets	0.20
							Silty SAND, light grey, very dry, loose	0.40
							Total Depth: 0.40 m	



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# TEST PIT LOG TP17

PROJECT NUMBER M405601 DATE 31/10/2006  
 PROJECT NAME Oakleigh South Primary School BLANK \_\_\_\_\_  
 LOCATION Corner Beryl Ave and Bakers Rd, Oakleigh South SCREEN \_\_\_\_\_  
 DRILLING METHOD Test Pit GRAVEL PACK \_\_\_\_\_  
 SAMPLING METHOD GRAB SANITARY SEAL/BENTONITE \_\_\_\_\_  
 SURFACE ELEVATION \_\_\_\_\_ STABILISED WATER LEVEL \_\_\_\_\_  
 WELL HEAD/TOC \_\_\_\_\_ GROUND WATER ELEVATION \_\_\_\_\_  
 LOGGED BY E. Pritchard, T.Sproal

COMMENTS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGL)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
							TOPSOIL / fill, grey silty sand with rootlets	0.10
							FILL, silty sand, grey-brown, dry, with gravel, chunks of clay, glass, timber and plastic fragments	
					1		<p>Becoming very moist to wet, becoming dark grey. Sewer odour noted with increasing moisture.</p>	
0.0			TP17_1.5	*				1.60
			TP17_1.7				Sandy CLAY, grey-green with orange mottling, slightly moist, medium plasticity	1.70
0.0							Total Depth: 1.70 m	

BORING / WELL CONSTRUCTION LOG M4056001\_TESTPITLOGS\_8NOV06.GPJ HLA\_SYD.GDT 05/12/06