

1400005279
1400005280

Fee Amount \$ 2000 RECEIPT NO. _____ RP/CoT YES NO FILE NO BNE 34771

Officer	Action	Outcome	Signature & Date
Administration Officer <i>B. Thomson</i>	Check Access ✓	(Record IPA Appln No) <u>NONE</u>	CTPI 49-S <u>11/12/07</u>
	Is report related to UXO? <u>NO</u>	Yes -forward to UXO advisor (Disposal Permit and Data Validation not needed)	CTPI 49-S <u>11/12/07</u>
Registry Officer	Initial Entry/Update of EMR/CLR		

Lot & Plan	Site ID	Entry Date	Initial Status	Reclass. Date	Final Status (Removal, SMP)
L2 SPI36512	9437	14/6/96	PRO-Sanitary Landfill sites		
LH RP147143	9435	14/6/96	PRO-Sanitary Landfill sites		
LH RP909375	24357		New Parcel of LH RP147143 ↑		

Officer	Action	Signature & Date
Disposal Permit	Check for previous correspondence & attach to file <u>NONE</u>	<u>11/12/07</u>
Data Validation	Check Notification & General files for previous correspondence & attach to file ✓	<u>11/12/07</u>

Officer	Action	Signature & Date
Contact Advisor	Review Assessment	
Peer Review Advisor	Review Assessment	
Date Final Submission Received	Key Contaminants _____ Groundwater Contaminants _____	
Studies Undertaken		
Registry Officer	Final check, update, print suit stat (own & appl) & notices (own & appl & local govt)	
Contact Advisor	Check final suitability statements & notices	
Peer Review Advisor	Check final suitability statements & notices	
Delegated Officer	Final approval & sign suitability statement & notices	
Administration Officer	Mail suit stat/smp/plan, green copy on file, blue copy needed (if SMP) check blue sheet is signed ,update Access and CARMS	

Amended Concurrence Agency

This notice is issued by the administering authority pursuant to sections 3.3.17 of the *Integrated Planning Act 1997*, to advise you of a decision or action.

CC: Bay Survey Consultants obo AHC Ltd
PO Box 5129
TORQUAY QLD 4655

Hervey Bay City Council
PO Box 5045
TORQUAY QLD 4655

Attention: Mr Michael Ellery

Re: Application (No. 514/3-072169) for development approval for assessable development to be carried out at Drury Lane, Dundowran (Lot 11 on RP909375).

Pursuant to the following items of Table 2 Schedule 2 of the *Integrated Planning Regulation 1998*, the Environmental Protection Agency (EPA) – Contaminated Land Unit (CLU) is a concurrence agency for the development application:

- ☒ Item 21, Table 2 of Schedule 2 of the *Integrated Planning Regulation 1998*
- ☐ Item 22, Table 2 of Schedule 2 of the *Integrated Planning Regulation 1998*

The EPA-CLU, acting as a concurrence agency under the *Integrated Planning Act 1997*, provides its response to the application detailed above as attached.

It would be appreciated if Council could provide a signed hard copy of the final development approval issued by Council (which includes the Agency's concurrence conditions).

The EPA-CLU has not provided a notification to native title parties for this application. The State's Native Title Work Procedures indicate that responsibility for assessment of native title issues for an IDAS application rest with the Assessment Manager. It is recommended that you undertake an assessment using your own guidelines to determine if a native title notification is required for this application.

Should you require any further information please do not hesitate to contact Paul Ritchie on 3330 5688.

CTPI 49-Sch4

Signed

11/5/10

Date

**Delegate of Administering Authority
*Environmental Protection Act 1994.***

Emr updated/edited
12/5/10

CTPI 49-Sch4

Conditions of the development approval

At all times while the use continues and the subject land is on the Environmental Management Register (EMR) the applicant must comply with the approved Site Management Plan (SMP) for Lot 11 on RP909375 issued under the *Environmental Protection Act 1994* by the Department of Environment and Resource Management (DERM) - Contaminated Land Unit (CLU).

Reasons for inclusion of development conditions or refusal

In accordance with section 3.3.18 of the *Integrated Planning Act 1997* and section 27B of the *Acts Interpretation Act 1954*, a concurrence response must include reasons for a refusal or for the inclusion of development conditions.

The Environmental Protection Agency is recognised as a concurrence agency under the *Integrated Planning Regulation 1998* for the protection of the environment by the management of contaminated land. The Environmental Protection Agency concurrence agency conditions for this proposed development that are contained within this response are required to prevent or mitigate any potential risk to human health or the environment from possible hazardous contaminants present on the site.

Additional information for applicants

This concurrence response pursuant to Chapter 7, Part 8 of the *Environmental Protection Act 1994* applies only to contaminated land issues and does not remove the need to obtain any further approval for this development which may be required by this or other legislation, State and/or Commonwealth. Applicants are advised to check with all relevant statutory authorities for such approvals as may be required.

~ End of Concurrence Agency Response ~

Amended Concurrence Agency

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- ☐ Item 22, Table 2 of Schedule 2 of the *Integrated Planning Regulation 1998*

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It would be appreciated if Council could provide a signed hard copy of the final development approval issued by Council (which includes the Agency's concurrence conditions).

The EPA-CLU has not provided a notification to native title parties for this application. The State's Native Title Work Procedures indicate that responsibility for assessment of native title issues for an IDAS application rest with the Assessment Manager. It is recommended that you undertake an assessment using your own guidelines to determine if a native title notification is required for this application.

Should you require any further information please do not hesitate to contact Paul Ritchie on 3330 5688.

CTPI 49-Sch4

Signed

Date

**Delegate of Administering Authority
*Environmental Protection Act 1994.***

CTPI 49-Sch4

Concurrence agency response

Sections 3.3.17 and 3.3.18 *Integrated Planning Act 1997*

Applicant:	Bay Survey Consultants obo AHC Ltd
Council Application Number:	514/3-072169
EPA Application Number:	9435 Part 1
Date application received by EPA:	22/01/2008
Relevant Laws and Policies:	<i>Environmental Protection Act 1994</i>
Jurisdiction:	Chapter 7, Part 8 <i>Environmental Protection Act 1994</i>

Development Description:

Reconfiguration of a Lot - Reconfiguring a lot 1 lot into 15 lots and a balance lot

where:

- ☐ the existing use of the land is, or if the land is vacant land with no existing use the most recent use of the land was, for a notifiable activity under the *Environmental Protection Act 1994*.
- ☐ the proposed use of the land is for child care, educational, recreational, residential or similar purposes and the existing use of the land is, or if the land is vacant land with no existing use the most recent use of the land was, for an industrial activity.
- ☒ **the land is on the Environmental Management Register or Contaminated Land Register under the *Environmental Protection Act 1994*.**
- ☐ the land is wholly or partly within an area for which an Area Management Advice for industrial activity or natural mineralisation has been issued and the proposed use of the land is for child care, educational, recreational, residential or similar purposes.
- ☐ the land is wholly or partly in an area for which an Area Management Advice for unexploded ordnance has been issued.

at the following place(s):

Drury Lane, Dundowran
(Lot 11 on RP909375)

Response to Development Application

The Environmental Protection Agency, acting as a concurrence agency under the *Integrated Planning Act 1997*, provides its response to the application detailed above.

The concurrence agency response is that

- ☒ **conditions must attach to any development approval**
- ☐ any approval must be for part only of the development
- ☒ **any approval must be a preliminary approval only**
- ☐ there are no concurrence agency requirements
- ☐ the application must be refused

Rele

Conditions of the development approval

At all times while the use continues and the subject land is on the Environmental Management Register (EMR) the applicant must comply with the approved Site Management Plan (SMP) for Lot 11 on RP909375 issued under the *Environmental Protection Act 1994* by the Department of Environment and Resource Management (DERM) - Contaminated Land Unit (CLU).

Reasons for inclusion of development conditions or refusal

In accordance with section 3.3.18 of the *Integrated Planning Act 1997* and section 27B of the *Acts Interpretation Act 1954*, a concurrence response must include reasons for a refusal or for the inclusion of development conditions.

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~ End of Concurrence Agency Response ~

Released

Paul Ritchie

From: CTPI 49-Sch4 [redacted]@hyneslawyers.com.au]
Sent: Monday, 10 May 2010 11:43 AM
To: Paul Ritchie
Subject: FW: Application No. 514/3-072169 - Drury Lane, Dundowran (Lot 11 on RP909375)
Importance: High
Attachments: EPA Concurrence response to Lot 11.pdf; Certificate of Approval of SMP - Lot 11 on RP909375 - 18.03.10.pdf

From: CTPI 49-Sch4 [redacted] **On Behalf Of** CTPI 49-Sch4 [redacted]
Sent: Friday, 7 May 2010 3:41 PM
To: 'allen.johns@derm.qld.gov.au'
Subject: Application No. 514/3-072169 - Drury Lane, Dundowran (Lot 11 on RP909375)
Importance: High

Dear Mr Johns

We act for AHC Limited, the owner of Lot 11 on RP909375.

Your file number is: BNE35253

Please find **attached**:

1. Notice of Concurrence Agency Response dated 4 March 2008, and
2. Certificate of Approval of a Site Management Plan dated 18 March 2010.

We kindly request that you attend to re-issuing the Notice of Concurrence Agency Response to remove the requirement that any approval must be a preliminary approval only, as is currently indicated on page 2 of the Notice. The Notice can be re-issued and/or copied to our office.

We would appreciate it if you could attend to this matter **before 10am Monday 10 May 2010**, as this issue is subject to Court proceedings and our client must comply with directions relating to this material by 10 May 2010.

Please contact CTPI 49-Sch4 [redacted] with any queries.

Kind regards,

CTPI 49-Sch4 [redacted]

Lawyer



the advantage of focus®

Direct: 07 5504 9921 | Telephone: 07 5504 9999 | Fax: 07 5592 6643

Level 6, 50 Appel Street, Surfers Paradise | PO Box 359 Surfers Paradise Qld 4217

BRISBANE | GOLD COAST | SYDNEY | www.hyneslawyers.com.au |  follow us on twitter

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Southern Regional Office (Brisbane)
GPO Box 2771 BRISBANE QLD 4001
Phone: (07) 3225 1827 Fax: (07) 3247 3278
www.epa.qld.gov.au ABN:87221158786



6.3.08
Queensland Government
Environmental Protection Agency
Queensland Parks and Wildlife Service

Notice of concurrence agency response Sections 3.3.16 and 3.3.18 *Integrated Planning Act 1997*

This notice is issued by the administering authority pursuant to sections 3.3.16 and 3.3.18 of the *Integrated Planning Act 1997*, to advise you of a decision or action.

Enquiries to: Christine Juergensen
Telephone: (07) 3224 7998
Your reference: 514/3-072169
Our reference: Appl'n: 9435 Part 1 File No.: BNE35253

CC: Bay Survey Consultants obo AHC Ltd
PO Box 5129
TORQUAY QLD 4655

Hervey Bay City Council
PO Box 5045
TORQUAY QLD 4655

Attention: Mr Michael Ellery

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It would be appreciated if Council could provide a signed hard copy of the final development approval issued by Council (which includes the Agency's concurrence conditions).

The EPA-CLU has not provided a notification to native title parties for this application. The State's Native Title Work Procedures indicate that responsibility for assessment of native title issues for an IDAS application rest with the Assessment Manager. It is recommended that you undertake an assessment using your own guidelines to determine if a native title notification is required for this application.

Should you require any further information please do not hesitate to contact the above officer on the telephone number provided.

CTPI 49-Sch4

04 March 2008

Signed

Date

Delegate of Administering Authority
Environmental Protection Act 1994.

Concurrence agency response
Sections 3.3.16 and 3.3.18 Integrated Planning Act 1997

Applicant:	Bay Survey Consultants obo AHC Ltd
Council Application Number:	514/3-072169
EPA Application Number:	9435 Part 1
Date application received by EPA:	22/01/2008
Relevant Laws and Policies:	<i>Environmental Protection Act 1994</i>
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Development Description:

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- ☒ the land is on the Environmental Management Register or Contaminated Land Register under the *Environmental Protection Act 1994*.
- ☐ the land is wholly or partly within an area for which an Area Management Advice for industrial activity or natural mineralisation has been issued and the proposed use of the land is for child care, educational, recreational, residential or similar purposes.
- ☐ the land is wholly or partly in an area for which an Area Management Advice for unexploded ordnance has been issued.

at the following place(s):

Drury Lane, Dundowran
(Lot 11 on RP909375)

Response to Development Application

The Environmental Protection Agency, acting as a concurrence agency under the *Integrated Planning Act 1997*, provides its response to the application detailed above.

The concurrence agency response is that

- ☒ conditions must attach to any development approval
- ☐ any approval must be for part only of the development
- ☒ any approval must be a preliminary approval only
- ☐ there are no concurrence agency requirements
- ☐ the application must be refused

9

Conditions of the development approval

Prior to any Development Permit being issued for the site, a site investigation / remediation and / or validation works must be undertaken and the results submitted to the Environmental Protection Agency (EPA) – Contaminated Land Unit (CLU), in accordance with the *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland* (DEH, 1998), to enable the EPA-WCLU to determine that the Lot 11 on RP909375 is suitable for the intended use by either:

- (i) removing the site from the Environmental Management Register, or
- (ii) approving a submitted draft Site Management Plan / Remediation Action Plan.

Comments or advice about the application

The EPA CLU acknowledges that a draft Site Management Plan (SMP) and Remedial Action Plan (RAP) have been submitted in relation to Lot 11 on RP909375, which have been assessed by the EPA-CLU. These documents did not comply with provisions under the *Environmental Protection Act 1994* (EP Act), including, but not limited to, sections 409 and 410 of the EP Act.

Reasons for inclusion of development conditions or refusal

In accordance with section 3.3.18 of the *Integrated Planning Act 1997* and section 27B of the *Acts Interpretation Act 1954*, a concurrence response must include reasons for a refusal or for the inclusion of development conditions.

The Environmental Protection Agency is recognised as a concurrence agency under the *Integrated Planning Regulation 1998* for the protection of the environment by the management of contaminated land. The Environmental Protection Agency concurrence agency conditions for this proposed development that are contained within this response are required to prevent or mitigate any potential risk to human health or the environment from possible hazardous contaminants present on the site.

Additional information for applicants

This concurrence response pursuant to Chapter 7, Part 8 of the *Environmental Protection Act 1994* applies only to contaminated land issues and does not remove the need to obtain any further approval for this development which may be required by this or other legislation, State and/or Commonwealth. Applicants are advised to check with all relevant statutory authorities for such approvals as may be required.

~ End of Concurrence Agency Response ~



Queensland
Government

Level 8, 400 George St • Brisbane, Queensland • GPO Box 2454 • Brisbane QLD 4001 • AUSTRALIA
http://www.derm.qld.gov.au/environmental_management/land/contaminated_land/

18 March 2010

Site ID: 24356
File Number: BNE35253
Enquiries to: Contaminated Land Unit
Telephone: (07) 3330 5685

AHC LIMITED
PO BOX 34
OXENFORD QLD 4210

CERTIFICATE OF APPROVAL OF A SITE MANAGEMENT PLAN

This document provides written notification that, in accordance with the *Environmental Protection Act 1994 (EP Act)*, a site management plan has been approved for the parcel of land described below, which is recorded on the Environmental Management Register (EMR). A copy of the suitability statement and the site management plan is attached.

Lot: 11 Plan: RP909375
Fraser Coast Regional Council

DRURY LANE
DUNDOWRAN 4655

The owner may apply to the Department of Environment and Resource Management (DERM) to amend the site management plan in accordance with section 418 of the *EP Act*.

Under section 434 of the *EP Act*, a person must not contravene a site management plan.

The owner may apply for a review of, and appeal against, the decision to approve the site management plan within 14 days after receipt of this notice in accordance with sections 521 and 531 of the *EP Act*.

In accordance with the land being recorded on the EMR, the following requirements apply under section 421 of the *EP Act*:

If the owner proposes to dispose of the land to someone else, the owner must, before agreeing to dispose of the land, give written notice to the buyer:

if the particulars of the land are recorded in the EMR - that the particulars are recorded in the register; and
if the land is subject to a site management plan, details of the plan.

Further information regarding this notice may be obtained by contacting the Contaminated Land Unit, Department of Environment and Resource Management on telephone (07) 3330 5685. Further information about contaminated land matters may be obtained by visiting our web-site at: http://www.derm.qld.gov.au/environmental_management/land/contaminated_land/

CTPI 49-Sch4

Delegate of Administering Authority
Environmental Protection Act 1994

Published on DES Disclosure Log
RTI Act 2009



ANNEXURE 1 - SITE MANAGEMENT PLAN

LOT : 11 PLAN : RP909375 FILE REF : BNE35253 PRINTED: 18/03/2010

DATE OF EFFECT : 16/03/2010

1.0 SUMMARY OF CONTAMINATION

A sand extraction operation operated historically on the site located at Lot 11 Drury Lane, Dundowran, QLD. A portion of the extraction area along Drury Lane was subsequently filled in an uncontrolled manner. The placement of uncontrolled fill over a portion of the site (refer attached Figure 1) resulted in the listing of the site on the Environmental Management Register for the Notifiable Activity - Landfill.

Investigation of the uncontrolled fill material revealed predominantly sandy clay soils with a variable amount of deleterious materials including:

Building rubble (including large pieces of concrete greater than 300mm diameter), steel, bitumen, timber, bricks, iron, tyres, car parts, animal carcasses, wire, gravel, plastic, PVC pipe, cobbles, and sandstone.

In addition to the filled portion of Lot 11, two stockpiles ("burn pit" materials and recently imported uncontrolled fill) were also identified in the southern portion of the site (refer Figure 1). Materials identified in these stockpile included:

Burn Pit Stockpile

Broken asbestos sheeting fragments

Lead impacted soil (above HIL 'A') - Maximum concentration of contamination in soil exceeding the HIL 'A' is described below:

Analyte	Maximum Concentration (mg/kg)
Lead	1,420

Recently Imported Uncontrolled Fill Stockpile

Arsenic impacted soil (above HIL 'A') - Maximum concentration of contamination in soil exceeding the HIL 'A' is described below:

Analyte	Maximum Concentration (mg/kg)
Arsenic	133

The strategy by which these materials will be removed and/or managed to enable removal of the site from the Environmental Management Register (EMR) is contained in the Remediation Action Plan (RAP) attached as Appendix 1.

2.0 OBJECTIVES OF THE SMP

The purpose of this SMP is to manage identified contamination on the site in a manner that protects human health and the environment.

3.0 ACHIEVEMENT AND MAINTENANCE OF OBJECTIVES

3.1 *Responsibility.* The owner of the land (as defined in the Environmental Protection Act 1994) is to ensure that this SMP and any variations approved or required by the administering authority are complied with. The obligations and conditions set out in this SMP bind the owner, from time to time, of the land.

3.2 *Site Use.* The site is currently vacant site and is proposed to be redeveloped and subdivided into an industrial estate. Prior to commencement of this new land use, remedial works will be conducted with the primarily intent removing the site from the EMR. All remediation and validation works for this site are to be carried out in accordance with Appendix 1 - Remediation Action Plan (RAP).

3.3 *Third Party Reviewer (TPR).* A Third Party Reviewer (TPR) approved by the DERM and operating in accordance with the DERM's Terms of Reference for TPR (February 2008) must be appointed for the duration of the site assessment and remediation activities.

3.4 *Provision of SMP to appropriate persons.* The owner must provide all persons involved in building design and planning and all contractors and lessees conducting building and/or excavation works with a copy of the SMP prior to commencement of site works. All persons occupying or working on the site must comply with the requirements of the SMP.

3.5 *Surface capping and protective barriers.* Existing surface cover across filled areas shall be maintained until such time as remediation works occur.

3.6 *Service Trenches* All underground services must be constructed in either uncontaminated material or in trenches in which the services are surrounded by a minimum of 0.3m of uncontaminated fill for minor services (< 100 mm in diameter), and 0.5m of uncontaminated fill for services greater than 100 mm in diameter.

3.7 *Soil Excavation & Removal.* Uncontrolled fills must not be removed from site without suitable characterisation sampling and analysis. Representative characterisation sampling and analysis of any uncontrolled fill materials excavated from the site must be managed by a suitably qualified and experienced person in accordance with Section 381 of the *Environmental Protection Act 1994* (EP Act). Contaminated soil must not be removed off-site without a disposal permit in accordance with Section 424 of the EP Act.

3.8 *Unexpected Contamination.* If during any site earthworks or excavation, offensive or noxious odours and/or evidence of gross contamination not previously detected are observed, site works are to cease in that area and action taken to immediately abate the environmental harm. The administering authority is to be notified in writing within 2 business days of detection and advised of appropriate remedial action.

Any remedial action is to be developed by an appropriately qualified and experienced person in accordance with Section 381 of the EP Act.

3.9 *General Environmental Protection.* All earthworks are to be undertaken in accordance with general environmental protection measures to avoid unwanted migration and deposition of soil. These measures include the control of dust, noise, stormwater runoff, sediment, erosion, spillage from haulage trucks and odour releases involving the handling or movement of contaminated material.

3.10 *Workplace Health and Safety.* A Workplace Health and Safety Plan (WH&S plan), which

conforms to the requirements of the *Workplace Health and Safety Act 1995* is to be developed for any site excavation works in contaminated areas. The WH&S plan must specifically address contaminants of concern.

4.0 MONITORING AND REPORTING

The owner is to ensure that the following reporting and monitoring is performed to ensure compliance with the SMP:

Until remediation commences:

Records are to be kept of all inspections, any soil excavation in contaminated areas, disposal permits and site management plan compliance for review by the administering authority from time to time. A biennial inspection is to be undertaken to ensure that capping and protective barriers remain in sound condition at all times in accordance with Section 3.5.

The biennial period is to commence from the effective date of this plan.

Once remediation commences:

Monitoring and reporting is to be conducted as required in Appendix 1 - Remediation Action Plan (RAP).

In addition to the reporting required in the RAP, within 60 days from the completion of site development, a report is to be submitted to the TPR documenting details of remediation activities, the results of any sampling undertaken during remediation, records of any site inspections and details of Site Management Plan compliance. The report is to be prepared by a suitably qualified and experienced person in accordance with Section 381 of the *Environmental Protection Act 1994* (EP Act).

This Site Management Plan (SMP) has been developed to manage site contamination risks present at the issue date. Subsequent uses of the site may result in the need to review the plan.

This SMP makes reference to a plan attachment that is available from the Administering Authority if required.

This SMP makes reference to a Remediation Action Plan attachment that is available from the Administering Authority if required.



**Queensland
Government**

Level 8, 400 George St • Brisbane, Queensland • GPO Box 2454 • Brisbane QLD 4001 • AUSTRALIA
http://www.derm.qld.gov.au/environmental_management/land/contaminated_land/

SUITABILITY STATEMENT

DATE PRINTED: 18/03/2010

OWNER

AHC LIMITED
PO BOX 34
OXENFORD QLD 4210

DATE OF ISSUE: 16/03/2010

PROPERTY DESCRIPTION

LOT: 11 PLAN: RP909375
DRURY LANE
DUNDOWRAN 4655

Fraser Coast Regional Council
EMR Site ID: 24356 FILE REFERENCE: BNE35253

STUDIES UNDERTAKEN BY APPLICANT OR REQUESTED BY DIRECTOR

Drury Lane, Dundowran, Interim Third Party Review Summary Report, prepared by Lloyd Consulting Pty Ltd, dated 10 December 2009 (Doc No 09-528-8-001)

Additional Field Investigations - Supplementary Report, Lot 11 on RP909375, Drury Lane, Dundowran, prepared by Golder Associates Pty Ltd, dated December 2009 (Doc No AS077683505-8000r)

Stage 2 Detailed Site Investigation, Lot 11 on RP909375, Drury Lane, Dundowran, Queensland, prepared by Golder Associates Pty Ltd, dated November 2007 (Doc No 077683505 (AG))

Stage 1 Preliminary Site Investigation, Lot 11 on RP909375, Drury Lane, Dundowran, Queensland, prepared by Golder Associates Pty Ltd, dated August 2007 (Doc No 077683505(AA))

STATEMENT OF SUITABILITY

On the basis of the information supplied to this Department, the subject site is suitable for the following use(s) providing the site is used and managed as per the Site Management Plan attached as Annexure 1.

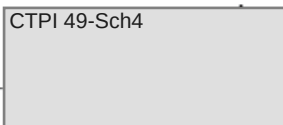
Suitable for industrial/commercial use including premises such as shops, offices and industrial buildings (but excluding uses where regular soil access by children is possible).

Other specific uses may be suitable for the site, please contact this Department for further advice. The suitability statement provides information on appropriate land uses at the date of effect. Subsequent uses of the site for notifiable activities or for situations where a hazardous contaminant is released into the soil may result in the need to review suitable uses or amend the attached site management plan.

ENVIRONMENTAL MANAGEMENT REGISTER

LOT : 11 PLAN : RP909375 is recorded on the Environmental Management Register with a Site Management Plan. A copy of the Site Management Plan is attached as Annexure 1.

