

GEO TECH REPORT

S&G CONSULTING

7 FEBRUARY 2007

ENVIRONMENTAL SITE ASSESSMENT – PHASE 1 & 2 ALLOTMENT 52 RESERVOIR ROAD PARADISE, SOUTH AUSTRALIA

7 FEBRUARY 2007

DOC. REF: SG061444 RP01

REVISION 0

FOR

MR VINCE BELPERIO

SOIL & GROUNDWATER CONSULTING



EXECUTIVE SUMMARY

Soil and Groundwater Consulting (S&G) has undertaken an Environmental Site Assessment – Phase 1 & 2 (ESA – Phase 1 & 2) of the site defined as Allotment 52 Reservoir Road, Paradise, South Australia.

The objective of the ESA – Phase 1 (site history) was to identify site contamination issues associated with the past and present site usage, which may significantly impact on future use or development of the site, or pose probable public health and/or environmental risks. The aim of the ESA – Phase 2 (soil investigation) was to gather sufficient information to characterise any soil contamination that may present a risk to human and environmental health and thus impact on future development / use of the site.

The site has been vacant and undeveloped since at least the 1950's and used for market gardening practices to this present day. A number of areas and chemicals of interest were identified, including the possible use of pesticides on the market garden, and the possible presence of nutrients and biological parameters associated with a long drop toilet located on-site. A soil investigation was undertaken to quantify the extent and magnitude of any contamination (if any) to assist in future development of the site.

The results of the ESA - Phase 2 have indicated the surface soils consist of reworked natural soils to an approximate depth of 0.25 m. Natural, undisturbed soils were encountered below the reworked surface soils. All chemicals measured in both the fill and natural soils at the site were less than the NEPM health based investigation levels for residential land use and the NEPM ecological investigation levels that are protective of plant growth.

Therefore, based on the results of ESA – Phase 1 and 2, there are no soil contamination issues associated with historical use of the site as a market garden that would preclude development of the site for residential use. Whilst there may be elevated nutrients and biological parameters associated with the long drop toilet on-site, these parameters are not considered to present a significant impediment to redevelopment of the site for residential use. It is recommended that the long drop toilet and the immediately surrounding soils be excavated during preliminary earthworks for the site and disposed off-site. The walls and base of the excavation should be validated by an environmental consultant to ensure that there are no residual nutrient or biological impacted soils in this part of the site.

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DOCUMENT INFORMATION

Rev.	Status	Date	Company	Name
1	ESA – Phase 1 & 2	7 February 2007	Mr Vince Belperio	Mr Vince Belperio
			Soil & Groundwater Consulting	File

1. INTRODUCTION

Soil and Groundwater Pty Ltd (S&G) was commissioned by Mr Vince Belperio to undertake an Environmental Site Assessment – Phase 1 & 2 (ESA – Phase 1 & 2) of the site defined as Allotment 52, Reservoir Road, Paradise, South Australia.

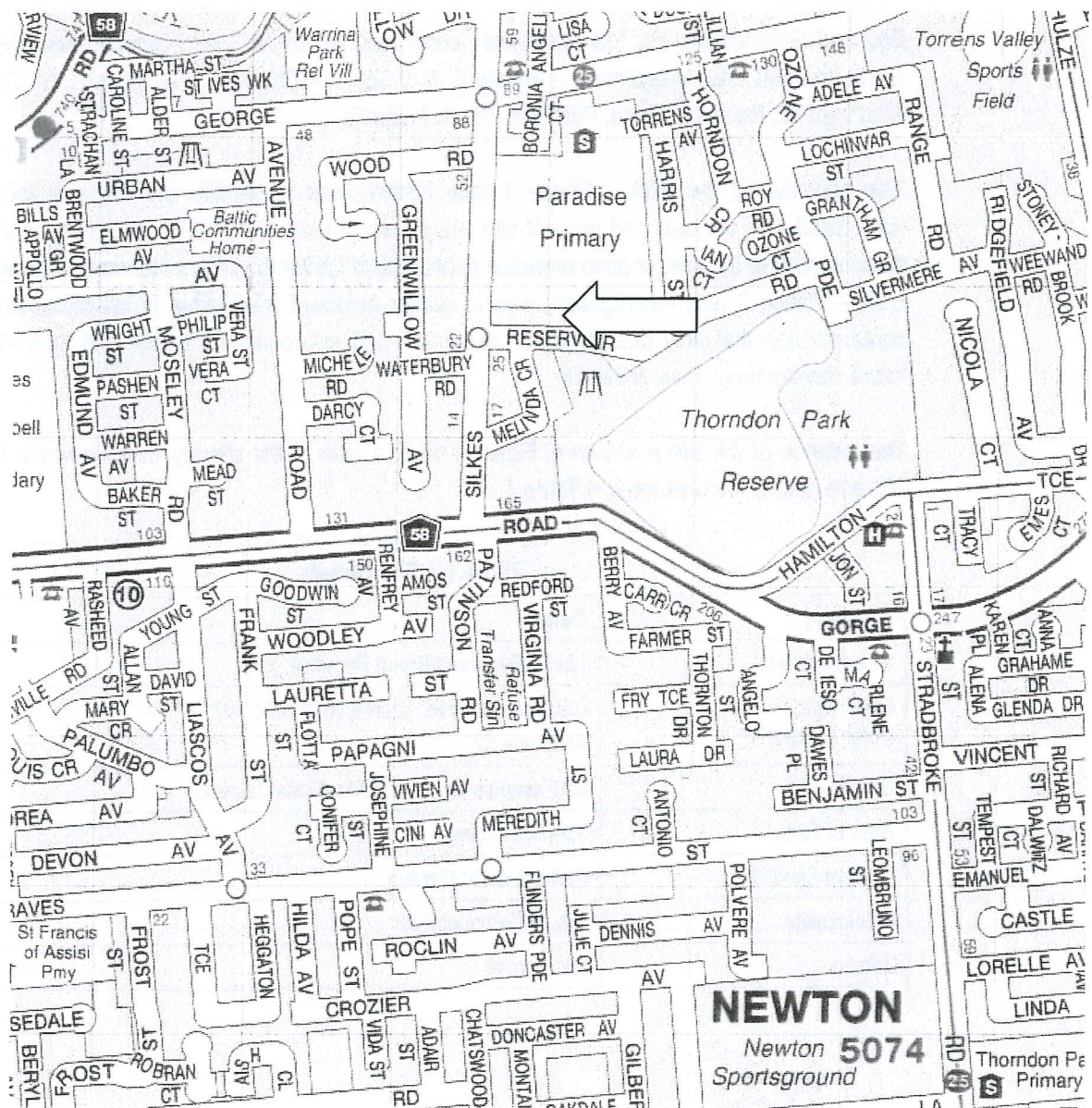
The objective of the ESA – Phase 1 (site history) was to identify site contamination issues associated with the past and present site usage, which may significantly impact on future use or development of the site, or pose probable public health and/or environmental risks. The aim of the ESA – Phase 2 (soil investigation) was to gather sufficient information to characterise any soil contamination that may present a risk to human and environmental health and thus impact on future development / use of the site.

The location of the site is shown in Figure 1 while a plan of the title layout is shown in Figure 2. The site details are presented in Table 1.

Table 1 – Site Details

Category	Details
Street Address	Lot 52 Reservoir Road, Paradise, S.A
Certificate of Title (refer Appendix A)	Certificate of Title Volume 5515 Folio 987 Allotment 52
Owner	Mr Pasquale Belperio & Mrs Maria Belperio
Area of Site	1.546 hectares
Current Land Use	Partial Market Garden
Municipality	City of Campbelltown
Zoning	Residential

Figure 1 – Site Location Plan



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2. SITE HISTORY (ESA – PHASE 1)

2.1 Methodology

The ESA – Phase 1 was undertaken in accordance with the procedures presented in the National Environment Protection Council (NEPC) "*National Environment Protection (Assessment of Site Contamination) Measure*" (NEPM, 1999), with particular reference to Schedule B(2) "*Basic Site Information*".

This included collating information on the historical use of the site from the following sources:

- A site inspection to assess the current state of the site and surrounding land uses (Sections 2.2 and 2.3)
- Review of the expected regional geology and hydrogeology (Section 2.4)
- Review of aerial photographs (Section 2.5)
- Review of historical land ownership (Section 2.6)
- Review of EPA records through a Section 7 search (Section 2.7)
- Review of local government records (Section 2.8)
- Review of Workplace Services dangerous goods register (Section 2.9)

2.2 Site Description

An experienced environmental scientist from S&G undertook a site inspection on the day of drilling fieldwork on 19 December 2006. The site layout is shown in Figure 3.

The site is located on the eastern side of Silkes Road and northern site of Reservoir Road and is square in shape. The topography of the site is generally level and it covers an area of approximately 1.5 hectares. There is one small shed located on the site.

At the time of the site inspection the site was vacant. The following are observations that were noted during the site inspection:

- The land is slightly sloping towards the north west, however generally level with slight undulations due to market gardening practises.
- There were no obvious signs of foreign fill through out the site, only reworked natural soils were observed due to market gardening practises.
- One 'long-drop' toilet was located at the centre of the site towards the southern boundary.

- There is a small storage shed located on the southern boundary.
- The site is generally surrounded with post and wire fencing and galvanised iron fencing. The north western boundary of the site is not fenced.

Photographs of the site are included on the following pages.



Site Photograph Facing West



Site Photograph Facing North



Site Photograph Facing East

2.3 Surrounding Land Use

The site is surrounded by the following land uses:

- North: Vacant land, reserve
- East: Residential housing
- South: Residential housing
- West: Operational small market garden, house, then Silkes Road

2.4 Regional Geology & Hydrogeology

2.4.1 Geology

Reference to the 1:50,000 Soil Association Map of the Adelaide Region (Department of Mines & Energy, Second Edition, 1989) indicates the soil profile includes heavy red brown clayey soils with prismatic or blocky structure over clay with variable lime.

2.4.2 Hydrogeology

A search of the Department of Water, Land and Biodiversity Conservation (DWLBC) groundwater database was undertaken and this information is included in Appendix B.

There are a large number of licensed wells located in the vicinity of the site. A summary of the nearest wells and their available information is included in Table 2.

Table 2 – DWLBC Groundwater Database Summary

Well	Location to Site	Date Installed	Total Depth (m)	SWL (m)	TDS (mg/L)
12520	NE	04/1983	134.00	15.0	961
9748	NE	-	21.34	18.90	-
19168	E	08/1998	27.00	17.00	-
9729	S	03/1971	152.40	12.17	1024
19257	SW	11/1998	42.50	20.00	1250
9731	NW	01/1963	16.46	10.97	1024
9737	NNW	11.28	74.68	11.28	1142

The DWLBC groundwater data indicates that groundwater in the shallow unconfined aquifer could be encountered at a depth of between 10 and 20 m. Salinity was variable and reported between 961 mg/L and 1250 mg/L. Therefore, it is considered that groundwater in the vicinity of the site is not suitable for potable and domestic use. Groundwater salinity levels may be acceptable for some agricultural use, however further investigation is required to determine the extent of groundwater use in stock watering and irrigation of crops.

2.5 Aerial Photographs

The following aerial photographs of the site dating from 1949 have been reviewed.

Table 3 – Summary of Aerial Photographs

Date	Survey	Photo	Scale
24 January 2005	7012	173	1:20,000
26 September 1999	5717	640	1:20,000
28 September 1989	4108	119	1:20,000
19 March 1979	2410	41	1:16,000
15 November 1968	1124	9813	1:15,800
3 January 1959	327	9573	1:16,000
10 January 1949	7	148	1:15,840

Selected aerial photographs are presented in this section. The approximate site boundaries are shown for reference. The following comments were noted (Table 4). A copy of each aerial photograph is presented in Appendix D.

Table 4 – Summary of Observations from Aerial Photographs

Year	Observations
1949	<ul style="list-style-type: none"> ▪ The subject site is undeveloped vacant land. ▪ The surrounding land appears to be cropping and market gardening land. ▪ The photograph shows several small white shelters existing on the site, which is possibly associated with market gardening practices.
1959	<ul style="list-style-type: none"> ▪ The site appears similar as in 1949, with the only noticeable change being the white market garden shelters are no longer present on the site. <p><i>Refer Figure 2 overleaf for 1959 aerial photograph</i></p>
1968	<ul style="list-style-type: none"> ▪ The subject site has minimal changes to the previous photograph. ▪ There is a slight increase of residential development to the west of the site.
1979	<ul style="list-style-type: none"> ▪ The site remains undeveloped as in 1968. ▪ There appears to be a small shed located on the southern boundary. ▪ There are two houses located to the south of the site. ▪ <i>Refer Figure 3 overleaf for 1989 aerial photograph</i>
1989	<ul style="list-style-type: none"> ▪ There is a primary school located to the north of the site with vacant grass land. ▪ There is an increase in residential properties on adjacent areas to the west, north and east of the site. ▪ There are several trees located on the northern boundary within the primary school site.
1999	<ul style="list-style-type: none"> ▪ The site appears as in 1989 with continuing market gardening practices on the subject land.
2005	<ul style="list-style-type: none"> ▪ The subject site remains vacant with operational market gardening practices. ▪ There are no other noticeable changes from the 1999 aerial photograph with the exception of the shed located on the southern boundary of the site has slightly increased in size. <p><i>Refer Figure 4 overleaf for 2005 aerial photograph</i></p>

2.6 Land Ownership

The current Certificate of Title (CT) for the site is Volume 5515 Folio 987.

A historical ownership of the subject site was conducted by a representative of the Lands Titles Office. A copy of the historical land ownership information is provided in Appendix A. A brief summary of the historical ownership is described below.

The first traceable CT (998/174 - larger piece) was issued on 19/6/1914 and the site was owned by a Mr Charles Silke from Paradise with an occupation of a Gardiner. A portion of the site was then leased to Samuel Pitt for 5 years from 1/8/1919. The land was then owned by T. Henry, Fredrick and Arthur Silke from 22/9/1920. T. Henry Silke from Paradise (Gardiner) then owned the land from 12/11/1937. On 21/12/1937 a new CT was issued (CT: 1694/74) and on 10/5/1955, T. Henry, May and Charles Silke owned the land. On 11/9/1972 the land was then owned by T. Pasquale and Maria Belperio from Paradise with an occupation of Market Gardeners. A new CT was issued on 8/8/1984 (CT: 4228/75) the land was transferred to T. George and Maria Belperio on 31/10/1997. Another new CT was issued on 19/3/1998 (CT: 5515/987 – Piece 52 DP 48873) and transferred to T. Pasquale and Maria Belperio on 29/11/2000 whom are the current owners of the land.

2.7 Section 7 Search

The Section 7 information indicated that there were no particulars relating to environment protection at the site. This indicates the following:

- There are no mortgages, charges or prescribed encumbrances affecting the site under the relevant sections of the *Environment Protection Act 1993*;
- The Environmental Protection Authority (EPA) does not hold a copy of a report on any environmental assessment of the land;
- No licenses have been issued and recorded on the Public Register under the repealed *South Australian Waste Management Commission Act 1979* or the repealed *Waste Management Act 1987* to operate waste depot or to produce prescribed wastes on the land. There is also no record on the Public Register of any environmental authorisations in the form of a license to operate a waste depot or to carry out an activity that produces listed waste on the land, either current or terminated.
- The former Waste Management Commission, under the repealed *Waste Management Act 1987*, did not have any record of waste being deposited on the site between 1 January 1983 and 30 April 1995.

The Section 7 information is presented in Appendix C.

2.8 Local Government Records

The site is zoned as Residential by the City of Campbelltown. The objectives of the Residential zone are:

- Objective 1: A zone in which detached dwellings on individual allotments are the predominant dwelling type.
- Objective 2: A zone accommodating a variety of dwelling types of low to medium densities, with medium densities in suitable areas, close to a range of services including public transport, centres, and larger areas of open space.

2.9 Dangerous Good Register

Workplace Services were contacted and had no record of any licenses to store hazardous substances on the site.

Figure 2 - 1959 Aerial Photograph

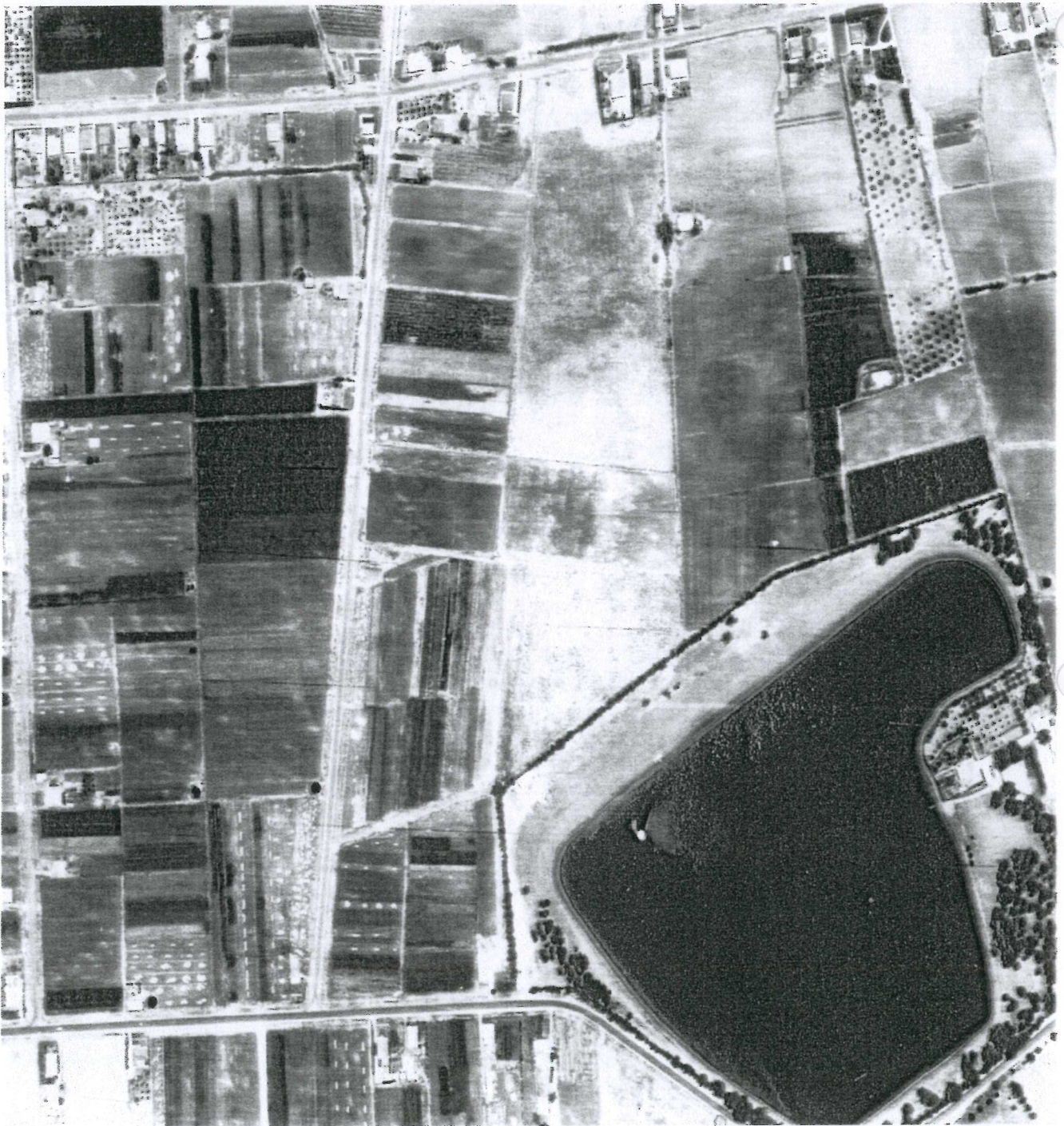


Figure 3 - 1979 Aerial Photograph

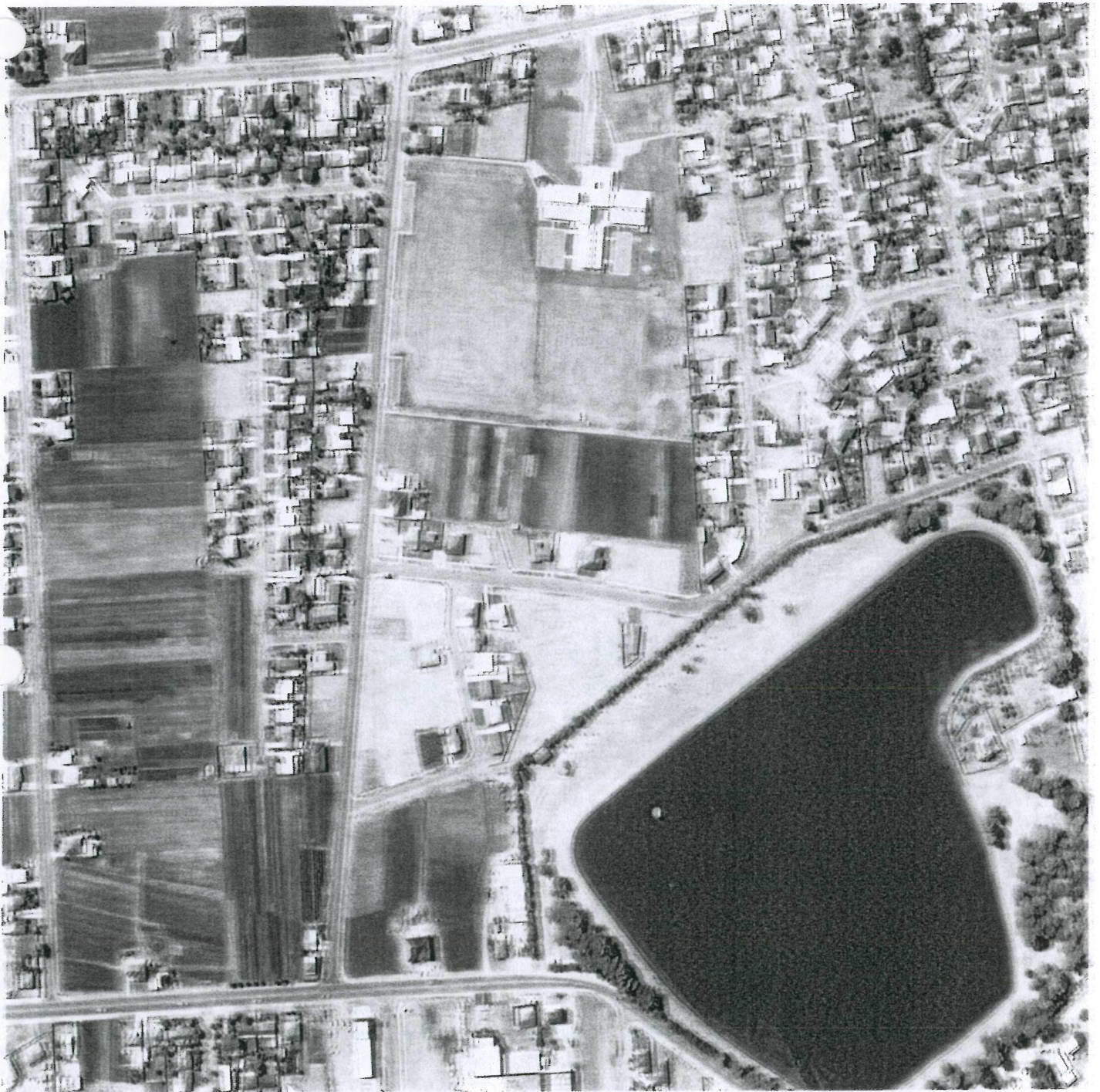


Figure 4 - 2005 Aerial Photograph



2.10 Summary of Historical Information

The site has been vacant and undeveloped since at least the 1950's and used for market gardening practices to this present day.