CTPI 49-Sch4



Delegate of Administering Authority
Environmental Protection Act 1994

Published on DES Disclosure Log
RTI Act 2009

APPENDIX 1

REMEDIATION ACTION PLAN

LOT: 11 PLAN: RP909375

FILE REF: BNE35253

PRINTED: 16/3/2010

DATE OF EFFECT: 16/3/2010

1.0 INTRODUCTION

This Remediation Action Plan (RAP) has been prepared for remediation of uncontrolled filling activities on Lot 11 on RP909375, located at Lot 11 Drury Lane, Dundowran, QLD. Historical filling has occurred at three locations on site as shown on Figure 1 – uncontrolled filling backfilling of an old sand pit (along part of the eastern boundary), a “burn pit” stockpile, and a recently imported uncontrolled fill stockpile. The remediation works are required to remove materials that may pose a risk to the health of future site users or the environment. The works required include:

Excavation of all uncontrolled fill materials, separation of recyclables, stained/odorous materials and characterisation of remaining materials for reuse or offsite disposal.

Removal of asbestos sheeting fragments and lead impacted soil identified in the “burn pit” stockpile.

Further characterisation of recently imported uncontrolled fill stockpile materials for reuse or offsite disposal.

1.1 Purpose of the RAP

This document has been prepared to describe remediation strategies and control measures aimed at achieving removal of the site from the Environmental Management Register (EMR).

1.2 Remediation Objective

The primary objective of the remediation works is to obtain a Site Suitability Statement to support future redevelopment of the site.

1.3 Third Party Reviewer

A Third Party Reviewer (TPR) must be appointed for the duration of this project. The site work and subsequent reporting is to be certified by a Department of Environment and Resource Management (DERM) approved Third Party Reviewer (TPR). All validation requirements must first have consent from the TPR and any clarification issues will be referred to the TPR prior to the DERM.

Released

The uncontrolled fill encountered (ranging from 1.0 m to 4.4 m in depth) was generally sandy clay containing varying amounts of building rubble (including large pieces of concrete greater than 300mm diameter), steel, bitumen, timber, bricks, iron, tyres, car parts, animal carcasses, wire, gravel, plastic, PVC pipe, cobbles, and sandstone. The natural stiff (or stiffer) clay underlying fill and natural sand may be residual soil formed by weathering of the underlying parent rock (Maryborough Formation).

For most of the site, the upper sand appears to have been removed as part of the sand extraction work. Remnants of this material are present in the higher section of the south-east and north east corners of the site where excavations have not been conducted. This area comprises mostly sand overlying coffee rock.

Much of the exposed ground surface in the area where sand extraction works have been undertaken comprises medium dense to dense sandy soils (including dense indurated silty sand), to depths of about 0.2m to 0.8m and overlying stiff (or stiffer) clay.

2.4 Hydrogeology

Groundwater was recorded at depths of 0.5 m (excavated areas) to 2.4 m (excavated areas where fill has been placed) in the monitoring wells, which were installed as part of the acid sulfate soils investigation. It should be noted that groundwater was not encountered in test pits excavated in fill materials. The direction of groundwater flow is expected to be to the west. Groundwater inflows into monitoring wells were very slow and the resulting yields are not considered to represent a viable source of potable water or other extractive groundwater use.

2.5 Information Sources

Previous investigation reports considered in the preparing this RAP include:

Stage 1 Preliminary Site Investigation, Lot 11 RP909375, Drury Lane, Dundowran, [ref. Golder Associates 077683505(AA) dated August 2007].

Stage 2 Detailed Site Investigation, Lot 11 RP909375, Drury Lane, Dundowran, [ref. Golder Associates 077683505(AG) dated November 2007].

Additional Filed Investigations – Supplementary Report, Lot 11 RP909375, Drury Lane, Dundowran, [ref. Golder Associates 077683505(AS) dated November 2009].

2.6 Historical Data

The historical data identified the following potential sources of contamination at this site:

concrete (including embedded steel reinforcing rods), pulverised to a maximum 300mm nominal size; and

clean earthen fill.

Deleterious materials other than the above inert materials will need to be segregated and removed from site during remediation works.

The uncontrolled fill materials have presently been characterized by sampling and analysis for contaminants of concern at a frequency of about 1 sample per 1500m³ of fill. The results of this preliminary characterization sampling did not identify concentrations of the contaminants of concern that are considered to indicate a risk to human health or the environment. However, a higher density of characterization sampling would be required to validate these materials as suitable for unrestricted reuse on site.

2.7.3 Recently Imported Fill Stockpile

It is estimated that about 2,000 m³ of fill material is present in this stockpile. No deleterious material has been observed during investigation of this stockpile.

Limited characterization sampling and analysis of the recently imported stockpile of uncontrolled fill was conducted at a frequency of 1 sample per 100m³ of fill. The results of this preliminary characterization sampling identified the presence of arsenic impacted soil with concentration exceeding the Health-based Investigation Levels for use in a "standard" residential setting (maximum concentration of 133 mg/kg). In the absence of more detailed characterization of fill materials, it has been assumed that zones of arsenic impact occur within the uncontrolled fill materials. However, a higher density of characterization sampling may provide a statistical basis evaluating the unrestricted reuse of this on site or the need for offsite disposal.

2.7.4 Burn Pit Stockpile

An estimated 50m³ (insitu) of materials are present in the "burn pit" stockpile. Fragments of broken asbestos sheeting were observed in this stockpile. This material was confirmed as containing chrysotile and amosite asbestos.

Concentrations of lead impacted soil exceeding the Health-based Investigation Levels for use in a "standard" residential setting (maximum concentration of 1420 mg/kg) were also detected in the burn pit stockpile.

Removal and offsite disposal of this material will be required during remedial works.

Release

Water samples collected from GA3, GA6, and GA11 revealed concentrations of organochlorine and organophosphorus pesticides below the laboratory limit of reporting. However, the laboratory limits of reporting were above all adopted environmental assessment criteria. Given the lack of organochlorine and organophosphorus pesticides detection in the soil samples during Stage 1 investigations, the risk of organochlorine or organophosphorus pesticides impact to groundwater is considered to be low. Confirmation of pesticide concentrations in groundwater samples is required during remedial works.

The investigation results suggest that there will not be a need for large scale dewatering operations during excavation of uncontrolled fill materials.

3.0 ENVIRONMENTAL GUIDELINES

The remedial activities undertaken at the site must be performed in accordance with the following documents:

- *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland*, May 1998;
- *Draft Hydrocarbon Guidelines*, Contaminated Land Unit, Queensland EPA, January 1999;
- *Guidelines issued under Schedule B of the National Environment Protection (Assessment of Site Contamination) Measure (NEPM)*, National Environment Protection Council, December 1999;
- *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC guidelines)* published by the Australian and New Zealand Environment and Conservation Council/National Health and Medical Research Council, January 1992;
- Australian Standard AS4482.1-2005 *Guide to the sampling and investigation of potentially contaminated soil Part 1 – Non volatile and semi volatile compounds*; and
- Australian Standard AS4482.2-2005 *Guide to the sampling and investigation of potentially contaminated soil Part 1 – Volatile and semi volatile compounds*

4.0 REMEDIAL GOALS AND VALIDATION CRITERIA

4.1 General

Remediation and acceptance criteria for soils contained in the following sections are based on redevelopment of the site for unrestricted land use. The criteria consider a range of issues including human health risk, environmental risk and aesthetic considerations such as odour and discoloration.)

Criteria should be applied to the 95% Upper Confidence Level (UCL) on the mean of data for each domain of interest, with no hot-spot concentrations greater than 2.5 times the relevant criteria value. The domains of interest at this Site will be each individual stockpile of excavated soil. Sufficient samples must be collected within each domain of interest to ensure that statistical analysis is valid.

Release

- (5) Elevated Environmental Investigation Level for Low Phytotoxicity Setting
- (6) Should environmentally sensitive receptors be identified at/in proximity to the site, then Environmental Investigation criteria will be applied.
- (7) Western Australia Department of Health Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, May 2009.

These criteria may be amended, subject to approval by the TPR, where it can be demonstrated that alternative concentrations are protective of human health, the environment and aesthetic considerations. In addition, these criteria may be amended to environmental investigation levels (as listed in *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland*, Queensland Department of Environmental 1998) should sensitive environmental receptors be identified at or in close proximity to the site. Criteria for other additional parameters, if required, must be approved by the TPR.

4.3 Groundwater

On completion of remedial earthworks, the following groundwater acceptance criteria shall be applied:

Parameter	Acceptance Levels
<u>Petroleum Hydrocarbons</u>	
TPH (C ₆ – C ₉)	0.15 mg/L ⁽¹⁾
TPH (C ₁₀ – C ₃₆)	0.6 mg/L ⁽²⁾
<u>Inorganics</u>	
Arsenic	< ANZECC Water Quality Guidelines 2000, Trigger Values for Fresh Waters 95% Level of Protection
Cadmium	
Chromium (total)	
Copper	
Lead	
Nickel	
Mercury	
Zinc	
<u>Monocyclic Aromatic Hydrocarbons</u>	
Benzene	
Toluene	
Ethyl Benzene	
Xylene	
<u>Organochlorine & Organophosphorus Pesticides</u>	

Notes:

- (1) Dutch C - Netherlands Soil Clean-up Guideline, 1983
- (2) Dutch Intervention Value - Environmental Quality Objectives in the Netherlands, 1994
- (3) No specific criteria or guidelines have been published in Queensland or Australia for the assessment of TPH contamination in groundwater. In the absence of State or National guidelines, intervention values for hydrocarbons contained in Dutch Guidelines have been adopted for assessment of environmental risk from TPH. TPH concentrations exceeding these guideline criteria may represent a threat to the environment and require specific assessment of risk.

Characterisation sampling of soils for reuse or removal from site will be required at a frequency of at least 1 sample per 50m³ for individual stockpiles of similar soil types. If mixed soil types are noted in stockpiles then characterisation samples must be collected of each material types present at a rate of at least 1 sample per 50m³. A minimum of 9 samples must be collected within each stockpile where statistical assessment of result is proposed for validation purposes.

A quality assurance/quality control program shall be conducted during characterization sampling. This program shall include collection and analysis of:

Blind replicate samples at a frequency of 1 for every 20 samples collected.

Split samples at a frequency of 1 for every 20 samples collected.

Equipment rinsate samples for each day where sampling is conducted.

4.5.2 Groundwater

At least two rounds of groundwater samples shall be collected from excavation sumps following completion of excavations.

A quality assurance/quality control program shall be conducted during groundwater sampling. This program shall include collection and analysis of:

A blind replicate sample during each sampling round.

A split sample during each sampling round.

An equipment rinsate sample during each sampling round.

4.6 Sampling & Reporting

Characterisation sampling shall be conducted under the direction of a suitably qualified and experienced person in accordance with Section 381 of the Environmental Protection Act 1994 (EP Act). Standard procedures that include sample equipment decontamination, sample handling, sample storage and documentation shall be applied.

At the completion of remediation works a Validation Report shall be prepared by the suitably qualified and experienced person that documents the works

Pulverisation/crushing of bricks and concrete (> 300 mm diameter) to enable reuse as inert site fill.

Offsite disposal of remaining deleterious materials.

Further characterisation of recently imported uncontrolled fill for either reuse on site as "clean" fill or for offsite disposal.

Removal and offsite disposal of the entire 'burn pit' stockpile

Detailed management procedures for this strategy are provided in the following sections. These procedures may be amended, subject to approval by the TPR, where it can be demonstrated that alternative procedures are protective of human health, the environment and aesthetic considerations.

6.0 REMEDIATION PROGRAM

6.1 Existing Uncontrolled Fill Area

6.6.1 Excavation and Segregation of Materials

Approximately 80,000 m³ (insitu volume) of existing uncontrolled fill will need to be excavated and segregated. Excavations shall be continued both laterally and vertically until all existing uncontrolled fill materials have been removed.

A suitably qualified and experienced person shall monitor all excavation works and screen excavated materials using a photo-ionisation detector (PID). Excavations shall be conducted in a manner which targets removal and stockpiling of visually similar materials. Daily photographic and written records of inspection and monitoring shall be kept.

Any materials observed to contain building rubble and other deleterious materials will be segregated from soils and separately stockpiled. Where hydrocarbon odours, staining, elevated PID readings or other indicators of suspected impact are noted, these materials shall be segregated from other material and separately stockpiled for characterisation.

Groundwater encountered during the excavation of overburden shall be collected from a sump excavated in the low point of the excavation. Reuse or disposal of groundwater is discussed in Section 6.1.5.

An area of approximately 5 ha of non-filled land is available at the site for the stockpiling of excavated materials. Operational controls to be adopted during the excavation, onsite transportation and stockpiling of excavated materials are discussed in Section 7.0.

Movement and stockpiling of excavated materials shall be conducted under a materials tracking plan approved by the TPR.

6.1.2 Soil Characterisation Stockpiles

Stockpiles of soil materials shall be sampled and analysed in accordance with Section 4.0.

Released

comply with all conditions in issued permits (including any pretreatment required to remove sediments and contaminants).

6.2 Recently Imported Uncontrolled Fill Area

Further characterisation sampling of the recently imported uncontrolled fill for reuse or removal from site will be carried out to achieve an overall frequency of 1 sample per 50m³ of fill.

If the materials are found to be in compliance with the validation criteria they can be reused to backfill excavations. If the materials are found not to be in compliance with the validation criteria they shall be removed from site. An offsite disposal permit shall be obtained through the TPR prior to removal of these soils from site. Disposal to landfill shall only occur under an approved Disposal Permit issued by DERM.

6.3 Burn Pit Stockpile

The burn pit stockpile shall be excavated and removed from site.

Due to the presence of asbestos fragments, excavation and removal off-site shall be conducted by a suitably licensed asbestos contractor.

7.0 OPERATION CONTROL

7.1 Construction Environment Management Plan

A Construction Environmental Management Plan (CEMP) for the Site shall be prepared incorporating detailed elements covering environmental management of the Site to ensure environmental effects of the remediation work are kept to a minimum and in compliance with all relevant Acts of Parliament and Environmental Regulations.

The CEMP must be approved by the TPR prior to commencement of works on site.

The CEMP shall contain management approaches for, but not limited to, the following areas:

Land Disturbance

Erosion and sediment control devices;

Management of stormwater;

Management of excavated materials and stockpiles;

Dust control;

Release

Inspection of the bunds, drains and sumps regularly during site remediation works to check their integrity and repair any faults as soon as practicable.

7.3 Soil and Sediment Control

A site-specific erosion and sediment control plan (ESCP) must be developed in accordance with local Council guidelines prior to the commencement of remediation works.

7.4 Noise Control

Site works shall be carried out between 6.30am and 6.30pm Monday to Saturday, or other alternative timeframes approved by local Council.

7.5 Dust Control

Potential for dust generation from excavation works and/or stockpiles shall be managed on an as required basis by spraying from water trucks; or other TPR approved method.

7.6 Community Relations

Prior to the commencement of site works, neighbouring properties shall be consulted to inform of the commencement and expected timing of the works.

Concerns and complaints raised by the community (or other parties) during the remedial works will be noted and a register must be maintained to record the following information:

1. **Contact details:** Name, address and phone number of party raising concern.
2. **Nature of concern:** Details of issue/incident.
3. **Action taken or required:** Details of action proposed or undertaken to address the concern, including time and date.
4. **Response to Action:** Was the party raising the concern satisfied with the outcome, if not, what else needs to be done, or is it outside the scope of the development works.
5. **Prevention of re-occurrence:** If the concern relates directly to an operational problem, what action has been taken to ensure the problem will not occur again.

The register must be available to DERM or TPR at request.

All complaints must be responded to within two business days of the complaint being raised.

10.0 HEALTH AND SAFETY

A *Health and Safety Plan* must be prepared for the activities to be performed on the site where employees may be exposed to toxic or other hazardous compounds and elements. Specific requirements relating to dermal contact and inhalation as well as public safety, vehicle decontamination, protective clothing, equipment and appropriate safety controls must be addressed. Personnel working on the site during remediation works must be inducted and sign relevant forms stating that the induction has been carried out.

Works will be according to the *Workplace Health and Safety Act (1995)* and *Workplace Health and Safety Regulations (2008)*.

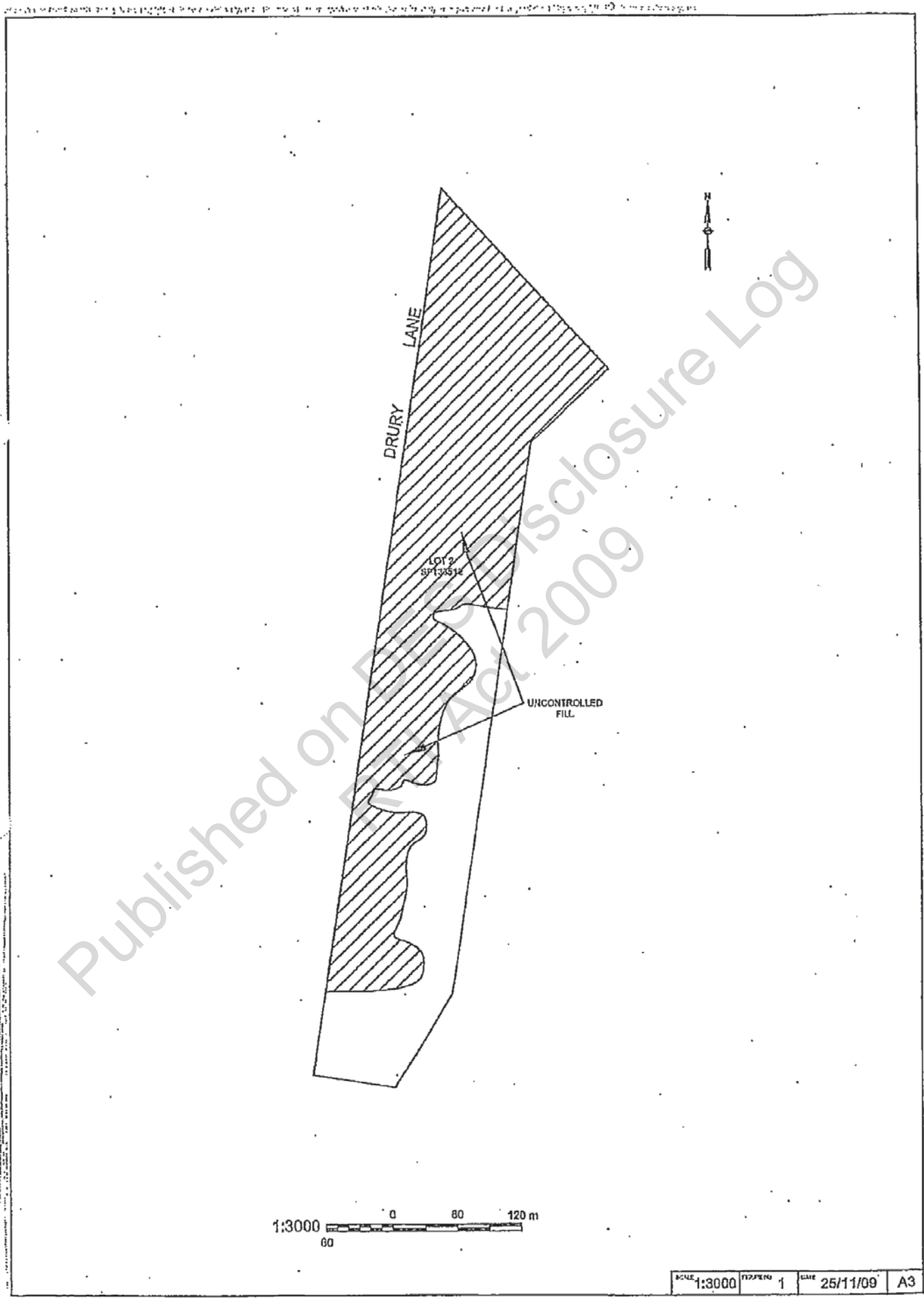
11.0 REPORTING

The progress of the works will be reported to the TPR on a regular basis. Fill characterisation and validation sampling results will be supplied to the TPR in the form of reports as the data becomes available.

Within 60 days of the completion of all remediation and validation works, a report detailing works must be prepared by a suitable qualified person in accordance with Section 4.6 and submitted to the TPR for certification prior to submission to the DERM. The report submitted should be in accordance with Chapter 7, Part 8 of the EP Act and the *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland* May (1998) and NEPM requirements.

The report shall include but not be limited to documentation of the remediation and characterisation program activities (including photographic records and daily site diaries detailing volumes of soil moved), records of all offsite disposal, analysis of characterisation results and an evaluation of the results against the validation criteria.

The report shall also include the results of the QA/QC program, Chain of Custody documentation and Sample Receipt Advices for all samples collected and copies of documentation validating the appropriate handling, disposal and treatment of any contaminated soil, materials and water in accordance with DERM requirements.



Bring Up Details Report

321413 - Advice - Reconfig on land in or within 100m of a
wetland/Drury Lane, Dundowran QLD 4655/Radway Pty Ltd - 17-FEB-2010

Ref:	59353	Created Date:	19-FEB-10
Status:	Submitted	Closed Date:	
Assigned To:	BARRY, Kim	Due Date:	26-FEB-10
Email Address:	Kim.Barry@derm.qld.gov.au	Reminder Date:	
Project Director:			
Project Manager:			
CC:			
CC:			
Subject:	Project 321413 Radway Pty Ltd		
Comments:	<p>Project Number: <321413 Permit Number: CLEA00245110 TPR (If applicable): Client: Radway Pty Ltd Lot on Plan: 2 SP200633 Location: Drury Lane, Dundowran Report Title (if any): Application Date: 17/2/10</p> <p>Dear Kim</p> <p>An application has been received for an Assessment of Site Investigation Report. The application will be forwarded to the Contaminated Land Unit on the 19/02/10.</p> <p>Regards, Kim Christeson</p>		





Project Running Report

Project Ref 321413	Project Name Advice - Reconfig on land in or within 100m of a wetland/Drury Lane, Dundowran QLD 4655/Radway Pty Ltd	Status Active	Project Director BARRY, Kim	Project Manager NOT, Allocated	Office Responsible ES - Directorate - Southern - Bne
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Assessing Officers

Name HESSE, Robyn

Applications: 3

Date 30-JAN-2008	Status Assessment	Decision Level 2
----------------------------	-----------------------------	----------------------------

Primary Clients

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Radway Pty Ltd	C/- Bay Survey Consultants	PO Box 5129	TORQUAY	4655	QLD

Primary Contact

Name Fraser Coast Regional Council	Contact Number 1300794929
--	-------------------------------------

Activities

Name Advice - Reconfig on land in or within 100m of a wetland

Locations

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Drury Lane, Dundowran QLD 4655					

Agency Interests/Ratings

Category	Type	Rating
Biodiversity	Biodiversity - riparian buffer zones	Unknown (default)
Land	Land - erosion/stability	Unknown (default)

Permits: 1

Permit Ref IPAR00849808	Permit Type Advice Agency Response	Status Current
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Date 17-DEC-2009	Status Application Validation	Decision Level 2
----------------------------	---	----------------------------

Primary Clients

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Radway Pty Ltd	C/- Bay Survey Consultants	PO Box 5129	TORQUAY	4655	QLD

Activities

Name Assessment Of Site Investigation Report For Land On Emr/clr
--

Locations

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Drury Lane, Dundowran QLD 4655					

Agency Interests/Ratings

Category	Type	Rating
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Permits: 1



Project Running Report

Date 17-DEC-2009 **Status** Application Validation **Decision** Level 2

Permit Ref	Permit Type	Status
CLEA00206710	Site Report Assessment for Land on the Environmental Management Register or Contaminated Land Register	Invalid

Date 17-FEB-2010 **Status** Assessment **Decision** Level 2

Primary Clients

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Radway Pty Ltd	112 Siganto Drive		HELENSVALE	4212	QLD

Activities

Name
Assessment Of Site Investigation Report For Land On Emr/clr

Locations

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Drury Lane, Dundowran QLD 4655					

Agency Interests/Ratings

Category	Type	Rating
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Permits: 1

Permit Ref	Permit Type	Status
CLEA00245110	Site Report Assessment for Land on the Environmental Management Register or Contaminated Land Register	Assessment

CTP

24 FEB 2010

☐ For Regional Information & Filing☒ Regional Action Required

Admin. Office: Contaminated Land Unit, Southern Region

Project No: 321413

Client No:

EMR/CLR ID No: 82379

Permit No: CLEA00245117

Ecoaccess Customer Service Unit

CROW No: 24093

Application for Assessment of a Site Investigation Report (Contaminated Land) Checklist

Date Received:

17/2/10

Date Application Deemed Valid:

17/2/10

Due Date (20 Business Days
After Application Deemed
Valid):

17/3/10

Due Date for report that has had
a Third Party Review (5 Business
Days after received): This applies
to sites requesting removal from
the Register.(If TPR recommends an SMP refer
to Contam Land ASAP!)Due Date for Decision of IPA Application
(20 Business Days):

Third Party Reviewer:

Applicant Name: Radway P/L Contact: CTPI 49-Sch4

Location: Lot 2 SP200633 Drury Lane Dunderburg Coordinator: CTPI 49-Sch4

Receipt details: Fees correct ☐ N/A ☒

Receipt No: Date:/...../2009

Amount Paid \$

Receipt sent to client Yes ☐ No ☐

Previously paid BNE 35253

COST CENTRE/CODE:

Payment Method:

Cheque ☐ EFT ☐ Cash ☐ Credit ☐

Cheque No:

Drawer (if other than the applicant):

Record of consultation

Applicant name:

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	Ecoaccess CSU Staff:			

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	Ecoaccess CSU Staff:			

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	Ecoaccess CSU Staff:			

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	Ecoaccess CSU Staff:			

Release

24 FEB 2010

**STATUTORY DECLARATION
(INVESTIGATOR)**

Address of Site Investigated: Lot 2 on SP136512, Drury Lane, Dundowran,
Queensland

Real Property Description: Lot 2 on SP136512

Title of Report: *Addendum letter for Stage 1 and Stage 2 Reports, Lot 2 on
SP136512, Drury Lane, Dundowran, Queensland
Golder Associates Report 077683504AO, November 2009.*

17 DEC 2009

ECSU

I [CTPI 49-Sch4] of Golder Associates, 216 Draper Street, Cairns, in the State of
Queensland, do solemnly and sincerely declare that;

- I was the investigator and preparer of the report described above;
- I am a chartered member of Institute of Engineers Australia and my qualifications and experience have previously been submitted to the Department of Environment in a submission dated 31 July 1998, reference P983299;
- I have not knowingly included any false, misleading or incomplete information in the report;
- I have not knowingly failed to reveal any relevant information or document to the administering authority; and

I certify that:

- The report addressed the relevant matters for the investigation and is factually correct; and
- The opinions expressed in it are honestly and reasonably held.

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1867*

Signature

CTPI 49-Sch4

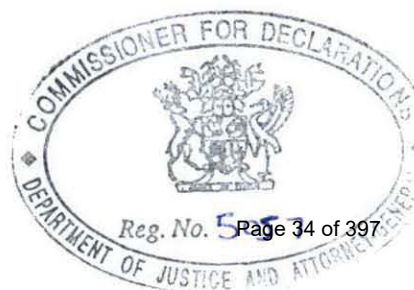
Name

CTPI 49-Sch4

Taken and Declared before me at *Marrabidgee* this *15* day of *December* 2009

Witness (~~Justice of the Peace~~/Commissioner for Declarations)

Name

Barbara Cummins



15 February 2010

Project No. 077683505(AX)

Ria George
Ecoaccess Customer Service Unit
Department of Environment & Resource Management
PO Box 15155
CITY EAST QLD 4002

RECEIVED
16 FEB 2010
EC&SU

LOT 2 ON SP136512, DRURY LANE, DUNDOWRAN

Dear Ria

As per recent discussions on 15 February 2010 regarding the incomplete application for assessment of a Site Investigation for Lot 2 on SP136512, we are pleased to present application form A and a registered plan for the newly configured Lot 2 on SP200633 (formerly Lot 2 on SP136512) as per discussions. Should you have any questions regarding these, please do not hesitate to contact this office.

Yours faithfully

GOLDER ASSOCIATES PTY LTD

CTPI 49-Sch4

CTPI 49-Sch4 BSc(Env Science) MEIANZ
Environmental Scientist

CK/mf

Attachments: Draft SMP RAP – Lot 2 (CD)
Statutory Declaration – Lot 2
Addendum Letter for Stage 1 and Stage 2 Reports – Lot 2

j:\2007\environmental\077683504\00_correspondence\out\ax077683505cl.doc

15 December 2009

Ms Kim Barry
Contaminated Land Unit
Department of Environment & Resource Management
PO Box 15155
CITY EAST QLD 4002

CONTAMINATED
LAND SECTION
24 FEB 2010

RECEIVED
17 DEC 2009
ECSU

Project No. 077683505(AW)

LOT 11 ON RP909375 & LOT 2 ON SP136512, DRURY LANE, DUNDOWRAN

Dear Sir

We are pleased to present documentation as per attachments listed below. Should you have any questions regarding these, please do not hesitate to contact this office.

Yours faithfully

GOLDER ASSOCIATES PTY LTD

CTPI 49-Sch4

CTPI 49-Sch4 BSc(Env Science) CEnvP MEIANZ
Environmental Scientist

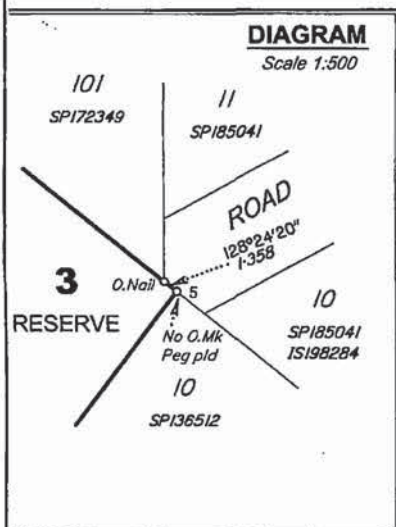
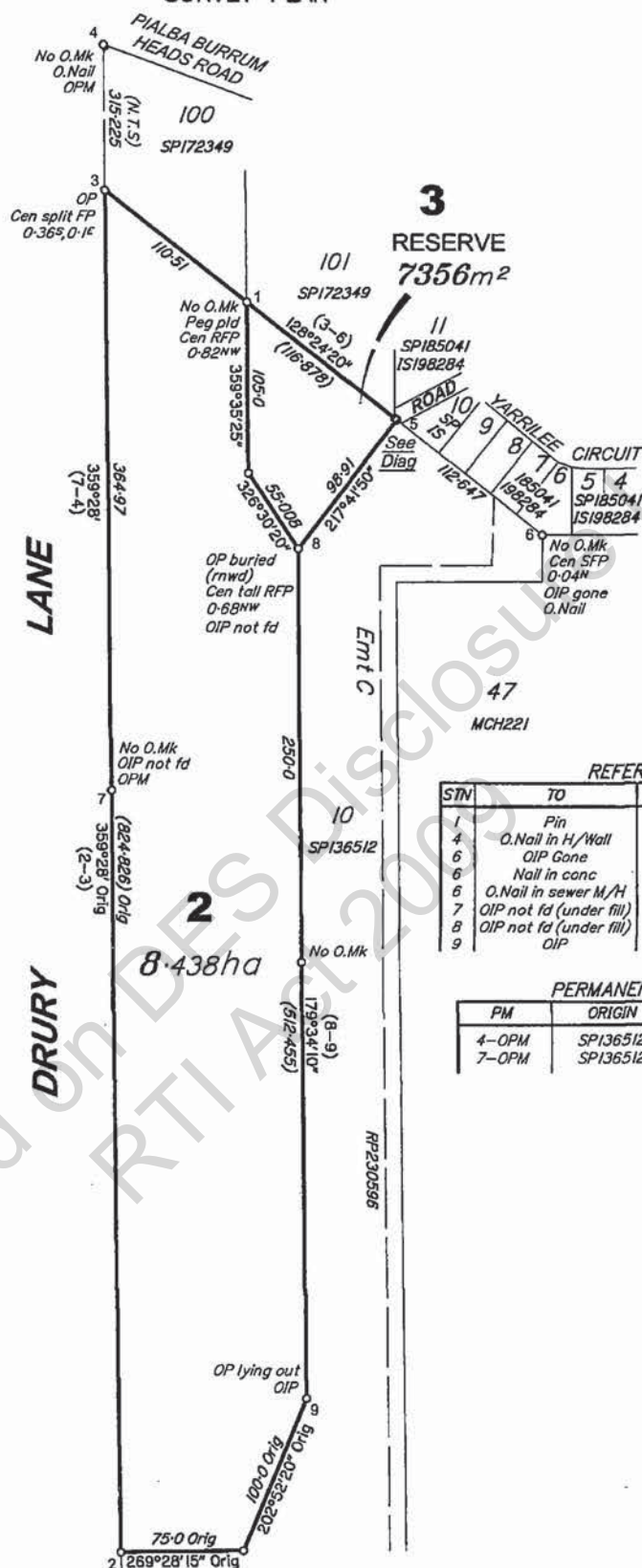
JM/mf

Attachments: Report AS077683505-8000r x 1 Copy (Bound) – Lot 11
Draft SMP RAP x 2 – Lot 11 & Lot 2 (CD's)
Statutory Declaration x 2 – Lot 11 & Lot 2
Addendum Letter for Stage 1 and Stage 2 Reports – Lot 11 & Lot 2
Lloyd Consulting Interim Third Party Review Summary Report

j:\2007\environmental\077683505\00_correspondence\out\aw077683505cl.doc

Land Title Act 1994; Land Act 1994
Form 21 Version 2Sheet
1 1

SURVEY PLAN



REFERENCE MARKS

STN	TO	ORIGIN	BEARING	DIST
1	Pin		104°40'	0-576
4	O.Nail in H/Wall		313°43'50"	0-897
6	OIP Gone	RP191932	239°30'25"	0-412
6	Nail in conc		197°43'	1-05
6	O.Nail in sewer M/H	SPI85041	14°52'	1-713
7	OIP not fd (under fill)	RP190323	269°28'	1-0
8	OIP not fd (under fill)	SPI36512	41°37'10"	1-5
9	OIP	SPI36512	328°22'	4-818

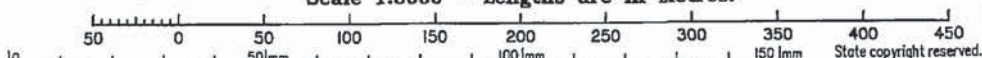
PERMANENT MARKS

PM	ORIGIN	BEARING	DIST	NO
4-OPM	SPI36512	288°38'45"	19-885	121787
7-OPM	SPI36512	245°0'	21-05	122894

Original information compiled from
SP136512 in the Department of Natural
Resources and Water.

Peg placed at all new corners, unless
otherwise stated.

Scale 1:3000 - Lengths are in Metres.



Plan of Lots 2 & 3

Cancelling Lot 2 on SPI36512

PARISH: VERNON

COUNTY: MARCH

Meridian: SPI36512

File A

F/N's: No

Scale: 1:3000

Format: STANDARD



SP200633

Plan Status:

Page 37 of 397

PACIFIC COAST SURVEY PTY LTD (ABN 26 155 098 077) hereby
certify that the land comprised in this plan was surveyed by the
corporation, by Philip Martin O'DONOGHUE, Cadastral Surveyor,
for whose work the corporation accepts responsibility, and that
the plan is accurate, that the said survey was performed in
accordance with the Survey and Mapping Infrastructure Act 2003
and Surveyors Act 2003 and associated Regulations and
Standards and that the said survey was completed on 16/02/07.

CTPI 49-Sch4

Director

CTPI 49-Sch4

Director

19-295

Date 19/2/2007

WARNING : Folded or Mutilated Plans will not be accepted.
Plans may be rolled.
Information may not be placed in the outer margins.

712058543

\$393.20

20/11/2008 10:04

MH 400 NT

Registered

5. Lodged by

BELL DIXON BUTLER
PO Box 5014
TORQUAY Q 4655
Ph: 07 4125 1611

MH015

(Include address, phone number, reference, and Lodger Code)

1. Certificate of Registered Owners or Lessees.

1/We Council of the City of Hervey Bay RADWAY PTY LTD
ACN 125 664 771

(Names in full)

* as Registered Owners of this land agree to this plan and dedicate the Public Use Land as shown hereon in accordance with Section 50 of the Land Title Act 1994.

* as Lessees of this land agree to this plan.

Signature of *Registered Owners *Lessees-

RADWAY PTY LTD ACN 125 664 771

CTPI 49-Sch4

DIRECTOR

DIRECTOR / SECRETARY

CTPI 49-Sch4

* Rule out whichever is inapplicable

2. Local Government Approval. FRASER COAST REGIONAL COUNCIL

* Council of the City of Hervey Bay

hereby approves this plan in accordance with the:

% Integrated Planning Act 1997

Dated this 18th day of NOVEMBER 2008

CTPI 49-Sch4

CTPI 49

C60

* Insert the name of the Local Government. % Insert Integrated Planning Act 1997 or
Insert designation of signatory or delegation Local Government (Planning & Environment) Act 1990

3. Plans with Community Management Statement:

CMS Number:

Name: 19-295

4. References:

Dept File:

Local Govt:

Surveyor: 3304_01 File A

6. Existing

Created

Title Reference	Lot	Plan	Lots	Emts	Road
50348760	2	SPI36512	2 & 3		

2 & 3

Por 45

Lots

Orig

7. Portion Allocation:

8. Map Reference:

9447-24421

9. Locality:

DUNDOWRAN

10. Local Government:

FRASER COAST REGIONAL COUNCIL
HERVEY BAY CITY COUNCIL

11. Passed & Endorsed:

By:

Date:

Signed:

Designation:

CTPI 49-Sch4

19.11.08

CTPI 49-Sch4

Cadastral Surveyor

12. Building Format Plans only.

I certify that:

* As far as it is practical to determine, no part of the building shown on this plan encroaches onto adjoining lots or road.

* Part of the building shown on this plan encroaches onto adjoining * lots and road

Cadastral Surveyor/Director * Date
* delete words not required

13. Lodgement Fees:

Survey Deposit \$

Lodgement \$

.....New Titles \$

Photocopy \$

Postage \$

TOTAL \$

14. Insert Plan Number
Page 58 of 997

SB200633

Application Form

Part A

General details for all applications

OFFICIAL USE ONLY

DATE RECEIVED

FILE REF

PROJECT REF

COMPLETE FORM

☐

ENTERED BY [SIGNATURE]

DATE

RECEIPTING DETAILS ONLY

DATE RECEIVED

RECEIPT NUMBER

AMOUNT RECEIVED

\$

PROCESSED BY (INITIALS AND NAME)

GUIDE

1. The applicant is the person intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices. It is the address of a person and cannot be a post office box.

If more than one applicant as part of a partnership, complete the "Joint applicant details" form and attach to this PART A form.

Important information for applicants

This form asks for general applicant details and a description of the proposed project and any associated activities. The completed form must be submitted together with relevant activity specific [Part B] forms and any other associated forms included in your application kit.

Specific details must accompany this form to enable your application to be processed. The guide provided will help you complete your application correctly. If you have any difficulties completing the form, contact the Ecoaccess Customer Service Unit desk on 1300 368 326. Please number all attachments alphabetically (e.g. 'Attachment A').

(Commercial and confidential information must be marked clearly. If subsequent activities are added to the project, you will be required to resubmit this application with details of the additional activity).

Tick relevant boxes below if the applicant(s) are:

- ☐ an individual or sole trader
☐ individuals in a partnership
☐ individual(s) acting on behalf of an unincorporated organisation
→ Go to Section 1
☒ an incorporated company
☐ an incorporated association
☐ a statutory authority
☐ a body politic
→ Go to Section 2

1. Individual applicant(s) details⁽¹⁾

APPLICANT'S FULL NAME		TITLE	DATE OF BIRTH
REGISTERED ADDRESS			POST CODE
TELEPHONE	FACSIMILE	E-MAIL	
POSTAL ADDRESS (WRITE 'AS ABOVE' IF THE SAME AS REGISTERED ADDRESS)			POST CODE



Application form – Part A
General details for all applications

Guardian details (if applicable)

A parent or legal guardian must complete the following details if an applicant is under 18 years of age.

GUARDIAN'S FULL NAME	DATE OF BIRTH
GUARDIAN'S REGISTERED ADDRESS	POST CODE
GUARDIAN'S SIGNATURE	DATE

→ Go to Section 3

2. Applicant details

2. The applicant is the registered legal entity (not a business trading name) intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices. It is the registered business address of the company making the application and cannot be a post office box.

Enter the Australian Business Number (ABN); or the Australian Company Number (ACN) of the incorporated company; or the Association Number (AN) of the incorporated association; or the title and section of the legislation that gives the statutory corporation its legal status.

REGISTERED LEGAL ENTITY NAME RAOWAY Pty Ltd		
TRADING NAME (IF APPLICABLE) As Above		
REGISTERED ADDRESS 112 Siganto Drive Helensvale		POST CODE 4210
TELEPHONE 55 732666	FASCIMILE 55 733324	E-MAIL/WEBSITE CTPI 49-Sch eate.co.za
POSTAL ADDRESS (WRITE 'AS ABOVE' IF THE SAME AS REGISTERED ADDRESS) PO BOX 634 OXFORD		POST CODE 4210
ABN/ACN/AN OR TITLE AND SECTION OF LEGISLATION 811 2566 4771		

Application form – Part A
General details for all applications

Principal contact or person in charge details

PRINCIPAL CONTACT/PERSON IN CHARGE FULL NAME CTPI 49-Sch4		TITLE Mr
POSITION IN CORPORATION Environmental Scientist,, Golder Associates Pty Ltd		
TELEPHONE 0754755913	FACSIMILE 0754755901	E-MAIL/WEBSITE CTP@golder.com.au
POSTAL ADDRESS (WRITE 'AS ABOVE' IF THE SAME AS REGISTERED ADDRESS) PO Box 5569 Maroochydore BC QLD		POST CODE 4558

Authorised signatory

The authorised signatory is the person authorised to sign an application on behalf of a corporation and in doing so declares that the corporation will be bound by the conditions associated with the granting of the licence or permit.

AUTHORIZED SIGNATORY FULL NAME CTPI 49-Sch4	TITLE MANAGING DIRECTOR
POSITION IN CORPORATION	

3. Project details

Pre-lodgement

Have you previously attended a pre-lodgement meeting or submitted a pre-lodgement form for this project?

☒ NO ☐ YES

PROJECT NUMBER (IF APPLICABLE)

Project description

Briefly describe the proposed activities, works, development or management. Attach a separate sheet if there is insufficient space below.

DESCRIPTION

Application form – Part A
General details for all applications

Approvals required

Please list all Part B application forms you are attaching to this form.

<p>APPLICATION FORMS</p> <p>Application for Assessment of Site Investigation Report</p>

Project site

Where will the activities be conducted? Provide the street address, real property description(s) of the land(s) in which the project is located and local government area. If you require more space, attach a separate sheet.

This information should at least provide enough details to allow an EPA or QPWS officer to locate the site of the proposal.

<p>STREET ADDRESS</p> <p>Drury Lane, Dundowran, 4655</p>	
<p>LOT</p> <p>2</p>	<p>PLAN</p> <p>SP200633</p>
<p>LOCAL GOVERNMENT AREA</p> <p>Fraser Coast Regional Council</p>	

If possible, provide a specific location within a protected area, a property name or an attached map with the project area clearly delineated. Also include the map name/details.

Give as much information as possible to accurately locate your activity, for example maps with contextual or boundary lines on plan or GPS boundary co-ordinates.

<p>SPECIFIC LOCATION/PROPERTY NAME</p>
<p>PROTECTED AREA</p>
<p>GEOGRAPHICAL CO-ORDINATES</p> <p>Latitude 152 47 57</p> <p>Longitude 25 17 31</p>

Geographical co-ordinates can include northing/easting, longitude/latitude.

Attachments

List all attached documents, including maps containing information supporting this application in the space below. If there are no attachments mark "N/A."

Label all attachments alphabetically (e.g. 'Attachment A')

<p>ATTACHMENTS (LABEL ALL ATTACHMENTS ALPHABETICALLY – E.G. 'ATTACHMENT A')</p> <p>Attachment A: Ecoaccess Form Part B, Attachment B: TPR Summary Report, Attachment C: Addendum Letter for Stage 1 and Stage 2 Reports (077683504AO, dated November 2009), Attachment D: SMP/RAP Lot 2, Attachment E: Statutory Declaration.</p>

Application form – Part A
General details for all applications

4. Applicant's certification

Note: If you have not told the truth in this application you may be liable for prosecution under the relevant Acts or Regulations.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge and I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1867*.
- I understand that information supplied on or with this application form may be disclosed publicly in accordance with the *Freedom of Information Act 1992* and the *Evidence Act 1977*.

APPLICANT(1) SIGNATURE	CTPI 49-Sch4
------------------------	--------------

Joint applicant signatures (if applicable)

APPLICANT(2) SIGNATURE

APPLICANT(3) SIGNATURE

APPLICANT(4) SIGNATURE

APPLICANT(5) SIGNATURE

DATE 10 / 12 / 2009

Complete the following checklist.

- ☒ Application form(s) signed and completed
- ☐ Permit fees paid or enclosed (if applicable)
- ☒ Supporting information attached (e.g. maps)

Please return your completed application kit to:

Ecoaccess Customer Service Unit
Environmental Protection Agency

PO Box 15155
City East
Queensland 4002

Enquiries: 1300 368 326
Facsimile: (07) 3115 9600
Email: eco.access@epa.qld.gov.au

Application form — Part B

Environmental Protection Act 1994

Submission of a site investigation / validation report

This form asks for activity specific details in relation to an application under Sections 375 and 390 of the *Environmental Protection Act 1994* for an assessment of a site investigation/validation report. Please read the information sheets and any guidelines included with your application kit to understand the environmental management and conservation issues, policies and procedures that relate to the activities proposed.

Note: Your application must be accompanied by a General Details – Part A form.

1. Lodgement details

Complete this section only if form not lodged by applicant

NAME CTPI 49-Sch4	TELEPHONE 0754755914
COMPANY/ORGANISATION Golder Associates Pty Ltd	
POSTAL ADDRESS PO Box 5569 Maroochydore BC QLD 4558	
EMAIL CTPI@golder.com.au	FACSIMILE 0754755901

2. Site owner's details

An Agent's address is not acceptable.

NAME Radway Pty Ltd	TELEPHONE 55 732 666
POSTAL ADDRESS PO Box 634 Oxenford, 4210	FACSIMILE 55 733 324

3. Site details

If you require additional space, attach the information on a separate sheet marked "Site Details."

STREET ADDRESS Drury Lane, Dundowran, 4655	
LOT(S) 2	PLAN(S) SP136512
LOCAL GOVERNMENT AUTHORITY Fraser Coast Regional Council	

Application form – Part B
Submission of a site investigation / validation report

NOTIFIABLE ACTIVITY/POSSIBLE CONTAMINATING ACTIVITY Landfilling	
CURRENT LAND USE Vacant	PROPOSED LAND USE Industrial
STREET ADDRESS	
LOT(S)	PLAN(S)
LOCAL GOVERNMENT AUTHORITY	
NOTIFIABLE ACTIVITY/POSSIBLE CONTAMINATING ACTIVITY	
CURRENT LAND USE	PROPOSED LAND USE

4. Details of report

4.1 Is a development application pending under the *Integrated Planning Act 1997*?

☐ NO ☒ YES

4.2 The attached report contains (as per the *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland May 1998*)

☐ Stage 1 and Stage 2 investigation
☒ Stage 3 and Stage 4 remediation and validation report

If previous submissions have been made quote:
 Ref no. BNE 34771

5. Payment

The applicable fee¹ of \$ Previously Paid (refer reference no. BNE 34771)

☐ is enclosed with this application (cheque, money order etc.); or
☐ was paid by electronic funds transfer (EFT) on _____ ; and

¹ The fee is \$466.60 per lot where the land is used exclusively for residential purposes and is not the subject of a development application. For any other lot the fee is \$1048 per lot.

details required in the information sheet *Electronically paying fees to the Department of Environment and Resource Management (DERM)* were included.

The payment was for:

- ☐ this application only and the EFT identification code is: _____ / _____ ; or
- ☐ this and other applications. A payment notification (from the final page of the information sheet *Electronically paying fees to the Department of Environment and Resource Management (DERM)*²) was sent to DERM and a copy is attached.

Note: An incomplete application (including applications that do not include the fee, or sufficient detail to show that the fee has been paid where fees are paid by EFT) may be invalid. Invalid applications will be returned without processing and will only be processed if resubmitted with all invalidating issues addressed.

6. Applicant checklist

- ☒ Application form(s) completed and signed.
- ☐ Permit fees paid or enclosed (if applicable).
- ☒ Enclosed statutory declarations by investigators, preparers and owners as per Section 383 of the EP Act. Note: It is an offence under s480 of the EP Act to give to the administering authority or an authorised person a document containing information that you know is false, misleading or incomplete in a material particular.
- ☒ Enclosed signed consultant's report (as per Guidelines for the Assessment and Management of Contaminated Land in Queensland).
- ☒ Enclosed legible copy/copies of proof of ownership of site/s clearly showing the full name(s) of the registered proprietor(s) e.g. current certificates of Title or Title Searches.
- ☒ Enclosed legible copy/copies of all relevant registered plans (available from the Titles Section, Department of Environment and Resource Management) clearly showing location of the site/s and current registered plan details.
- ☒ Enclosed copy of a street map/area map clearly showing location of property.

Please return your completed application kit to:

Ecoaccess Customer Service Unit
Department of Environment and Resource Management

PO Box 15155
City East
Queensland 4002

Enquiries: **1300 130 372**
Facsimile: (07) 3115 9600
eco.access@derm.qld.gov.au

Office use only	
Account code	9091084/433019

² Available at www.derm.qld.gov.au or through the Ecoaccess Customer Service Unit (phone 1300 130 372).

FOR INTERNAL USE ONLY
ENVIRONMENTAL PROTECTION AGENCY

SEARCH RESPONSE

ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Transaction ID: 1204178 EMR Site Id: 82379 17 February
2010

This response relates to a search request received for the site:

Lot: 2 Plan: SP200633

EMR RESULT

The above site IS included on the Environmental Management Register.
The site you have searched has been subdivided from the following site, which is included on the EMR. Subdivided new parcels will remain on the EMR unless it can be shown that they are not located near the contaminating activity.