2.11 Areas & Chemicals of Interest

Table 5 presents a discussion on the areas and chemicals of interest identified in the ESA – Phase 1.

Table 5 – Areas of Chemicals of Interest

Areas	Chemicals of Potential Concern	Likelihood	Mobility / Comments
Surface soils from former and current market garden practises	Organochlorine pesticides (OCP), organophosphorous pesticides (OPP), Heavy Metals	Moderate to High (based recent use as a market garden)	Generally low mobility for most compounds. If present, likely to be limited to surface soils only.
'Long drop' toilet	Biological paramaters, nutrients	Moderate	Generally low, likely to be limited to immediately surrounding soils, if present.

3. SOIL INVESTIGATION (ESA – PHASE 2)

The field investigation and sampling works were undertaken in December 2006. The sampling methodologies for the soil and groundwater investigation are outlined in Appendix F.

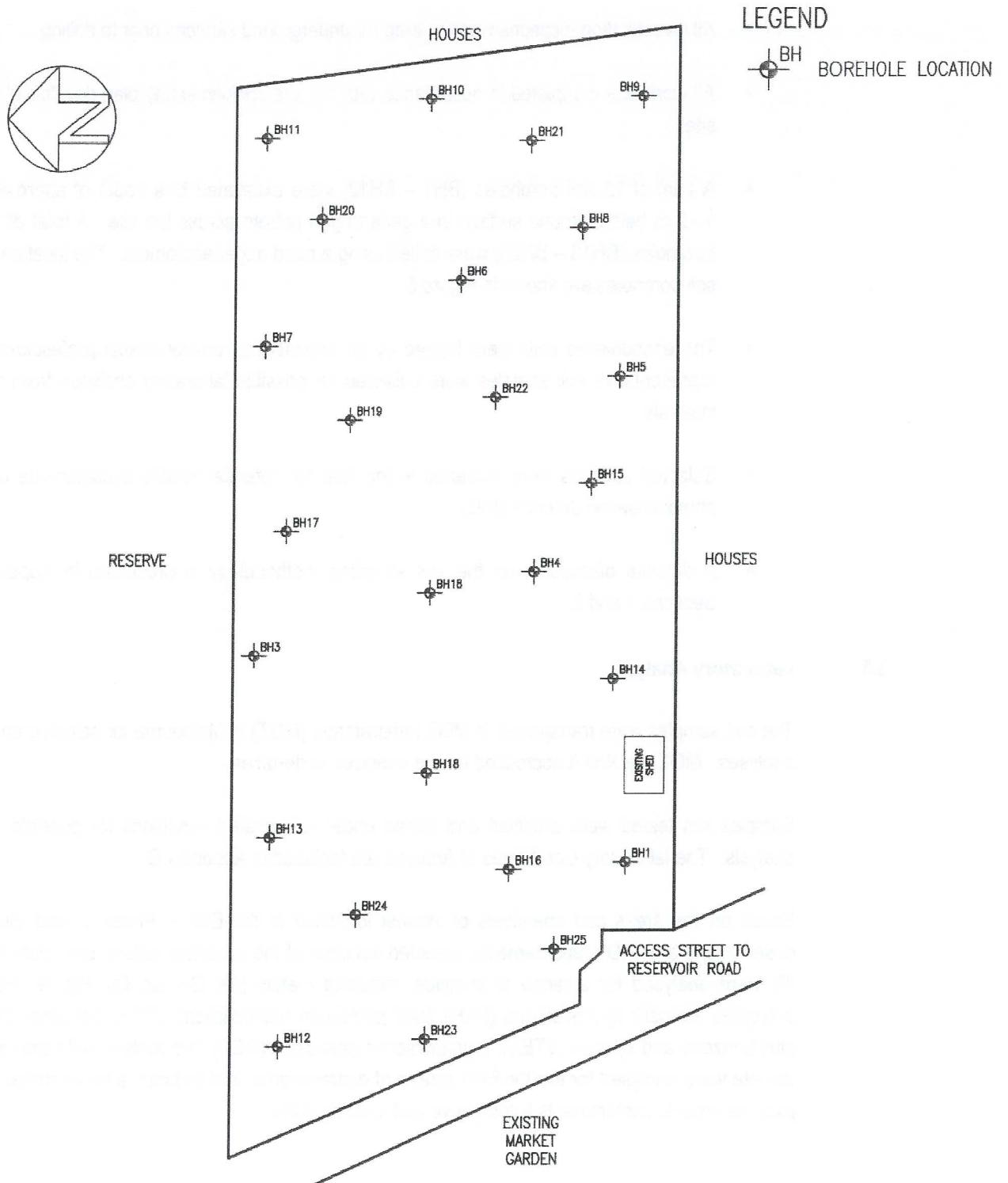
The aim of the soil investigation was to gather sufficient information to characterise any soil contamination that may present a risk to human and environmental health and thus impact on future development / use of the site.

3.1 Rationale for Investigation Locations

Given the historical reworked natural soils of the site, and in accordance with AS4482.1 – 1997, a broad grid was proposed across the site. A total of 25 soil bores were drilled across the site using push tube and hand auger techniques. 12 soil boreholes were excavated in a grid pattern at the site using a dingo drilling rig. Another 13 boreholes were excavated using hand auger equipment to meet the requirements of AS4482.1.

The locations of the soil bores holes are illustrated in Figure 5 overleaf.

Figure 5 - Borehole Location Plan



3.2 Scope of Work

The following scope of soil investigations was undertaken:

- All investigation locations were cleared for underground services prior to drilling.
- All work was completed in accordance with the site specific safety plan developed for the site.
- A total of 12 soil boreholes (BH1 – BH12) were excavated to a depth of approximately 1 - 2 m below ground surface in a general grid pattern across the site. A total of 13 soil boreholes (BH13 – BH25) were drilled using a hand auger equipment. The locations of all soil boreholes are shown in Figure 5.
- The encountered soils were logged by an experienced environmental professional, and representative soil samples were collected for possible laboratory analyses from regular intervals.
- Selected samples were screened in the field for potential volatile contaminants using a photoionisation detector (PID).
- A detailed discussion on the soil sampling methodology is presented in Appendix F, Sections 1 and 2.

3.3 Laboratory Analysis

The soil samples were transported to MGT Laboratories (MGT) in Melbourne for selected chemical analyses. MGT are NATA accredited for the analyses undertaken.

Samples not tested were archived and stored under refrigerated conditions for possible further analysis. The laboratory Certificates of Analysis are included in Appendix G.

Based on the areas and chemicals of interest identified in the ESA – Phase 1, and also field observations and PID measurements, selected samples of the reworked natural soil (classified as fill) were analysed for a range of analytes, including metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn), polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylenes (BTEX), organochlorine pesticides (OCP), two surface soil samples from the site were analysed for the Vic EPA screen of contaminants, that includes a broad metals suite, plus the organic contaminants listed above and cyanide (CN).

3.4 Assessment Criteria & Investigation Levels

The following assessment criteria and investigation levels were used in the interpretation of the laboratory results. These levels are presented with the laboratory results in the summary tables appended to this report.

The laboratory results for soils were compared to the following guidelines:

Potential Human Health Risks

Based on the proposed development of the site for residential land use, the National Environment Protection (Assessment of Site Contamination) Measure, 1999, Health Based Investigation Levels (HILs) were used to assess the potential risks to human health for a residential land use (Setting A).

The HILs are based on generally conservative assumptions for the estimated exposure of residents in the above land use scenario. The NEPM states that:

*“An **investigation level** is the concentration of a contaminant above which further appropriate investigation and evaluation will be required (ANZECC/NHMRC Guidelines 1992)”.*

An exceedence of an investigation level does not indicate that there is a definite risk to human health, but rather that further site-specific assessment is required to quantify the potential risk to human health.

Where the NEPM investigation levels were silent, other health based guidelines were referenced, including the Dutch 2000 background and intervention levels. The adopted investigation levels are presented in the summary tables attached to this report.

Potential Ecological Risks

The NEPM Ecological Intervention Levels (EILs) - Interim Urban were used to assess the potential risks to the environment.

The EILs Interim Urban aim to protect ecological values (eg. flora, fauna) in developed areas. The EILs are based on considerations of phytotoxicity (copper, chromium, lead) and soil survey data (barium, phosphorous, sulphur) from four Australian capital cities. The ANZECC B values were retained for the other contaminants.

Where NEPM guidelines were not provided for a particular chemical, other guideline documents were referenced, including the NSW EPA sensitive use criteria for hydrocarbons, the Dutch 2000 target and intervention levels.

All investigation levels are presented in the summary table attached to this report. The discussion of results presented in the following sections of this report present the relevant guidelines and provide discussion on the relevance to the proposed future land use at the site.

3.5 Results

The results of the soil investigation are presented in this section. Certified laboratory results and chain of custody documentation is provided in Appendix G. Summary tables of results are appended to this report.

3.5.1 QA / QC

To ensure that results were not biased by field sampling techniques and intra-laboratory variation, soil and groundwater blind field duplicate samples were collected in the field for selected analyses.

The QA / QC for soils is presented in Appendix H.

3.5.2 Soil / Fill Materials Encountered

The borelogs for soil boreholes BH1 – BH25 are included in Appendix E. A sparse ground cover was present over some parts of the site.

The general profile consisted of reworked natural clayey silt, which was dark grey in colour, with traces of fine to medium gravels. This material was inferred to be reworked topsoil associated with the former and current market gardening practises. This reworked fill material generally extended to a depth of approximately 0-0.25m within each soil borehole.

Natural soils were encountered below the reworked fill material. This natural profile generally consisted of a silty clay with trace calcareous, traces of fine to medium sized gravels with a brown grey colour. This profile extended to the maximum depth drilled of 2 m. There was no groundwater encountered within any soil borehole.

3.5.3 Potential Volatile Contaminants

Selected replicate soil samples were screened for ionisable compounds using a photoionisation detector (PID). The results of the PID screening are presented in the borelogs included in Appendix G.

The PID results indicated insignificant ionisable compound concentrations at all locations, with all measurements recording 0.0 ppm. Readings of over 100 ppm are considered to indicate the potential presence of volatile contaminants.

3.5.4 Laboratory Results

A summary of the laboratory results for soils are presented in the tables appended to this report. Laboratory Certificates of Analysis are included as Appendix G.

Samples from the reworked surface soils were tested for a range of analytes. This section summarises the laboratory results.

Metals

The concentrations of metals in all samples were below the NEPM residential health based investigation levels. The results were also less than the ecological investigation levels (EILs - Interim Urban).

Cyanide, Chlorinated Hydrocarbons, Phenols, Pesticides & PCBs

The concentrations of total cyanide, chlorinated hydrocarbons, phenols, pesticides & PCBs in all samples were less than the laboratory reporting limits and the investigation levels, where available.

There were minor concentrations of OCP's detected in various surface samples, however these detections were reported less than the investigation levels.

Hydrocarbons (TPH, BTEX, PAH)

Concentrations of TPH, BTEX and PAHs were below the laboratory reporting limits, and the investigation levels in both samples analysed. TPH, BTEX and PAH were analysed as a part of the VIC EPA Screen on samples 'BH6: 0-0.1m' and 'BH22: 0-0.1m'.

4. CONCLUSIONS

Soil and Groundwater Consulting (S&G) has undertaken an Environmental Site Assessment – Phase 1 & 2 (ESA – Phase 1 & 2) of the site defined as Allotment 52 Reservoir Road, Paradise, South Australia.

The objective of the ESA – Phase 1 (site history) was to identify site contamination issues associated with the past and present site usage, which may significantly impact on future use or development of the site, or pose probable public health and/or environmental risks. The aim of the ESA – Phase 2 (soil investigation) was to gather sufficient information to characterise any soil contamination that may present a risk to human and environmental health and thus impact on future development / use of the site.

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The results of the ESA - Phase 2 have indicated the surface soils consist of reworked natural soils to an approximate depth of 0.25 m. Natural, undisturbed soils were encountered below the reworked surface soils. All chemicals measured in both the fill and natural soils at the site were less than the NEPM health based investigation levels for residential land use and the NEPM ecological investigation levels that are protective of plant growth.

Therefore, based on the results of ESA – Phase 1 and 2, there are no soil contamination issues associated with historical use of the site as a market garden that would preclude development of the site for residential use. Whilst there may be elevated nutrients and biological parameters associated with the long drop toilet on-site, these parameters are not considered to present a significant impediment to redevelopment of the site for residential use. It is recommended that the long drop toilet and the immediately surrounding soils be excavated during preliminary earthworks for the site and disposed off-site. The walls and base of the excavation should be validated by an environmental consultant to ensure that there are no residual nutrient or biological impacted soils in this part of the site.

SUMMARY TABLES

Sample ID	Depth (m)	Unit	% Moisture	pH (pH units)	Heavy Metals										TPH				BTEX				Polychlorinated Biphenyls																
					Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Tin	Zinc	C6-C9 fraction	C10-C14 fraction	C15-C28 fraction	C29-C36 fraction	Benzene	Ethylbenzene	Toluene	Xylenes	Aroclor-1016	Aroclor-1221	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCB						
INVESTIGATION LEVELS (LAND USE)																																							
NEMPM H/L (Residential)					100	20	20	<0.5	32	100	1000	300	15	600	7000	65				10																			
EIL (Interim Urban)					20		3				100	100	600	60	200																								
NSW EPA sensitive use																																							
RESULTS																																							
BH10-0.1M	0-0.1	mg/kg	7.1	8.2	8.6	<0.5	32	38	30	14	60																												
BH20-0.1M	0-0.1	mg/kg	20	8.1	6.4	<0.5	30	31	21	13	58																												
BH30-0.1M	0-0.1	mg/kg	5.8		6.8	<0.5	29	23	19	14	46																												
BH40-0.1M	0-0.1	mg/kg	23	7.6	6.8	0.6	29	31	22	13	56																												
BH50-0.1M	0-0.1	mg/kg	22		7.1	<0.5	21	21	23	9.9	56																												
BH60-0.1M	0-0.1	mg/kg	4.1		6.7	<2	<0.5	25	24	22	<0.1	<10	<2	<10	42	<20	<50	<100	<100	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1										
BH70-0.1M	0-0.1	mg/kg	17		8.4	<0.5	29	22	18	12	46																												
BH80-0.1M	0-0.1	mg/kg	20		7.4	<0.5	30	29	21	13	58																												
BH90-0.1M	0-0.1	mg/kg	19		7.6	<0.5	35	33	26	14	70																												
BH100-0.1M	0-0.1	mg/kg	11	8.3	5.5	<0.5	25	18	16	10	42																												
BH110-0.1M	0-0.1	mg/kg	15		8.1	<0.5	36	28	25	15	69																												
BH120-0.1M	0-0.1	mg/kg	14	8.3	7.4	<0.5	23	22	23	11	45																												
BH130-0.1M	0-0.1	mg/kg	22		6.5	<0.5	17	18	27	9	40																												
BH140-0.1M	0-0.1	mg/kg	20		7.4	0.6	26	34	23	12	64																												
BH150-0.1M	0-0.1	mg/kg	14	8.1	6.9	0.6	29	36	26	13	56																												
BH160-0.1M	0-0.1	mg/kg	19		7.4	<0.5	26	30	25	12	49																												
BH170-0.1M	0-0.1	mg/kg	17		7.6	0.5	31	31	24	14	64																												
BH180-0.1M	0-0.1	mg/kg	16	8.2	9.2	0.6	43	37	30	17	64																												
BH190-0.1M	0-0.1	mg/kg	24	8.1	8.4	0.7	34	37	34	14	70																												
BH200-0.1M	0-0.1	mg/kg	2.4		7	<0.5	25	29	20	10	52																												
BH210-0.1M	0-0.1	mg/kg	2.3	8	5.2	<0.5	18	16	13	8.9	32																												
BH220-0.1M	0-0.1	mg/kg	1.7		5.2	<2	<0.5	27	6.4	28	19	<0.1	<10	11	<2	<10	53	<20	<50	<100	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1										
BH230-0.1M	0-0.1	mg/kg	24		7.8	<0.5	29	33	25	13	63																												
BH240-0.1M	0-0.1	mg/kg	18		7.9	<0.5	27	32	30	13	57																												
BH250-0.1M	0-0.1	mg/kg	22	8.4	6.7	0.6	28	36	26	12	63																												
QA / QC																																							
REP - 0.1M	0-0.1M	mg/kg	7.1	8.2	8.6	<0.5	32	38	30	14	60																												
DUP1 - 0.1M	0-0.1M	mg/kg	7	8.2	8.4	<0.5	29	31	26	11	46																												
DUP2 - 0.1M	0-0.1M	mg/kg	5	8.1	8.3		27%	30%	16%	92%																													
REP - 0.1M	0-0.1M	mg/kg	2.3	8	8.2	<0.5	18	16	12	8.9	32																												
DUP1 - 0.1M	0-0.1M	mg/kg	1.9	7.6	7.8	<0.5	18	17	12	8.6	32																												
DUP2 - 0.1M	0-0.1M	mg/kg	1.6	7.5	7.7	<0.5	17	16	11	8.5	31																												
REP - 0.1M	0-0.1M	mg/kg	1.6	7.5	7.7	<0.5	17	16	11	8.5	31																												

[illegible]

NEPM HIL (Residential)	1	20
EIL (Interim Urban)		
NSW EPA sensitive use		

[illegible]

	mg/kg	0.0 M 9.0 M	mg/kg %
GHE-62-M DHF-1 RFD%	mg/kg	0.0 M 9.0 M	%
GHE-62-M DHF-3 MDF%	mg/kg	0.0 M 9.0 M	%
SINSAFE-1	mg	-	-

Sample ID	Depth (m)	Unit	Organochlorine Pesticides															Phenols									
INVESTIGATION LEVELS (LAND USE)			DDO-DDT+DDE = 200 Aldrin + Dieldrin = 10															8500									
INEPM H/L (Residential)																											
EIL (Interim Urban)																											
NSW EPA sensitive use																											
RESULTS																											
BH10-0.1M	0-0.1	mg/kg	< 0.05	1.6	0.43	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	0.15	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH20-0.1M	0-0.1	mg/kg	0.29	1.5	0.1	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH30-0.1M	0-0.1	mg/kg	< 0.05	0.81	0.12	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH40-0.1M	0-0.1	mg/kg	0.14	1.7	0.22	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH50-0.1M	0-0.1	mg/kg	0.05	2.2	0.71	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH60-0.1M	0-0.1	mg/kg	0.1	1.1	0.2	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH70-0.1M	0-0.1	mg/kg	< 0.05	1.7	0.27	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH80-0.1M	0-0.1	mg/kg	< 0.05	2.8	0.6	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH90-0.1M	0-0.1	mg/kg	< 0.05	2.5	0.58	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH100-0.1M	0-0.1	mg/kg	< 0.05	0.65	0.05	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH110-0.1M	0-0.1	mg/kg	0.06	2	0.48	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH120-0.1M	0-0.1	mg/kg	< 0.05	0.88	0.14	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH130-0.1M	0-0.1	mg/kg	0.18	1.3	0.07	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH140-0.1M	0-0.1	mg/kg	0.28	2.3	0.24	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	0.12	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH150-0.1M	0-0.1	mg/kg	< 0.05	1.2	0.26	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	0.3	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH160-0.1M	0-0.1	mg/kg	0.26	2.1	0.25	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH170-0.1M	0-0.1	mg/kg	0.06	1.6	0.29	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1									
BH180-0.1M	0-0.1	mg/kg	0.09	0.23	0.17	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	<														

[illegible]Page 4 of 4



Title Register Search

LANDS TITLES OFFICE, ADELAIDE

For a Certificate of Title issued pursuant to the Real Property Act 1986

REGISTER SEARCH OF CERTIFICATE OF TITLE * VOLUME 5515 FOLIO 987 *

COST : \$16.10 (GST exempt)

REGION : EMAIL

AGENT : TWAL BOX NO : 529

SEARCHED ON : 15/01/2007 AT : 14:05:11

CLIENT REF S&G PARADISE

PARENT TITLE : CT 4228/75

AUTHORITY : RTU B387639

DATE OF ISSUE : 19/03/1998

EDITION : 3

REGISTERED PROPRIETORS IN FEE SIMPLE

PASQUALE BELPERIO OF 1 UNDIVIDED 2ND PART AND MARIA BELPERIO OF 1
UNDIVIDED 2ND PART BOTH OF 27 SILKES ROAD PARADISE SA 5075

DESCRIPTION OF LAND

ALLOTMENT COMPRISING PIECES 51 AND 52 DEPOSITED PLAN 48873
IN THE AREA NAMED PARADISE
HUNDRED OF ADELAIDE

EASEMENTS

NIL

SCHEDULE OF ENDORSEMENTS

NIL

NOTATIONS

DOCUMENTS AFFECTING THIS TITLE

NIL

REGISTRAR-GENERAL'S NOTES

NIL

END OF TEXT.



SEARCH DATE : 15/01/2007 TIME: 14:05:11

* Asterisk denotes PIECE identifier only.
NOTE: All remaining parcels are each an allotment.



C.T. 5515/987 See attachment

Piece 52 DP 48873, Paradise

Issued 19/3/1998

Issued from C.T. 4228/75

George and Maria Belperio

T. Pasquale and Maria Belperio, 29/11/2000

C.T. 4228/75

Issued 8/8/1984

Issued from C.T. 1694/74

Pasquale and Maria Belperio, Paradise, Market Gardeners

T. George and Maria Belperio, 31/10/1997

C.T. 1694/74

Issued 21/12/1937

Issued from C.T. 998/174

Henry Silke, Paradise, Gardiner

T. Henry, May and Charles Silke, 10/5/1955

T. Pasquale and Maria Belperio, Paradise, Market Gardeners, 11/9/1972

C.T. 998/174 (Larger Piece)

Issued 19/6/1914

First traceable C.T.

Charles Silke, Paradise, Gardiner

Portion leased to Samuel Pitt for 5 years from 1/8/1919

T. Henry, Frederick and Arthur Silke, 22/9/1920

T. Henry Silke, Paradise, Gardiner, 12/11/1937

C.T. 251575-26 (March 1975)
 Y and Z (1945-1946) (March 1975)
 March 1975 1975
 March 1975 from C.T. 251575
 Georgia and Maine (March 1975)
 T. Treadwell and John B. (March 1975)
 C.T. 251575
 March 1975
 March 1975 (C.T. 251575)
 Georgia and Maine (March 1975)
 T. Treadwell and John B. (March 1975)
 C.T. 251575
 March 1975
 March 1975 (C.T. 251575)
 Georgia and Maine (March 1975)
 T. Treadwell and John B. (March 1975)
 C.T. 251575
 March 1975
 March 1975 (C.T. 251575)
 Georgia and Maine (March 1975)
 T. Treadwell and John B. (March 1975)

APPENDIX B

DWLBC GROUNDWATER DATABASE INFORMATION

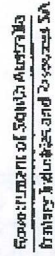


1. 10/10/2023
 2. 10/10/2023
 3. 10/10/2023
 4. 10/10/2023
 5. 10/10/2023
 6. 10/10/2023
 7. 10/10/2023
 8. 10/10/2023
 9. 10/10/2023
 10. 10/10/2023

Notes:
Digital cameras are
supplied and
FASA digital
data is
not contained

REPORT





Summary of Latest Water Information for Drilling

Government of South Australia
Department of Water, Land and
Biodiversity Conservation



Government of South Australia
Water, Land and Biodiversity
Conservation

Unit No	Classification	Max Drilled Depth (m)	Orig Drill Date	Current Depth (m)	Current Date	Standing Water Level (m)	Yield (L/min)	Salinity EC	Yield Zone	Location	Permit No	Log Sheet No	Status	Date
8028 9857	Engineering	6.35	09/05/05	0.85	09/05/05	132	09/05/05			Yatala			Abandoned	09/05/05
8028 0953	Engineering	6.10	09/05/05	6.10	09/05/05	2.45	09/05/05			Yatala			Abandoned	09/05/05
8028 9855	Water Well	81.45		91.14						Yatala	A 232		Abandoned	
8028 9710	Engineering	8.40	05/05/05	5.10	05/05/05					Yatala			Abandoned	05/05/05
8028 9719	Engineering	2.25	03/05/05	0.20	03/05/05					Yatala			Abandoned	03/05/05
8028 9726	Water Well	77.22	12/05/05	18/73		15.97	03/05/05	1373	630 11/03	Yatala			Abandoned	03/05/05
8028 9727	Water Well	95.40	01/05/05	01/05/05			03/05/05	1373	755 02/04	Yatala	A 30		Abandoned	02/04/05
8028 9728	Water Well	160.42	01/05/05	01/05/05			01/05/05	1373	755 02/04	Yatala	A 30		Abandoned	02/04/05
8028 9729	Water Well	162.40	01/05/05	162.40	01/05/05	12.17	03/07/05	1373	1024 03/07	Yatala	A 102		Abandoned	03/07/05
8028 9730	Water Well					13.72	01/05/05	1373	1024 03/07	Yatala	A 102		Abandoned	03/07/05
8028 9731	Water Well	16.45	01/05/05	16.45	01/05/05	10.97	01/05/05	1373	2442 03/07	Yatala	A 102		Abandoned	03/07/05
8028 9732	Water Well	105.60	01/05/05	105.60	01/05/05	13.12	01/05/05	1373	2442 03/07	Yatala	A 102		Abandoned	03/07/05
8028 9733	Water Well	10.67		10.67						Yatala	A 23		Abandoned	
8028 9734	Water Well	10.07		10.07						Yatala	A 101		Abandoned	
8028 9735	Water Well	16.46		16.46						Yatala	A 105		Abandoned	
8028 9736	Water Well	8.14		8.14						Yatala	A 105		Abandoned	
8028 9737	Water Well	74.80	10/05/05	74.80	10/05/05	47.75	10/05/05	2403	1328 08/02	Yatala	A 105		Abandoned	08/02/05
8028 9738	Water Well	10.29		10.29						Yatala	A 105		Abandoned	
8028 9739	Water Well									Yatala	A 105		Abandoned	
8028 9740	Water Well	19.23		19.23						Yatala	A 105		Abandoned	
8028 9741	Water Well	30.43		30.43						Yatala	A 105		Abandoned	
8028 9742	Water Well	37.88		37.88						Yatala	A 105		Abandoned	
8028 9743	Water Well	48.77		48.77						Yatala	A 105		Abandoned	
8028 9744	Water Well	42.05		42.05						Yatala	A 105		Abandoned	
8028 9745	Water Well	24.05		24.05						Yatala	A 105		Abandoned	
8028 9746	Water Well	24.14		24.14						Yatala	A 105		Abandoned	
8028 9747	Water Well	21.24		21.24						Yatala	A 105		Abandoned	
8028 9748	Water Well	21.24		21.24						Yatala	A 105		Abandoned	
8028 9749	Water Well	30.12		30.12						Yatala	A 105		Abandoned	
8028 9750	Water Well	48.15		48.15						Yatala	A 105		Abandoned	

Date 19/01/2007 08:57 PM

Printed By Durbach E

Phone (08) 8453 6944 Fax (08) 8453 6998

The Department will not assume responsibility for any errors or omissions in the data provided

Radial Search Unit No: 8525 10183 Radius: 1.00 (km)

Page 1 of 3

Ordered By Unit No

Government of South Australia
Department of Water, Land and
Biodiversity Conservation

Summary of Latest Water Information for Drillholes

Government of South Australia
Primary Industries and Fisheries SA

Unit No	Classification	Max Shelled Depth (m)	Orig Drill Date	Current Depth (m)	Current Depth Date	Gas to (m)	Standing Water Level (m)	Well Yield (Gallons)	Well Yield Date	EC (µS/cm)	YDS (m)	Location	Permit No	Drilling Status	Status
5820 9760	Water Well	34.50	01/71	36.50	09/01					3885	19/12	Adelaide	A-13		Abandoned
5820 9770	Water Well				01/73					4440	24/77	7.30 Adelaide	A-30		Abandoned
5820 9771	Water Well	68.95	03/68	80.95	03/68		13.51	19020	03/69	4247	23/65	Adelaide	A-14		Abandoned
5820 9772	Water Well	48.72		40.72								Adelaide	A-10		Operational
5820 9775	Water Well	73.25	01/72	19.25	08/75		14.25	21000	07/78			Adelaide	A-30		Abandoned
5820 9776	Water Well	76.20		75.20								Adelaide	A-11		Operational
5820 9777	Water Well	117.35	01/29		01/29	75.20	25.57	890	01/29			Adelaide	A-12		Abandoned
5820 9778	Water Well	108.77		105.77	02/84			3001	02/84	320	02/84	Adelaide	A-3		Operational
5820 9779	Water Well	59.44		59.44								Adelaide	A-18		Operational
5820 9787	Water Well	30.48		30.48	01/25		16.87	1487	01/25	1160	04/03	Adelaide			Operational
5820 9853	Water Well		01/27	01/27						700	08/05	Adelaide	S-726		Operational
5820 9855	Water Well	133.20		0.00	03/85		0.00	2502	01/84	3349	18/52	Adelaide	A-72		Operational
5820 12430	Water Well	30.00	03/02	30.00	02/03	30.03	18.00	702	02/03	2750	16/24	7.80 Adelaide	A-80		Operational
5820 12431	Water Well	22.00	04/82	22.00	04/83	22.03	6.50	752	04/83	2250	12/14	7.70 Adelaide	A-210		Operational
5820 12432	Water Well	55.00		53.00	02/83		18.50	1781	03/83			Adelaide	A-20		Operational
5820 12433	Water Well	48.72	08/83	43.72	08/83	1.00	1.00					Adelaide			Operational
5820 12434	Water Well	134.00	04/83	134.00	04/83	20.03	15.00	4514	04/83	1740	04/83	Adelaide	S-104		Operational
5820 12435	Water Well	24.00	10/83	24.00	10/83	24.03	5.00	2000	10/83			Adelaide			Operational
5820 12436	Water Well	14.00	12/83	14.00	12/83		3.88					Adelaide	A-27		Operational
5820 12437	Water Well	52.00	10/83	52.00	12/83	46.03	38.50	15	12/83	10700	01/85	Adelaide	A-11		Operational
5820 12438	Water Well	62.00	11/83	62.00	11/83	30.03	32.18	35	11/83	510	204	Adelaide	A-13		Operational
5820 14558	Engineering	9.75	03/80	9.75	03/80							Adelaide	A-10		Abandoned
5820 14557	Engineering	9.75	03/80	9.75	03/80							Adelaide			Abandoned
5820 14559	Water Well	72.00	03/80	72.00	03/80	28.03	4.00	1810	02/80	1810	02/80	Adelaide	A-19		Operational
5820 14560	Water Well	24.25	02/82	24.25	02/82	24.28	21.00	594	02/82	2540	14/82	Adelaide	A-1		Operational
5820 14561	Water Well	24.00	01/85	24.00	01/85	24.03	15.00	1501	01/85	5000	03/84	Adelaide	A-37		Operational
5820 14562	Water Well	24.00	03/85	0.00	11/85		17.50	198	03/85	2100	03/85	Adelaide	A-20		Operational
5820 14563	Water Well									2100	13/02	Adelaide	A-11		Operational
5820 14564	Water Well	13.00	11/85	13.00	11/85	12.00		1830	11/85	220	12/85	Adelaide	A-73		Operational
5820 14565	Water Well									1600	02/85	Adelaide			Operational

Date 19/07/2007 03:37 PM

Printed By: D. B. S.

Phone (08) 8453 8344 Fax (08) 8453 8050

The Department will not assume responsibility for any errors or omissions in the data provided

Radius Search Unit No: 5820 1818 Radius: 1.0 (KM)



Summary of Latest Water Information for Drillholes



PAR No	Classification	Max Depth (m)	Orig Date	Current Depth (m)	Current Date	Standing Water Level (m)	Well Field (Cat)	EC (µS/cm)	EC Date	EC Date	Location	Payable No	Logs Available	Statics	Date
1553	Water Well	21.50	10/06	21.50	10/06	13.32	10/06	378	10/06	10/06	7.03 Adelaide	38302	0	0	04/08
1554	Water Well	130.60	02/06	130.60	02/06	22.00	02/06	310	02/06	02/06	7.20 Adelaide	43308	0	0	04/08
1555	Water Well	31.50	02/06	31.50	02/06	22.00	02/06	310	02/06	02/06	7.20 Adelaide	43308	0	0	04/08
1556	Water Well	43.00	02/06	43.00	02/06	22.00	02/06	310	02/06	02/06	7.20 Adelaide	43308	0	0	04/08
1557	Water Well	27.80	02/06	27.80	02/06	22.00	02/06	310	02/06	02/06	7.20 Adelaide	43308	0	0	04/08
1558	Water Well	42.50	11/06	42.50	11/06	22.00	11/06	310	11/06	11/06	7.20 Adelaide	43308	0	0	04/08
1559	Water Well	43.00	04/06	43.00	04/06	22.00	04/06	310	04/06	04/06	7.20 Adelaide	43308	0	0	04/08
1560	Water Well	12.00	19/06	12.00	19/06	22.00	19/06	310	19/06	19/06	7.20 Adelaide	43308	0	0	04/08
1561	Water Well	40.50	05/06	40.50	05/06	22.00	05/06	310	05/06	05/06	7.20 Adelaide	43308	0	0	04/08
1562	Water Well	40.00	05/06	40.00	05/06	22.00	05/06	310	05/06	05/06	7.20 Adelaide	43308	0	0	04/08

APPENDIX C

SECTION 7 INFORMATION

Soil & Groundwater Consulting
PO BOX 3166
NORWOOD SA 5067

Contact: Rosslyn Farquharson
Telephone: (08)8204 2179

Contact: Gayle Brackshaw
Telephone: (08)8204 1112
Fax: (08)8124 4672

23 January, 2007

Dear Sir/Madam,

Section 7 - Land and Business (Sale and Conveyancing) Act 1991

I refer to your enquiry concerning the parcel of land comprised in

Title Reference CT Volume 5515 Folio 987

Address Pieces 51 & 52, 27 Wilkes Road, PARADISE SA 5075

(Please note above, official LOTS property address)

I advise as follows:

**PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES
AFFECTING THE LAND**

- | | | |
|-----|--|----|
| 53. | Environment performance agreement under section 59 of the <i>Environment Protection Act 1993</i> that is registered in relation to the land. | NO |
| 54. | Environment protection order issued under section 93 of the <i>Environment Protection Act 1993</i> that is registered in relation to the land. | NO |
| 55. | Clean-up order issued under section 99 of the <i>Environment Protection Act 1993</i> that is registered in relation to the land. | NO |
| 56. | Clean-up authorisation issued under section 100 of the <i>Environment Protection Act 1993</i> that is registered in relation to the land. | NO |

CT Volume 5515 Folio 987

page 1 of 3

Environment Protection Authority

GPO Box 2607 ADELAIDE SA 5001 | 77 Grenfell Street Adelaide South Australia
T (08) 8204 2000 • F (08) 8204 2020 • 1800 623 445 (country areas) | www.epa.sa.gov.au

PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994

The answers to the following questions are shown:

Environmental assessments

2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
- (a) by or on behalf of the owner or occupier of the land -
 - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the *Environment Protection Act 1993*;
 - or
 - (ii) for the purposes of a notification given under section 83 of that Act;
 - or
 - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
 - or
 - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

NO

Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?
- (2) Was a licence to operate a waste depot on the land ever issued under the repealed *Waste Management Act 1987*, a record of which is on the Public Register?
- (3) Is an environmental authorisation currently in force under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
- (4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

NO

NO

NO

Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act 1979* ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
- (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

NO

4. (3) Is an environmental authorisation currently in force under the *Environment Protection Act 1993* in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

- (4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?


NO

Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act 1987* have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA cannot confirm the accuracy of the historical information provided.