Lot: 2 Plan: RP230596
Address: DUNDOWRAN ROAD
DUNDOWRAN 4655

The site has been subject to the following Notifiable Activity pursuant to section 374 of the *Environmental Protection Act 1994*.

LANDFILL - disposing of waste (excluding inert construction and demolition waste).

CLR RESULT

The above site is NOT included on the Contaminated Land Register.

ADDITIONAL ADVICE

EMR/CLR Searches may be conducted online through the State Government Website www.smartservice.qld.gov.au or Citec Confirm www.confirm.com.au.

If you have any queries in relation to this search please phone (07) 3330 5687.

Lindi Bowen
Registrar, Contaminated Land Unit

Release

To execute a new search, select the "Back" button on the browser twice

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Release

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QNTIME Version 1.5

[QNTIME](#) > [Specific Parcel Search](#) > [Specific Parcel Report](#)

Specific Parcel Report

Lot: 2 on Plan: SP200633
Parcel: on Segment:

DCDB:**Tenure:****FH****Description:****FREEHOLD****CISP:****Previous Plan Details:****Plan Registered Description**

SP200633 22/01/2009 LOTS 2 & 3 CANCELLING LOT 2 ON SP136512
SP136512 04/04/2001 LOTS 2 AND 10 CANCELLING LOT 2 ON RP230596
RP230596 06/03/1990 LOTS 1-3 (PROP) EMTS D & E IN LOT 1 (PROP) EMT C IN LOT 2 CANCELLING LOT 4 ON RP190323
RP191932 29/03/1985 EMT A&B IN LOT 4 ON RP190323
RP190323 26/06/1984 LOTS 2 TO 4 CANCELLING LOT 2 ON RP177006
RP177006 01/09/1981 LOTS 1 AND 2 CANCELLING LOT 45 ON MCH221
MCH762 30/09/1910 RD IN POR.45
MCH221 15/08/1905 POR.45&47

ATS:**Title Reference:****50755666****Registered Owner:****RADWAY PTY LTD****Tenure Reference:****Original Deed of Grant:****1. 11265143 (POR 45)****Lease Purpose:****Reserve Purpose:****Area:****Lease Conditions:****Commencement Date:****Trustees:****Interests:****MORTGAGE 710693271 15/06/2007 10:10:25****Previous Title References:****50348760****QVAS:****Registered Owner:****RADWAY PTY LTD****Address:****DRURY LA, DUNDOWRAN QLD 4655****Primary Land Use Code:****VACANT - LARGE HOUSESITE(4)****Secondary Land Use Code:****NONE(0)****TAS:****No TAS data found.**[View on Keymap](#)[Back to Search](#)

Logged in as zandez

Release

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Radway Pty Ltd

C/- CTPI 49-Sch4

Golder Associates Pty Ltd

PO BOX 5569

Maroochydore BC QLD 4558

Your reference: 077683505 (AW)

Our Reference: 321413 File no. BNE34771

Dear CTPI 49-Sch4

Re: Application for assessment of a Site Investigation / Validation report for Lot 2 SP136512 located at Drury Lane, Dundowran 4655

The Department of Environment and Resource Management (DERM) - Contaminated Land Unit (CLU) received your application for assessment of a Site Investigation / Validation report on 17 December 2009.

The Guidelines for the Assessment & Management of Contaminated Land in Queensland, 6.3 Lodging site investigations reports – administrative requirements states "The following information must be provided to DERM when lodging site investigation and validation reports. Failure to lodge all required information will result in the application being rejected and returned for completion and resubmission". I have enclosed a copy of the extract for your information.

To make your application complete the following information is required:

- ☒ An Application form completed and signed for assessment of a site investigation/validation report and Part A General Details form; - *The property description provided on Form A and in the report does not exist.*
- ☒ Statutory declaration from the applicant (if someone other the investigator);

Please find attached the original application (including all supporting information) that was supplied to DERM. Should you have any queries in relation to this notice, Ria George of DERM on telephone 1300 130 372 would be happy to assist you.

Yours faithfully

CTPI 49-Sch4

Jodie Brackenburg

Team Leader

Department of Environment and
Resource Management

Date:

Enquiries:

Ecoaccess Customer Service Unit

PO Box 15155

CITY EAST Qld 4002

Telephone: 1300 130 372

Facsimile: (07) 3896 3342

☒ Regional Action Required

Project No: 321413.....

EMR/CLR ID No.....

Permit No. CLEA 0220

CROW No. 196874

Property Description doesn't exist.

17, 12, 09.

-INVALID-

_____ / _____

_____ / _____

(If TPR recommends an SMP refer to Contam Land ASAP!)

/ /

CTPI 49-Sch4

Applicant Name: Radway Pty Ltd

Contact:

CTPI 49-Sch4

Location: 2/SP136512 E 11

Coordinator:

CTPI 49-Sch4

Fees correct ☐ N/A ☒**Payment Method:**Cheque ☐ EFT ☐ Cash ☐ Credit ☐

Cheque No:.....

Drawer (if other than the applicant):

Fees previously paid per DByers column.

COST CENTRE/CODE:

Record of consultation

Applicant name: Radway Pty Ltd

Date 21/12	Person Contacted:		Phone No: <u>CDU: 19684</u>
	Information Requested: <u>LIP doesn't exist (2/SP136512) on QTime</u>		
	<u>Stat Dec for Report preparer states Lot 11/RP909375</u>		
	<u>which is not on Form A (Double Application, as per</u>		
	Response: <u>lot 11 IDAS forms provided</u>		
	Ecoaccess CSU Staff:	<u>Ria</u>	

Date 21/12 31/10	Person Contacted:	CTPI 49-Sch4	Phone No: <u>email</u>
	Information Requested: <u>Owner's consent/applicant - Amend Form A</u>		
	<u>Lot 2/SP136512 doesn't exist on QTime</u>		
	Response: <u>- no response, application made invalid; sent back Lot 2/SP136512 does not exist</u>		
	Ecoaccess CSU Staff:	<u>Ria</u>	

Date	Person Contacted:	CTPI 49-Sch4	Phone No: <u>email</u>
	Information Requested: <u>Confirm fees paid \$1048 per applicants letter; att to BNE35253</u>		
	Response:		
	Ecoaccess CSU Staff:		

Date	Person Contacted:		Phone No:
	Information Requested:		
	Response:		
	Ecoaccess CSU Staff:		

Ria George

From: Ria George
Sent: Monday, 21 December 2009 3:14 PM
To: CTPI@golder.com.au
Subject: Incomplete application for Assessment of Site Investigation Report. DERM ref's 19684 and 19805

Dear CTPI 49-Sc

The department is in receipt of the applications for the Assessment of a Site Investigation Report, however at this time the department cannot validate the application(s) for assessment for the following reasons;

Lot2 SP136512 (Our ref: 19684)

1. The above property description does not exist, please provide the correct Lot on Plan description and amend Form A
2. Owners consent/Applicants consent via Statutory Declaration not provided

Lot11 RP909375 (Our ref: 19805)

1. Owners consent/Applicants consent via Statutory declaration not provided

Please provide the information as requested above in order for the Department to deem that applications valid for assessment.

Kind regards
 Ria George

Contaminated Land C
 Ecoaccess Customer
 Department of Environ

PO BOX 15155
 CITY EAST QLD 4002
 Phone: 1300 130 372
 Fax: +617 3896 3342

Disclaimer: WARNING: This
 confidential, private, or covered
 to be sent to and if you use it
 authority. If you have received
 computer system network and

TPR combined for these LIPs
 however had 2b separated as
 2 diff LIPs + 2 lots forms
 sent w/ diff applicants.
 Lot 2/SP136512 Grow 19684
 Lot 11/ RP909375 Grow 19805.

nation that is
 was intended
 ut appropriate
 es, from your

Ria George

From: Darryl Byers
Sent: Wednesday, 6 January 2010 9:13 AM
To: Ria George
Subject: RE: Request for confirmation of fees for 2 L/Ps for previous SIR

Ria,

These have been paid.

From: Ria George
Sent: Monday, 21 December 2009 2:53 PM
To: Darryl Byers
Subject: Request for confirmation of fees for 2 L/Ps for previous SIR
Importance: High

Hi Darryl

I am in receipt of an application for a Site Investigation report for 2 different lots with two different applicants who state the fee was paid on BNE35253 however the L/Ps searched on Ecotrack do not show any receipting, can you please confirm that the correct fees have been paid for a SIR on;

Lot11 RP909375 (Ecotrack project no. 322048)
 Lot2/SP136512 (Ecotrack Project no. 321413)

Kind regards
 Ria George

Contaminated Land Coordinator
 Ecoaccess Customer Service Unit
 Department of Environment & Resource Management

PO BOX 15155
 CITY EAST QLD 4002
 Phone: 1300 130 372
 Fax: +617 3896 3342

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SEARCH RESPONSE

ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Transaction ID: 1192003

EMR Site Id: 34287

21 December

This response relates to a search request received for the site:

Lot: 2 Plan: SP136512

EMR RESULT

The above site IS included on the Environmental Management Register.

The site you have searched has been subdivided from the following site, which is included on the EMR. Subdivided new parcels will remain on the EMR unless it can be shown that they are not located near the contaminating activity.

Lot: 2 Plan: RP230596
Address: DUNDOWRAN ROAD
DUNDOWRAN 4655

The site has been subject to the following Notifiable Activity pursuant to section 374 of the *Environmental Protection Act 1994*.

LANDFILL - disposing of waste (excluding inert construction and demolition waste).

CLR RESULT

The above site is NOT included on the Contaminated Land Register.

ADDITIONAL ADVICE

EMR/CLR Searches may be conducted online through the State Government Website www.smartservice.qld.gov.au or Citec Confirm www.confirm.com.au.

If you have any queries in relation to this search please phone (07) 3330 5687.

Lindi Bowen
Registrar, Contaminated Land Unit

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To execute a new search, select the "Back" button on the browser twice

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Relea



QNTIME Version 1.5

[QNTIME](#) > [Specific Parcel Search](#) > [Specific Parcel Report](#)**Specific Parcel Report**

Lot: 2 on Plan: SP136512
Parcel: on Segment:

DCDB:

No DCDB data found.

CISP:**Previous Plan Details:****Plan Registered Description**

SP200633 22/01/2009 LOTS 2 & 3 CANCELLING LOT 2 ON SP136512
SP136512 04/04/2001 LOTS 2 AND 10 CANCELLING LOT 2 ON RP230596
RP230596 06/03/1990 LOTS 1-3 (PROP) EMTS D & E IN LOT 1 (PROP) EMT C IN LOT 2 CANCELLING LOT 4 ON RP190323
RP191932 29/03/1985 EMT A&B IN LOT 4 ON RP190323
RP190323 26/06/1984 LOTS 2 TO 4 CANCELLING LOT 2 ON RP177006
RP177006 01/09/1981 LOTS 1 AND 2 CANCELLING LOT 45 ON MCH221
MCH762 30/09/1910 RD IN POR.45
MCH221 15/08/1905 POR.45&47

ATS:

No ATS data found.

ATS TitleRef for lot/plan (2/CPSP136512) not found

QVAS:

No QVAS data found.

No data found:Error Code:3

TAS:

No TAS data found.

[Back to Search](#)

Logged in as wilsonm

[Disclaimer](#)

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[Queensland Government Gateway](#)

Released

15 December 2009

RECEIVED

17 DEC 2009

Project No. 077683505(AW)

Ms Kim Barry
Contaminated Land Unit
Department of Environment & Resource Management
PO Box 15155
CITY EAST QLD 4002

ECSU

LOT 11 ON RP909375 & LOT 2 ON SP136512, DRURY LANE, DUNDOWRAN

Dear Sir

We are pleased to present documentation as per attachments listed below. Should you have any questions regarding these, please do not hesitate to contact this office.

Yours faithfully

GOLDER ASSOCIATES PTY LTD

CTPI 49-Sch4

CTPI 49-Sch4

BSc(Env Science) CEnvP MEIANZ
Environmental Scientist

CTPI 49

Attachments: Report AS077683505-8000r x 1 Copy (Bound) – Lot 11
Draft SMP RAP x 2 – Lot 11 & Lot 2 (CD's)
Statutory Declaration x 2 – Lot 11 & Lot 2
Addendum Letter for Stage 1 and Stage 2 Reports – Lot 11 & Lot 2
Lloyd Consulting Interim Third Party Review Summary Report

j:\2007\environmental\077683505\00_correspondence\out\aw077683505d.doc



**STATUTORY DECLARATION
(INVESTIGATOR)**

Address of Site Investigated: Lot 2 on SP136512, Drury Lane, Dundowran,
Queensland

Real Property Description: Lot 2 on SP136512

Title of Report: *Addendum letter for Stage 1 and Stage 2 Reports, Lot 2 on
SP136512, Drury Lane, Dundowran, Queensland*
Golder Associates Report 077683504AO, November 2009.

17 DEC 2009

ESU

I [CTPI 49-Sch4] of Golder Associates, 216 Draper Street, Cairns, in the State of
Queensland, do solemnly and sincerely declare that;

- I was the investigator and preparer of the report described above;
- I am a chartered member of Institute of Engineers Australia and my qualifications and experience have previously been submitted to the Department of Environment in a submission dated 31 July 1998, reference P983299;
- I have not knowingly included any false, misleading or incomplete information in the report;
- I have not knowingly failed to reveal any relevant information or document to the administering authority; and

I certify that:

- The report addressed the relevant matters for the investigation and is factually correct; and
- The opinions expressed in it are honestly and reasonably held.

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1867*

Signature

Name

Taken and Declared before me at *Morayfield* this *15* day of *December* 2009

Witness (Justice of the Peace/Commissioner for Declarations)

Name

Barbara Cummins



ecoaccess

environmental licences and permits

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17 DEC 2009

ECSU

Application Form

Part A

General details for all applications**OFFICIAL USE ONLY**

DATE RECEIVED

FILE REF

PROJECT REF

COMPLETE FORM

☐

ENTERED BY (SIGNATURE)

DATE

RECEIPTING DETAILS ONLY

DATE RECEIPTED

RECEIPT NUMBER

AMOUNT RECEIVED

\$

PROCESSED BY (INITIALS AND NAME)

GUIDE

1. The applicant is the person intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices. It is the address of a person and cannot be a post office box.

If more than one applicant as part of a partnership, complete the "Joint applicant details" form and attach to this PART A form.

Important information for applicants

This form asks for general applicant details and a description of the proposed project and any associated activities. The completed form must be submitted together with relevant activity specific [Part B] forms and any other associated forms included in your application kit.

Specific details must accompany this form to enable your application to be processed. The guide provided will help you complete your application correctly. If you have any difficulties completing the form, contact the Ecoaccess Customer Service Unit desk on 1300 368 326. Please number all attachments alphabetically (e.g. 'Attachment A').

(Commercial and confidential information must be marked clearly. If subsequent activities are added to the project, you will be required to resubmit this application with details of the additional activity).

Tick relevant boxes below if the applicant(s) are:

- ☐ an individual or sole trader
☐ individuals in a partnership
☐ individual(s) acting on behalf of an unincorporated organisation
→ **Go to Section 1**
☒ an incorporated company
☐ an incorporated association
☐ a statutory authority
☐ a body politic
→ **Go to Section 2**

1. Individual applicant(s) details⁽¹⁾

APPLICANT'S FULL NAME		TITLE	DATE OF BIRTH
REGISTERED ADDRESS			POST CODE
TELEPHONE	FACSIMILE	E-MAIL	
POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS)			POST CODE



**Application form – Part A**
General details for all applications**Guardian details (if applicable)**

A parent or legal guardian must complete the following details if an applicant is under 18 years of age.

GUARDIAN'S FULL NAME	DATE OF BIRTH
GUARDIAN'S REGISTERED ADDRESS	POST CODE
GUARDIAN'S SIGNATURE	DATE

→ Go to Section 3

2. Applicant details

2. The applicant is the registered legal entity (not a business trading name) intending to carry out the activity and in whose name the relevant permits or licences are to be issued.

The registered address is legally required for the serving of notices. It is the registered business address of the company making the application and cannot be a post office box.

Enter the Australian Business Number (ABN); or the Australian Company Number (ACN) of the incorporated company; or the Association Number (AN) of the incorporated association; or the title and section of the legislation that gives the statutory corporation its legal status.

REGISTERED LEGAL ENTITY NAME		
RAOWAY Pty Ltd		
TRADING NAME (IF APPLICABLE)		
As Above		
REGISTERED ADDRESS		POST CODE
112 Siganto Drive Helensvale		4210
TELEPHONE	FASCIMILE	E-MAIL/WEBSITE
55 732666	55 733324	CTPI 49-Sch4 eahc.com.au
POSTAL ADDRESS (WRITE 'AS ABOVE' IF THE SAME AS REGISTERED ADDRESS)		POST CODE
PO BOX 634 OXFORD		4210
ABN/ACN/AN OR TITLE AND SECTION OF LEGISLATION		
811 2566 4771		

Application form – Part A
General details for all applications

Principal contact or person in charge details

PRINCIPAL CONTACT/PERSON IN CHARGE FULL NAME CTPI 49-Sch4		TITLE Mr
POSITION IN CORPORATION Environmental Scientist,, Golder Associates Pty Ltd		
TELEPHONE 0754755913	FACSIMILE 0754755901	E-MAIL/WEBSITE CTP@golder.com.au
POSTAL ADDRESS (WRITE 'AS ABOVE' IF THE SAME AS REGISTERED ADDRESS) PO Box 5569. Maroochydore BC QLD		POST CODE 4558

Authorised signatory

The authorised signatory is the person authorised to sign an application on behalf of a corporation and in doing so declares that the corporation will be bound by the conditions associated with the granting of the licence or permit.

AUTHORIZED SIGNATORY FULL NAME CTPI 49-Sch4	TITLE MANAGING DIRECTOR
POSITION IN CORPORATION	

3. Project details

Pre-lodgement

Have you previously attended a pre-lodgement meeting or submitted a pre-lodgement form for this project?

☒ NO ☐ YES

PROJECT NUMBER (IF APPLICABLE)

Project description

Briefly describe the proposed activities, works, development or management. Attach a separate sheet if there is insufficient space below.

DESCRIPTION

Application form – Part A

General details for all applications

Approvals required

Please list all Part B application forms you are attaching to this form.

APPLICATION FORMS Application for Assessment of Site Investigation Report
--

Project site

Where will the activities be conducted? Provide the street address, real property description(s) of the land(s) in which the project is located and local government area. If you require more space, attach a separate sheet.

This information should at least provide enough details to allow an EPA or QPWS officer to locate the site of the proposal.

STREET ADDRESS Drury Lane, Dundowran, 4655	
LOT 2	PLAN SP136512
LOCAL GOVERNMENT AREA Fraser Coast Regional Council	

If possible, provide a specific location within a protected area, a property name or an attached map with the project area clearly delineated. Also include the map name/details.

Give as much information as possible to accurately locate your activity, for example maps with contextual or boundary lines on plan or GPS boundary co-ordinates.

SPECIFIC LOCATION/PROPERTY NAME
PROTECTED AREA
GEOGRAPHICAL CO-ORDINATES Latitude 152 47 57 Longitude 25 17 31

Geographical co-ordinates can include northing/easting, longitude/latitude.

Attachments

List all attached documents, including maps containing information supporting this application in the space below. If there are no attachments mark "N/A."

Label all attachments alphabetically (e.g. 'Attachment A')

ATTACHMENTS (LABEL ALL ATTACHMENTS ALPHABETICALLY – E.G. 'ATTACHMENT A') Attachment A: Ecoaccess Form Part B, Attachment B: TPR Summary Report, Attachment C: Addendum Letter for Stage 1 and Stage 2 Reports (077683504AO, dated November 2009), Attachment D: SMP/RAP Lot 2, Attachment E: Statutory Declaration.
--

Release

Application form – Part A
General details for all applications

4. Applicant's certification

Note: If you have not told the truth in this application you may be liable for prosecution under the relevant Acts or Regulations.

- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge and I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1867*.
- I understand that information supplied on or with this application form may be disclosed publicly in accordance with the *Freedom of Information Act 1992* and the *Evidence Act 1977*.

APPLICANT(1) SIGNATURE	CTPI 49-Sch4
------------------------	--------------

Joint applicant signatures (if applicable)

APPLICANT(2) SIGNATURE

APPLICANT(3) SIGNATURE

APPLICANT(4) SIGNATURE

APPLICANT(5) SIGNATURE

DATE	10 / 12 / 2009.
------	-----------------

Complete the following checklist.

- ☒ Application form(s) signed and completed
- ☐ Permit fees paid or enclosed (if applicable)
- ☒ Supporting information attached (e.g. maps)

Please return your completed application kit to:

**Ecoaccess Customer Service Unit
Environmental Protection Agency**

PO Box 15155
City East
Queensland 4002

Enquiries: 1300 368 326
Facsimile: (07) 3115 9600
Email: eco.access@epa.qld.gov.au

Application form — Part B

Environmental Protection Act 1994

Submission of a site investigation / validation report

This form asks for activity specific details in relation to an application under Sections 375 and 390 of the *Environmental Protection Act 1994* for an assessment of a site investigation/validation report. Please read the information sheets and any guidelines included with your application kit to understand the environmental management and conservation issues, policies and procedures that relate to the activities proposed.

Note: Your application must be accompanied by a General Details – Part A form.

1. Lodgement details

Complete this section only if form not lodged by applicant

NAME CTPI 49-Sch4	TELEPHONE 0754755914
COMPANY/ORGANISATION Golder Associates Pty Ltd	
POSTAL ADDRESS PO Box 5569 Maroochydore BC QLD 4558	
EMAIL CTPI@golder.com.au	FACSIMILE 0754755901

2. Site owner's details

An Agent's address is not acceptable.

NAME Radway Pty Ltd	TELEPHONE 55 732 666
POSTAL ADDRESS PO Box 634 Oxenford, 4210	FACSIMILE 55 733 324

3. Site details

If you require additional space, attach the information on a separate sheet marked "Site Details."

STREET ADDRESS Drury Lane, Dundowran, 4655	
LOT(S) 2	PLAN(S) SP136512
LOCAL GOVERNMENT AUTHORITY Fraser Coast Regional Council	



Submission of a site investigation / validation report

NOTIFIABLE ACTIVITY/POSSIBLE CONTAMINATING ACTIVITY Landfilling	
CURRENT LAND USE Vacant	PROPOSED LAND USE Industrial
STREET ADDRESS	
LOT(S)	PLAN(S)
LOCAL GOVERNMENT AUTHORITY	
NOTIFIABLE ACTIVITY/POSSIBLE CONTAMINATING ACTIVITY	
CURRENT LAND USE	PROPOSED LAND USE

4. Details of report

4.1 Is a development application pending under the *Integrated Planning Act 1997*?☐

NO

☒

YES

4.2 The attached report contains (as per the *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland May 1998*)☐

Stage 1 and Stage 2 investigation

☒

Stage 3 and Stage 4 remediation and validation report

If previous submissions have been made quote:

Ref no. BNE 34771

5. Payment

The applicable fee¹ of \$ Previously Paid (refer reference no. BNE 34771)

☐

is enclosed with this application (cheque, money order etc.); or

☐

was paid by electronic funds transfer (EFT) on _____; and

¹ The fee is \$466.60 per lot where the land is used exclusively for residential purposes and is not the subject of a development application. For any other lot the fee is \$1048 per lot.

Application form – Part B
Submission of a site investigation / validation report

details required in the information sheet *Electronically paying fees to the Department of Environment and Resource Management (DERM)* were included.

The payment was for:

- ☐ this application only and the EFT identification code is: _____ / _____ ; or
- ☐ this and other applications. A payment notification (from the final page of the information sheet *Electronically paying fees to the Department of Environment and Resource Management (DERM)*²) was sent to DERM and a copy is attached.

Note: An incomplete application (including applications that do not include the fee, or sufficient detail to show that the fee has been paid where fees are paid by EFT) may be invalid. Invalid applications will be returned without processing and will only be processed if resubmitted with all invalidating issues addressed.

6. Applicant checklist

- ☒ Application form(s) completed and signed.
- ☐ Permit fees paid or enclosed (if applicable).
- ☒ Enclosed statutory declarations by investigators, preparers and owners as per Section 383 of the EP Act. Note: It is an offence under s480 of the EP Act to give to the administering authority or an authorised person a document containing information that you know is false, misleading or incomplete in a material particular.
- ☒ Enclosed signed consultant's report (as per Guidelines for the Assessment and Management of Contaminated Land in Queensland).
- ☒ Enclosed legible copy/copies of proof of ownership of site/s clearly showing the full name(s) of the registered proprietor(s) e.g. current certificates of Title or Title Searches.
- ☒ Enclosed legible copy/copies of all relevant registered plans (available from the Titles Section, Department of Environment and Resource Management) clearly showing location of the site/s and current registered plan details.
- ☒ Enclosed copy of a street map/area map clearly showing location of property.

Please return your completed application kit to:

Ecoaccess Customer Service Unit
Department of Environment and Resource Management

PO Box 15155
City East
Queensland 4002

Enquiries: **1300 130 372**
Facsimile: (07) 3115 9600
eco.access@derm.qld.gov.au

Office use only	
Account code	9091084/433019

² Available at www.derm.qld.gov.au or through the Ecoaccess Customer Service Unit (phone 1300 130 372).