Delegate for

ENVIRONMENT PROTECTION AUTHORITY

APPENDIX D

AERIAL PHOTOGRAPHS

PHOTO: 148

SCALE: 1:15840

DATE: 10 JAN 1949

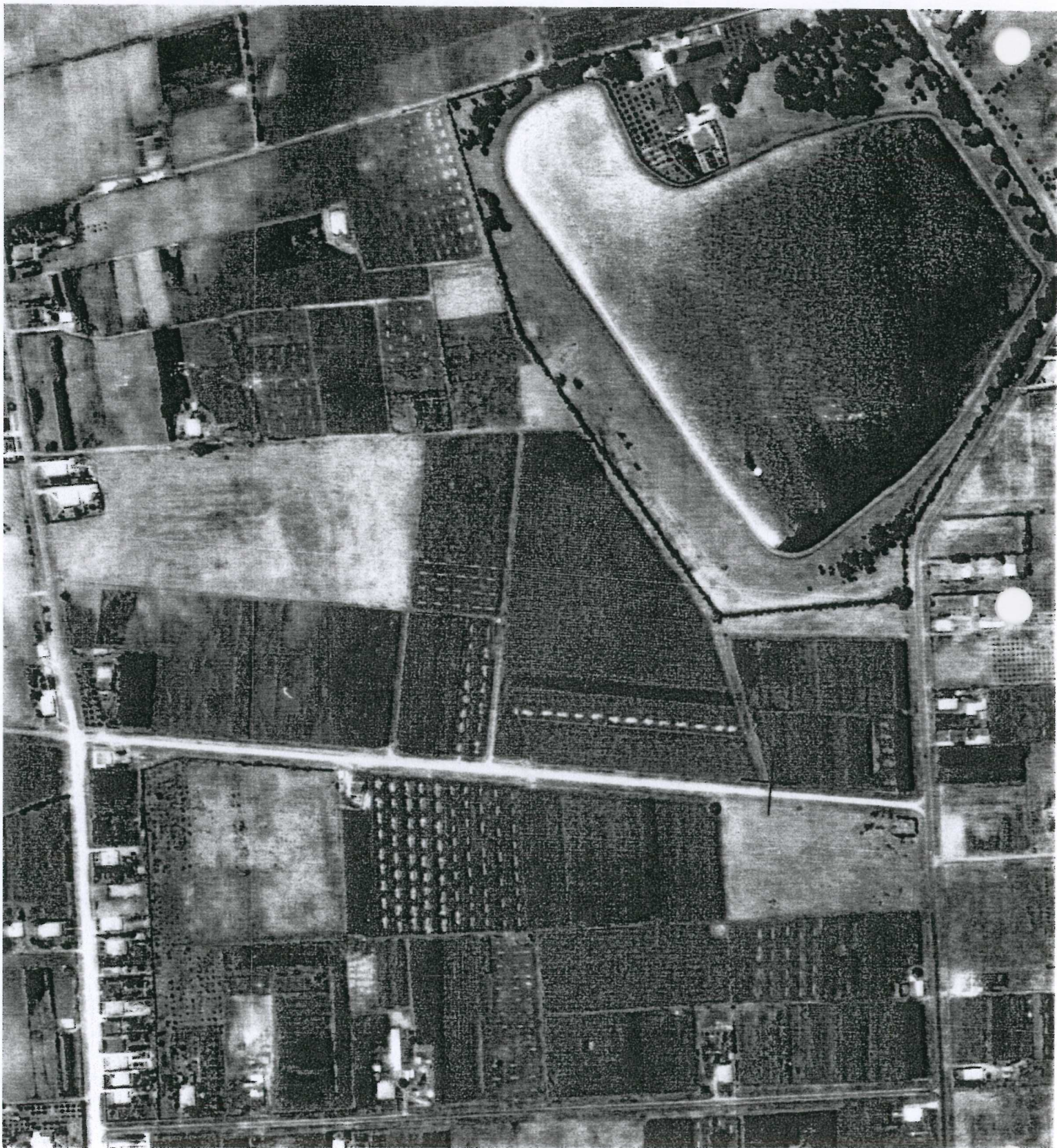


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DATE: 3 JAN 195

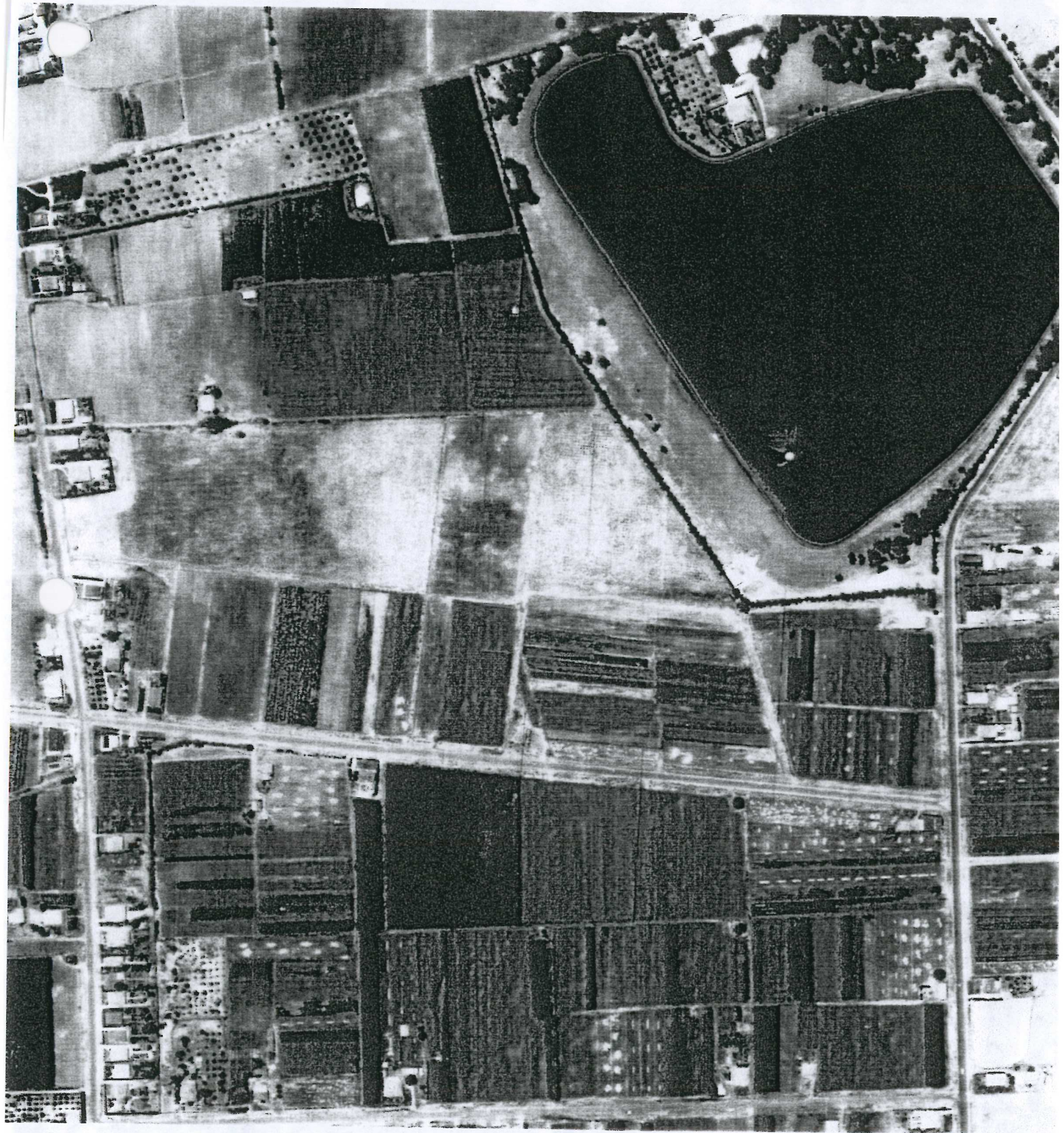


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DATE: 15 Nov 196

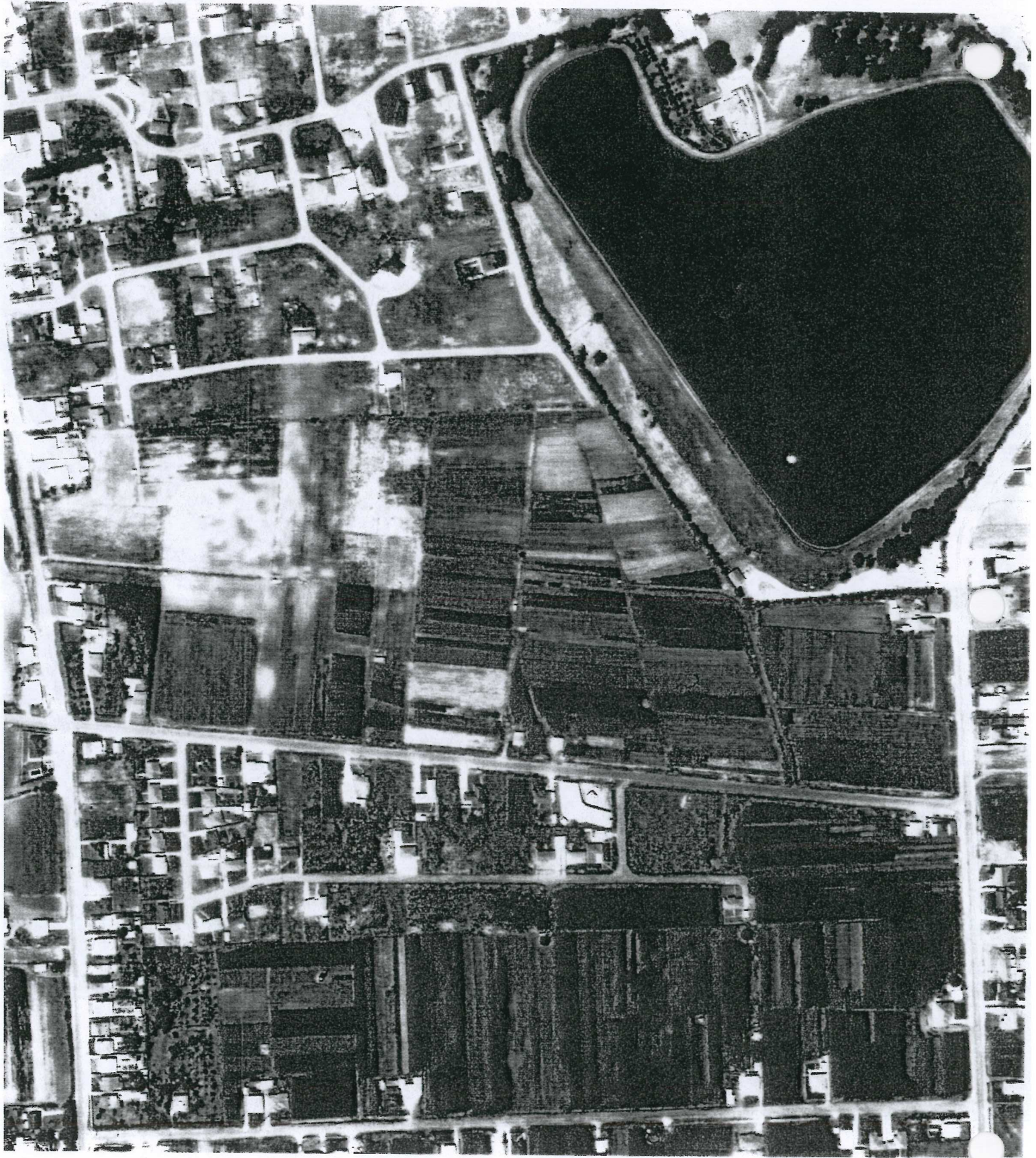


PHOTO: 41

SCALE: 1:16000

DATE: 19 MAR 197

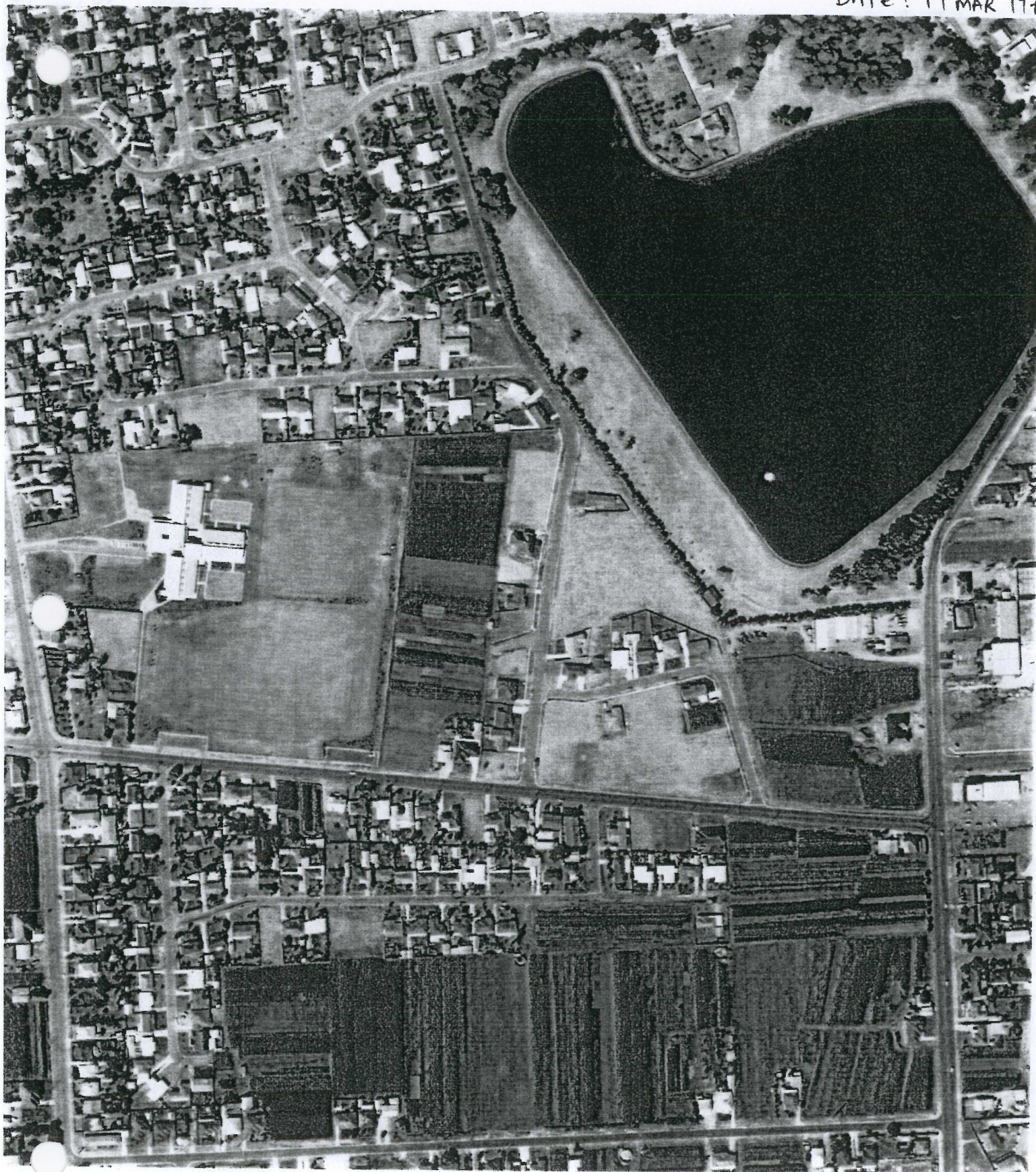


PHOTO: 119

SCALE: 1:20,000

DATE: 28 SEPT 198



PHOTO : 640

SCALE : 1 : 20,000

DATE : 26 SEPT 1996

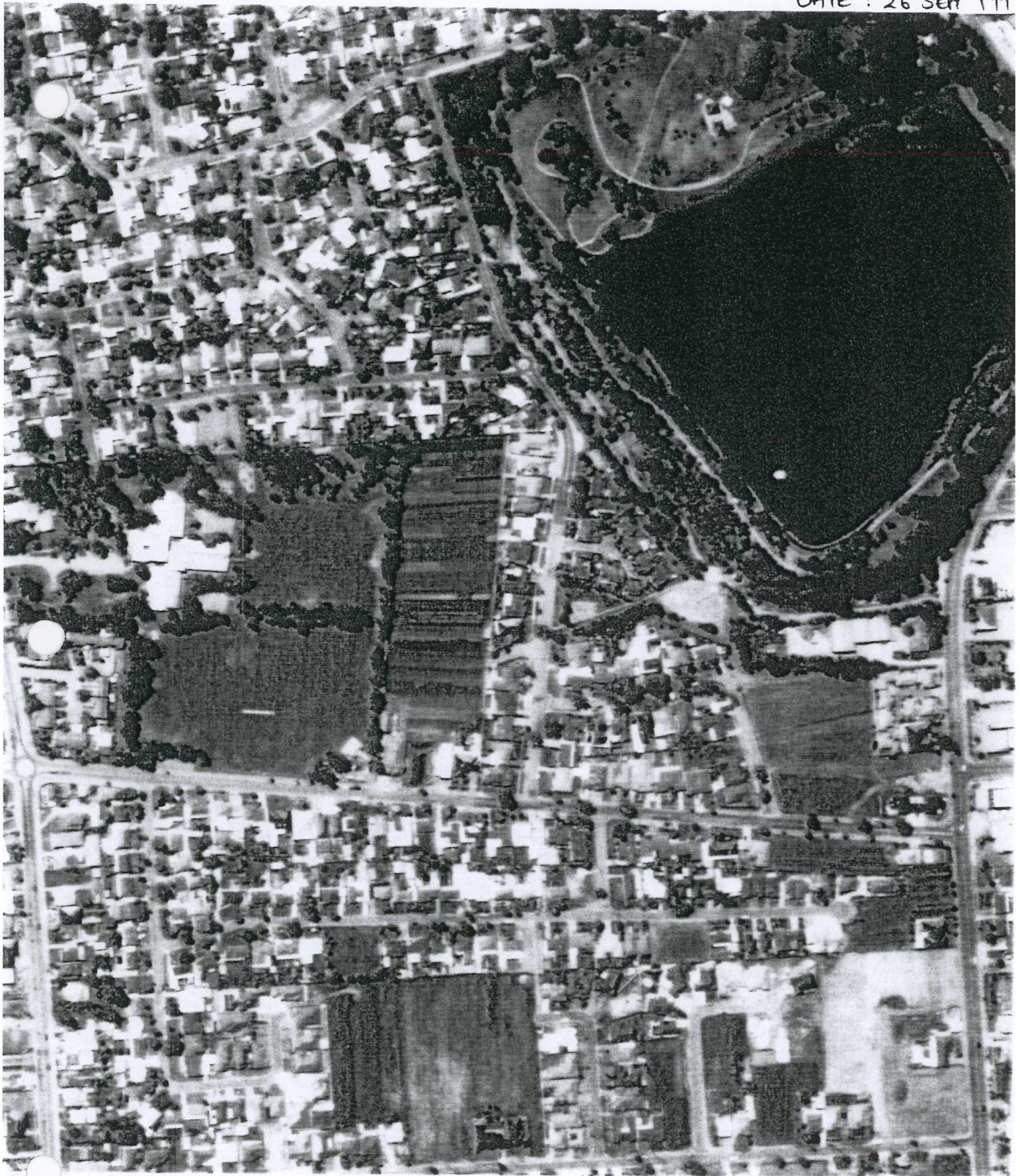


PHOTO: 173

SCALE: 1:20,000

DATE: 24 JAN 2005



APPENDIX E

BORELOGS

Soil Profile Log

Client: Mr Vince Belperio
Site: Lot 52 Reservoir Road, Paradise
Project: Contamination Investigation

Job No: SG061444
Date: 19-12-2006
Logged by: BJS

Borehole: BH 1
Location: See Site Plan
Drilling Method: PT - Dingo

Depth Scale Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
0.15	FILL: Reworked Clayey SILT: dark grey, trace fine gravels	FILL	M-H	<PL	L	SM	BH1: 0-0.1m / DUP 1	0
0.5	Silty CLAY: grey, pale brown mottling	CH	H	>PL	F	M	BH1: 0.15-0.25m BH1: 0.4-0.5m	0
0.65	Calcareous Silty CLAY: grey brown, cream mottling	CH	VH	>PL	F-St	M	BH1: 1.5-1.6m	0
1.0								
1.5								
2.0	End BH @ 2.0m No Refusal No Groundwater							
2.5								
3.0								
3.5								
4.0								
Hole Completion: End BH @ 2.0m								

Abbreviations & Symbols

MC Moisture Content
PL Plastic Limit
> Greater Than
< Less Than
- Approximately equal to
DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
M Medium NP Non Plastic

Consistency*

VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard

Moisture

D Dry
SM Slightly Moist

Density*

Fb Friable
VL Very Loose
L Loose
M Medium Dense
D Dense
VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravolly Soil
SW, SP, SM, SC Sandy Soils
ML, MH Silt Soils
CL, CH Clay Soils

Samples

B Bulk
D Disturbed
UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
 : Lot 52 Roservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 2
 Location: See Site Plan
 Drilling Method: PT - Dingo

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
0.2	0.2	FILL: Reworked Clayey SILT, trace sand, trace fine gravels: dark grey br.	FILL	M-H	< PL	F	SM	BH2: 0-0.1m	0
0.5	0.5	Silty CLAY, some sand: grey brown, trace fine gravels	CH	H	> PL	F-St	SM-M	BH2: 0.2-0.3m	0
0.6	0.6	Silty CLAY, trace calcareous: orange brown, cream mottling	CH	H-VH	> PL	St	M	BH2: 0.6-0.7m	0
0.85	0.85	Calcareous Silty CLAY: cream brown	CH	VH	> PL	St	M		
1.0	1.0	End BH @ 1.3m No Refusal No Groundwater							
1.3	1.3								
1.5	1.5								
2.5	2.5								
3.0	3.0								
3.5	3.5								
4.0	4.0								

Hole Completion: End BH @ 1.3m

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ~ Approximately equal to
 DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VSt Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravolly Soils
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
Site: Lot 52 Reservoir Road, Paradise
Project: Contamination Investigation

Job No: SG061444
Date: 19-12-2006
Logged by: BJS

Borehole: BH 3
Location: See Site Plan
Drilling Method: PT - Dingo

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
	0.25	FILL: Reworked Clayey Sandy SILT, trace fine gravels: grey	FILL	M	<PL	L	D	BH3: 0-0.1m BH3: 0.15-0.25m	0
0.5	0.6	Silty CLAY, trace organics: dark grey	CH	H	>PL	F	SM	BH3: 0.25-0.35m	0
	0.75	Calcareous Silty CLAY: brown cream mottling	CH	H	>PL	F	SM		
1.0	1.0	Silty CLAY: pale brown, trace alluvial gravels	CH	H	>PL	F	SM		
1.5		End BH @ 1.0m No Groundwater Encountered No Refusal							
2.0									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 1.0m

Abbreviations & Symbols

MC Moisture Content
PL Plastic Limit
> Greater Than
< Less Than
~ Approximately equal to
DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
M Medium NP Non Plastic

Consistency*

VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard

Moisture

D Dry
SM Slightly Moist

Density*

Fb Friable
VL Very Loose
L Loose
M Medium Dense
D Dense
VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soil
SW, SP, SM, SC Sandy Soils
ML, MH Silt Soils
CL, CH Clay Soils

Samples

B Bulk
D Disturbed
UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
 Site: Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 4
 Location: See Site Plan
 Drilling Method: PT - Dingo

Depth Scale Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
0.25	FILL: Reworked Clayey SILT, some fine gravels (alluvial): dark grey	FILL	M-H	>PL	S-F	M	BH4: 0-0.1m	0
0.5	Silty CLAY, trace sand, trace fine alluvial gravels: grey, pale brown mottling	CH	H-VH	>PL	F-St	M	BH4: 0.25-0.35m BH4: 0.5-0.6m	0
0.6								0
1.0	Silty CLAY: pale gray brown, cream mottling, trace calcareous, trace fine alluvial gravels	CH	VH	>PL	F-St	M	BH4: 0.9-1.0m	0
1.5	End BH @ 1.0m No Groundwater Encountered No Refusal							
2.5								
3.0								
3.5								
4.0								
Hole Completion: End BH @ 1.0m								

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ≈ Approximately equal to
 P Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VSt Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Sc
 SW, SP, SM, SC Sandy Solls
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
Site: Lot 52 Reservoir Road, Paradise
Project: Contamination Investigation

Job No: SG061444
Date: 19-12-2006
Logged by: BJS

Borehole: BH 5
Location: See Site Plan
Drilling Method: PT - Dingo

Depth Scale Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PtD (ppm)
0.25	FILL: Reworked Clayey SILT, dark gray, some fine gravels	FILL	M-H	>PL	S-F	M	BH5: 0-0.1m	0
0.5	Silty CLAY: dark gray, trace fine alluvial gravels	CH	H	>PL	F	M	BH5: 0.25-0.35m BH5: 0.5-0.6m	0
0.8								0
1.0	Silty CLAY, trace calcareous; orange brown	CH	H-VH	>PL	F-St	M		
1.1	End BH @ 1.1m No Refusal No Groundwater Encountered							
1.5								
2.0								
2.5								
3.0								
3.5								
4.0								
Hole Completion: End BH @ 1.1m								

Abbreviations & Symbols

MC Moisture Content
PL Plastic Limit
> Greater Than
< Less Than
~ Approximately equal to
DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
M Medium NP Non Plastic

Consistency*

VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard

Moisture

D Dry
SM Slightly Moist

Density*

Fb Friable
VL Very Loose
L Loose
M Medium Dense
D Dense
VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soil
SW, SP, SM, SC Sandy Soils
ML, MH Silt Soils
CL, CH Clay Soils

Samples

B Bulk
D Disturbed
UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
 : Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 6
 Location: See Site Plan
 Drilling Method: PT - Dingo

Depth Scale	Horiz. Depth (m)	Soil Description: colour, Inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
	0.25	FILL: Reworked Clayey Sandy SILT: grey, trace fine gravels	FILL	M	<PL	L	D	BH6: 0-0.1m / DUP 2 BH6: 0.15-0.25m	0
0.5		Silty CLAY: orange brown	CH	H	>PL	F	D-SM	BH6: 0.25-0.35m BH6: 0.6-0.7m	0
0.85									
1.0		Calcareous Silty CLAY: pale grey cream, brown mottling, some (F-M) alluvial gravels	CH	H	>PL	F	SM		
1.5									
2.0		End BH @ 2.0m No Groundwater Encountered No Refusal							
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 2.0m

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ~ Approximately equal to
 CDP Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VSr Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly So
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
Site: Lnt 52 Reservoir Road, Paradise
Project: Contamination Investigation

Job No: SG061444
Date: 19-12-2008
Logged by: BJS

Borehole: BH 7
Location: See Site Plan
Drilling Method: PT - Dingo

Depth Scale	Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/Density	Moisture	Comments/Samples Taken	PID (ppm)
0.2	0.2	FILL: Reworked Sandy SILT, trace fine gravels: grey	FI LL	M	< PL	L	D	BH7: 0-0.1m	0
0.5	0.5	Silty CLAY, trace fine gravels: grey brown	CH	M-H	> PL	F	D	BH7: 0.2-0.3m	0
0.6	0.6							BH7: 0.5-0.6m	0
1.0	1.0	Silty CLAY, trace fine gravels: orange brown	CH	M-H	> PL	F-St	D-SM		
1.5		End BH @ 1.0m No Refusal No Groundwater Encountered							
2.0									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 1.0m

Abbreviations & Symbols

MC Moisture Content
PL Plastic Limit
> Greater Than
< Less Than
- Approximately equal to
DCP Dynamic Cone Penetrometer

Consistency*

VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard

Density*

Fb Friable
VL Very Loose
L Loose
M Medium Dense
D Dense
VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soil
SW, SP, SM, SC Sandy Soils
ML, MH Silt Soils
CL, CH Clay Soils

Samples

B Bulk
D Disturbed
UD(die) Undisturbed (diameter)

Plasticity

L Low H High
M Medium NP Non Plastic

Moisture

D Dry
SM Slightly Moist

M

M Moist
W Wet
Sat Saturated

Soil Profile Log

Client: Mr Vince Belperio
 Site: Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 8
 Location: See Site Plan
 Drilling Method: PT - Dingo

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
	0.25	FILL: Reworked Clayey SILT, trace (F-M) gravels: grey brown	FILL	M	<-PL	L	SM	BH8: 0-0.1m	0
0.5	0.7	Silty CLAY, (F-M) alluvial gravels, calcareous: red orange brown	CH	M	<-PL	Fb	D-SM	BH8: 0.25-0.35m BH8: 0.5-0.6m	0
1.0	1.0	Silty Sandy CLAY (F-M) alluvial gravels, calcareous: cream orange brown, red mottling	CH	M	>-PL	Fb	D-SM		
1.5		End BH @ 1.0m No Refusal No Groundwater Encountered							
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 1.0m

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ~ Approximately equal to
 □ Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VSt Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soils
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
 Site: Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 9
 Location: See Site Plan
 Drilling Method: PT - Dingo

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/Density	Moisture	Comments/Samples Taken	PID (ppm)
0.25	0.25	FILL: Reworked Clayey SILT: grey brown, trace (F-M) gravels	FILL	M	<-PL	L	D	BH9: 0-0.1m BH9: 0.15-0.25m	0
0.5	0.65	Silty CLAY: dark grey, red mottling, trace fine gravels	CH	H	>PL	F-St	D-SM	BH9: 0.25-0.35m BH9: 0.5-0.6m	0
1.0	1.0	Calcareous Silty CLAY, some (F-M) alluvial gravels: orange brown, cream mottling	CH	H	>PL	St	D-SM		
1.5		End BH @ 1.0m No Refusal No Groundwater Encountered							
2.0									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 1.0m

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ~ Approximately equal to
 DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VSt Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravely Soils
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
 Address: Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 10
 Location: See Site Plan
 Drilling Method: PT - Dingo

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/Density	Moisture	Comments/Samples Taken	PID (ppm)
0.25		FILL: Reworked Clayey SILT: gray, trace (F-M) gravels	FILL	M	< PL	L	D	BH10: 0-0.1m BH10: 0.15-0.25m	0
0.5		Silty CLAY: gray, orange mottling, some (F-M) gravels	CH	M-H	> PL	F-St	D	BH10: 0.25-0.35m	0
0.7								BH10: 0.6-0.7m	0
1.0		Calcareous Silty CLAY: pale gray brown, cream mottling	CH	H	> PL	St	D-SM		
1.1		End BH @ 1.1m No Groundwater Encountered No Refusal							
1.5									
2.5									
3.0									
3.5									
4.0									
Hole Completion: End BH @ 1.1m									

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ~ Approximately equal to
 CPT Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VS+ Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soils
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(r/a) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
 Site: Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 11
 Location: See Site Plan
 Drilling Method: PT - Dingo

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
0.25	0.25	FILL: Reworked Clayey SILT: grey, trace organics, trace fine gravels	FILL	M	< PL	L	D	BH11: 0-0.1m	0
0.5	0.5	Silty CLAY: grey, trace fine gravels	CH	M-H	> PL	F	D	BH11: 0.25-0.35m BH11: 0.4-0.5m	0
1.0	1.0	Silty CLAY: brown, grey mottling, trace calcareous, trace fine gravels	CH	H	> PL	F-St	D-SM		
1.5		End BH @ 1.0m No Refusal No Groundwater Encountered							
2.0									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 1.0m

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ~ Approximately equal to
 DCP Dynamic Cone Penetrometer

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VSt Very Stiff
 H Hard

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soils
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Plasticity

L Low H High
 M Medium NP Non Plastic

Moisture

D Dry
 SM Slightly Moist

M

M Moist
 W Wet
 Sat Saturated

Soil Profile Log

Client: Mr Vince Belperio
 : Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 12
 Location: See Site Plan
 Drilling Method: PT - Dingo

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/Density	Moisture	Comments/Samples Taken	PID (ppm)
	0.25	FILL: Howorked Clayey SILT, fine gravels; grey, some organics	FILL	M	< PL	L	D	BH12: 0-0.1m	0
0.5	0.6	Calcareous Silty CLAY: dark grey, cream mottling	CH	H	> PL	F	SM	BH12: 0.25-0.35m	0
								BH12: 0.5-0.6m	0
1.0	1.1	Silty CLAY: pale brown, cream grey mottling, trace calcareous	CH	H	> PL	F-St	SM		
1.5		End BH @ 1.1m No Groundwater Encountered No Refusal							
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 1.1m

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ~ Approximately equal to
 CDP Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VSt Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soils
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
Site: Lot 52 Reservoir Road, Paradise
Project: Contamination Investigation

Job No: SG061444
Date: 19-12-2006
Logged by: BJS

Borehole: BH 13
Location: See Site Plan
Drilling Method: Hand Auger

Depth Scale	Horiz. Depth (m)	Soil Description: colour, Inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/Density	Moisture	Comments/Samples Taken	PID (ppm)
0.25	0.25	FILL: Reworked Clayey SILT: grey	FILL	M	< PL	L	D	BH13: 0-0.1m BH13: 0.15-0.25m	0
0.5	0.5	Calcareous Silty CLAY: pale brown cream mottling	CH	H	> PL	F	SM	BH13: 0.25-0.35m	0
1.0		End BH @ 0.5m No Refusal No Groundwater Encountered							
1.5									
2.0									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 0.5m

Abbreviations & Symbols

MC Moisture Content
PL Plastic Limit
> Greater Than
< Less Than
- Approximately equal to
DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
M Medium NP Non Plastic

Consistency*

VS Very Soft
S Soft
F Firm
St Stiff
VSI Very Stiff
H Hard

Moisture

D Dry
SM Slightly Moist

Density*

Fb Friable
VL Very Loose
L Loose
M Medium Dense
D Dense
VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soils
SW, SP, SM, SC Sandy Soils
ML, MH Silt Soils
CL, CH Clay Soils

Samples

B Bulk
D Disturbed
UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
 Site: Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 14
 Location: See Site Plan
 Drilling Method: Hand Auger

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
	0.25	FILL: Reworked Clayey SILT: grey, trace fine gravels	FILL	M	<PL	L	C	BH14: 0-0.1m BH14: 0.1-0.2m	0
0.5	0.5	Silty CLAY: grey, brown mottling, trace fine alluvial gravels	CH	H	>PL	H	SM	BH14: 0.25-0.35m	0
1.0		End BH @ 0.5m No Refusal No Groundwater Encountered							
1.5									
2.5									
3.0									
3.5									
4.0									
Hole Completion: End BH @ 0.5m									

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ≈ Approximately equal to
 D Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VS Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravolly Soil
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
Site: Lot 52 Reservoir Road, Paradise
Project: Contamination Investigation

Job No: SG061444
Date: 19-12-2006
Logged by: BJS

Borehole: BH 15
Location: See Site Plan
Drilling Method: Hand Auger

Depth Scale	Horiz. Depth (m)	Soil Description: colour, Inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
0.25	0.25	FILL: Reworked Clayey SILT: brown grey, (F-M) gravels	Fill	M	<PL	L	D	BH15: 0-0.1m	0
0.5	0.5	Calcareous Silty CLAY, (F-M) alluvial gravels: grey orange cream mottling	CH	H	>PL	F-St	SM	BH15: 0.26-0.35m BH15: 0.4-0.5m	0
1.0		End BH @ 0.5m No Refusal No Groundwater Encountered							
1.5									
2.0									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 0.5m

Abbreviations & Symbols

MC Moisture Content
PL Plastic Limit
> Greater Than
< Less Than
~ Approximately equal to
DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
M Medium NP Non Plastic

Consistency*

VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard

Moisture

D Dry
SM Slightly Moist

Density*

Fb Friable
VL Very Loose
L Loose
M Medium Dense
D Dense
VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soil
SW, SP, SM, SC Sandy Soils
ML, MH Silt Soils
CL, CH Clay Soils

Samples

B Bulk
D Disturbed
UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
 Site: Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 16
 Location: See Site Plan
 Drilling Method: Hand Auger

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	APL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
	0.25	FILL: Reworked Clayey SILT: grey, trace fine gravels	FILL	M	>PL	L	SM	BH16: 0-0.1m	0
0.5	0.5	Silty CLAY: grey, orange brown mottling, trace fine gravels	CH	H	>PL	F	SM	BH16: 0.25-0.35m	0
1.0		End BH @ 0.5m No Refusal No Groundwater Encountered							
1.5									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 0.5m

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 - Approximately equal to
 Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VSt Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soil
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
Site: Lot 52 Reservoir Road, Paradise
Project: Contamination Investigation

Job No: SG061444
Date: 19-12-2006
Logged by: BJS

Borehole: BH 17
Location: See Site Plan
Drilling Method: Hand Auger

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/Density	Moisture	Comments/Samples Taken	PID (ppm)
	0.25	FILL: Reworked Clayey SILT; dark grey, trace fine gravels	FILL	M	<PL	L	D	BH17: 0-0.1m	0
0.5	0.5	Silty CLAY: dark grey, trace calcareous	CH	H	>PL	F-St	SM	BH17: 0.25-0.35m	0
1.0		End BH @ 0.5m No Refusal No Groundwater Encountered							
1.5									
2.0									
2.5									
3.0									
3.5									
4.0									
Hole Completion: End BH @ 0.5m									

Abbreviations & Symbols

MC Moisture Content
PL Plastic Limit
> Greater Than
< Less Than
- Approximately equal to
DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
M Medium NP Non Plastic

Consistency*

VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard

Moisture

D Dry
SM Slightly Moist

Density*

Fb Friable
VL Very Loose
L Loose
M Medium Dense
D Dense
VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soil
SW, SP, SM, SC Sandy Soils
ML, MH Silt Soils
CL, CH Clay Soils

Samples

B Bulk
D Disturbed
UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
 Address: Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 18
 Location: See Site Plan
 Drilling Method: Hand Auger

Depth Scale Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
0.25	FILL: Reworked Clayey SILT: dark grey, trace gravels	FILL	M	< PL	L	D	BH18: 0-0.1m	0
0.5 0.6	Silty CLAY, trace calcareous, trace fine gravels: dark grey, cream mottling	CH	H	> PL	F	SM	BH18: 0.25-0.35m BH18: 0.4-0.6m	0
1.0	End BH @ 0.6m No Refusal No Groundwater Encountered							
1.5								
2.5								
3.0								
3.5								
4.0								
Hole Completion: End BH @ 0.6m								

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ≈ Approximately equal to
 DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VS_{st} Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravolly Soils
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
Site: Lot 52 Reservoir Road, Paradise
Project: Contamination Investigation

Job No: SG061444
Date: 19-12-2006
Logged by: BJS

Borehole: BH 19
Location: See Site Plan
Drilling Method: Hand Auger

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PtD (ppm)
0.25	0.25	FILL: Reworked Clayey SILT: grey, trace fine gravels, trace organics	FILL	M	<PL	L	SM	BH19: 0-0.1m	0
0.5	0.6	Calcareous Silty CLAY: pale grey brown, cream mottling	CH	H	>PL	F-St	M	BH19: 0.25-0.35m BH19: 0.4-0.5m	0
1.0		End BH @ 0.6m No Refusal No Groundwater Encountered							
1.5									
2.0									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 0.6m

Abbreviations & Symbols

MC Moisture Content
PL Plastic Limit
> Greater Than
< Less Than
~ Approximately equal to
DCP Dynamic Cone Penetrometer

Consistency*

VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard

Density*

Fb Friable
VL Very Loose
L Loose
M Medium Dense
D Dense
VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravolly Soils
SW, SP, SM, SC Sandy Soils
ML, MH Silt Soils
CL, CH Clay Soils

Plasticity

L Low H High
M Medium NP Non Plastic

Moisture

D Dry
SM Slightly Moist

M Moist

W Wet
Sat Saturated

Samples

B Bulk
D Disturbed
UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
 Address: Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 20
 Location: See Site Plan
 Drilling Method: Hand Auger

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/Density	Moisture	Comments/Samples Taken	PID (ppm)
0.25	0.25	FILL: Reworked Clayey SILT, trace gravels (fine): gray	FILL	M	< PL	L	D	BH20: 0-0.1m	0
0.5	0.4	Silty CLAY, trace fine gravels: grey	CH	H	> PL	F	SM-M	BH20: 0.25-0.35m	0
1.0		End BH @ 0.4m No Groundwater Encountered No Refusal							
1.5									
2.0									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 0.4m

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 - Approximately equal to
 DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VSt Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Fh Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soil
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(rla) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
Site: Lot 52 Reservoir Road, Paradise
Project: Contamination Investigation

Job No: SG061444
Date: 19-12-2006
Logged by: BJS

Borehole: BH 21
Location: See Site Plan
Drilling Method: Hand Auger

Depth Scale	Horiz. Depth (m)	Soil Description: colour, Inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/Density	Moisture	Comments/Samples Taken	PID (ppm)
	0.25	FILL: Reworked Clayey SILT, some (F-M) gravels: grey brown	FILL	M	< PL	L	D	BH21: 0-0.1m	0
0.5	0.5	Calcareous Silty CLAY: orange brown, cream mottling	CH	H	> PL	F	SM	BH21: 0.25-0.35m	0
1.0		End BH @ 0.5m No Groundwater Encountered No Refusal							
1.5									
2.0									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 0.5m

Abbreviations & Symbols

MC Moisture Content
PL Plastic Limit
> Greater Than
< Less Than
~ Approximately equal to
DCP Dynamic Cone Penetrometer

Consistency*

VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard

Density*

Fb Friable
VL Very Loose
L Loose
M Medium Dense
D Dense
VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soil
SW, SP, SM, SC Sandy Soils
ML, MH Silt Soils
CL, CH Clay Soils

Samples

B Bulk
D Disturbed
UD(dia) Undisturbed (diameter)

Plasticity

L Low H High
M Medium NP Non Plastic

Moisture

D Dry
SM Slightly Moist

M

M Moist
W Wet
Sat Saturated

Soil Profile Log

Client: Mr Vince Belperio
 Address: Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 22
 Location: See Site Plan
 Drilling Method: Hand Auger

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
	0.25	FILL: Reworked Clayey SILT: pale grey, trace (F-M) gravels	FILL	L-M	<PL	L	D	BH22: 0-0.1m	0
0.5	0.5	Silty CLAY: dark grey	CH	H	>PL	F	SM-M	BH22: 0.25-0.35m BH22: 0.4-0.5m	0
1.0		End BH @ 0.5m No Groundwater Encountered No Refusal							
1.5									
2.5									
3.0									
3.5									
4.0									
Hole Completion: End BH @ 0.5m									

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ~ Approximately equal to
 Dynamic Cone Penetrometer

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VSt Very Stiff
 H Hard

Density*

Fb Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravely Soil
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Plasticity

L Low
 M Medium
 H High
 NP Non Plastic

Moisture

D Dry
 SM Slightly Moist

M

M Moist
 W Wet
 Sat Saturated

Soil Profile Log

Client: Mr Vince Belperio
Site: Lot 52 Reservoir Road, Paradise
Project: Contamination Investigation

Job No: SG061444
Date: 19-12-2006
Logged by: BJS

Borehole: BH 23
Location: See Site Plan
Drilling Method: Hand Auger

Depth Scale	Horiz. Depth (m)	Soil Description: colour, Inclusions, organics, (origln).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
0.25	0.25	FILL: Reworked Clayey SILT, trace fine gravels: grey	FILL	M-H	>PL	L	M	BH23: 0-0.1m	0
0.5	0.5	Silty CLAY: dark grey	CH	H	>PL	F	M	BH23: 0.25-0.35m	0
1.0		End BH @ 0.5m No Groundwater Encountered No Refusal							
1.5									
2.0									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 0.5m

Abbreviations & Symbols

MC Moisture Content
PL Plastic Limit
> Greater Than
< Less Than
- Approximately equal to
DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
M Medium NP Non Plastic

Consistency*

VS Very Soft
S Soft
F Firm
SI Stiff
VSt Very Stiff
H Hard

Moisture

D Dry
SM Slightly Moist

Density*

Fb Friable
VL Very Loose
L Loose
M Medium Dense
D Dense
VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravolly Soil
SW, SP, SM, SC Sandy Soils
ML, MH Silt Soils
CL, CH Clay Soils

Samples

B Bulk
D Disturbed
UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
 Address: Lot 52 Reservoir Road, Paradise
 Project: Contamination Investigation

Job No: SG061444
 Date: 19-12-2006
 Logged by: BJS

Borehole: BH 24
 Location: See Site Plan
 Drilling Method: Hand Auger

Depth Scale Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
0.25	FILL: Reworked Clayey SILT: dark grey, trace (fine) gravels	FILL	M-H	< PL	L	SM	BH24: 0-0.1m	0
0.5	Silty CLAY: dark grey, trace gravels (fine)	CH	H	> PL	T	M	BH24: 0.25-0.35m	0
1.0	End BH @ 0.5m No Groundwater Encountered No Refusal							
1.5								
2.5								
3.0								
3.5								
4.0								
Hole Completion: End BH @ 0.5m								

Abbreviations & Symbols

MC Moisture Content
 PL Plastic Limit
 > Greater Than
 < Less Than
 ≈ Approximately equal to
 DCP Dynamic Cone Penetrometer

Plasticity

L Low H High
 M Medium NP Non Plastic

Consistency*

VS Very Soft
 S Soft
 F Firm
 St Stiff
 VSt Very Stiff
 H Hard

Moisture

D Dry
 SM Slightly Moist

Density*

Ph Friable
 VL Very Loose
 L Loose
 M Medium Dense
 D Dense
 VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soils
 SW, SP, SM, SC Sandy Soils
 ML, MH Silt Soils
 CL, CH Clay Soils

Samples

B Bulk
 D Disturbed
 UD(dia) Undisturbed (diameter)

Soil Profile Log

Client: Mr Vince Belperio
Site: Lot 52 Reservoir Road, Paradise
Project: Contamination Investigation

Job No: SG061444
Date: 19-12-2006
Logged by: BJS

Borehole: BH 25
Location: See Site Plan
Drilling Method: Hand Auger

Depth Scale	Horiz. Depth (m)	Soil Description: colour, inclusions, organics, (origin).	USCS	Plasticity	MC rel. to PL	Consistency/ Density	Moisture	Comments/Samples Taken	PID (ppm)
	0.25	FILL: Reworked Clayey SILT, trace fine gravels: dark grey	FILL	M-H	>PL	L	M	BH25: 0-0.1m	0
0.5	0.5	Silty CLAY: dark grey	CH	H	>PL	F	M	BH25: 0.25-0.35m	0
1.0		End BH @ 0.5m No Groundwater Encountered No Refusal							
1.5									
2.0									
2.5									
3.0									
3.5									
4.0									

Hole Completion: End BH @ 0.5m

Abbreviations & Symbols

MC Moisture Content
PL Plastic Limit
> Greater Than
< Less Than
~ Approximately equal to
DCP Dynamic Cone Penetrometer

Consistency*

VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard

Density*

Fb Friable
VL Very Loose
L Loose
M Medium Dense
D Dense
VD Very Dense

* Field estimate only

USCS Abbreviations

GW, GP, GM, GC Gravelly Soils
SW, SP, SM, SC Sandy Soils
ML, MH Silt Soils
CL, CH Clay Soils

Samples

B Bulk
D Disturbed
UD(dia) Undisturbed (diameter)

Plasticity

L Low H High
M Medium NP Non Plastic

Moisture

D Dry
SM Slightly Moist

M

M Moist
W Wet
Sat Saturated

APPENDIX F

METHODOLOGIES

TEST PIT SAMPLING

- The test pits were excavated using a small excavator with a 0.5 m wide bucket;
- The encountered soils were logged and sampled directly from the centre of the excavator bucket from the various fill and natural layers by an experienced environmental engineer from S&G and placed into appropriately preserved laboratory supplied jars;
- Following logging and sampling the excavations were backfilled;
- Duplicate samples were collected in snap lock bags with equal headspace to the volume of soils, and screened for volatile contaminants using a photoionisation detector (PID)
- The samples were transported in a chilled cool box to the laboratory for selected chemical analysis under chain of custody (COC) documentation;
- The locations of the test pits were measured using a hand-held GPS for future reference and GIS mapping techniques;

SOIL BORE SAMPLING

- Soil bores were drilled using a hand auger;
- The drilling equipment was decontaminated between investigation locations using potable water and and phosphate-free detergent;
- The materials encountered were logged (refer Appendices).
- Following completion of logging and sampling, the soil bores were backfilled using the spoil from each bore;
- The samples were transported in a chilled cool box to the laboratory for selected chemical analysis under chain of custody (COC) documentation;
- The locations of the soil bores were measured using a hand-held GPS for future reference and GIS mapping techniques.