24 FEB 2010

24 November 2009

Project No. 077683504(AO)

CTPI 49-Sch4

Lloyd Consulting
PO BOX 320
WILSTON QLD 4051

RECEIVED
17 DEC 2009
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**ADDENDUM LETTER FOR STAGE 1 AND STAGE 2 REPORTS
LOT 2 SP136512, DRURY LANE, HERVEY BAY**

Dear CTPI 49

1.0 INTRODUCTION

This addendum letter has been prepared to provide additional information in response to queries raised by the Third Party Reviewer (TPR) regarding the Stage 1 Preliminary Site Investigation (Golder Associates Report 077683504AI, dated November 2007) and Stage 2 Detailed Site Investigation (Golder Associates Report 077683504, dated November 2007) for the above site. The TPR queries were detailed in an email dated 2 September 2009. The queries (shown in *italics*) and our responses are provided below.

2.0 RESPONSE TO REVIEW COMMENTS

1) Historical aerial photographs should be included (as appendices) in the reports.

Aerial photographs were reviewed at the Department of Natural Resources (DNR now Department of Environment and Resource Management - DERM) office and are not available for inclusion in the report. In addition, we do not have an existing agreement with DERM to enable reproduction of this material.

2) Data Quality Objectives are not defined and there is a very limited discussion surrounding the QA/QC for field work such as trip blanks and duplicate samples. It appears that duplicate samples were collected for surface samples only and the number of samples collected relative to applicable guidelines (one in twenty) is not discussed.

Investigation Data Quality Objectives for both the Stage 1 Preliminary Site Investigation (PSI) and Stage 2 Detailed Site Investigation (DSI) included:

- General compliance with standard internal Golder procedures for fieldwork.
- Recording all field data directly onto relevant standard internal Golder forms.
- Keeping copies of all field records in the appropriate project file.
- Decontamination of all sampling equipment prior to and between sampling events.
- Use of laboratory supplied and prepared sample containers appropriate for particular analytes.
- Immediate placement and storage of collected samples into ice/brick-cooled containers on-site.
- Delivery of samples directly to the laboratory on the day of collection or storage within refrigerated facilities until delivered to the laboratory.

Golder Associates Pty Ltd

55 Kingsford Smith Parade, Maroochydore, Queensland 4558, Australia (PO Box 5569, Maroochydore BC QLD 4558)
Tel: +61 7 5475 5900 Fax: +61 7 5475 5901 www.golder.com

Golder Associates: Operations in Africa, Asia, Australasia, Europe, North America and South America

A.B.N. 64 006 107 857

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- Transport of all samples to the laboratory under standard chain of custody documentation.

The Stage 1 PSI Quality Assurance/Quality Control (QA/QC) samples were collected during the field investigation to confirm the validity of the sampling and subsequent laboratory testing program. A total of one duplicate soil sample was collected for QA/QC purposes from a total of 10 samples collected. This frequency of duplicate samples is within the requirement (1 duplicate sample per 20 samples) described in Australian Standard (AS 4482.1-2005).

The Stage 2 DSI Quality Assurance/Quality Control (QA/QC) samples were collected during the field investigation to confirm the validity of the sampling and subsequent laboratory testing program. A total of eight duplicate soil samples were collected for QA/QC purposes, from a total of 227 samples collected. This duplicate sampling frequency of 1 duplicate sample per 28 samples is not in compliance with the requirement (1 duplicate sample per 20 samples) described in Australian Standard (AS 4482.1-2005). This non-compliance arose from the sampling program being conducted where a duplicate sample was collected at every twentieth investigation sample location. We have amended our general sampling procedures to prevent this from reoccurring. This non-compliance is not considered to adversely impact upon the findings of the Stage 2 DSI.

No trip blanks or triplicates were collected during the Stage 1 PSI or Stage 2 DSI. The Stage 1 PSI or Stage 2 DSI works for this project commenced in 2007 in a period where the level of QA/QC data required by the Contaminated Land Unit for report review and Golder's internal sampling protocols were subject to a process of continuing improvement to comply with the relevant national policies and standards. The absence of some components of a best practice data QA/QC program was not considered to be a significant non-conformance for the assessment outcomes of this project on the basis of the following:

- The analytical laboratory was accredited by the National Association of Testing Authorities (NATA) and subject to ongoing QA/QC performance monitoring on a range of other projects by Golder Associates.
- The primary aim of trip blank samples is to identify potential cross-contamination of samples from and volatile concentrations in collected samples. As such, their purpose is to identify potential 'false positive' or over-reporting of the contaminant concentrations present in collected samples not 'false negatives' or under reporting that may directly impact upon the validation works.

Further more intense sampling will be required during the remediation stage and sampling for QA/QC purposes (including trip blanks, rinsates, duplicate and triplicate samples) during this work will be undertaken as per Australian Standard (AS 4482.1-2005) and as agreed with the TPR.

Refer to bullet point number 4 for further discussion on QA/QC results.

3) Sampling densities are not mentioned / calculated in relation to relevant guideline (i.e. to confirm appropriate sampling density / robustness for EMR removal objectives). For example, the stage 2 assessment work for Lot 11 included only 13 soil samples and 3 water samples which would appear to be less than required densities given the objective of ultimate removal of the site from the EMR. Soil under the stockpile area (southern part of the site) was also not apparently sampled in either the stage 1 or stage 2 ESA. Please provide additional information and consider additional sampling to support draft SMP/RAP preparation commensurate with new objectives.

At the time the Stage 1 and Stage 2 reports were prepared, the objective was for Lot 2 to remain on the EMR as a managed site under a commercial/industrial land use setting. The sampling program conducted under this objective was considered suitable to (and did) achieve this objective.

A total of 216 samples were analysed during the Stage 2 DSI for a range of potential contaminants identified during the Stage 1 PSI. The approximate volume of uncontrolled fill identified on Lot 2 is approximately 250,000 m³. On this basis a sampling density of approximately one sample per 1157m³ of uncontrolled fill was achieved during the Stage 2 DSI. This sampling frequency is obviously insufficient to support the new objective to remove the site from the EMR but is considered to be a suitable basis for development of a Remediation Action Plan (RAP) for the site. Further characterisation sampling will be conducted during remedial works at a sampling density of 1 per 50 m³.

4) Section 3.1 of the Lot 2 stage 2 report states that seven of nine RPD values were ok (but lists six that weren't) – this seems to be contradictory. Also, the RPD table includes eight duplicate samples whereas the report states nine. Please clarify (please also highlight RPD exceedences on the table).

The Stage 2 report incorrectly stated that seven of nine RPD values were acceptable.

Six of the eight duplicates had RPDs outside the acceptable range of 0% and 50%. These six results were correctly identified and discussed in the Stage 2 report.

The QA/QC table (Table No. 13) from the Stage 2 report has been amended to highlight RPD exceedences and is presented in Attachment A.

5) Section 4.1 of the reports state that HIL-A and HIL-F settings were used for comparative purposes but does not indicate what the appropriate criteria for the sites are please amend commensurate with new objectives (i.e. removal off the EMR) / final land use plans. Please include a table showing relevant site assessment / remediation criteria in each report.

At the time the Stage 1 and Stage 2 reports were prepared, the objective was for Lot 2 to remain on the EMR as a managed site under a commercial/industrial land use setting. Under this managed setting HIL"F" criteria are considered to be appropriate for assessment of human health risks.

Under the new objective to remove the site from the EMR, HIL"A" criteria area considered to be appropriate for assessment of human health risks. On this basis in Tables 2 to 6 from the Stage 1 PSI and Stage 2 DSI reports have been amended to compare against HIL"A" criteria. These amended tables are presented in Attachment B.

6) Groundwater bore searches for the area was not conducted. There would appear to be a significant level of groundwater usage in the area (Windmill observed during site inspection). Please undertake a survey of registered bores in the area and include in the report.

A groundwater bore search was conducted through DERM (refer Attachment C). The results of a 5km radius borehole search revealed 17 groundwater bores, showing standing water levels ranging between 2.2 metres below ground level (mbgl) to 14.3 mbgl. The salinity range within these bores was variable ranging from fresh to salty.

The main potential use of the groundwater within the area is expected to be limited to irrigation and stock watering. However, It should be noted that groundwater inflows into monitoring wells installed by Golder within Lot 2, were very slow and the resulting yields are not considered to represent a viable source of potable water or other extractive groundwater use.

7) The reports do not currently provide sufficient details on source of the hydrocarbons levels detected in the groundwater samples – please clarify / undertake additional sampling to better characterise the source / explain the detection results.

Discussions with the TPR clarified that this comment was not related to this site.

8) Section 6.0 and 7.0 of the reports – please update commensurate with new objectives (i.e. removal from EMR) and include a remediation strategy / process based on future land use / configuration plans.

It is not proposed to update specific reports. The findings of the Stage 2 Detailed Site Investigation do not support removal of this site from the EMR without remedial works being undertaken. It is proposed to develop a Draft Site Management Plan (SMP) and Remediation Action Plan (RAP) for TPR/DERM approval. The RAP will be based on a strategy of:

- Excavation of all uncontrolled fill materials.
- Segregation of soil materials from deleterious materials.
- Characterization of separated soil materials for either reuse on site as "clean" fill or for offsite disposal.
- Pulverisation/crushing of bricks and concrete (> 300 mm diameter) to enable reuse as inert site fill.

■ Offsite disposal of remaining deleterious materials

The RAP will outline the requirements for remediation and validation to confirm the site is suitable for future residential use and allow removal of the EMR.

9) Please include highlighting in results tables showing exceedances against relevant criteria; also please show exceedances on relevant figures. (Note: For table 9, please also display the TPH fractions for C10 – C36 as a total to compare against relevant criteria).

Updated table 9 and figure 2 are presented in Attachment D, all other updated tables are presented in Attachment B.

10) Laboratory certificates include only metals analysis. A number of results also appear to be missing (e.g. samples S68 0.1 (I think you mean S58 0.1) and S20 2.0 were missing from the lab documents). Please clarify / check and provide outstanding information / certificates.

Missing laboratory certificates are presented in Attachment E, including metal results for S58 0.1 and S20 2.0.

11) Limitations in reports need to be amended to include TPR review.

For purposes of your services as a Third Party Reviewer on the above project you may rely on the following reports:

- Stage 1 Preliminary Site Investigation Lot 2 on SP136512 Drury Lane, Dundowran, Queensland 4655 (077683504(AI) November 2007);
- Stage 2 Detailed Site Investigation Lot 2 on SP136512 Drury Lane, Dundowran, Queensland 4655 (077683504(AG) November 2007);

We trust this information meets your requirements. If you have any further queries, please don't hesitate to contact the undersigned.

Yours faithfully

GOLDER ASSOCIATES PTY LTD

CTPI 49-Sch4

CTPI 49-Sch4
Environmental Scientist

CJK/PKS/cjk

CTPI 49-Sch4

CTPI 49-Sch4
Principal

Attachments: Attachment A – QA/QC Table No. 13 (Stage 2 DSI)
Attachment B – Tables 2 to 6 (Stage 2 DSI)
Attachment C – DERM Groundwater Bore Search
Attachment D – Updated Figure No. 2 and Table No. 9 (Stage 2 DSI)
Attachment E – Laboratory Reports for S58 0.1m and S20 2.0m
Attachment F - Limitations

Attachments A

QA/QC Table No. 13 (Stage 2 DSI)

TABLE 13
SUMMARY OF QA/QC ANALYTICAL RESULTS - DETAILED INVESTIGATION

Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Sample	Depth (m)	Collect Date	Sample Type	METALS							
				Lead mg/kg	Nickel mg/kg	Arsenic mg/kg	Cadmium mg/kg	Chromium mg/kg	Copper mg/Kg	Zinc mg/kg	Mercury mg/kg
S6	0.1	17/07/2007	soil	<5	3	<5	<1	3	<5	6	<0.1
S6Q	0.1	17/07/2007	soil	<5	2	<5	<1	3	<5	6	<0.1
Relative Percentage Difference Values %				0	40	0	0	0	0	0	0
S10	0.1	17/07/2007	soil	7	<2	5	<1	6	<5	19	<0.1
S10Q	0.1	17/07/2007	soil	7	5	<5	<1	4	5	21	<0.1
Relative Percentage Difference Values %				0	85.7	0	0	40	0	10	0
S29	0.1	17/07/2007	soil	62	15	6	<1	11	11	62	<0.1
S29Q	0.1	17/07/2007	soil	16	2	6	<1	8	5	18	<0.1
Relative Percentage Difference Values %				117.9	152.9	0	0	31.6	75	110	0
S37	0.1	17/07/2007	soil	10	4	11	<1	8	<5	9	<0.1
S37Q	0.1	17/07/2007	soil	11	5	16	<1	9	<5	12	<0.1
Relative Percentage Difference Values %				9.5	22.2	37	0	11.8	0	28.6	0
S45	0.1	17/07/2007	soil	<5	<2	<5	1	4	<5	7	<0.1
S45Q	0.1	17/07/2007	soil	<5	<2	<5	<1	2	<5	25	<0.1
Relative Percentage Difference Values %				0	0	0	0	66.7	0	112.5	0
S48	0.1	17/07/2007	soil	12	12	37	<1	7	16	19	<0.1
S48Q	0.1	17/07/2007	soil	10	7	8	<1	4	5	15	<0.1
Relative Percentage Difference Values %				18.2	52.6	128.9	0	54.5	104.8	23.5	0
S56	0.1	20/07/2007	soil	<5	2	7	<1	4	<5	<5	0.1
S56Q	0.1	20/07/2007	soil	<5	8	9	<1	8	<5	6	0.1
Relative Percentage Difference Values %				0	120	25	0	66.7	0	18.2	0
S60	0.1	17/07/2007	soil	15	16	16	<1	17	10	45	0.1
S60Q	0.1	17/07/2007	soil	10	<2	136	<1	61	<5	7	0.1
Relative Percentage Difference Values %				40	155.6	157.9	0	112.8	66.7	146.2	0

Notes

a All results are expressed as mg/kg

b <LOR = Less than detection limit

c Except where indicated, chromium expected as Cr(III)



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Attachments B
Table 2 to 6 (Stage 2 DSI)

Relea

Table 2
SUMMARY OF ANALYTICAL RESULTS INORGANICS
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Location	Sample	Depth (m)	METALS							
			Arsenic mg/kg	Cadmium mg/kg	Chromium mg/kg	Copper mg/kg	Lead mg/kg	Nickel mg/kg	Zinc mg/kg	Mercury mg/kg
Uncontrolled Fill	S1	0.1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S1	1	<5	<1	<2	<5	<5	<2	9	<0.1
	S1	2	<5	<1	<2	<5	<5	<2	<5	<0.1
	S2	0.1	<5	<1	<2	<5	<5	<2	8	<0.1
	S2	1	6	<1	13	9	12	22	29	<0.1
	S2	2	<5	<1	<2	<5	<5	<2	<5	<0.1
	S2	3	<5	<1	<2	<5	<5	<2	<5	<0.1
	S3	0.1	<5	<1	6	11	18	8	80	<0.1
	S3	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S3	2	<5	<1	<2	<5	<5	<2	<5	<0.1
	S4	0.1	<5	<1	4	<5	12	3	13	<0.1
	S4	1	<5	<1	<2	<5	20	<2	283	<0.1
	S4	2	<5	<1	4	6	37	3	185	<0.1
	S4	3	<5	<1	<2	<5	<5	<2	<5	<0.1
	S5	0.1	9	<1	8	<5	6	7	11	<0.1
	S5	1	7	<1	10	7	7	9	18	<0.1
	S5	2	7	<1	9	8	11	18	22	<0.1
	S5	3	<5	<1	6	<5	<5	<2	<5	<0.1
	S6	0.1	<5	<1	3	<5	<5	3	8	<0.1
	S6	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S7	0.1	13	<1	11	<5	9	5	10	<0.1
	S7	1	13	<1	14	<5	7	11	10	<0.1
	S7	2	14	<1	18	<5	7	3	12	<0.1
	S7	3	<5	<1	6	<5	<5	3	<5	<0.1
	S8	0.1	6	<1	5	<5	12	4	11	<0.1
	S8	1	8	<1	5	<5	10	3	7	<0.1
	S8	2	<5	<1	11	<5	<5	<2	<5	<0.1
	S9	0.1	5	<1	11	6	10	17	19	<0.1
	S9	1	6	<1	9	<5	9	8	18	<0.1
	S9	2	<5	<1	14	<5	8	<2	<5	0.2
	S10	0.1	5	<1	6	<5	7	<2	19	<0.1
	S10	1	<5	<1	<2	<5	6	2	<5	<0.1
	S10	2	<5	<1	11	<5	<5	4	<5	0.2
	S11	0.1	13	<1	16	10	10	27	18	<0.1
	S11	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S11	2	9	<1	8	9	10	18	24	<0.1
	S12	0.1	<5	<1	10	8	16	15	24	<0.1
	S12	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S13	0.1	5	<1	9	8	<5	25	18	<0.1
	S13	1	<5	<1	4	<5	6	3	<5	<0.1
	S13	2	<5	<1	13	13	23	29	38	<0.1
	S13	3	<5	<1	14	<5	6	5	<5	0.1
	S15	0.1	<5	<1	8	8	58	6	58	<0.1
	S15	1	<5	<1	5	<5	8	2	18	<0.1
	S15	2	<5	<1	<2	<5	<5	<2	<5	<0.1
	S16	0.1	<5	<1	5	<5	12	3	18	<0.1
	S16	1	<5	<1	4	<5	<5	<2	<5	<0.1
	S16	2	13	<1	4	14	7	7	97	<0.1
	S16	3	<5	<1	7	<5	<5	3	<5	<0.1
	S17	0.1	<5	<1	13	10	9	29	28	<0.1
	S17	1	<5	<1	10	<5	<5	7	<5	0.3
	S17	2	<5	<1	19	<5	<5	<2	<5	<0.1
	S18	0.1	6	<1	3	<5	6	<2	18	<0.1
	S18	1	<5	<1	3	<5	<5	<2	<5	<0.1
	S19	0.1	6	<1	3	<5	7	<2	15	<0.1
	S19	1	<5	<1	5	<5	<5	<2	<5	<0.1
	S20	0.1	16	<1	11	<5	16	5	14	<0.1
	S20	1	<5	<1	3	<5	5	2	<5	<0.1
	S20	2	<5	<1	2	<5	6	6	73	<0.1
	S20	3	<5	<1	4	<5	<5	2	<5	<0.1
	S21	0.1	8	<1	12	5	11	14	13	<0.1
	S21	1	<5	<1	<2	<5	<5	<2	8	<0.1
	S21	2	19	<1	8	<5	12	5	8	<0.1
	S22	0.1	<5	<1	13	24	5	76	36	<0.1
	S22	1	<5	<1	4	<5	<5	4	6	<0.1
	S22	2	<5	<1	<2	<5	<5	<2	18	0.2
	S22	3	<5	<1	7	<5	<5	3	<5	0.1
	S23	0.1	26	<1	16	8	24	20	25	0.1
	S23	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S24	0.1	7	<1	6	<5	6	10	8	<0.1
	S24	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S25	0.1	5	<1	11	12	7	34	28	<0.1
	S25	1	14	<1	15	<5	13	8	9	<0.1
	S25	2	6	<1	5	<5	10	3	11	<0.1
	S25	3	<5	<1	<2	<5	<5	<2	<5	<0.1
Environmental Investigation Levels ⁽¹⁾			20	3	50	80	300	60	400	1
Health-based Investigation Levels - Level A (Standard Residential) ⁽¹⁾			100	20	100	1000	300	600	7000	15

Notes:

All results are expressed as mg/kg

(1) Environmental and Industrial/Commercial Investigation Levels from Draft Guidelines for Assessment and Management of Contaminated Land in Queensland, May 1998

Except where indicated, chromium expressed as Cr(VI)

< Value represents the Laboratory LOR

Figures that are bold indicate exceedance of relevant adopted DoE EIL criteria⁴

Figures in bold underlined indicates exceedance of DoE HIL A¹ (Standard residential) or DoE 1999²

Client: Radway Pty Ltd
 Job Title: Stage 2 Investigation



Table 2 con.
SUMMARY OF ANALYTICAL RESULTS INORGANICS
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Location	Sample	Depth (m)	METALS							Mercury mg/kg
			Arsenic mg/kg	Cadmium mg/kg	Chromium mg/kg	Copper mg/kg	Lead mg/kg	Nickel mg/kg	Zinc mg/kg	
	S26	1	<5	<1	3	<5	5	<2	<5	<0.1
	S26	2	12	<1	14	8	10	16	19	<0.1
	S27	0.1	<5	<1	3	<5	<5	5	16	<0.1
	S27	1	<5	<1	<2	<5	<5	2	<5	<0.1
	S27	2	<5	<1	<2	<5	<5	<2	<5	<0.1
	S27	3	<5	<1	3	<5	6	8	7	0.1
	S28	0.1	<5	<1	3	<5	10	2	28	<0.1
	S28	1	<5	<1	3	<5	<5	<2	<5	<0.1
	S28	2	7	<1	9	19	112	15	99	<0.1
	S29	0.1	6	<1	11	11	62	15	62	<0.1
	S29	1	9	<1	4	<5	6	<2	15	<0.1
	S29	2	<5	<1	6	<5	<5	<2	<5	0.2
	S29	3	<5	<1	4	<5	<5	<2	<5	<0.1
	S30	0.1	<5	<1	47	<5	<5	18	8	<0.1
	S30	1	<5	<1	8	<5	<5	3	<5	0.2
	S30	2	<5	<1	182	<5	10	9	<5	0.1
	S31	0.1	<5	<1	8	<5	<5	3	<5	0.1
	S31	1	<5	<1	4	<5	16	6	25	<0.1
	S31	2	<5	<1	7	9	12	18	29	<0.1
	S32	0.1	<5	<1	9	8	10	18	26	<0.1
	S32	1	<5	<1	9	16	21	29	56	<0.1
	S32	2	7	<1	21	27	6	83	38	<0.1
	S33	0.1	7	<1	13	9	8	23	21	<0.1
	S33	1	6	<1	6	9	33	2	82	0.2
	S33	2	<5	<1	4	<5	<5	<2	<5	0.1
	S33	3	9	<1	6	<5	6	3	9	<0.1
	S35	0.1	<5	<1	4	<5	<5	<2	<5	<0.1
	S35	1	<5	<1	4	<5	<5	<2	<5	<0.1
	S35	2	7	<1	6	<5	7	2	<5	<0.1
	S35	3	<5	<1	4	<5	7	<2	<5	<0.1
	S35	4	<5	<1	30	16	16	24	49	<0.1
	S36	0.1	15	<1	11	<5	11	6	15	<0.1
	S36	1	8	<1	10	8	11	16	22	<0.1
	S36	2	26	<1	10	7	11	12	22	<0.1
	S36	3	<5	<1	4	<5	<5	2	<5	<0.1
	S36	4	12	<1	10	<5	11	5	10	<0.1
	S37	0.1	11	<1	8	<5	10	4	9	<0.1
	S37	1	11	<1	8	5	11	11	24	<0.1
	S37	2	<5	<1	7	6	10	10	18	<0.1
	S37	3	16	<1	12	6	28	4	93	<0.1
	S37	4	<5	<1	7	<5	<5	5	<5	0.1
	S38	0.1	<5	<1	10	8	7	23	18	<0.1
	S38	1	5	<1	7	9	11	19	26	<0.1
	S38	2	18	1	9	5	13	6	11	<0.1
	S38	3	<5	<1	5	<5	<5	3	<5	<0.1
	S38	4	<5	<1	8	16	8	30	23	<0.1
	S39	0.1	<5	<1	8	12	6	21	17	<0.1
	S39	1	<5	<1	3	5	9	<2	<5	<0.1
	S39	2	7	<1	6	14	31	4	45	<0.1
	S39	3	7	<1	8	25	60	9	72	<0.1
	S39	4	7	<1	3	<5	<5	<2	5	<0.1
	S40	0.1	<5	<1	2	<5	<5	2	43	0.1
	S40	1	7	<1	13	6	16	16	18	<0.1
	S40	2	<5	<1	2	<5	<5	<2	<5	<0.1
	S40	3	<5	<1	6	<5	7	<2	18	<0.1
	S41	0.1	9	<1	11	<5	12	3	20	<0.1
	S41	1	6	<1	2	<5	8	<2	14	<0.1
	S41	2	10	<1	7	9	10	5	12	<0.1
	S42	0.1	<5	<1	5	10	8	4	11	<0.1
	S42	1	<5	<1	10	<5	<5	3	31	<0.1
	S42	2	<5	<1	3	<5	14	6	89	<0.1
	S42	3	7	<1	7	6	25	7	17	<0.1
	S42	4	7	<1	8	6	10	10	22	<0.1
	S43	0.1	<5	<1	10	11	6	28	34	<0.1
	S43	1	6	<1	4	6	7	6	34	<0.1
	S43	2	6	<1	5	<5	7	3	87	<0.1
	S43	3	<5	<1	<2	<5	<5	<2	9	<0.1
	S43	4	<5	<1	6	<5	<5	4	<5	<0.1
	S43	5	18	<1	8	11	6	5	23	<0.1
	S44	0.1	<5	<1	4	<5	<5	<2	8	<0.1
	S44	1	5	<1	22	<5	10	8	7	<0.1
	S44	2	<5	<1	16	<5	7	3	<5	<0.1
	S44	3	7	<1	16	5	11	3	18	<0.1
	S44	4	9	<1	9	9	15	5	32	<0.1
	S44	5	<5	<1	4	<5	<5	<2	10	<0.1
Environmental Investigation Levels ⁽¹⁾			20	3	50	60	300	60	400	1
Health-based Investigation Levels - Level A (Standard Residential) ⁽¹⁾			100	20	100	1000	300	600	7000	15