APPENDIX G

LABORATORY CERTIFICATES & CHAIN OF CUSTODY DOCUMENTATION

CERTIFICATE OF ANALYSIS

Soil and Groundwater Consulting
First Floor The Parade
Norwood
South Australia 5065
Site: LOT 52 RESERVOIR RD, PARADISE

Report Number: 202436 Page 1 of 34
Order Number:
Date Received: Dec 27, 2006
Date Sampled: Dec 19, 2006
Date Reported: Jan 8, 2007
Contact: Adrian Webber

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Phenols
- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 6020 Heavy Metals
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8141A Organophosphorus Pesticides
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B - MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 9010B Cyanide
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

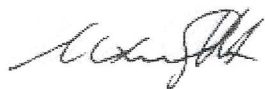
Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS

mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised



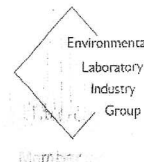
Michael Wright
NATA Signatory
Laboratory Manager

Report Number: 202436



NATA Accredited
Laboratory Number 1261

The tests, calibrations or measurements covered by this document have been performed in accordance with NATA requirements which include the requirements of ISO/IEC 17025 and are traceable to national standards of measurement. This document shall not be reproduced, except in full.



Soil and Groundwater Consulting		Client Sample ID	BH1:0-0.1M	BH2:0-0.1M	BH3:0-0.1M	BH4:0-0.1M
First Floor The Parade		Lab Number	06-De07455	06-De07456	06-De07457	06-De07458
Norwood		Matrix	Soil	Soil	Soil	Soil
South Australia 5065		Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type		LOR	Units			
Organochlorine Pesticides						
4,4'-DDD		0.05	< 0.05	0.29	< 0.05	0.14
4,4'-DDE		0.05	1.6	1.5	0.81	1.7
4,4'-DDT		0.05	0.43	0.10	0.12	0.22
a-BHC		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin		0.05	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane		0.1	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin		0.05	0.15	< 0.05	< 0.05	< 0.05
Endosulfan I		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endrin		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone		0.05	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor		0.05	< 0.05	< 0.05	< 0.05	< 0.05
Toxophene		0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloride (surr.)		1	97	140	110	140
Tetrachloro-m-xylene (surr.)		1	98	130	110	130
Organophosphorous Pesticides						
Bolstar		0.2	< 0.2	< 0.2	-	< 0.2
Chlorpyrifos		0.2	< 0.2	< 0.2	-	< 0.2
Coumaphos		0.2	< 0.2	< 0.2	-	< 0.2
Demeton-O		0.2	< 0.2	< 0.2	-	< 0.2
Diazinon		0.2	< 0.2	< 0.2	-	< 0.2
Dichlorvos		0.2	< 0.2	< 0.2	-	< 0.2

COMMENTS:

Soil and Groundwater Consulting		Client Sample ID		BH1:0-0.1M	BH2:0-0.1M	BH3:0-0.1M	BH4:0-0.1M
First Floor The Parade		Lab Number		06-De07455	06-De07456	06-De07457	06-De07458
Norwood		Matrix		Soil	Soil	Soil	Soil
South Australia 5065		Sample Date		Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type		LOR	Units				
Disulfoton		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethion		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethoprop		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenitrothion		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fensulfothion		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenthion		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Merphos		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Methyl azinphos		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Methyl parathion		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Mevinphos		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Naled		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Phorate		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ronnel		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tokuthion		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Trichloronate		0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Triphenylphosphate (surr.)		1	%	91	98	-	110
% Moisture		0.1	%	7.1	20	5.8	23
pH (1:5 Aqueous extract)		0.1	units	8.2	8.1	-	7.6
Heavy Metals (7)							
Arsenic		2	mg/kg	8.6	6.4	6.8	6.8
Cadmium		0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6
Chromium		5	mg/kg	32	30	29	29
Copper		5	mg/kg	38	31	23	31
Lead		5	mg/kg	30	21	19	22
Nickel		5	mg/kg	14	13	14	13
Zinc		5	mg/kg	60	58	46	56
Heavy Metals							
Mercury		0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Soil and Groundwater Consulting

First Floor The Parade

Norwood

South Australia 5065

Analysis Type

Total Recoverable Hydrocarbons

TRH C6-C9 Fraction by GC

TRH C10-C14 Fraction by GC

TRH C15-C28 Fraction by GC

TRH C29-C36 Fraction by GC

Monocyclic Aromatic Hydrocarbons

Benzene

Toluene

Ethylbenzene

Xylenes(ortho.meta and para)

Fluorobenzene (surr.)

Polycyclic Aromatic Hydrocarbons

Acenaphthene

Acenaphthylene

Anthracene

Benz(a)anthracene

Benzo(a)pyrene

Benzo(b)fluoranthene

Benzo(g,h,i)perylene

Benzo(k)fluoranthene

Chrysene

Dibenz(a,h)anthracene

Fluoranthene

Fluorene

Indeno(1,2,3-cd)pyrene

Naphthalene

Phenanthrene

Pyrene

Total PAH

Chrysene-d12 (surr.)

2-Fluorobiphenyl (surr.)

Client Sample ID	BH5:0-0.1M	BH6:0-0.1M	BH7:0-0.1M	BH8:0-0.1M
Lab Number	06-De07459	06-De07460	06-De07461	06-De07462
Matrix	Soil	Soil	Soil	Soil
Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
LOR	Units			
TRH C6-C9 Fraction by GC				
TRH C10-C14 Fraction by GC	20	< 20	-	-
TRH C15-C28 Fraction by GC	50	< 50	-	-
TRH C29-C36 Fraction by GC	100	< 100	-	-
TRH C29-C36 Fraction by GC	100	< 100	-	-
Monocyclic Aromatic Hydrocarbons				
Benzene	0.05	< 0.05	-	-
Toluene	0.05	< 0.05	-	-
Ethylbenzene	0.05	< 0.05	-	-
Xylenes(ortho.meta and para)	0.05	< 0.05	-	-
Fluorobenzene (surr.)	1	120	-	-
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	0.1	< 0.1	-	-
Acenaphthylene	0.1	< 0.1	-	-
Anthracene	0.1	< 0.1	-	-
Benz(a)anthracene	0.1	< 0.1	-	-
Benzo(a)pyrene	0.1	< 0.1	-	-
Benzo(b)fluoranthene	0.1	< 0.1	-	-
Benzo(g,h,i)perylene	0.1	< 0.1	-	-
Benzo(k)fluoranthene	0.1	< 0.1	-	-
Chrysene	0.1	< 0.1	-	-
Dibenz(a,h)anthracene	0.1	< 0.1	-	-
Fluoranthene	0.1	< 0.1	-	-
Fluorene	0.1	< 0.1	-	-
Indeno(1,2,3-cd)pyrene	0.1	< 0.1	-	-
Naphthalene	0.1	< 0.1	-	-
Phenanthrene	0.1	< 0.1	-	-
Pyrene	0.1	< 0.1	-	-
Total PAH	1.6	< 1.6	-	-
Chrysene-d12 (surr.)	1	54	-	-
2-Fluorobiphenyl (surr.)	1	88	-	-

COMMENTS:

Soil and Groundwater Consulting		Client Sample ID		BH5:0-0.1M	BH6:0-0.1M	BH7:0-0.1M	BH8:0-0.1M
First Floor The Parade		Lab Number		06-De07459	06-De07460	06-De07461	06-De07462
Norwood		Matrix		Soil	Soil	Soil	Soil
South Australia 5065		Sample Date		Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type		LOR	Units				
Organochlorine Pesticides							
4,4'-DDD		0.05	mg/kg	0.05	0.10	< 0.05	< 0.05
4,4'-DDE		0.05	mg/kg	2.2	1.1	1.7	2.8
4,4'-DDT		0.05	mg/kg	0.71	0.20	0.27	0.60
a-BHC		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane		0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxophene		0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloride (surr.)		1	%	140	130	120	130
Tetrachloro-m-xylene (surr.)		1	%	130	130	100	98
Chlorinated Hydrocarbons							
1,2-Dichlorobenzene		0.2	mg/kg	-	< 0.2	-	-
1,2,3-Trichlorobenzene		0.05	mg/kg	-	< 0.05	-	-
1,2,3,4-Tetrachlorobenzene		0.05	mg/kg	-	< 0.05	-	-
1,2,3,5-Tetrachlorobenzene		0.05	mg/kg	-	< 0.05	-	-

COMMENTS:

Soil and Groundwater Consulting		Client Sample ID			BH5:0-0.1M	BH6:0-0.1M	BH7:0-0.1M	BH8:0-0.1M
First Floor The Parade		Lab Number			06-De07459	06-De07460	06-De07461	06-De07462
Norwood		Matrix			Soil	Soil	Soil	Soil
South Australia 5065		Sample Date			Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type		LOR	Units					
1.2.4-Trichlorobenzene		0.05	mg/kg		-	< 0.05	-	-
1.2.4.5-Tetrachlorobenzene		0.05	mg/kg		-	< 0.05	-	-
1.3-Dichlorobenzene		0.2	mg/kg		-	< 0.2	-	-
1.3.5-Trichlorobenzene		0.05	mg/kg		-	< 0.05	-	-
1.4-Dichlorobenzene		0.2	mg/kg		-	< 0.2	-	-
Benzal chloride		0.05	mg/kg		-	< 0.05	-	-
Benzotrifluoride		0.05	mg/kg		-	< 0.05	-	-
Benzyl chloride		0.2	mg/kg		-	< 0.2	-	-
Hexachlorobenzene		0.05	mg/kg		-	< 0.05	-	-
Hexachlorobutadiene		0.05	mg/kg		-	< 0.05	-	-
Hexachlorocyclopentadiene		0.05	mg/kg		-	< 0.05	-	-
Hexachloroethane		0.05	mg/kg		-	< 0.05	-	-
Pentachlorobenzene		0.05	mg/kg		-	< 0.05	-	-
Dibutylchlorendate (surr.)		1	%		-	130	-	-
Tetrachloro-m-xylene (surr.)		1	%		-	130	-	-
Polychlorinated Biphenyls								
Aroclor-1016		0.1	mg/kg		-	< 0.1	-	-
Aroclor-1221		0.1	mg/kg		-	< 0.1	-	-
Aroclor-1232		0.1	mg/kg		-	< 0.1	-	-
Aroclor-1242		0.1	mg/kg		-	< 0.1	-	-
Aroclor-1248		0.1	mg/kg		-	< 0.1	-	-
Aroclor-1254		0.1	mg/kg		-	< 0.1	-	-
Aroclor-1260		0.1	mg/kg		-	< 0.1	-	-
Total PCB		1	mg/kg		-	< 1	-	-
Dibutylchlorendate (surr.)		1	%		-	130	-	-
Tetrachloro-m-xylene (surr.)		1	%		-	130	-	-
Phenols								
2-Chlorophenol		0.1	mg/kg		-	< 0.1	-	-
2-Methylphenol (o-Cresol)		0.1	mg/kg		-	< 0.1	-	-

COMMENTS:

Soil and Groundwater Consulting		Client Sample ID		BH5:0-0.1M	BH6:0-0.1M	BH7:0-0.1M	BH8:0-0.1M
First Floor The Parade		Lab Number		06-De07459	06-De07460	06-De07461	06-De07462
Norwood		Matrix		Soil	Soil	Soil	Soil
South Australia 5065		Sample Date		Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type		LOR	Units				
2-Nitrophenol		0.5	mg/kg	-	< 0.5	-	-
2,4-Dichlorophenol		0.1	mg/kg	-	< 0.1	-	-
2,4-Dimethylphenol		0.1	mg/kg	-	< 0.1	-	-
2,4,6-Trichlorophenol		0.1	mg/kg	-	< 0.1	-	-
2,6-Dichlorophenol		0.1	mg/kg	-	< 0.1	-	-
3&4-Methylphenol (m&p-Cresol)		0.2	mg/kg	-	< 0.2	-	-
4-Chloro-3-methylphenol		0.1	mg/kg	-	< 0.1	-	-
Pentachlorophenol		0.5	mg/kg	-	< 0.5	-	-
Phenol		0.1	mg/kg	-	< 0.1	-	-
Phenol-d6 (surr.)		1	%	-	76	-	-
% Moisture		0.1	%	22	4.1	17	20
Cyanide (total)		5	mg/kg	-	< 5		
Heavy Metals (7)							
Arsenic		2	mg/kg	7.1	-	8.4	7.4
Cadmium		0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chromium		5	mg/kg	21	-	29	30
Copper		5	mg/kg	21	-	22	29
Lead		5	mg/kg	23	-	18	21
Nickel		5	mg/kg	9.9	-	12	13
Zinc		5	mg/kg	56	-	46	58
Heavy Metals							
Antimony		10	mg/kg	-	< 10	-	-
Arsenic		2	mg/kg	-	6.7	-	-
Beryllium		2	mg/kg	-	< 2	-	-
Cadmium		0.5	mg/kg	-	< 0.5	-	-
Chromium		5	mg/kg	-	27	-	-
Cobalt		5	mg/kg	-	6.0	-	-
Copper		5	mg/kg	-	24	-	-

Soil and Groundwater Consulting		Client Sample ID		BH5:0-0.1M	BH6:0-0.1M	BH7:0-0.1M	BH8:0-0.1M
First Floor The Parade Norwood South Australia 5065	Analysis Type	Lab Number	06-De07459	06-De07460	06-De07461	06-De07462	
	Lead	Matrix	Soil	Soil	Soil	Soil	
	Mercury	Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	
	Molybdenum	LOR					
	Nickel	5	mg/kg	22	-	-	-
	Selenium	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
	Tin	10	mg/kg	< 10	< 10	-	-
	Zinc	5	mg/kg	11	-	-	-
		2	mg/kg	< 2	-	-	-
		10	mg/kg	< 10	-	-	-
		5	mg/kg	42	-	-	-

Soil and Groundwater Consulting

Client Sample ID		BH9:0-0.1M	BH10:0-0.1M	BH11:0-0.1M	BH12:0-0.1M
First Floor The Parade Norwood South Australia 5065	Lab Number	06-De07463	06-De07464	06-De07465	06-De07466
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
	LOR				
Analysis Type		Units			
Organochlorine Pesticides					
4,4'-DDD		mg/kg	< 0.05	< 0.05	< 0.05
4,4'-DDE		mg/kg	2.5	0.65	2.0
4,4'-DDT		mg/kg	0.58	0.05	0.48
a-BHC		mg/kg	< 0.05	< 0.05	< 0.05
Aldrin		mg/kg	< 0.05	< 0.05	< 0.05
b-BHC		mg/kg	< 0.05	< 0.05	< 0.05
Chlordane		mg/kg	< 0.1	< 0.1	< 0.1
d-BHC		mg/kg	< 0.05	< 0.05	< 0.05
Dieldrin		mg/kg	< 0.05	< 0.1	< 0.05
Endosulfan I		mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan II		mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan sulphate		mg/kg	< 0.05	< 0.05	< 0.05
Endrin		mg/kg	< 0.05	< 0.05	< 0.05
Endrin aldehyde		mg/kg	< 0.05	< 0.05	< 0.05
Endrin ketone		mg/kg	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)		mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor		mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor epoxide		mg/kg	< 0.05	< 0.05	< 0.05
Hexachlorobenzene		mg/kg	< 0.05	< 0.05	< 0.05
Methoxychlor		mg/kg	< 0.05	< 0.05	< 0.05
Toxophene		mg/kg	< 0.1	< 0.1	< 0.1
Dibutylchloride (surr.)		%	150	95	130
Tetrachloro-m-xylene (surr.)		%	130	76	110
Organophosphorous Pesticides					
Bolstar		mg/kg	-	< 0.2	< 0.2
Chlorpyrifos		mg/kg	-	< 0.2	< 0.2
Coumaphos		mg/kg	-	< 0.2	< 0.2
Demeton-O		mg/kg	-	< 0.2	< 0.2
Diazinon		mg/kg	-	< 0.2	< 0.2
Dichlorvos		mg/kg	-	< 0.2	< 0.2

COMMENTS:

Soil and Groundwater Consulting		Client Sample ID	BH9:0-0.1M	BH10:0-0.1M	BH11:0-0.1M	BH12:0-0.1M
First Floor The Parade		Lab Number	06-De07463	06-De07464	06-De07465	06-De07466
Norwood		Matrix	Soil	Soil	Soil	Soil
South Australia 5065		Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type		LOR	Units			
Disulfoton		0.2	mg/kg	-	< 0.2	< 0.2
Ethion		0.2	mg/kg	-	< 0.2	< 0.2
Ethoprop		0.2	mg/kg	-	< 0.2	< 0.2
Fenitrothion		0.2	mg/kg	-	< 0.2	< 0.2
Fensulfothion		0.2	mg/kg	-	< 0.2	< 0.2
Fenthion		0.2	mg/kg	-	< 0.2	< 0.2
Merphos		0.2	mg/kg	-	< 0.2	< 0.2
Methyl azinphos		0.2	mg/kg	-	< 0.2	< 0.2
Methyl parathion		0.2	mg/kg	-	< 0.2	< 0.2
Mevinphos		0.2	mg/kg	-	< 0.2	< 0.2
Naled		0.2	mg/kg	-	< 0.2	< 0.2
Phorate		0.2	mg/kg	-	< 0.2	< 0.2
Ronnell		0.2	mg/kg	-	< 0.2	< 0.2
Tokuthion		0.2	mg/kg	-	< 0.2	< 0.2
Trichloronate		0.2	mg/kg	-	< 0.2	< 0.2
Triphenylphosphate (surr.)		1	%	-	98	< 0.2
						110
% Moisture		0.1	%	19	11	
pH (1:5 Aqueous extract)		0.1	units	-	8.3	14
Heavy Metals (7)						8.3
Arsenic		2	mg/kg	7.8	5.5	7.4
Cadmium		0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chromium		5	mg/kg	35	25	23
Copper		5	mg/kg	33	18	22
Lead		5	mg/kg	26	16	23
Nickel		5	mg/kg	14	10	11
Zinc		5	mg/kg	70	42	45
Heavy Metals						
Mercury		0.1	mg/kg	< 0.1	< 0.1	< 0.1

COMMENTS:

Soil and Groundwater Consulting

Soil and Groundwater Consulting											
First Floor The Parade Norwood South Australia 5065	Client Sample ID			Units	BH13:0-0.1M	BH14:0-0.1M	BH15:0-0.1M	BH16:0-0.1M			
	Lab Number		06-De07467		06-De07468	06-De07469	06-De07470				
	Matrix		Soil		Soil	Soil	Soil				
	Sample Date		Dec 19, 2006		Dec 19, 2006	Dec 19, 2006	Dec 19, 2006				
Analysis Type											
Organochlorine Pesticides											
4,4'-DDD	0.05		mg/kg	0.18	0.28	< 0.05	0.26				
4,4'-DDE	0.05		mg/kg	1.3	2.3	1.2	2.1				
4,4'-DDT	0.05		mg/kg	0.07	0.24	0.26	0.25				
a-BHC	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Aldrin	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
b-BHC	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Chlordane	0.1		mg/kg	< 0.1	< 0.1	< 0.1	< 0.1				
d-BHC	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Dieldrin	0.05		mg/kg	0.12	0.30	< 0.05	< 0.05				
Endosulfan I	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Endosulfan II	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Endosulfan sulphate	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Endrin	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Endrin aldehyde	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Endrin ketone	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
g-BHC (Lindane)	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Heptachlor	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Heptachlor epoxide	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Hexachlorobenzene	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Methoxychlor	0.05		mg/kg	< 0.05	< 0.05	< 0.05	< 0.05				
Toxophene	0.1		mg/kg	< 0.1	< 0.1	< 0.1	< 0.1				
Dibutylchlorendate (surr.)	1		%	100	130	120	120				
Tetrachloro-m-xylene (surr.)	1		%	100	120	82	110				
Organophosphorous Pesticides											
Bolstar	0.2		mg/kg	-	-	< 0.2	-				
Chlorpyrifos	0.2		mg/kg	-	-	< 0.2	-				
Coumaphos	0.2		mg/kg	-	-	< 0.2	-				
Demeton-O	0.2		mg/kg	-	-	< 0.2	-				
Diazinon	0.2		mg/kg	-	-	< 0.2	-				
Dichlorvos	0.2		mg/kg	-	-	< 0.2	-				