Notes:

All results are expressed as mg/kg

(1) Environmental and Industrial/Commercial Investigation Levels from Draft Guidelines for Assessment and Management of Contaminated Land in Queensland, May 1996
 Except where indicated, chromium expected as Cr(III)

< Value represents the Laboratory LOR

Figures that are bold indicate exceedance of relevant adopted DoE EIL criteria¹

Figures in bold underlined indicates exceedance of DoE HIL A¹ (Standard residential) or DoE 1996²

Client
 Job Title
 Address

Radway Pty Ltd
 Stage 2 Investigation
 Lot 2, Drury Lane, Dundowran



Release

Table 2 con.
SUMMARY OF ANALYTICAL RESULTS INORGANICS
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Location	Sample	Depth (m)	METALS							
			Arsenic mg/kg	Cadmium mg/kg	Chromium mg/kg	Copper mg/kg	Lead mg/kg	Nickel mg/kg	Zinc mg/kg	Mercury mg/kg
	S45	2	7	<1	5	<5	8	4	6	<0.1
	S45	3	<5	<1	3	11	9	10	150	<0.1
	S45	4	10	1	24	20	10	58	41	<0.1
	S46	0.1	7	<1	23	20	6	60	38	<0.1
	S46	1	6	<1	16	13	14	32	36	<0.1
	S46	2	13	<1	22	20	23	16	68	<0.1
	S46	3	15	<1	21	31	28	21	101	<0.1
	S46	4	<5	<1	10	<5	<5	4	<5	<0.1
	S46	5	<5	<1	10	15	54	44	23	<0.1
	S47	0.1	5	<1	10	7	9	15	18	<0.1
	S47	1	<5	<1	4	9	8	6	205	<0.1
	S47	2	<5	<1	5	<5	6	6	25	<0.1
	S47	3	<5	<1	11	10	8	27	95	<0.1
	S47	4	<5	<1	5	<5	<5	2	<5	0.1
	S47	5	35	<1	7	21	20	22	29	<0.1
	S47	6	12	<1	6	8	15	7	17	<0.1
	S48	0.1	37	<1	7	16	12	12	19	<0.1
	S48	1	<5	<1	26	21	49	71	43	<0.1
	S48	2	<5	<1	46	20	14	44	48	<0.1
	S48	3	<5	<1	4	<5	<5	<2	<5	<0.1
	S48	4	<5	<1	33	12	13	29	34	<0.1
	S48	5	7	<1	4	8	10	3	54	<0.1
	S49	0.1	8	<1	6	<5	8	<2	12	<0.1
	S49	1	<5	<1	12	<5	6	11	14	<0.1
	S49	2	<5	<1	2	<5	<5	<2	<5	<0.1
	S49	3	<5	<1	10	14	9	30	57	<0.1
	S49	4	17	<1	10	<5	8	4	8	<0.1
	S50	0.1	6	<1	9	10	11	29	55	<0.1
	S50	1	<5	<1	<2	<5	<5	<2	21	<0.1
	S50	2	<5	<1	3	<5	7	6	6	<0.1
	S50	3	8	<1	17	7	11	17	24	<0.1
	S51	0.1	5	<1	4	<5	13	4	12	<0.1
	S51	1	<5	<1	<2	<5	<5	<2	19	<0.1
	S51	2	<5	<1	4	<5	5	2	19	<0.1
	S51	3	8	<1	7	<5	8	6	28	<0.1
	S51	4	<5	<1	7	6	7	14	17	<0.1
	S52	0.1	8	<1	6	<5	8	5	30	<0.1
	S52	1	<5	<1	4	<5	10	12	22	<0.1
	S52	2	<5	<1	6	<5	19	<2	<5	<0.1
	S53	0.1	11	<1	7	6	11	12	22	<0.1
	S53	1	<5	<1	6	<5	<5	3	<5	0.2
	S53	2	10	<1	4	<5	60	<2	77	<0.1
	S54	0.1	6	<1	5	<5	8	9	12	<0.1
	S54	1	<5	<1	10	<5	7	<2	<5	0.1
	S55	0.1	<5	<1	2	<5	48	<2	55	<0.1
	S55	1	8	<1	5	<5	6	6	10	<0.1
	S55	2	25	<1	9	<5	<5	<2	<5	0.1
	S56	0.1	7	<1	4	<5	<5	2	<5	<0.1
	S56	2	11	<1	13	<5	<5	<2	<5	0.1
	S56	3	5	<1	5	<5	10	7	42	<0.1
	S57	0.1	111	<1	86	<5	15	<2	<5	<0.1
	S57	1	<5	<1	6	<5	9	4	876	<0.1
	S57	2	<5	<1	4	<5	10	<2	771	<0.1
	S57	3	<5	<1	4	<5	11	4	14	<0.1
	S58	0.1	<5	<1	4	<5	9	<2	1060	<0.1
	S58	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S58	2	14	<1	7	<5	6	9	6	<0.1
	S58	3	<5	<1	4	<5	<5	<2	<5	<0.1
	S58	4	<5	<1	<2	<5	<5	<2	<5	<0.1
	S59	0.1	6	<1	7	7	6	24	36	<0.1
	S59	1	14	<1	5	<5	6	10	24	<0.1
	S59	2	7	<1	4	<5	<5	2	11	<0.1
	S60	0.1	16	<1	17	10	15	16	45	0.1
	S60	1	<5	<1	5	11	10	13	66	<0.1
	S60	2	<5	<1	14	<5	<5	5	<5	<0.1
	S60	3	6	<1	5	<5	6	3	7	<0.1
STATISTICAL ANALYSIS*			Count	216	216	216	216	216	216	216
			Minimum	2.5	0.5	1	2.5	1	2.5	0.05
			Maximum	111	1	182	31	83	1060	0.3
			St Dev	9.0	0.0	14.6	5.3	12.9	109.3	0.0
			Average	6.2	0.5	8.8	5.5	9.0	35.3	0.1
			95%UCL on the mean	6.6	0.5	9.5	5.8	10.6	40.3	0.1
Environmental Investigation Levels ⁽¹⁾				20	3	50	80	300	60	400
Health-based Investigation Levels - Level A (Standard Residential) ⁽¹⁾				100	20	100	1000	300	800	7000
										15

Notes:

All results are expressed as mg/kg

(1) Environmental and Industrial/Commercial Investigation Levels from Draft Guidelines for Assessment and Management of Contaminated Land in Queensland, May 1996

Except where indicated, chromium expected as Cr(III)

< Value represents the Laboratory LOR

* Results less than laboratory detection level converted to half the detection value for statistical analysis

Figures that are bold indicate exceedence of relevant adopted DoE EIL criteria¹

Figures in bold underlined indicates exceedence of DoE HIL A¹ (Standard residential) or DoE 1999²

Client
Job Title

Radway Pty Ltd
Stage 2 Investigation



Released

TABLE 3
SUMMARY OF ANALYTICAL RESULTS ORGANOPHOSPHORUS PESTICIDES
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Lot Number	Sample Number	Sample Depth (m)	Individual Organophosphorus Pesticides*							
				Dichlorvos	Chlorpyrifos	Fenthion	Demeton-S-methyl	Diazinon	Dimethoate	Malathion	Parathion
Uncontrolled Fill	Lot 2 SP136512	S1	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S1	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S3	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S5	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S5	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S8	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S10	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S12	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S15	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S16	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S18	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S20	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S24	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S26	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S29	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S32	0.1	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.2
	Lot 2 SP136512	S35	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S37	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S39	3	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.2
	Lot 2 SP136512	S41	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S42	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S44	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S46	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S48	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S50	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S52	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S55	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S56	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S58	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S58	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
Environmental Investigation Levels ⁽¹⁾				-	-	-	-	-	-	-	-

Notes

All results are expressed as mg/kg unless otherwise specified

(1) Draft Guidelines for the Assessment & Management of Contaminated Land in Queensland, May 1998

* Table shows only common analytes a total of 19 individual organophosphorus pesticides were reported. All individual pesticides not shown in table were below laboratory detection levels.

< Value represents the Laboratory LOR

Client Radway Pty Ltd
 Job Title Stage 2 Investigation
 Address Lot 2, Drury Lane, Dundowran



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TABLE 4
SUMMARY OF ANALYTICAL RESULTS ORGANOCHLORINE PESTICIDES
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Lot Number	Sample Number	Sample Depth (m)	Individual Organochlorine Pesticides*														
				alpha-BHC	beta-BHC	delta-BHC	gamma-Chlordane	alpha-Chlordane	Heptachlor	alpha-Endosulfan	beta-Endosulfan	Heptachlor epoxide	Aldrin	Dieldrin	Endrin	DDD	DDE	DDT
Uncontrolled Fill	Lot 2 SP136512	S1	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S1	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S3	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S5	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S5	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S8	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S10	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S12	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S15	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S16	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S18	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S20	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S24	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S26	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S29	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S32	0.1	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.2
	Lot 2 SP136512	S35	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S37	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S39	3	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.2
	Lot 2 SP136512	S41	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S42	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S44	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S46	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S48	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S50	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S52	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S55	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S56	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S58	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S58	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
Environmental Investigation Levels ⁽¹⁾				-	-	-	-	-	-	-	-	-	0.2	-	-	0.2	-	-
Health Based Investigation Thresholds - Exposure Setting A (Standard Residential) ⁽¹⁾				-	-	-	50	10	-	-	-	-	10	-	-	200	-	-

Notes

All results are expressed as mg/kg unless otherwise specified

(1) Environmental and Industrial/Commercial Based Investigation Levels from Draft Guidelines for Assessment and Management of Contaminated Land in Queensland, May 1998

* Table shows only common analytes, a total of 21 individual organochlorine pesticides were reported. All individual pesticides not shown in table were below laboratory detection levels.

< Value represents the Laboratory LOR

Client Radway Pty Ltd
 Job Title Stage 2 Investigation
 Address Lot 2, Drury Lane, Dundowran



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TABLE 5
SUMMARY OF ANALYTICAL RESULTS TOTAL PETROLEUM HYDROCARBONS, MONOCYCLIC AROMATIC
HYDROCARBONS

Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Sample Number	Sample Depth (m)	C ₆ -C ₉	C ₁₀ -C ₁₄	C ₁₅ -C ₂₈	C ₂₉ -C ₃₅	Total TPH C ₁₀ -C ₃₆	Benzene	Toluene	Ethyl Benzene	meta- & para- Xylene	ortho- Xylene
Uncontrolled Fill	S1	2	<10	<50	<100	120	270	<0.2	<0.5	<0.5	<0.5	<0.5
	S3	2	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S5	0.1	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S5	2	<10	<50	<100	150	300	<0.2	<0.5	<0.5	<0.5	<0.5
	S8	2	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S10	1	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S12	0.1	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S15	0.1	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S16	2	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S20	2	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S24	0.1	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S26	1	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S29	3	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S35	3	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S37	3	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S39	3	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S41	0.1	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S42	3	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S44	2	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S46	3	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S48	4	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S50	0.1	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S52	0.1	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S56	2	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S58	0.1	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
	S58	3	<10	<50	<100	<100	250	<0.2	<0.5	<0.5	<0.5	<0.5
Environmental Investigation Thresholds ⁽¹⁾			100	100	1000	1000	-	1	7 (total BTEX)			

Notes

All results are expressed as mg/kg unless otherwise specified

(1) Draft Internal Guideline - QLD EPA Contaminated Land Unit, January 1999

< value represents the laboratory LOR

Client Radway Pty Ltd
 Job Title Stage 2 Investigation
 Address Lot 2, Drury Lane, Dundowran



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TABLE 6
SUMMARY OF ANALYTICAL RESULTS POLYNUCLEAR AROMATIC HYDROCARBONS

Lot 2 SP136512, Drury Lane, Stage 2 Investigation

		*1. Individual Polynuclear Aromatic Hydrocarbons																	
Test Location	Sample Number	Sample Depth (m)	Benzo-a pyrene	Naphthalene	Acenaphthylene	Phenanthrene	Benz(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	Fluorene	Pyrene	Chrysene	Fluoranthene	Acenaphthene	Anthracene	Total PAH
Uncontrolled Fill	S1	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S3	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S5	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S5	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S8	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S10	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S12	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S15	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S16	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S20	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S24	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S26	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S29	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S35	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S37	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S39	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S41	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S42	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S44	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S46	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S48	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S50	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S52	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S56	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S58	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S58	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
Standard Residential based Investigation Levels - Level A (Residential)(1)			1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20

Notes

All results are expressed as mg/kg unless otherwise specified

(1) Environmental and Commercial/Industrial Based Investigation Levels from Draft Guidelines for Assessment and Management of Contaminated Land in Queensland, May 1998

*1 Table shows only common analytes a total of 16 individual Polynuclear Aromatic Hydrocarbons were reported. All individual hydrocarbons not shown in table were below laboratory detection levels.

< Value represents the Laboratory LOR

Client Radway Pty Ltd
 Job Title Stage 2 Investigation
 Address Lot 2, Drury Lane, Dundowran



Release

Attachment C

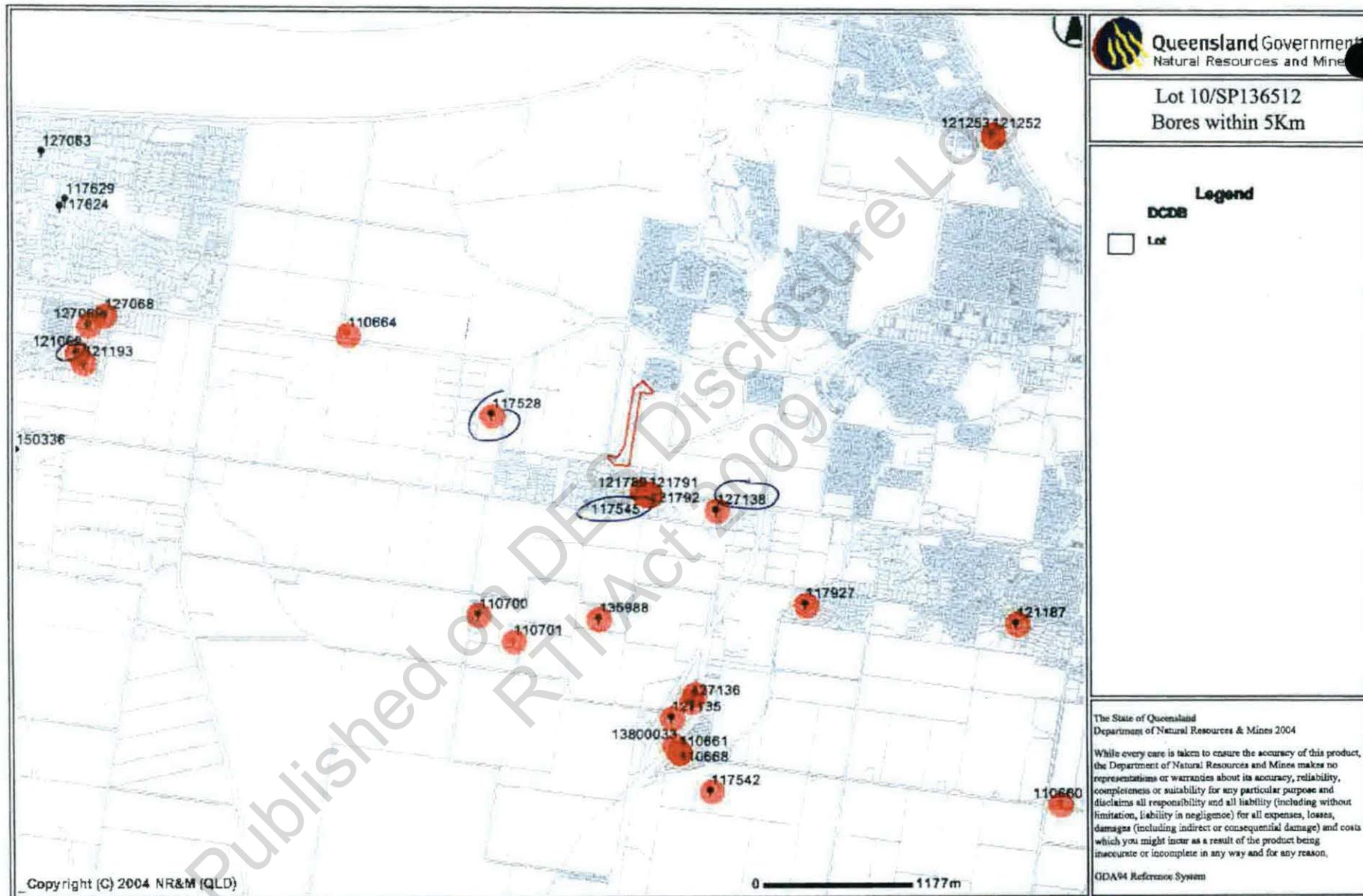
DERM Groundwater Bore Search

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RTI Act 2009

Release

RN	REC	CONDITION	TOP	BOTTOM	CONTR	FLOW	QUALITY	YIELD	SWL	RDATE	FORM_DESC	CREATED_BY	CREATED_DATE	UPDATED_BY	UPDATED_DATE
110661	1	XX	7.01		Y	N	1340 MICROM/CM	2.1	-2.3	6/11/1968		GW	7/03/2005	GW	7/03/2005
110700	1	SC	21	26.7	Y	N		1.11				WESTONL	14/08/2000	WESTONL	14/08/2000
110701	1	SC	14	22	Y	N						WESTONL	14/08/2000	WESTONL	14/08/2000
117528	1	UC	2		Y		BRACKISH	2.17				TUFFIELDM	7/12/2004	TUFFIELDM	7/12/2004
117529	2	UC	8		Y		BRACKISH	1.51				TUFFIELDM	7/12/2004	TUFFIELDM	7/12/2004
117542	1	UC	12		Y			0.35				TUFFIELDM	8/12/2004	TUFFIELDM	8/12/2004
117542	2	UC	27		Y			0.22				TUFFIELDM	8/12/2004	TUFFIELDM	8/12/2004
117542	3	UC	33	34	Y	N		0.06	-3	26/10/2004		TUFFIELDM	8/12/2004	TUFFIELDM	8/12/2004
117545	1	UC	12		Y		SALTY	0.64				TUFFIELDM	8/12/2004	TUFFIELDM	8/12/2004
117545	2	UC	25		Y		SALTY	4.45				TUFFIELDM	8/12/2004	TUFFIELDM	8/12/2004
121062	1	UC	18		Y	N	POTABLE	0.6	-14.3	9/04/2003		TUFFIELDM	15/04/2004	TUFFIELDM	15/04/2004
121187	1	UC	21	42	Y			0.57				TUFFIELDM	29/04/2004	TUFFIELDM	29/04/2004
127135	1	UC	18.18	59.69	Y	N	SALTY	1.56	-6	10/02/2005		TUFFIELDM	15/02/2005	TUFFIELDM	15/02/2005
127136	1	UC	18.18	31.81	Y	N	POTABLE	1	-6.66	1/02/2005		TUFFIELDM	15/02/2005	TUFFIELDM	15/02/2005
127137	1	UC	22.12	54.54	Y	N	BRACKISH	0.25	-6.64	4/02/2005		TUFFIELDM	15/02/2005	TUFFIELDM	15/02/2005
127138	1	UC	15.15	32.12	Y	N	SALTY	6.25	-2.12	10/02/2005		TUFFIELDM	15/02/2005	TUFFIELDM	15/02/2005
13800033	1	FR	8	15	N	N					TERTIARY - UNDEFINED	HANSENJI	2/06/2005	HANSENJI	2/06/2005

Release



Rel

Attachment D

Updated Figure No. 2 and Table No. 9 (Stage 2 DSI)



NOTE:

- DCDB COPYRIGHT THE STATE OF QUEENSLAND (DEPARTMENT OF NATURAL RESOURCES & WATER)
- IMAGERY COPYRIGHT GOOGLE EARTH 2007



CLIENT Radway Pty Ltd		PROJECT Industrial, Lot 2 Drury Lane, Dundowran	
DRAWN JM	DATE 18-09-09	TITLE SAMPLING LOCATIONS Releas	
CHECKED PKS*	DATE 18-09-09		
SCALE As Shown		PROJECT No 077683504	FIGURE No 2
		REV No 1	A3

NOTE: THE * BESIDE THE TYPED INITIALS DENOTES THE ORIGINAL DRAWING ISSUE WAS SIGNED OR INITIALED BY THAT RESPECTIVE PERSON.

TABLE 9
SUMMARY OF ANALYTICAL RESULTS (GROUNDWATER)
TOTAL RECOVERABLE HYDROCARBONS &
MONOCYCLIC AROMATIC HYDROCARBONS

Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Sampling Date	C ₆ -C ₉	C ₁₀ -C ₁₄	C ₁₅ -C ₂₈	C ₂₉ -C ₃₆	Total TPH C ₁₀ -C ₃₆	Benzene	Toluene	Ethyl Benzene	Xylene
Uncontrolled Fill										
BH1	2/08/2007	<0.02	<u><0.250</u>	<u>0.6</u>	<u>0.39</u>	<u>1.24</u>	<0.001	<0.002	<0.002	<0.002
BH1	7/11/2007	<0.02	<0.050	0.1	0.11	0.26	<0.001	<0.002	<0.002	<0.002
BH2	2/08/2007	<0.02	<0.100	0.3	0.2	<u>0.6</u>	<0.001	<0.002	<0.002	<0.002
BH2	7/11/2007	<0.02	<0.050	<0.1	0.07	0.22	<0.001	<0.002	<0.002	<0.002
BH3	2/08/2007	<0.02	<u><0.500</u>	<u><1</u>	<u><0.5</u>	<u>2</u>	<0.001	<0.002	<0.002	<0.002
BH3	7/11/2007	<0.02	<0.050	0.2	0.1	0.35	<0.001	<0.002	<0.002	<0.002
ANZECC Water Quality Guidelines 2000, Trigger Values for Fresh Waters 95% Level of Protection		ID	ID	ID	ID		0.95	ID	ID	-
Dutch Guideline Levels (1) Dutch C - Netherlands Soil Clean-up Guideline, 1983. (2) Dutch Intervention Value - Environmental Quality Objectives in the Netherlands, 1994		0.150 ⁽¹⁾	0.600 ⁽²⁾			0.600 (2)	-	-	-	-

Notes

All results are expressed as mg/L unless otherwise specified

ID = Insufficient data to derive reliable trigger level

* Trigger Value for M&P Xylene.

Results in Bold, Italics and Underlined exceed the Dutch Guideline Levels

Client
Job Title
Address

Radway Pty Ltd
Stage 2 Investigation
Lot 2, Drury Lane, Dundowran



Rele

Attachment E

Laboratory Reports for S58 0.1 m and S20 2.0 m

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ALS Environmental

CERTIFICATE OF ANALYSIS

Client	: GOLDER ASSOCIATES	Laboratory	: Environmental Division Brisbane	Page	: 1 of 42
Contact	: CTPI 49-Sch4	Contact	: CTPI 49-Sch4	Work Order	: EB0708137
Address	: P O BOX 5569 MAROOCHYDORE SOUTH QLD AUSTRALIA 4558	Address	: 32 Shand Street Stafford QLD Australia 4053		
E-mail	: CTPI49-S@golder.com.au	E-mail	: Services.Brisbane@alsenviro.com		
Telephone	: 5443 3511	Telephone	: +61-7-3243 7222	Date received	: 24 Jul 2007
Facsimile	: 5443 6645	Facsimile	: +61-7-3243 7218	Date issued	: 2 Aug 2007
Project	: 077683504 Contamination	Quote number	: EN/002/05	No. of samples	- Received : 227
Order number	: MQ 4043				- Analysed : 65
C-O-C number	: 077683504tr1				
Site	: - Not provided -				

ALSE - Excellence in Analytical Testing



NATA Accredited Laboratory
825

This document is issued in
accordance with NATA's
accreditation requirements.

Accredited for compliance with
ISO/IEC 17025.

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatory	Position	Department
CTPI 49-Sch4	Senior Organic Chemist	Organics - NATA 825 (818 - Brisbane)
CTPI 49-Sch4	Senior Inorganic Chemist	Inorganics - NATA 825 (818 - Brisbane)

Page Number : 2 of 42
Client : GOLDER ASSOCIATES
Work Order : EB0708137



Comments

This report for the ALSE reference EB0708137 supersedes any previous reports with this reference. Results apply to the samples as submitted. All pages of this report have been checked and approved for release.

This report contains the following information:

- Analytical Results for Samples Submitted
- Surrogate Recovery Data

The analytical procedures used by ALS Environmental have been developed from established internationally-recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported herein. Reference methods from which ALSE methods are based are provided in parenthesis.

When moisture determination has been performed, results are reported on a dry weight basis. When a reported 'less than' result is higher than the LOR, this may be due to primary sample extracts/digestion dilution and/or insufficient sample amount for analysis. Surrogate Recovery Limits are static and based on USEPA SW846 or ALS-QWI/EN38 (in the absence of specified USEPA limits). Where LOR of reported result differ from standard LOR, this may be due to high moisture, reduced sample amount or matrix interference. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number, LOR = Limit of Reporting. * Indicates failed Surrogate Recoveries.

Specific comments for Work Order EB0708137

EP068: Poor matrix spike recovery due to sample matrix interference. Confirmed by re-analysis.

EP068: Particular samples required dilutions prior to analysis due to matrix interferences. LOR values have been adjusted accordingly. Surrogates not determined.

EG005T: EB0708137-055 (S18 0.1m) duplicate failed due to sample heterogeneity.

Release

Page Number : 3 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S1 0.1m SOIL 17 Jul 2007 15:00	S1 2m SOIL 17 Jul 2007 15:00	S3 0.1m SOIL 17 Jul 2007 15:00	S3 2m SOIL 17 Jul 2007 15:00	S5 0.1m SOIL 17 Jul 2007 15:00
Sample Matrix Type / Description : Sample Date / Time :								
Laboratory Sample ID :				EB0708137-001	EB0708137-003	EB0708137-008	EB0708137-010	EB0708137-015
Analyte	CAS number	LOR	Units					
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0	%	<1.0	<1.0	5.3	25.8	1.7
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	9
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	<2	<2	6	<2	8
Copper	7440-50-8	5	mg/kg	<5	<5	11	<5	<5
Lead	7439-92-1	5	mg/kg	<5	<5	18	<5	6
Nickel	7440-02-0	2	mg/kg	<2	<2	6	<2	7
Zinc	7440-66-6	5	mg/kg	<5	<5	60	<5	11
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
beta-Endosulfan	33213-85-9	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	---	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	---	<0.2	<0.2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	---	<0.05	<0.05

Release

Page Number : 4 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S1	S1	S3	S3	S5
Sample Matrix Type / Description :				0.1m	2m	0.1m	2m	0.1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-001	EB0708137-003	EB0708137-008	EB0708137-010	EB0708137-015
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	—	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	—	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	—	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	—	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C8 - C9 Fraction		10	mg/kg	—	<10	—	<10	<10

Releas

Page Number : 5 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S1 0.1m SOIL 17 Jul 2007 15:00	S1 2m SOIL 17 Jul 2007 15:00	S3 0.1m SOIL 17 Jul 2007 15:00	S3 2m SOIL 17 Jul 2007 15:00	S5 0.1m SOIL 17 Jul 2007 15:00
Sample Matrix Type / Description :								
Sample Date / Time :								
* Laboratory Sample ID :								
Analyte	CAS number	LOR	Units	EB0708137-001	EB0708137-003	EB0708137-008	EB0708137-010	EB0708137-015
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction		50	mg/kg	—	<50	—	<50	<50
C15 - C28 Fraction		100	mg/kg	—	<100	—	<100	<100
C29 - C36 Fraction		100	mg/kg	—	120	—	<100	<100
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	—	<0.2	—	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
meta- & para-Xylene	108-38-3	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
ortho-Xylene	106-42-3	0.5	mg/kg	—	<0.5	—	<0.5	<0.5
EP088S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	66.8	41.7	—	19.0	62.0
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	85.0	52.0	—	22.1	67.8
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	—	86.6	—	74.1	77.1
2-Chlorophenol-D4	93951-73-6	0.1	%	—	88.5	—	84.1	83.3
2,4,6-Tribromophenol	118-79-6	0.1	%	—	80.0	—	69.9	70.4
EP076(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	—	84.3	—	93.5	92.4
Anthracene-d10	1719-06-8	0.1	%	—	80.4	—	79.2	75.8
4-Terphenyl-d14	1718-51-0	0.1	%	—	87.8	—	84.5	87.4
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	96.4	—	110	114
Toluene-D8	2037-26-5	0.1	%	—	108	—	107	111
4-Bromofluorobenzene	460-00-4	0.1	%	—	98.0	—	99.2	103

Releas

Page Number : 6 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S5	S6	S6	S8	S8
Sample Matrix Type / Description :				2m	0.1m	0.1Qm	0.1m	1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00
Analyte	CAS number	LOR	Units	EB0708137-017	EB0708137-019	EB0708137-020	EB0708137-026	EB0708137-027
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0 %		38.0	22.1	12.1	7.3	13.5
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	7	<5	<5	6	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	9	3	3	5	5
Copper	7440-50-8	5	mg/kg	8	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg	11	<5	<5	12	10
Nickel	7440-02-0	2	mg/kg	16	3	2	4	3
Zinc	7440-66-6	5	mg/kg	22	6	6	11	7
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	—	—	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	—	—	—	—
beta-BHC	319-85-7	0.05	mg/kg	<0.05	—	—	—	—
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	—	—	—	—
delta-BHC	319-86-8	0.05	mg/kg	<0.05	—	—	—	—
Heptachlor	76-44-8	0.05	mg/kg	<0.05	—	—	—	—
Aldrin	309-00-2	0.05	mg/kg	<0.05	—	—	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	—	—	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	—	—	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	—	—	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	—	—	—	—
Dieldrin	60-57-1	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	—	—	—	—
Endrin	72-20-8	0.05	mg/kg	<0.05	—	—	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	—	—	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	—	—	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	—	—	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	—	—	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	—	—	—	—
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	—	—	—	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	—	—	—	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	—	—	—	—

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S5 2m SOIL 17 Jul 2007 15:00	S6 0.1m SOIL 17 Jul 2007 15:00	S6 0.1Qm SOIL 17 Jul 2007 15:00	S8 0.1m SOIL 17 Jul 2007 15:00	S8 1m SOIL 17 Jul 2007 15:00
Sample Matrix Type / Description :								
Sample Date / Time :								
Laboratory Sample ID :								
Analyte	CAS number	LOR	Units	EB0708137-017	EB0708137-019	EB0708137-020	EB0708137-026	EB0708137-027
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	—	—	—	—
Dimethoate	60-51-5	0.05	mg/kg	<0.05	—	—	—	—
Diazinon	333-41-5	0.05	mg/kg	<0.05	—	—	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	—	—	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	—	—	—	—
Malathion	121-75-5	0.05	mg/kg	<0.05	—	—	—	—
Fenthion	55-38-9	0.05	mg/kg	<0.05	—	—	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	—	—	—	—
Parathion	56-38-2	0.2	mg/kg	<0.2	—	—	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	—	—	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	—	—	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	—	—	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	—	—	—	—
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	—	—	—	—
Ethion	563-12-2	0.05	mg/kg	<0.05	—	—	—	—
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	—	—	—	—
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	—	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	—	—	—	—
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	—	—	—	—
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	—	—	—	—
Fluorene	86-73-7	0.5	mg/kg	<0.5	—	—	—	—
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	—	—	—	—
Anthracene	120-12-7	0.5	mg/kg	<0.5	—	—	—	—
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	—	—	—	—
Pyrene	129-00-0	0.5	mg/kg	<0.5	—	—	—	—
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	—	—	—	—
Chrysene	218-01-9	0.5	mg/kg	<0.5	—	—	—	—
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	—	—	—	—
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	—	—	—	—
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	—	—	—	—
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	—	—	—	—
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	—	—	—	—
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	—	—	—	—
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		10	mg/kg	<10	—	—	—	—

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S5	S6	S6	S8	S8
Sample Matrix Type / Description :				2m	0.1m	0.1Qm	0.1m	1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-017	EB0708137-019	EB0708137-020	EB0708137-026	EB0708137-027
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction		50	mg/kg	<50	—	—	—	—
C15 - C28 Fraction		100	mg/kg	<100	—	—	—	—
C29 - C36 Fraction		100	mg/kg	150	—	—	—	—
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	—	—	—	—
Toluene	108-88-3	0.5	mg/kg	<0.5	—	—	—	—
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	—	—	—	—
meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	—	—	—	—
ortho-Xylene	106-42-3				—	—	—	—
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	—	—	—	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	83.2	—	—	—	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	89.2	—	—	—	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	77.0	—	—	—	—
2-Chlorophenol-D4	93951-73-6	0.1	%	87.3	—	—	—	—
2,4,6-Tribromophenol	118-79-6	0.1	%	88.6	—	—	—	—
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	104	—	—	—	—
Anthracene-d10	1719-06-8	0.1	%	79.4	—	—	—	—
4-Terphenyl-d14	1718-51-0	0.1	%	89.3	—	—	—	—
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	114	—	—	—	—
Toluene-D8	2037-26-5	0.1	%	112	—	—	—	—
4-Bromofluorobenzene	460-00-4	0.1	%	104	—	—	—	—

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S8	S10	S10	S10	S12
Sample Matrix Type / Description :				2m	0.1m	Qm	1m	0.1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00
Analyte	CAS number	LOR	Units	EB0708137-028	EB0708137-032	EB0708137-033	EB0708137-034	EB0708137-039
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0 %		16.9	9.9	9.8	12.2	8.2
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	11	6	4	<2	10
Copper	7440-50-8	5	mg/kg	<5	<5	5	<5	8
Lead	7439-92-1	5	mg/kg	<5	7	7	6	16
Nickel	7440-02-0	2	mg/kg	<2	<2	5	2	15
Zinc	7440-66-6	5	mg/kg	<5	19	21	<5	24
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	—	—	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	—	—	<0.2	<0.2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S8	S10	S10	S10	S12
Sample Matrix Type / Description :				2m	0.1m	Qm	1m	0.1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00
Analyte	CAS number	LOR	Units	EB0708137-028	EB0708137-032	EB0708137-033	EB0708137-034	EB0708137-039
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	—	—	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	—	—	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	—	—	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Prothiofos	34843-46-4	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		10	mg/kg	<10	—	—	<10	<10

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S8	S10	S10	S10	S12
Sample Matrix Type / Description :				2m	0.1m	Qm	1m	0.1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-028	EB0708137-032	EB0708137-033	EB0708137-034	EB0708137-039
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction		50	mg/kg	<50	—	—	<50	<50
C15 - C28 Fraction		100	mg/kg	<100	—	—	<100	<100
C29 - C36 Fraction		100	mg/kg	<100	—	—	<100	<100
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	—	—	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
	106-42-3							
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	54.7	—	—	68.2	60.3
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	63.4	—	—	73.5	68.9
EP076(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	78.2	—	—	76.6	83.1
2-Chlorophenol-D4	93951-73-6	0.1	%	87.7	—	—	85.0	89.7
2,4,6-Tribromophenol	118-79-6	0.1	%	72.0	—	—	79.4	73.2
EP076(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	104	—	—	98.0	85.5
Anthracene-d10	1719-06-8	0.1	%	74.9	—	—	81.7	82.4
4-Terphenyl-d14	1718-51-0	0.1	%	89.9	—	—	85.4	85.7
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	97.4	—	—	95.3	100
Toluene-D8	2037-26-5	0.1	%	101	—	—	100	102
4-Bromofluorobenzene	460-00-4	0.1	%	96.0	—	—	94.2	94.0

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Analytical Results				Client Sample ID :	S12	S15	S16	S16	S16
				Sample Matrix Type / Description :	1m	0.1m	1m	0.1m	2m
				Sample Date / Time :	SOIL	SOIL	SOIL	SOIL	SOIL
				Laboratory Sample ID :	17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007
					15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-040	EB0708137-045	EB0708137-046	EB0708137-048	EB0708137-050	
EA055: Moisture Content									
Moisture Content (dried @ 103°C)		1.0	%	3.0	9.8	11.0	4.7	17.6	
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	13	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1	
Chromium	7440-47-3	2	mg/kg	<2	6	5	5	4	
Copper	7440-50-8	5	mg/kg	<5	8	<5	<5	14	
Lead	7439-92-1	5	mg/kg	<5	56	8	12	7	
Nickel	7440-02-0	2	mg/kg	<2	8	2	3	7	
Zinc	7440-66-6	5	mg/kg	<5	58	16	18	97	
EG035T: Total Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg	—	<0.05	—	—	<0.05	
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	<0.05	—	—	<0.05	
beta-BHC	319-85-7	0.05	mg/kg	—	<0.05	—	—	<0.05	
gamma-BHC	58-89-9	0.05	mg/kg	—	<0.05	—	—	<0.05	
delta-BHC	319-86-8	0.05	mg/kg	—	<0.05	—	—	<0.05	
Heptachlor	76-44-8	0.05	mg/kg	—	<0.05	—	—	<0.05	
Aldrin	309-00-2	0.05	mg/kg	—	<0.05	—	—	<0.05	
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	<0.05	—	—	<0.05	
trans-Chlordane	5103-74-2	0.05	mg/kg	—	<0.05	—	—	<0.05	
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	<0.05	—	—	<0.05	
cis-Chlordane	5103-71-9	0.05	mg/kg	—	<0.05	—	—	<0.05	
Dieldrin	60-57-1	0.05	mg/kg	—	<0.05	—	—	<0.05	
4,4'-DDE	72-55-9	0.05	mg/kg	—	<0.05	—	—	<0.05	
Endrin	72-20-8	0.05	mg/kg	—	<0.05	—	—	<0.05	
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	<0.05	—	—	<0.05	
4,4'-DDD	72-54-8	0.05	mg/kg	—	<0.05	—	—	<0.05	
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	<0.05	—	—	<0.05	
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	<0.05	—	—	<0.05	
4,4'-DDT	50-29-3	0.2	mg/kg	—	<0.2	—	—	<0.2	
Endrin ketone	53494-70-5	0.05	mg/kg	—	<0.05	—	—	<0.05	
Methoxychlor	72-43-5	0.2	mg/kg	—	<0.2	—	—	<0.2	
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg	—	<0.05	—	—	<0.05	
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	<0.05	—	—	<0.05	

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :

Sample Matrix Type / Description :

Sample Date / Time :

Laboratory Sample ID :

S12
1m
SOIL
17 Jul 2007
15:00

S15
0.1m
SOIL
17 Jul 2007
15:00

S15
1m
SOIL
17 Jul 2007
15:00

S16
0.1m
SOIL
17 Jul 2007
15:00

S16
2m
SOIL
17 Jul 2007
15:00

EB0708137-040

EB0708137-045

EB0708137-046

EB0708137-048

EB0708137-050

Analyte	CAS number	LOR	Units	EB0708137-040	EB0708137-045	EB0708137-046	EB0708137-048	EB0708137-050
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	—	<0.2	—	—	<0.2
Dimethoate	60-51-5	0.05	mg/kg	—	<0.05	—	—	<0.05
Diazinon	333-41-5	0.05	mg/kg	—	<0.05	—	—	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	<0.05	—	—	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	—	<0.2	—	—	<0.2
Malathion	121-75-5	0.05	mg/kg	—	<0.05	—	—	<0.05
Fenthion	55-38-9	0.05	mg/kg	—	<0.05	—	—	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	<0.05	—	—	<0.05
Parathion	56-38-2	0.2	mg/kg	—	<0.2	—	—	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	<0.05	—	—	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	<0.05	—	—	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	<0.05	—	—	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	—	<0.05	—	—	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	—	<0.05	—	—	<0.05
Ethion	563-12-2	0.05	mg/kg	—	<0.05	—	—	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	—	<0.05	—	—	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	—	<0.05	—	—	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	—	<0.5	—	—	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	—	<0.5	—	—	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	—	<0.5	—	—	<0.5
Fluorene	86-73-7	0.5	mg/kg	—	<0.5	—	—	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	—	<0.5	—	—	<0.5
Anthracene	120-12-7	0.5	mg/kg	—	<0.5	—	—	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	—	<0.5	—	—	<0.5
Pyrene	129-00-0	0.5	mg/kg	—	<0.5	—	—	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	—	<0.5	—	—	<0.5
Chrysene	218-01-9	0.5	mg/kg	—	<0.5	—	—	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	—	<0.5	—	—	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	—	<0.5	—	—	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	—	<0.5	—	—	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	—	<0.5	—	—	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	—	<0.5	—	—	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	—	<0.5	—	—	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		10	mg/kg	—	<10	—	—	<10

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



Analytical Results

Client Sample ID :				S12	S15	S15	S16	S16
Sample Matrix Type / Description :				1m	0.1m	1m	0.1m	2m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-040	EB0708137-045	EB0708137-046	EB0708137-048	EB0708137-050
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction		50	mg/kg	—	<50	—	—	<50
C15 - C28 Fraction		100	mg/kg	—	<100	—	—	<100
C29 - C36 Fraction		100	mg/kg	—	<100	—	—	<100
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	—	<0.2	—	—	<0.2
Toluene	108-88-3	0.5	mg/kg	—	<0.5	—	—	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	—	<0.5	—	—	<0.5
meta- & para-Xylene	108-38-3	0.5	mg/kg	—	<0.5	—	—	<0.5
	106-42-3							
ortho-Xylene	95-47-6	0.5	mg/kg	—	<0.5	—	—	<0.5
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	65.5	—	—	45.8
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	77.5	—	—	57.4
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	—	79.3	—	—	72.7
2-Chlorophenol-D4	93951-73-6	0.1	%	—	86.8	—	—	83.1
2,4,6-Tribromophenol	118-79-6	0.1	%	—	78.0	—	—	68.8
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	—	86.0	—	—	103
Anthracene-d10	1719-06-8	0.1	%	—	77.0	—	—	75.0
4-Terphenyl-d14	1718-51-0	0.1	%	—	82.6	—	—	85.7
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	111	—	—	102
Toluene-D8	2037-26-5	0.1	%	—	109	—	—	99.6
4-Bromofluorobenzene	460-00-4	0.1	%	—	102	—	—	95.7

Release

Page Number : 15 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S18	S18	S19	S20	S22
Sample Matrix Type / Description :				0.1m	1m	1m	2m	0.1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-055	EB0708137-056	EB0708137-058	EB0708137-061	EB0708137-066
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0 %		15.1	9.2	10.4	15.4	1.8
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	8	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	3	3	5	2	13
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	24
Lead	7439-92-1	5	mg/kg	6	<5	<5	6	5
Nickel	7440-02-0	2	mg/kg	<2	<2	<2	6	76
Zinc	7440-66-6	5	mg/kg	18	<5	<5	73	36
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	—	—	<0.05	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	—	—	<0.05	—
beta-BHC	319-85-7	0.05	mg/kg	<0.05	—	—	<0.05	—
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	—	—	<0.05	—
delta-BHC	319-86-8	0.05	mg/kg	<0.05	—	—	<0.05	—
Heptachlor	76-44-8	0.05	mg/kg	<0.05	—	—	<0.05	—
Aldrin	309-00-2	0.05	mg/kg	<0.05	—	—	<0.05	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	—	—	<0.05	—
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	—	—	<0.05	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	—	—	<0.05	—
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	—	—	<0.05	—
Dieldrin	60-57-1	0.05	mg/kg	<0.05	—	—	<0.05	—
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	—	—	<0.05	—
Endrin	72-20-8	0.05	mg/kg	<0.05	—	—	<0.05	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	—	—	<0.05	—
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	—	—	<0.05	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	—	—	<0.05	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	—	—	<0.05	—
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	—	—	<0.2	—
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	—	—	<0.05	—
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	—	—	<0.2	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	—	—	<0.05	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	—	—	<0.05	—

Released

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S18	S18	S19	S20	S22
Sample Matrix Type / Description :				0.1m	1m	1m	2m	0.1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-055	EB0708137-056	EB0708137-058	EB0708137-061	EB0708137-066
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	—	—	<0.2	—
Dimethoate	60-51-5	0.05	mg/kg	<0.05	—	—	<0.05	—
Diazinon	333-41-5	0.05	mg/kg	<0.05	—	—	<0.05	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	—	—	<0.05	—
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	—	—	<0.2	—
Malathion	121-75-5	0.05	mg/kg	<0.05	—	—	<0.05	—
Fenthion	55-38-9	0.05	mg/kg	<0.05	—	—	<0.05	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	—	—	<0.05	—
Parathion	56-38-2	0.2	mg/kg	<0.2	—	—	<0.2	—
Phosphor-ethyl	23505-41-1	0.05	mg/kg	<0.05	—	—	<0.05	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	—	—	<0.05	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	—	—	<0.05	—
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	—	—	<0.05	—
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	—	—	<0.05	—
Ethion	563-12-2	0.05	mg/kg	<0.05	—	—	<0.05	—
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	—	—	<0.05	—
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	—	—	<0.05	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	—	—	—	<0.5	—
Acenaphthylene	208-96-8	0.5	mg/kg	—	—	—	<0.5	—
Acenaphthene	83-32-9	0.5	mg/kg	—	—	—	<0.5	—
Fluorene	86-73-7	0.5	mg/kg	—	—	—	<0.5	—
Phenanthrene	85-01-8	0.5	mg/kg	—	—	—	<0.5	—
Anthracene	120-12-7	0.5	mg/kg	—	—	—	<0.5	—
Fluoranthene	206-44-0	0.5	mg/kg	—	—	—	<0.5	—
Pyrene	129-00-0	0.5	mg/kg	—	—	—	<0.5	—
Benz(a)anthracene	56-55-3	0.5	mg/kg	—	—	—	<0.5	—
Chrysene	218-01-9	0.5	mg/kg	—	—	—	<0.5	—
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	—	—	—	<0.5	—
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	—	—	—	<0.5	—
Benzo(a)pyrene	50-32-8	0.5	mg/kg	—	—	—	<0.5	—
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	—	—	—	<0.5	—
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	—	—	—	<0.5	—
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	—	—	—	<0.5	—
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		10	mg/kg	—	—	—	<10	—

Release

Page Number : 17 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S18	S18	S19	S20	S22
Sample Matrix Type / Description :				0.1m	1m	1m	2m	0.1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007	17 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-055	EB0708137-056	EB0708137-058	EB0708137-061	EB0708137-066
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction		50	mg/kg	—	—	—	<50	—
C15 - C28 Fraction		100	mg/kg	—	—	—	<100	—
C29 - C38 Fraction		100	mg/kg	—	—	—	<100	—
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	—	—	—	<0.2	—
Toluene	108-88-3	0.5	mg/kg	—	—	—	<0.5	—
Ethylbenzene	100-41-4	0.5	mg/kg	—	—	—	<0.5	—
meta- & para-Xylene	108-38-3	0.5	mg/kg	—	—	—	<0.5	—
	106-42-3			—	—	—		—
ortho-Xylene	95-47-6	0.5	mg/kg	—	—	—	<0.5	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	54.4	—	—	52.2	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	74.8	—	—	73.5	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	—	—	—	70.6	—
2-Chlorophenol-D4	93951-73-6	0.1	%	—	—	—	82.7	—
2,4,6-Tribromophenol	118-79-6	0.1	%	—	—	—	71.4	—
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	—	—	—	96.6	—
Anthracene-d10	1719-06-8	0.1	%	—	—	—	78.6	—
4-Terphenyl-d14	1718-51-0	0.1	%	—	—	—	83.1	—
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	—	—	94.4	—
Toluene-D8	2037-26-5	0.1	%	—	—	—	98.7	—
4-Bromofluorobenzene	460-00-4	0.1	%	—	—	—	91.8	—

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S22 2m SOIL	S24 0.1m SOIL	S24 1m SOIL	S26 1m SOIL	S29 0.1m SOIL
Sample Matrix Type / Description :				17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00	17 Jul 2007 15:00
Sample Date / Time :								
Laboratory Sample ID :				EB0708137-068	EB0708137-072	EB0708137-073	EB0708137-078	EB0708137-087
Analyte	CAS number	LOR	Units					
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0 %		24.5	14.8	3.2	15.8	5.3
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	7	<5	<5	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	<2	6	<2	3	11
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	11
Lead	7439-92-1	5	mg/kg	<5	6	<5	5	62
Nickel	7440-02-0	2	mg/kg	<2	10	<2	<2	15
Zinc	7440-66-6	5	mg/kg	16	6	<5	<5	62
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	<0.05	—	<0.05	—
beta-BHC	319-85-7	0.05	mg/kg	—	<0.05	—	<0.05	—
gamma-BHC	58-89-9	0.05	mg/kg	—	<0.05	—	<0.05	—
delta-BHC	319-86-8	0.05	mg/kg	—	<0.05	—	<0.05	—
Heptachlor	76-44-8	0.05	mg/kg	—	<0.05	—	<0.05	—
Aldrin	309-00-2	0.05	mg/kg	—	<0.05	—	<0.05	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	<0.05	—	<0.05	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	<0.05	—	<0.05	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	<0.05	—	<0.05	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	<0.05	—	<0.05	—
Dieldrin	60-57-1	0.05	mg/kg	—	<0.05	—	<0.05	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	<0.05	—	<0.05	—
Endrin	72-20-8	0.05	mg/kg	—	<0.05	—	<0.05	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	<0.05	—	<0.05	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	<0.05	—	<0.05	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	<0.05	—	<0.05	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	<0.05	—	<0.05	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	<0.2	—	<0.2	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Methoxychlor	72-43-5	0.2	mg/kg	—	<0.2	—	<0.2	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	—	<0.05	—	<0.05	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	<0.05	—	<0.05	—