COMMENTS

Soil and Groundwater Consulting		Client Sample ID			BH13:0-0.1M	BH14:0-0.1M	BH15:0-0.1M	BH16:0-0.1M
First Floor The Parade		Lab Number			06-De07467	06-De07468	06-De07469	06-De07470
Norwood		Matrix			Soil	Soil	Soil	Soil
South Australia 5065		Sample Date			Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type		LOR	Units					
Disulfoton		0.2	mg/kg		-	-	< 0.2	-
Ethion		0.2	mg/kg		-	-	< 0.2	-
Ethoprop		0.2	mg/kg		-	-	< 0.2	-
Fenitrothion		0.2	mg/kg		-	-	< 0.2	-
Fensulfothion		0.2	mg/kg		-	-	< 0.2	-
Fenthion		0.2	mg/kg		-	-	< 0.2	-
Merphos		0.2	mg/kg		-	-	< 0.2	-
Methyl azinphos		0.2	mg/kg		-	-	< 0.2	-
Methyl parathion		0.2	mg/kg		-	-	< 0.2	-
Mevinphos		0.2	mg/kg		-	-	< 0.2	-
Naled		0.2	mg/kg		-	-	< 0.2	-
Phorate		0.2	mg/kg		-	-	< 0.2	-
Ronnol		0.2	mg/kg		-	-	< 0.2	-
Tokuthion		0.2	mg/kg		-	-	< 0.2	-
Trichloronate		0.2	mg/kg		-	-	< 0.2	-
Triphenylphosphate (surr.)		1	%		-	-	100	-
% Moisture		0.1	%		22	20	14	19
pH (1:5 Aqueous extract)		0.1	units		-	-	8.1	
Heavy Metals (7)								
Arsenic		2	mg/kg		6.5	7.4	6.9	7.4
Cadmium		0.5	mg/kg		< 0.5	0.6	0.6	< 0.5
Chromium		5	mg/kg		17	26	29	26
Copper		5	mg/kg		18	34	36	30
Lead		5	mg/kg		27	23	26	25
Nickel		5	mg/kg		9.0	12	13	12
Zinc		5	mg/kg		40	64	56	49
Heavy Metals								
Mercury		0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1

COMMENTS:

Soil and Groundwater Consulting

Client Sample ID		BH17:0-0.1M	BH18:0-0.1M	BH19:0-0.1M	BH20:0-0.1M
First Floor The Parade Norwood South Australia 5065	Lab Number	06-De07471	06-De07472	06-De07473	06-De07474
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
	LOR				
Analysis Type		Units			
Organochlorine Pesticides					
4,4'-DDD		mg/kg	0.06	0.09	0.11
4,4'-DDE		mg/kg	1.6	0.23	1.3
4,4'-DDT		mg/kg	0.29	0.17	0.20
a-BHC		mg/kg	< 0.05	< 0.05	< 0.05
Aldrin		mg/kg	< 0.05	< 0.05	< 0.05
b-BHC		mg/kg	< 0.05	< 0.05	< 0.05
Chlordane		mg/kg	< 0.1	< 0.1	< 0.1
d-BHC		mg/kg	< 0.05	< 0.05	< 0.05
Dieldrin		mg/kg	0.10	< 0.05	< 0.1
Endosulfan I		mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan II		mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan sulphate		mg/kg	< 0.05	< 0.05	< 0.05
Endrin		mg/kg	< 0.05	< 0.05	< 0.05
Endrin aldehyde		mg/kg	< 0.05	< 0.05	< 0.05
Endrin ketone		mg/kg	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)		mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor		mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor epoxide		mg/kg	< 0.05	< 0.05	< 0.05
Hexachlorobenzene		mg/kg	< 0.05	< 0.05	< 0.05
Methoxychlor		mg/kg	< 0.05	< 0.05	< 0.05
Toxophene		mg/kg	< 0.1	< 0.1	< 0.1
Dibutylchlorodate (surr.)		%	130	110	110
Tetrachloro-m-xylene (surr.)		%	90	81	110
Organophosphorous Pesticides					
Bolstar		mg/kg	-	< 0.2	-
Chlorpyrifos		mg/kg	-	< 0.2	-
Coumaphos		mg/kg	-	< 0.2	-
Demeton-O		mg/kg	-	< 0.2	-
Diazinon		mg/kg	-	< 0.2	-
Dichlorvos		mg/kg	-	< 0.2	-

COMMENTS:

Soil and Groundwater Consulting		Client Sample ID		BH17:0-0.1M		BH18:0-0.1M		BH19:0-0.1M		BH20:0-0.1M	
First Floor The Parade Norwood South Australia 5065	Analysis Type	Lab Number		06-De07471		06-De07472		06-De07473		06-De07474	
		Matrix		Soil		Soil		Soil		Soil	
		Sample Date		Dec 19, 2006		Dec 19, 2006		Dec 19, 2006		Dec 19, 2006	
		LOR									
	Disulfoton	0.2		-		< 0.2		< 0.2		-	
	Ethion	0.2		-		< 0.2		< 0.2		-	
	Ethoprop	0.2		-		< 0.2		< 0.2		-	
	Fenitrothion	0.2		-		< 0.2		< 0.2		-	
	Fensulfothion	0.2		-		< 0.2		< 0.2		-	
	Fenthion	0.2		-		< 0.2		< 0.2		-	
	Merphos	0.2		-		< 0.2		< 0.2		-	
	Methyl azinphos	0.2		-		< 0.2		< 0.2		-	
	Methyl parathion	0.2		-		< 0.2		< 0.2		-	
	Mevinphos	0.2		-		< 0.2		< 0.2		-	
	Naled	0.2		-		< 0.2		< 0.2		-	
	Phorate	0.2		-		< 0.2		< 0.2		-	
	Ronnel	0.2		-		< 0.2		< 0.2		-	
	Tokuthion	0.2		-		< 0.2		< 0.2		-	
	Trichloronate	0.2		-		< 0.2		< 0.2		-	
	Triphenylphosphate (surr.)	1		-		96		99		-	
	% Moisture	0.1		17		16		24		2.4	
	pH (1:5 Aqueous extract)	0.1		-		8.2		8.1			
	Heavy Metals (7)										
	Arsenic	2		7.6		9.2		8.4		7.0	
	Cadmium	0.5		0.5		0.6		0.7		< 0.5	
	Chromium	5		31		43		34		25	
	Copper	5		31		37		37		29	
	Lead	5		24		30		34		20	
	Nickel	5		14		17		14		10	
	Zinc	5		64		64		70		52	
	Heavy Metals										
	Mercury	0.1		< 0.1		< 0.1		< 0.1		< 0.1	

COMMENTS:

Soil and Groundwater Consulting

Client Sample ID		BH21:0-0.1M	BH22:0-0.1M	BH23:0-0.1M	BH24:0-0.1M
First Floor The Parade		06-De07475	06-De07476	06-De07477	06-De07478
Norwood		Soil	Soil	Soil	Soil
South Australia 5065		Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type		Units			
Total Recoverable Hydrocarbons					
TRH C6-C9 Fraction by GC		mg/kg			
TRH C10-C14 Fraction by GC		mg/kg			
TRH C15-C28 Fraction by GC		mg/kg			
TRH C29-C36 Fraction by GC		mg/kg			
Monocyclic Aromatic Hydrocarbons					
Benzene		mg/kg			
Toluene		mg/kg			
Ethylbenzene		mg/kg			
Xylenes(ortho meta and para)		mg/kg			
Fluorobenzene (surr.)		mg/kg			
Polycyclic Aromatic Hydrocarbons		%			
Acenaphthene		mg/kg			
Acenaphthylene		mg/kg			
Anthracene		mg/kg			
Benz(a)anthracene		mg/kg			
Benzo(a)pyrene		mg/kg			
Benzo(b)fluoranthene		mg/kg			
Benzo(g,h,i)perylene		mg/kg			
Benzo(k)fluoranthene		mg/kg			
Chrysene		mg/kg			
Dibenz(a,h)anthracene		mg/kg			
Fluoranthene		mg/kg			
Fluorene		mg/kg			
Indeno(1,2,3-cd)pyrene		mg/kg			
Naphthalene		mg/kg			
Phenanthrene		mg/kg			
Pyrene		mg/kg			
Total PAH		mg/kg			
Chrysene-d12 (surr.)		%			
2-Fluorobiphenyl (surr.)		%			

COMMENTS:

Soil and Groundwater Consulting		Client Sample ID		BH21:0-0.1M	BH22:0-0.1M	BH23:0-0.1M	BH24:0-0.1M
First Floor The Parade		Lab Number		06-De07475	06-De07476	06-De07477	06-De07478
Norwood		Matrix		Soil	Soil	Soil	Soil
South Australia 5065		Sample Date		Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type		LOR	Units				
Organochlorine Pesticides							
4,4'-DDD		0.05	mg/kg	< 0.05	0.08	< 0.05	< 0.05
4,4'-DDE		0.05	mg/kg	0.40	1.2	1.8	1.3
4,4'-DDT		0.05	mg/kg	0.07	0.30	0.41	0.28
a-BHC		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane		0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor		0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxophene		0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloride (surr.)		1	%	110	110	120	99
Tetrachloro-m-xylene (surr.)		1	%	110	120	120	100
Chlorinated Hydrocarbons							
1,2-Dichlorobenzene		0.2	mg/kg	-	< 0.2	-	-
1,2,3-Trichlorobenzene		0.05	mg/kg	-	< 0.05	-	-
1,2,3,4-Tetrachlorobenzene		0.05	mg/kg	-	< 0.05	-	-
1,2,3,5-Tetrachlorobenzene		0.05	mg/kg	-	< 0.05	-	-

COMMENTS:

Soil and Groundwater Consulting				Client Sample ID		BH21:0-0.1M	BH22:0-0.1M	BH23:0-0.1M	BH24:0-0.1M
First Floor The Parade				Lab Number		06-De07475	06-De07476	06-De07477	06-De07478
Norwood				Matrix		Soil	Soil	Soil	Soil
South Australia 5065				Sample Date		Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type				LOR	Units				
1.2.4-Trichlorobenzene				0.05	mg/kg	-	< 0.05	-	-
1.2.4.5-Tetrachlorobenzene				0.05	mg/kg	-	< 0.05	-	-
1.3-Dichlorobenzene				0.2	mg/kg	-	< 0.2	-	-
1.3.5-Trichlorobenzene				0.05	mg/kg	-	< 0.05	-	-
1.4-Dichlorobenzene				0.2	mg/kg	-	< 0.2	-	-
Benzal chloride				0.05	mg/kg	-	< 0.05	-	-
Benzotrithchloride				0.05	mg/kg	-	< 0.05	-	-
Benzyl chloride				0.2	mg/kg	-	< 0.2	-	-
Hexachlorobenzene				0.05	mg/kg	-	< 0.05	-	-
Hexachlorobutadiene				0.05	mg/kg	-	< 0.05	-	-
Hexachlorocyclopentadiene				0.05	mg/kg	-	< 0.05	-	-
Hexachloroethane				0.05	mg/kg	-	< 0.05	-	-
Pentachlorobenzene				0.05	mg/kg	-	< 0.05	-	-
Dibutylchlorendate (surr.)				1	%	-	110	-	-
Tetrachloro-m-xylene (surr.)				1	%	-	120	-	-
Organophosphorous Pesticides									
Bolstar				0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos				0.2	mg/kg	< 0.2	-	-	-
Coumaphos				0.2	mg/kg	< 0.2	-	-	-
Demeton-O				0.2	mg/kg	< 0.2	-	-	-
Diazinon				0.2	mg/kg	< 0.2	-	-	-
Dichlorvos				0.2	mg/kg	< 0.2	-	-	-
Disulfoton				0.2	mg/kg	< 0.2	-	-	-
Ethion				0.2	mg/kg	< 0.2	-	-	-
Ethoprop				0.2	mg/kg	< 0.2	-	-	-
Fenitrothion				0.2	mg/kg	< 0.2	-	-	-
Fensulfothion				0.2	mg/kg	< 0.2	-	-	-
Fenthion				0.2	mg/kg	< 0.2	-	-	-
Merphos				0.2	mg/kg	< 0.2	-	-	-

COMMENTS:

Soil and Groundwater Consulting		Client Sample ID		BH21:0-0.1M	BH22:0-0.1M	BH23:0-0.1M	BH24:0-0.1M
First Floor The Parade		Lab Number		06-De07475	06-De07476	06-De07477	06-De07478
Norwood		Matrix		Soil	Soil	Soil	Soil
South Australia 5065		Sample Date		Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type		LOR	Units				
Methyl azinphos		0.2	mg/kg	< 0.2	-	-	-
Methyl parathion		0.2	mg/kg	< 0.2	-	-	-
Mevinphos		0.2	mg/kg	< 0.2	-	-	-
Naled		0.2	mg/kg	< 0.2	-	-	-
Phorate		0.2	mg/kg	< 0.2	-	-	-
Ronnell		0.2	mg/kg	< 0.2	-	-	-
Tokuthion		0.2	mg/kg	< 0.2	-	-	-
Trichloronate		0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)		1	%	130	-	-	-
Polychlorinated Biphenyls							
Aroclor-1016		0.1	mg/kg	-	< 0.1	-	-
Aroclor-1221		0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232		0.1	mg/kg	-	< 0.1	-	-
Aroclor-1242		0.1	mg/kg	-	< 0.1	-	-
Aroclor-1248		0.1	mg/kg	-	< 0.1	-	-
Aroclor-1254		0.1	mg/kg	-	< 0.1	-	-
Aroclor-1260		0.1	mg/kg	-	< 0.1	-	-
Total PCB		1	mg/kg	-	< 1	-	-
Dibutylchloroendate (surr.)		1	%	-	110	-	-
Tetrachloro-m-xylene (surr.)		1	%	-	120	-	-
Phenols							
2-Chlorophenol		0.1	mg/kg	-	< 0.1	-	-
2-Methylphenol (o-Cresol)		0.1	mg/kg	-	< 0.1	-	-
2-Nitrophenol		0.5	mg/kg	-	< 0.5	-	-
2,4-Dichlorophenol		0.1	mg/kg	-	< 0.1	-	-
2,4-Dimethylphenol		0.1	mg/kg	-	< 0.1	-	-
2,4,6-Trichlorophenol		0.1	mg/kg	-	< 0.1	-	-
2,6-Dichlorophenol		0.1	mg/kg	-	< 0.1	-	-
3&4-Methylphenol (m&p-Cresol)		0.2	mg/kg	-	< 0.2	-	-

COMMENTS:

Soil and Groundwater Consulting		Client Sample ID		BH21:0-0.1M	BH22:0-0.1M	BH23:0-0.1M	BH24:0-0.1M
First Floor The Parade Norwood South Australia 5065	Analysis Type	LOR	Units				
	4-Chloro-3-methylphenol	0.1	mg/kg	-	< 0.1	-	-
	Pentachlorophenol	0.5	mg/kg	-	< 0.5	-	-
	Phenol	0.1	mg/kg	-	< 0.1	-	-
	Phenol-d6 (surr.)	1	%	-	67	-	-
	% Moisture	0.1	%	2.3	1.7	24	18
	Cyanide (total)	5	mg/kg	-	< 5	-	-
	pH (1:5 Aqueous extract)	0.1	units	8.0			
	Heavy Metals (7)						
	Arsenic	2	mg/kg	5.2	-	7.8	7.9
	Cadmium	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
	Chromium	5	mg/kg	18	-	29	27
	Copper	5	mg/kg	16	-	33	32
	Lead	5	mg/kg	13	-	25	30
	Nickel	5	mg/kg	8.9	-	13	13
	Zinc	5	mg/kg	32	-	57	63
	Heavy Metals						
	Antimony	10	mg/kg	-	< 10	-	-
	Arsenic	2	mg/kg	-	8.1	-	-
	Beryllium	2	mg/kg	-	< 2	-	-
	Cadmium	0.5	mg/kg	-	< 0.5	-	-
	Chromium	5	mg/kg	-	25	-	-
	Cobalt	5	mg/kg	-	6.4	-	-
	Copper	5	mg/kg	-	28	-	-
	Lead	5	mg/kg	-	19	-	-
	Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
	Molybdenum	10	mg/kg	-	< 10	-	-
	Nickel	5	mg/kg	-	11	-	-
	Selenium	2	mg/kg	-	< 2	-	-

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Soil and Groundwater Consulting		Client Sample ID		BH21:0-0.1M	BH22:0-0.1M	BH23:0-0.1M	BH24:0-0.1M
First Floor The Parade Norwood South Australia 5065	Analysis Type	LOR	Units	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
	Tin	10	mg/kg	-	< 10	-	-
	Zinc	5	mg/kg	-	53	-	-

Soil and Groundwater Consulting

Client Sample ID		BH25:0-0.1M	DUP 1	DUP 3	RINSATE 1
Lab Number		06-De07479	06-De07480	06-De07481	06-De07482
Matrix		Soil	Soil	Soil	Water
Sample Date		Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
LOR		Units			
Organochlorine Pesticides					
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
4,4'-DDE	0.05	mg/kg	2.9	0.31	< 0.0001
4,4'-DDT	0.05	mg/kg	0.71	0.39	< 0.0001
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.0005
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Dieldrin	0.05	mg/kg	< 0.05	0.18	< 0.0001
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.0001
Toxophene	0.1	mg/kg	< 0.1	< 0.1	< 0.0005
Dibutylchlorodate (surr.)	1	%	120	120	100
Tetrachloro-m-xylene (surr.)	1	%	120	97	89
Organophosphorous Pesticides					
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-
Coumaphos	0.2	mg/kg	< 0.2	< 0.2	-
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-

COMMENTS:

Soil and Groundwater Consulting						
First Floor The Parade Norwood South Australia 5065	Client Sample ID		BH25:0-0.1M	DUP 1	DUP 3	RINSATE 1
	Lab Number		06-De07479	06-De07480	06-De07481	06-De07482
	Matrix		Soil	Soil	Soil	Water
	Sample Date		Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type	LOR	Units				
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Methyl azinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ronnell	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Triphenylphosphate (surr.)	1	%	100	96	90	-
% Moisture	0.1	%	22	7.0	1.9	-
pH (1:5 Aqueous extract)	0.1	units	8.4	8.2	7.9	
Heavy Metals (7)						
Arsenic	2	mg/kg	6.7	8.1	4.9	< 0.001
Cadmium	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.0002
Chromium	5	mg/kg	28	26	19	< 0.001
Copper	5	mg/kg	36	31	17	< 0.001
Lead	5	mg/kg	26	26	12	< 0.001
Nickel	5	mg/kg	12	11	8.6	< 0.001
Zinc	5	mg/kg	63	48	32	< 0.001
Heavy Metals						
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.0001

COMMENTS:

Soil and Groundwater Consulting		Client Sample ID	BH1:0-0.1M	BH1:0-0.1M	BH1:0-0.1M	BH1:0-0.1M
First Floor The Parade		Lab Number	06-De07455	06-De07455	06-De07455	06-De07455
Norwood		QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
South Australia 5065		Matrix	Soil	Soil	Soil	Soil
		Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type		Units			% RPD	% Recovery
Aroclor-1016			-	-	<1	-
Aroclor-1221			-	-	<1	-
Aroclor-1232			-	-	<1	-
Aroclor-1242			-	-	<1	-
Aroclor-1248			-	-	<1	-
Aroclor-1254			-	-	<1	-
Aroclor-1260			-	-	<1	-
pH (1:5 Aqueous extract)			8.2	8.1	-	-
Total PCB			-	-	<1	-
Organochlorine Pesticides						
4,4'-DDD			< 0.05	< 0.05	<1	96
4,4'-DDE			1.6	1.7	10	-
4,4'-DDT			0.43	0.46	7.8	-
a-BHC			< 0.05	< 0.05	<1	116
Aldrin			< 0.05	< 0.05	<1	109
b-BHC			< 0.05	< 0.05	<1	92
Chlordane			< 0.1	< 0.1	<1	-
d-BHC			< 0.05	< 0.05	<1	114
Dieldrin			0.15	0.13	12	-
Endosulfan I			< 0.05	< 0.05	<1	113
Endosulfan II			< 0.05	< 0.05	<1	114
Endosulfan sulphate			< 0.05	< 0.05	<1	119
Endrin			< 0.05	< 0.05	<1	94
Endrin aldehyde			< 0.05	< 0.05	<1	120
Endrin ketone			< 0.05	< 0.05	<1	119
g-BHC (Lindane)			< 0.05	< 0.05	<1	118
Heptachlor			< 0.05	< 0.05	<1	97
Heptachlor epoxide			< 0.05	< 0.05	<1	115
Hexachlorobenzene			< 0.05	< 0.05	<1	121

COMMENTS:

Soil and Groundwater Consulting First Floor The Parade Norwood South Australia 5065		Client Sample Lab Number	BH1:0-0.1M 06-De07455	BH1:0-0.1M 06-De07455	BH1:0-0.1M 06-De07455	BH1:0-0.1M 06-De07455	BH1:0-0.1M 06-De07455
		QA Description		Duplicate		Duplicate % RPD	Spike % Recovery
		Matrix	Soil	Soil	Soil	Soil	Soil
		Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
		Units				% RPD	% Recovery
Analysis Type							
Organochlorine Pesticides							
Methoxychlor			< 0.05	< 0.05	< 0.05	< 1	122
Toxophene			< 0.1	< 0.1	< 0.1	< 1	-
Dibutylchloride (surr.)			97	99	99	-	-
Tetrachloro-m-xylene (surr.)			98	110	110	-	-
Organophosphorous Pesticides							
Bolstar			< 0.2	< 0.2	< 0.2	< 1	-
Chlorpyrifos			< 0.2	< 0.2	< 0.2	< 1	-
Coumaphos			< 0.2	< 0.2	< 0.2	< 1	-
Demeton-O			< 0.2	< 0.2	< 0.2	< 1	-
Diazinon			< 0.2	< 0.2	< 0.2	< 1	110
Dichlorvos			< 0.2	< 0.2	< 0.2	< 1	-
Disulfoton			< 0.2	< 0.2	< 0.2	< 1	-
Ethion			< 0.2	< 0.2	< 0.2	< 1	96
Ethoprop			< 0.2	< 0.2	< 0.2	< 1	-
Fenitrothion			< 0.2	< 0.2	< 0.2	< 1	103
Fensulfothion			< 0.2	< 0.2	< 0.2	< 1	-
Fenthion			< 0.2	< 0.2	< 0.2	< 1	-
Merphos			< 0.2	< 0.2	< 0.2	< 1	-
Methyl azinphos			< 0.2	< 0.2	< 0.2	< 1	-
Methyl parathion			< 0.2	< 0.2	< 0.2	< 1	106
Mevinphos			< 0.2	< 0.2	< 0.2	< 1	88
Naled			< 0.2	< 0.2	< 0.2	< 1	-
Phorate			< 0.2	< 0.2	< 0.2	< 1	-
Ronnol			< 0.2	< 0.2	< 0.2	< 1	-
Tokuthion			< 0.2	< 0.2	< 0.2	< 1	-
Trichloronate			< 0.2	< 0.2	< 0.2	< 1	-
Triphenylphosphate (surr.)			< 0.2	< 0.2	< 0.2	< 1	-
Heavy Metals (7)			91	94	94	-	-

COMMENTS:

Soil and Groundwater Consulting First Floor The Parade Norwood South Australia 5065	Client Sample	BH1:0-0.1M	BH1:0-0.1M	BH1:0-0.1M	BH1:0-0.1M	Method blank
	Lab Number	06-De07455	06-De07455	06-De07455	06-De07455	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Heavy Metals (7)						
Arsenic		8.6	9.5	9.0	83	-
Cadmium		< 0.5	0.6	18	87	-
Chromium		32	32	1.4	77	-
Copper		38	37	2.2	92	-
Lead		30	32	6.5	78	-
Nickel		14	14	4.4	75	-
Zinc		60	60	0.90	76	-
Heavy Metals						
Antimony		-	-	<1	-	< 0.5
Beryllium		-	-	4.1	85	< 0.02
Cobalt		-	-	0.40	76	< 0.05
Mercury		-	-	<1	81	< 0.005
Molybdenum		-	-	<1	76	< 0.5
Selenium		-	-	<1	-	< 0.02
Tin		-	-	<1	86	< 0.5

Soil and Groundwater Consulting		Client Sample ID	BH6:0-0.1M	BH6:0-0.1M	BH6:0-0.1M	BH6:0-0.1M	Method blank
First Floor The Parade		Lab Number	06-De07460	06-De07460	06-De07460	06-De07460	Batch
Norwood		QA Description			Duplicate % RPD	Spike % Recovery	
South Australia 5065		Matrix	Soil	Soil	Soil	Soil	Soil
Analysis Type		Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Cyanide (total)		Units			% RPD	% Recovery	mg/L
Total Recoverable Hydrocarbons			-	-	<1	115	< 0.5
TRH C6-C9 Fraction by GC			< 20	< 20	<1	99	-
TRH C10-C14 Fraction by GC			-	-	<1	129	< 0.05
TRH C15-C28 Fraction by GC			-	-	<1	-	< 0.1
TRH C29-C36 Fraction by GC			-	-	<1	-	< 0.1
Monocyclic Aromatic Hydrocarbons							
Benzene			< 0.05	< 0.05	<1	111	-
Toluene			< 0.05	< 0.05	<1	110	-
Ethylbenzene			< 0.05	< 0.05	<1	116	-
Xylenes(ortho.meta and para)			< 0.05	< 0.05	<1	123	-
Fluorobenzene (surr.)			120	99	-	111	-
Polycyclic Aromatic Hydrocarbons							
Acenaphthene			-	-	<1	95	< 0.001
Acenaphthylene			-	-	<1	90	< 0.001
Anthracene			-	-	<1	81	< 0.001
Benz(a)anthracene			-	-	<1	111	< 0.001
Benzo(a)pyrene			-	-	<1	91	< 0.001
Benzo(b)fluoranthene			-	-	<1	100	< 0.001
Benzo(g,h,i)perylene			-	-	<1	86	< 0.001
Benzo(k)fluoranthene			-	-	<1	123	< 0.001
Chrysene			-	-	<1	97	< 0.001
Dibenz(a,h)anthracene			-	-	<1	71	< 0.001
Fluoranthene			-	-	<1	111	< 0.001
Fluorene			-	-	<1	90	< 0.001
Indeno(1,2,3-cd)pyrene			-	-	<1	78	< 0.001
Naphthalene			-	-	<1	101	< 0.001
Phenanthrene			-	-	<1	90	< 0.001
Pyrene			-	-	<1	111	< 0.001

COMMENTS:

Soil and Groundwater Consulting First Floor The Parade Norwood South Australia 5065	Client Sample	RPD	BH6:0-0.1M	Method blank
	Lab Number	BATCH	06-De07460	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type	Units		% Recovery	mg/L
Polycyclic Aromatic Hydrocarbons				
Total PAH		<1	-	< 0.016
Chrysene-d12 (surr.)		-	54	54
2-Fluorobiphenyl (surr.)		-	100	82
Chlorinated Hydrocarbons				
1,2-Dichlorobenzene		<1	118	< 0.02
1,2,3-Trichlorobenzene		<1	100	< 0.005
1,2,3,4-Tetrachlorobenzene		<1	77	< 0.005
1,2,3,5-Tetrachlorobenzene		<1	-	< 0.005
1,2,4-Trichlorobenzene		<1	-	< 0.005
1,2,4,5-Tetrachlorobenzene		<1	94	< 0.005
1,3-Dichlorobenzene		<1	91	< 0.02
1,3,5-Trichlorobenzene		<1	98	< 0.005
1,4-Dichlorobenzene		<1	122	< 0.02
Benzal chloride		<1	95	< 0.005
Benzotrichloride		<1	123	< 0.005
Benzyl chloride		<1	-	< 0.02
Hexachlorobutadiene		<1	93	< 0.005
Hexachlorocyclopentadiene		<1	107	< 0.005
Hexachloroethane		<1	98	< 0.005
Pentachlorobenzene		<1	77	< 0.005
Phenols				
2-Chlorophenol		<1	81	< 0.01
2-Methylphenol (o-Cresol)		<1	113	< 0.01
2-Nitrophenol		<1	101	< 0.05
2,4-Dichlorophenol		<1	92	< 0.01
2,4-Dimethylphenol		<1	108	< 0.01
2,4,6-Trichlorophenol		<1	97	< 0.01
2,6-Dichlorophenol		<1	108	< 0.01

COMMENTS:

Soil and Groundwater Consulting First Floor The Parade Nonwood South Australia 5065	Client Sample	RPD	BH6:0-0.1M	Method blank
	Lab Number	BATCH	06-De07460	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type	Units		% Recovery	mg/L
Phenols				
3&4-Methylphenol (m&p-Cresol)		<1	103	< 0.02
4-Chloro-3-methylphenol		<1	93	< 0.01
Pentachlorophenol		<1	88	< 0.05
Phenol		<1	108	< 0.01
Phenol-d6 (surr.)		-	54	87

COMMENTS:

Soil and Groundwater Consulting		Client Sample ID	BH11:0-0.1M	BH11:0-0.1M	BH11:0-0.1M	BH11:0-0.1M
First Floor The Parade		Lab Number	06-De07465	06-De07465	06-De07465	06-De07465
Nonwood		QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
South Australia 5065		Matrix	Soil	Soil	Soil	Soil
Analysis Type		Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Heavy Metals (7)		Units			% RPD	% Recovery
Arsenic			8.1	7.5	8.1	75
Cadmium			< 0.5	< 0.5	<1	82
Chromium			36	29	20	85
Copper			29	26	16	83
Lead			25	20	19	75
Nickel			15	13	17	75
Zinc			69	56	19	79
Heavy Metals						
Antimony			-	-	0.60	-
Beryllium			-	-	<1	80
Molybdenum			-	-	<1	-
Selenium			-	-	<1	-
Tin			-	-	6.6	81

Soil and Groundwater Consulting		Client Sample ID	BH16:0-0.1M	BH16:0-0.1M	BH16:0-0.1M	BH16:0-0.1M	Method blank
First Floor The Parade	Lab Number	06-De07470	06-De07470	06-De07470	06-De07470	06-De07470	Batch
Norwood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery		
South Australia 5065	Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Analysis Type	Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Aroclor-1016	Units			% RPD	% Recovery	% Recovery	mg/L
Aroclor-1221		-	-	<1	-	-	-
Aroclor-1232		-	-	<1	-	-	-
Aroclor-1242		-	-	<1	-	-	-
Aroclor-1248		-	-	<1	-	-	-
Aroclor-1254		-	-	<1	-	-	-
Aroclor-1260		-	-	<1	-	-	-
Total PCB		-	-	<1	-	-	-
Organochlorine Pesticides							
4,4'-DDD		0.26	0.22	19	94	< 0.005	< 0.005
4,4'-DDE		2.1	2.1	0.24	128	< 0.005	< 0.005
4,4'-DDT		0.25	0.27	6.8	92	< 0.005	< 0.005
a-BHC		< 0.05	< 0.05	<1	122	< 0.005	< 0.005
Aldrin		< 0.05	< 0.05	<1	118	< 0.005	< 0.005
b-BHC		< 0.05	< 0.05	<1	99	< 0.005	< 0.005
Chlordane		< 0.1	< 0.1	<1	106	< 0.01	< 0.01
d-BHC		< 0.05	< 0.05	<1	123	< 0.005	< 0.005
Dieldrin		< 0.05	0.05	22	103	< 0.005	< 0.005
Endosulfan I		< 0.05	< 0.05	<1	105	< 0.005	< 0.005
Endosulfan II		< 0.05	< 0.05	<1	125	< 0.005	< 0.005
Endosulfan sulphate		< 0.05	< 0.05	<1	121	< 0.005	< 0.005
Endrin		< 0.05	< 0.05	<1	101	< 0.005	< 0.005
Endrin aldehyde		< 0.05	< 0.05	<1	122	< 0.005	< 0.005
Endrin ketone		< 0.05	< 0.05	<1	125	< 0.005	< 0.005
g-BHC (Lindane)		< 0.05	< 0.05	<1	121	< 0.005	< 0.005
Heptachlor		< 0.05	< 0.05	<1	114	< 0.005	< 0.005
Heptachlor epoxide		< 0.05	< 0.05	<1	123	< 0.005	< 0.005
Hexachlorobenzene		< 0.05	< 0.05	<1	120	< 0.005	< 0.005
Methoxychlor		< 0.05	< 0.05	<1	128	< 0.005	< 0.005

COMMENTS:

Soil and Groundwater Consulting First Floor The Parade Norwood South Australia 5065	Client Sample	BH16:0-0.1M	BH16:0-0.1M	BH16:0-0.1M	BH16:0-0.1M	BH16:0-0.1M	Method blank
	Lab Number	06-De07470	06-De07470	06-De07470	06-De07470	06-De07470	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery		
	Matrix	Soil	Soil	Soil	Soil		Soil
	Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006		Dec 19, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L	
Organochlorine Pesticides							
Toxophene		< 0.1	< 0.1	<1	-	< 0.01	
Dibutylchloride (surr.)		120	130	-	83	98	
Tetrachloro-m-xylene (surr.)		110	120	-	85	110	

Soil and Groundwater Consulting First Floor The Parade Norwood South Australia 5065	Client Sample ID	BH21:0-0.1M	BH21:0-0.1M	BH21:0-0.1M	BH21:0-0.1M
	Lab Number	06-De07475	06-De07475	06-De07475	06-De07475
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type	Units			% RPD	% Recovery
Heavy Metals (7)					
Arsenic		5.2	5.1	2.5	-
Cadmium		< 0.5	< 0.5	<1	-
Chromium		18	16	6.9	-
Copper		16	16	1.4	-
Lead		13	12	5.8	-
Nickel		8.9	8.4	6.2	-
Zinc		32	32	0.10	-
Heavy Metals					
Antimony		-	-	<1	-
Beryllium		-	-	0.20	-
Cobalt		-	-	9.8	-
Molybdenum		-	-	<1	-
Selenium		-	-	<1	-
Tin		-	-	<1	-

COMMENTS:

Soil and Groundwater Consulting First Floor The Parade Norwood South Australia 5065	Client Sample ID	DUP 1	DUP 1	DUP 1	DUP 1	Method blank
	Lab Number	06-De07480	06-De07480	06-De07480	06-De07480	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
pH (1:5 Aqueous extract)		8.2	8.1	-	-	-
Organophosphorous Pesticides						
Bolstar		< 0.2	< 0.2	<1	-	< 0.002
Chlorpyrifos		< 0.2	< 0.2	<1	-	< 0.002
Coumaphos		< 0.2	< 0.2	<1	100	< 0.002
Demeton-O		< 0.2	< 0.2	<1	-	< 0.002
Diazinon		< 0.2	< 0.2	<1	95	< 0.002
Dichlorvos		< 0.2	< 0.2	<1	-	< 0.002
Disulfoton		< 0.2	< 0.2	<1	-	< 0.002
Ethion		< 0.2	< 0.2	<1	101	< 0.002
Ethoprop		< 0.2	< 0.2	<1	-	< 0.002
Fenitrothion		< 0.2	< 0.2	<1	108	< 0.002
Fensulfothion		< 0.2	< 0.2	<1	114	< 0.002
Fenthion		< 0.2	< 0.2	<1	-	< 0.002
Merphos		< 0.2	< 0.2	<1	-	< 0.002
Methyl azinphos		< 0.2	< 0.2	<1	-	< 0.002
Methyl parathion		< 0.2	< 0.2	<1	114	< 0.002
Mevinphos		< 0.2	< 0.2	<1	101	< 0.002
Naled		< 0.2	< 0.2	<1	-	< 0.002
Phorate		< 0.2	< 0.2	<1	-	< 0.002
Ronnel		< 0.2	< 0.2	<1	-	< 0.002
Tokuthion		< 0.2	< 0.2	<1	-	< 0.002
Trichloronate		< 0.2	< 0.2	<1	-	< 0.002
Triphenylphosphate (surr.)		96	94	-	88	94

Soil and Groundwater Consulting		Client Sample ID	RINSATE 1	RINSATE 1	RINSATE 1	RINSATE 1	Method blank
First Floor The Parade	Lab Number	06-De07482	06-De07482	06-De07482	06-De07482	06-De07482	Batch
Norwood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery		
South Australia 5065	Matrix	Water	Water	Water	Water	Water	Water
	Sample Date	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006	Dec 19, 2006
	Units			% RPD	% Recovery		mg/L
Analysis Type							
Heavy Metals (7)							
Arsenic		< 0.001	< 0.001	< 1	82	< 0.001	< 0.001
Cadmium		< 0.0002	< 0.0002	< 1	95	< 0.0002	< 0.0002
Chromium		< 0.001	< 0.001	< 1	93	< 0.001	< 0.001
Copper		< 0.001	< 0.001	11	93	< 0.001	< 0.001
Lead		< 0.001	< 0.001	1.1	98	< 0.001	< 0.001
Nickel		< 0.001	< 0.001	< 1	98	< 0.001	< 0.001
Zinc		< 0.001	< 0.001	< 1	91	< 0.001	< 0.001
Heavy Metals							
Beryllium		-	-	< 1	94	-	-
Cobalt		-	-	< 1	104	-	-
Molybdenum		-	-	< 1	99	-	-
Tin		-	-	< 1	105	-	-

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11:54 12/2006

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CHAIN OF CUSTODY DOCUMENTATION

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First Floor 207 The Parade Norwood SA 5067 • PO Box 3188 Norwood SA 5067
T: +61 8 8431 7113 • F: +61 8 8431 7115
ACN 100 220 479 • ABN 62 100 220 479

CLIENT: Mr Vince Belpelio		LABORATORY: MGT									
PROJECT: Soil Assessment		COC Reference #:									
SEND REPORT TO: SAG		SEND INVOICE TO: SAG									
DATA NEEDED BY: 5 day/la		REPORT NEEDED BY: 5 day/la									
PROJECT ID: Lot 52 Reservoir		QUOTE NO:									
Road, Paradise		RELINQUISHED BY: SJS									
NAME: Adrian Webb		DATE: 11/12/2006									
OF: Soil and Groundwater		TIME:									
NAME:		DATE:									
OF:		TIME:									
P.O. NO:		TIME:									
FOR LAB USE ONLY		COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:									
COOLER SEAL		Please forward results and Invoice to: adamcs@collandgroundwater.com.au									
Yes		No									
Broken		Intact									
COOLER TEMP: deg.C											
SAMPLE ID		MATRIX		DATE		TIME		TYPE & PRESERVATIVE		CONTAINER DATA	
										NO. pH/ed	
BH 13: 0-15-0-25m		Soil		19/12/06		4:30p					
BH 13: 0-25-0-35m		"									
BH 14: 0-0-1m											
BH 14: 0-1-0-2m											
BH 14: 0-25-0-35m											
BH 15: 0-0-1m											
BH 15: 0-25-0-35m											
BH 15: 0-4-0-5m											
BH 16: 0-0-1m											
BH 16: 0-25-0-35m											
BH 17: 0-0-1m											
BH 17: 0-25-0-35m											
BH 18: 0-0-1m											
BH 18: 0-25-0-35m											
BH 18: 0-4-0-5m											
BH 19: 0-0-1m											
BH 19: 0-25-0-35m											
BH 19: 0-4-0-5m											
BH 20: 0-0-1m											
BH 20: 0-25-0-35m											
BH 21: 0-0-1m											

CHAIN OF STUDY DOCUMENTATION

Page 4

First Floor 207 The Parade Norwood SA 5067 · PO Box 3186 Norwood SA 5067
T: +61 8 8431 7113 · F: +61 8 8431 7115
ACN 100 220 479 · ABN 67 100 220 479

CLIENT: Mr Vince Belperio		LABORATORY: MWGT		PROJECT: Soil Assessment		ACN 100 220 479 · E: +61 8 6431 7115 · ABN 62 100 220 479	
SEND REPORT TO: SSG		COC Reference #:		LABORATORY BATCH NO:			
DATA NEEDED BY: 5 day/yr		SEND INVOICE TO: SSG		SAMPLERS: BJS			
PROJECT ID: Lot 52 Reserve		REPORT NEEDED BY: 5 day/yr		PHONE: 0808 977 862 FAX: 08 6431 7115 E-MAIL: adamics@soilandgroundwater.com.au			
NAME: Rodan Webster		QUOTE NO.:		REPORT FORMAT: HARDY YES FAX: NO EMAIL: YES			
OF: Soil and Groundwater		RELINQUISHED BY: BJS		METHOD OF SHIPMENT: Overnight			
NAME:		DATE: 19/12/2006		CONSIGNMENT NOTE NO.			
OF:		TIME:		TRANSPORT CO. NAME:			
P.O. NO.:		COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:		ANALYSIS REQUIRED			
FOR LAB USE ONLY		Please forward results and invoice to: adamics@soilandgroundwater.com.au		Heavy Metals			
COOLER SEAL				OCPP's			
Yes				Nutrients & pH			
Broken				Via EPA Sorber			
COOLER TEMP: deg.C							
SAMPLE DATA			CONTAINER DATA				
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.	pH field	
BH 21 : 0-25-0-35m	Soil C	19/12/06	4:00pm				
BH 22 : 0-0-1m	"						
BH 23 : 0-25-0-35m	"						
BH 24 : 0-4-0-15m	"						
BH 25 : 0-0-1m	"						
BH 26 : 0-25-0-35m	"						
BH 27 : 0-0-1m	"						
BH 28 : 0-25-0-35m	"						
DUP 1							
DUP 2							
DUP 3							
RINGSIDE 1	WATER						
Trip Blank 1	"						
TOTAL						0	0

NOTES

* PLEASE SEND "DUP 2"
TO ALS & TEST FOR
HEAVY METALS (8) + OCPP'S

* Container Type and Preservative Codes P = Neutral Plastic; W = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Acid Rinced Jar; S = Solvent Washed Acid Rinced Glass Bottle; VC = Hydrochloric Acid Preserved Vial; VS = Sulfuric Acid Preserved Vial; BS = Silicic Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; O = Other.

APPENDIX H

QA / QC

H1. QUALITY ASSURANCE / QUALITY CONTROL

To ensure that results were not biased by field sampling techniques and intra-laboratory variation, soil and groundwater blind field duplicate samples were collected in the field for selected analyses.

The relative percentage difference (RPD) was calculated on these duplicate pairs. The RPD is defined as the difference between the duplicate samples as a percentage of the mean. The RPD is not calculated where one or both of the duplicate results are below the laboratory reporting limits. The RPDs are included in the tabulated results.

It is noted that the RPD method is skewed by low laboratory results, where a small actual difference in concentrations returns a high RPD.

H1.1 Field Duplicate Samples

Two soil blind duplicates were analysed for a range of parameters (refer summary tables).

The RPDs calculated for soil field duplicate samples ranged from 0% to 51%, with only 1 of the 10 RPD results above the generally accepted maximum value of 50%. The elevated RPDs were for results less than the ecological investigation levels and are attributed to low concentrations in these samples.

Based on the duplicate sample RPDs the analytical results and sampling techniques are considered to produce representative samples.

H1.2 Internal Laboratory QA

The laboratory undertook internal QA/QC procedures, which are within the acceptable limits of repeatability, chemical extraction and detection.

The chemical results are therefore considered to represent the concentrations of chemicals in samples provided to the laboratory.

H1.3 Summary of QA

The field duplicate samples and internal laboratory QA show a good correlation, indicating that the sampling and laboratory methods are appropriate, and the results are representative of the samples provided to the laboratory.