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S22 2m SOIL 17 Jul 2007 15:00	S24 0.1m SOIL 17 Jul 2007 15:00	S24 1m SOIL 17 Jul 2007 15:00	S26 1m SOIL 17 Jul 2007 15:00	S29 0.1m SOIL 17 Jul 2007 15:00
Sample Matrix Type / Description :								
Sample Date / Time :								
Laboratory Sample ID :								
Analyte	CAS number	LOR	Units	EB0708137-068	EB0708137-072	EB0708137-073	EB0708137-078	EB0708137-087
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	—	<0.2	—	<0.2	—
Dimethoate	60-51-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Diazinon	333-41-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	<0.05	—	<0.05	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	<0.2	—	<0.2	—
Malathion	121-75-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Fenthion	55-38-9	0.05	mg/kg	—	<0.05	—	<0.05	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	<0.05	—	<0.05	—
Parathion	56-38-2	0.2	mg/kg	—	<0.2	—	<0.2	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	<0.05	—	<0.05	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Prothiofos	34643-46-4	0.05	mg/kg	—	<0.05	—	<0.05	—
Ethion	563-12-2	0.05	mg/kg	—	<0.05	—	<0.05	—
Carbophenothion	786-19-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Azinphos Methyl	86-50-0	0.05	mg/kg	—	<0.05	—	<0.05	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	—	<0.5	—	<0.5	—
Acenaphthylene	208-96-8	0.5	mg/kg	—	<0.5	—	<0.5	—
Acenaphthene	83-32-9	0.5	mg/kg	—	<0.5	—	<0.5	—
Fluorene	86-73-7	0.5	mg/kg	—	<0.5	—	<0.5	—
Phenanthrene	85-01-8	0.5	mg/kg	—	<0.5	—	<0.5	—
Anthracene	120-12-7	0.5	mg/kg	—	<0.5	—	<0.5	—
Fluoranthene	206-44-0	0.5	mg/kg	—	<0.5	—	<0.5	—
Pyrene	129-00-0	0.5	mg/kg	—	<0.5	—	<0.5	—
Benz(a)anthracene	56-55-3	0.5	mg/kg	—	<0.5	—	<0.5	—
Chrysene	218-01-9	0.5	mg/kg	—	<0.5	—	<0.5	—
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	—	<0.5	—	<0.5	—
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	—	<0.5	—	<0.5	—
Benzo(a)pyrene	50-32-8	0.5	mg/kg	—	<0.5	—	<0.5	—
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	—	<0.5	—	<0.5	—
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	—	<0.5	—	<0.5	—
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	—	<0.5	—	<0.5	—
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		10	mg/kg	—	<10	—	<10	—

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S22 2m SOIL 17 Jul 2007 15:00	S24 0.1m SOIL 17 Jul 2007 15:00	S24 1m SOIL 17 Jul 2007 15:00	S26 1m SOIL 17 Jul 2007 15:00	S29 0.1m SOIL 17 Jul 2007 15:00
Sample Matrix Type / Description :								
Sample Date / Time :								
Laboratory Sample ID :								
Analyte	CAS number	LOR	Units	EB0708137-068	EB0708137-072	EB0708137-073	EB0708137-078	EB0708137-087
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction		50	mg/kg	—	<50	—	<50	—
C15 - C28 Fraction		100	mg/kg	—	<100	—	<100	—
C29 - C36 Fraction		100	mg/kg	—	<100	—	<100	—
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	—	<0.2	—	<0.2	—
Toluene	108-88-3	0.5	mg/kg	—	<0.5	—	<0.5	—
Ethylbenzene	100-41-4	0.5	mg/kg	—	<0.5	—	<0.5	—
meta- & para-Xylene	108-38-3	0.5	mg/kg	—	<0.5	—	<0.5	—
	106-42-3							
ortho-Xylene	95-47-6	0.5	mg/kg	—	<0.5	—	<0.5	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	57.2	—	34.5	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	81.6	—	50.4	—
EP076(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	—	81.4	—	72.8	—
2-Chlorophenol-D4	93951-73-6	0.1	%	—	84.9	—	79.7	—
2,4,6-Tribromophenol	118-79-6	0.1	%	—	75.8	—	74.4	—
EP076(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	—	82.9	—	92.6	—
Anthracene-d10	1719-08-8	0.1	%	—	82.7	—	77.8	—
4-Terphenyl-d14	1718-51-0	0.1	%	—	81.4	—	85.0	—
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	100	—	99.8	—
Toluene-D8	2037-26-5	0.1	%	—	104	—	100	—
4-Bromofluorobenzene	460-00-4	0.1	%	—	98.3	—	93.7	—

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S29	S29	S32	S32	S36
Sample Matrix Type / Description :				Qm	3m	0.1m	1m	1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007 15:00	17 Jul 2007 15:00	18 Jul 2007 15:00	18 Jul 2007 15:00	18 Jul 2007 15:00
Analyte	CAS number	LOR	Units	EB0708137-088	EB0708137-091	EB0708137-098	EB0708137-099	EB0708137-106
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0 %		17.0	13.2	16.1	15.1	21.3
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	8	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	8	4	9	9	4
Copper	7440-50-8	5	mg/kg	5	<5	8	16	<5
Lead	7439-92-1	5	mg/kg	16	<5	10	21	<5
Nickel	7440-02-0	2	mg/kg	2	<2	18	29	<2
Zinc	7440-66-6	5	mg/kg	18	<5	28	58	<5
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	<0.05	<0.06	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	<0.05	<0.06	—	—
beta-BHC	319-85-7	0.05	mg/kg	—	<0.05	<0.06	—	—
gamma-BHC	58-89-9	0.05	mg/kg	—	<0.05	<0.06	—	—
delta-BHC	319-86-8	0.05	mg/kg	—	<0.05	<0.06	—	—
Heptachlor	76-44-8	0.05	mg/kg	—	<0.05	<0.06	—	—
Aldrin	309-00-2	0.05	mg/kg	—	<0.05	<0.06	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	<0.05	<0.06	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	<0.05	<0.06	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	<0.05	<0.06	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	<0.05	<0.06	—	—
Dieldrin	60-57-1	0.05	mg/kg	—	<0.05	<0.06	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	<0.05	<0.06	—	—
Endrin	72-20-8	0.05	mg/kg	—	<0.05	<0.06	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	<0.05	<0.06	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	<0.05	<0.06	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	<0.05	<0.06	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	<0.05	<0.06	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	<0.2	<0.2	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	<0.05	<0.06	—	—
Methoxychlor	72-43-5	0.2	mg/kg	—	<0.2	<0.2	—	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	—	<0.05	<0.06	—	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	<0.05	<0.06	—	—

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S29 Qm SOIL 17 Jul 2007 15:00	S29 3m SOIL 17 Jul 2007 15:00	S32 0.1m SOIL 18 Jul 2007 15:00	S32 1m SOIL 18 Jul 2007 15:00	S36 1m SOIL 18 Jul 2007 15:00
Sample Matrix Type / Description :								
Sample Date / Time :								
Laboratory Sample ID :								
Analyte	CAS number	LOR	Units	EB0708137-088	EB0708137-091	EB0708137-098	EB0708137-099	EB0708137-106
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	—	<0.2	<0.2	—	—
Dimethoate	60-51-5	0.05	mg/kg	—	<0.05	<0.06	—	—
Diazinon	333-41-5	0.05	mg/kg	—	<0.05	<0.06	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	<0.05	<0.06	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	<0.2	<0.2	—	—
Malathion	121-75-5	0.05	mg/kg	—	<0.05	<0.06	—	—
Fenthion	55-38-9	0.05	mg/kg	—	<0.05	<0.06	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	<0.05	<0.06	—	—
Parathion	56-38-2	0.2	mg/kg	—	<0.2	<0.2	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	<0.05	<0.06	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	<0.05	<0.06	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	<0.05	<0.06	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	<0.05	<0.06	—	—
Prothiofos	34643-46-4	0.05	mg/kg	—	<0.05	<0.06	—	—
Ethion	563-12-2	0.05	mg/kg	—	<0.05	<0.06	—	—
Carbophenothion	786-19-6	0.05	mg/kg	—	<0.05	<0.06	—	—
Azinphos Methyl	86-50-0	0.05	mg/kg	—	<0.05	<0.06	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	—	<0.5	—	—	—
Acenaphthylene	208-96-8	0.5	mg/kg	—	<0.5	—	—	—
Acenaphthene	83-32-9	0.5	mg/kg	—	<0.5	—	—	—
Fluorene	86-73-7	0.5	mg/kg	—	<0.5	—	—	—
Phenanthrene	85-01-8	0.5	mg/kg	—	<0.5	—	—	—
Anthracene	120-12-7	0.5	mg/kg	—	<0.5	—	—	—
Fluoranthene	206-44-0	0.5	mg/kg	—	<0.5	—	—	—
Pyrene	129-00-0	0.5	mg/kg	—	<0.5	—	—	—
Benz(a)anthracene	56-55-3	0.5	mg/kg	—	<0.5	—	—	—
Chrysene	218-01-9	0.5	mg/kg	—	<0.5	—	—	—
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	—	<0.5	—	—	—
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	—	<0.5	—	—	—
Benzo(a)pyrene	50-32-8	0.5	mg/kg	—	<0.5	—	—	—
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	—	<0.5	—	—	—
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	—	<0.5	—	—	—
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	—	<0.5	—	—	—
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		10	mg/kg	—	<10	—	—	—

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S29	S29	S32	S32	S35
Sample Matrix Type / Description :				Qm	3m	0.1m	1m	1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				17 Jul 2007	17 Jul 2007	18 Jul 2007	18 Jul 2007	18 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-088	EB0708137-091	EB0708137-098	EB0708137-099	EB0708137-106
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction		50	mg/kg	—	<50	—	—	—
C15 - C28 Fraction		100	mg/kg	—	<100	—	—	—
C29 - C36 Fraction		100	mg/kg	—	<100	—	—	—
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	—	<0.2	—	—	—
Toluene	108-88-3	0.5	mg/kg	—	<0.5	—	—	—
Ethylbenzene	100-41-4	0.5	mg/kg	—	<0.5	—	—	—
meta- & para-Xylene	108-38-3	0.5	mg/kg	—	<0.5	—	—	—
	106-42-3			—		—	—	—
ortho-Xylene	95-47-6	0.5	mg/kg	—	<0.5	—	—	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	Not Determined	Not Determined	—	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	Not Determined	Not Determined	—	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	—	94.8	—	—	—
2-Chlorophenol-D4	93951-73-6	0.1	%	—	104	—	—	—
2,4,6-Tribromophenol	118-79-6	0.1	%	—	93.8	—	—	—
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	—	106	—	—	—
Anthracene-d10	1719-06-8	0.1	%	—	99.2	—	—	—
4-Terphenyl-d14	1718-51-0	0.1	%	—	102	—	—	—
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	101	—	—	—
Toluene-D8	2037-26-5	0.1	%	—	97.7	—	—	—
4-Bromofluorobenzene	460-00-4	0.1	%	—	91.9	—	—	—

Release

Page Number : 24 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S35 3m SOIL 18 Jul 2007 15:00	S37 0.1m SOIL 18 Jul 2007 15:00	S37 Qm SOIL 18 Jul 2007 15:00	S37 3m SOIL 18 Jul 2007 15:00	S37 4m SOIL 18 Jul 2007 15:00
Sample Matrix Type / Description :								
Sample Date / Time :								
Laboratory Sample ID :				EB0708137-108	EB0708137-115	EB0708137-116	EB0708137-119	EB0708137-120
Analyte	CAS number	LOR	Units					
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0 %		10.3	12.3	10.3	12.9	13.7
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	11	16	16	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	4	8	9	12	7
Copper	7440-50-8	5	mg/kg	<5	<5	<5	6	<5
Lead	7439-92-1	5	mg/kg	7	10	11	28	<5
Nickel	7440-02-0	2	mg/kg	<2	4	5	4	5
Zinc	7440-66-6	5	mg/kg	<5	9	12	93	<5
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	—	—	<0.05	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	—	—	<0.05	—
beta-BHC	319-85-7	0.05	mg/kg	<0.05	—	—	<0.05	—
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	—	—	<0.05	—
delta-BHC	319-86-8	0.05	mg/kg	<0.05	—	—	<0.05	—
Heptachlor	76-44-8	0.05	mg/kg	<0.05	—	—	<0.05	—
Aldrin	309-00-2	0.05	mg/kg	<0.05	—	—	<0.05	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	—	—	<0.05	—
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	—	—	<0.05	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	—	—	<0.05	—
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	—	—	<0.05	—
Dieldrin	60-57-1	0.05	mg/kg	<0.05	—	—	<0.05	—
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	—	—	<0.05	—
Endrin	72-20-8	0.05	mg/kg	<0.05	—	—	<0.05	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	—	—	<0.05	—
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	—	—	<0.05	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	—	—	<0.05	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	—	—	<0.05	—
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	—	—	<0.2	—
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	—	—	<0.05	—
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	—	—	<0.2	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	—	—	<0.05	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	—	—	<0.05	—

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :

Sample Matrix Type / Description :

Sample Date / Time :

Laboratory Sample ID :

Analyte	CAS number	LOR	Units	S36 3m SOIL 18 Jul 2007 15:00 EB0708137-108	S37 0.1m SOIL 18 Jul 2007 15:00 EB0708137-115	S37 Qm SOIL 18 Jul 2007 15:00 EB0708137-116	S37 3m SOIL 18 Jul 2007 15:00 EB0708137-119	S37 4m SOIL 18 Jul 2007 15:00 EB0708137-120
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	—	—	<0.2	—
Dimethoate	60-51-5	0.05	mg/kg	<0.05	—	—	<0.05	—
Diazinon	333-41-5	0.05	mg/kg	<0.05	—	—	<0.05	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	—	—	<0.05	—
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	—	—	<0.05	—
Malathion	121-75-5	0.05	mg/kg	<0.05	—	—	<0.2	—
Fenthion	55-38-9	0.05	mg/kg	<0.05	—	—	<0.05	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	—	—	<0.05	—
Parathion	56-38-2	0.2	mg/kg	<0.2	—	—	<0.05	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	—	—	<0.2	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	—	—	<0.05	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	—	—	<0.05	—
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	—	—	<0.05	—
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	—	—	<0.05	—
Ethion	563-12-2	0.05	mg/kg	<0.05	—	—	<0.05	—
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	—	—	<0.05	—
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	—	—	<0.05	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	—	—	<0.5	—
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	—	—	<0.5	—
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	—	—	<0.5	—
Fluorene	86-73-7	0.5	mg/kg	<0.5	—	—	<0.5	—
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	—	—	<0.5	—
Anthracene	120-12-7	0.5	mg/kg	<0.5	—	—	<0.5	—
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	—	—	<0.5	—
Pyrene	129-00-0	0.5	mg/kg	<0.5	—	—	<0.5	—
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	—	—	<0.5	—
Chrysene	218-01-9	0.5	mg/kg	<0.5	—	—	<0.5	—
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	—	—	<0.5	—
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	—	—	<0.5	—
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	—	—	<0.5	—
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	—	—	<0.5	—
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	—	—	<0.5	—
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	—	—	<0.5	—
EP080/071: Total Petroleum Hydrocarbons								
C8 - C9 Fraction		10	mg/kg	<10	—	—	<10	—

Released

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S36	S37	S37	S37	S37
Sample Matrix Type / Description :				3m	0.1m	Qm	3m	4m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				18 Jul 2007	18 Jul 2007	18 Jul 2007	18 Jul 2007	18 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-108	EB0708137-115	EB0708137-116	EB0708137-119	EB0708137-120
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction		50	mg/kg	<50	—	—	<50	—
C15 - C28 Fraction		100	mg/kg	<100	—	—	<100	—
C29 - C38 Fraction		100	mg/kg	<100	—	—	<100	—
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	—	—	<0.2	—
Toluene	108-88-3	0.5	mg/kg	<0.5	—	—	<0.5	—
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	—	—	<0.5	—
meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	—	—	<0.5	—
	106-42-3							
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	—	—	<0.5	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21855-73-2	0.1	%	Not Determined	—	—	38.4	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	Not Determined	—	—	67.2	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d8	13127-88-3	0.1	%	84.9	—	—	103	—
2-Chlorophenol-D4	93951-73-6	0.1	%	94.2	—	—	115	—
2,4,6-Tribromophenol	118-79-6	0.1	%	88.5	—	—	97.7	—
EP076(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	112	—	—	105	—
Anthracene-d10	1719-06-8	0.1	%	87.0	—	—	110	—
4-Terphenyl-d14	1718-51-0	0.1	%	91.2	—	—	111	—
EP080S:TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	96.1	—	—	99.3	—
Toluene-D8	2037-26-5	0.1	%	95.6	—	—	99.7	—
4-Bromofluorobenzene	460-00-4	0.1	%	91.8	—	—	92.9	—

Releas

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S39	S39	S41	S41	S42
Sample Matrix Type / Description :				0.1m	3m	0.1m	1m	0.1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				18 Jul 2007	18 Jul 2007	18 Jul 2007	18 Jul 2007	18 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-126	EB0708137-129	EB0708137-135	EB0708137-136	EB0708137-138
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0 %		13.8	16.2	7.6	15.1	16.6
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	7	9	6	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	8	8	11	2	5
Copper	7440-50-8	5	mg/kg	12	25	<5	<5	10
Lead	7439-92-1	5	mg/kg	6	60	12	8	8
Nickel	7440-02-0	2	mg/kg	21	9	3	<2	4
Zinc	7440-66-6	5	mg/kg	17	72	20	14	11
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	<0.12	<0.05	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	<0.12	<0.05	—	—
beta-BHC	319-85-7	0.05	mg/kg	—	<0.12	<0.05	—	—
gamma-BHC	58-89-9	0.05	mg/kg	—	<0.12	<0.05	—	—
delta-BHC	319-86-8	0.05	mg/kg	—	<0.12	<0.05	—	—
Heptachlor	76-44-8	0.05	mg/kg	—	<0.12	<0.05	—	—
Aldrin	309-00-2	0.05	mg/kg	—	<0.12	<0.05	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	<0.12	<0.05	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	<0.12	<0.05	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	<0.12	<0.05	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	<0.12	<0.05	—	—
Dieldrin	60-57-1	0.05	mg/kg	—	<0.12	<0.05	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	<0.12	<0.05	—	—
Endrin	72-20-8	0.05	mg/kg	—	<0.12	<0.05	—	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	<0.12	<0.05	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	<0.12	<0.05	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	<0.12	<0.05	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	<0.12	<0.05	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	<0.2	<0.2	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	<0.12	<0.05	—	—
Methoxychlor	72-43-5	0.2	mg/kg	—	<0.2	<0.2	—	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	—	<0.12	<0.05	—	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	<0.12	<0.05	—	—

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :			S39 0.1m SOIL 18 Jul 2007 15:00	S39 3m SOIL 18 Jul 2007 15:00	S41 0.1m SOIL 18 Jul 2007 15:00	S41 1m SOIL 18 Jul 2007 15:00	S42 0.1m SOIL 18 Jul 2007 15:00
Sample Matrix Type / Description :							
Sample Date / Time :							
Laboratory Sample ID :			EB0708137-126	EB0708137-129	EB0708137-135	EB0708137-136	EB0708137-138
Analyte	CAS number	LOR Units					
EP068B: Organophosphorus Pesticides (OP)							
Monocrotophos	6923-22-4	0.2 mg/kg	—	<0.2	<0.2	—	—
Dimethoate	60-51-5	0.05 mg/kg	—	<0.12	<0.05	—	—
Diazinon	333-41-5	0.05 mg/kg	—	<0.12	<0.05	—	—
Chlorpyrifos-methyl	5598-13-0	0.05 mg/kg	—	<0.12	<0.05	—	—
Parathion-methyl	298-00-0	0.2 mg/kg	—	<0.2	<0.2	—	—
Malathion	121-75-5	0.05 mg/kg	—	<0.12	<0.05	—	—
Fenthion	55-38-9	0.05 mg/kg	—	<0.12	<0.05	—	—
Chlorpyrifos	2921-88-2	0.05 mg/kg	—	<0.12	<0.05	—	—
Parathion	56-38-2	0.2 mg/kg	—	<0.2	<0.2	—	—
Pirimphos-ethyl	23505-41-1	0.05 mg/kg	—	<0.12	<0.05	—	—
Chlorfenvinphos	470-90-6	0.05 mg/kg	—	<0.12	<0.05	—	—
Bromophos-ethyl	4824-78-6	0.05 mg/kg	—	<0.12	<0.05	—	—
Fenamiphos	22224-92-6	0.05 mg/kg	—	<0.12	<0.05	—	—
Prothiofos	34643-46-4	0.05 mg/kg	—	<0.12	<0.05	—	—
Ethion	563-12-2	0.05 mg/kg	—	<0.12	<0.05	—	—
Carbophenothion	786-19-6	0.05 mg/kg	—	<0.12	<0.05	—	—
Azinphos Methyl	86-50-0	0.05 mg/kg	—	<0.12	<0.05	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Naphthalene	91-20-3	0.5 mg/kg	—	<0.5	<0.5	—	—
Acenaphthylene	208-96-8	0.5 mg/kg	—	<0.5	<0.5	—	—
Acenaphthene	83-32-9	0.5 mg/kg	—	<0.5	<0.5	—	—
Fluorene	86-73-7	0.5 mg/kg	—	<0.5	<0.5	—	—
Phenanthrene	85-01-8	0.5 mg/kg	—	<0.5	<0.5	—	—
Anthracene	120-12-7	0.5 mg/kg	—	<0.5	<0.5	—	—
Fluoranthene	206-44-0	0.5 mg/kg	—	<0.5	<0.5	—	—
Pyrene	129-00-0	0.5 mg/kg	—	<0.5	<0.5	—	—
Benz(a)anthracene	56-55-3	0.5 mg/kg	—	<0.5	<0.5	—	—
Chrysene	218-01-9	0.5 mg/kg	—	<0.5	<0.5	—	—
Benzo(b)fluoranthene	205-99-2	0.5 mg/kg	—	<0.5	<0.5	—	—
Benzo(k)fluoranthene	207-08-9	0.5 mg/kg	—	<0.5	<0.5	—	—
Benzo(a)pyrene	50-32-8	0.5 mg/kg	—	<0.5	<0.5	—	—
Indeno(1,2,3-cd)pyrene	193-39-5	0.5 mg/kg	—	<0.5	<0.5	—	—
Dibenz(a,h)anthracene	53-70-3	0.5 mg/kg	—	<0.5	<0.5	—	—
Benzo(g,h,i)perylene	191-24-2	0.5 mg/kg	—	<0.5	<0.5	—	—
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction		10 mg/kg	—	<10	<10	—	—

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S39 0.1m SOIL 18 Jul 2007 15:00	S39 3m SOIL 18 Jul 2007 15:00	S41 0.1m SOIL 18 Jul 2007 15:00	S41 1m SOIL 18 Jul 2007 15:00	S42 0.1m SOIL 18 Jul 2007 15:00
Sample Matrix Type / Description :								
Sample Date / Time :								
Laboratory Sample ID :				EB0708137-126	EB0708137-129	EB0708137-135	EB0708137-136	EB0708137-138
Analyte	CAS number	LOR	Units					
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction		50	mg/kg	—	<50	<50	—	—
C15 - C28 Fraction		100	mg/kg	—	<100	<100	—	—
C29 - C36 Fraction		100	mg/kg	—	<100	<100	—	—
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	—	<0.2	<0.2	—	—
Toluene	108-88-3	0.5	mg/kg	—	<0.5	<0.5	—	—
Ethylbenzene	100-41-4	0.5	mg/kg	—	<0.5	<0.5	—	—
meta- & para-Xylene	108-38-3	0.5	mg/kg	—	<0.5	<0.5	—	—
ortho-Xylene	106-42-3	0.5	mg/kg	—	<0.5	<0.5	—	—
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	Not Determined	40.0	—	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	Not Determined	62.6	—	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	—	87.5	78.2	—	—
2-Chlorophenol-D4	93951-73-6	0.1	%	—	97.4	90.2	—	—
2,4,6-Tribromophenol	118-79-6	0.1	%	—	88.2	74.4	—	—
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	—	94.1	91.6	—	—
Anthracene-d10	1719-06-8	0.1	%	—	95.3	92.2	—	—
4-Terphenyl-d14	1718-51-0	0.1	%	—	96.0	98.5	—	—
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	92.7	104	—	—
Toluene-D8	2037-26-5	0.1	%	—	89.8	101	—	—
4-Bromofluorobenzene	460-00-4	0.1	%	—	85.3	93.3	—	—

Page Number : 30 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S42	S44	S44	S44	S46
Sample Matrix Type / Description :				3m	0.1m	2m	4m	0.1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				18 Jul 2007	18 Jul 2007	18 Jul 2007	18 Jul 2007	18 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-141	EB0708137-149	EB0708137-151	EB0708137-153	EB0708137-161
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0 %		18.9	5.6	15.2	18.6	15.1
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	7	<5	<5	9	7
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	7	4	16	9	23
Copper	7440-50-8	5	mg/kg	6	<5	<5	9	20
Lead	7439-92-1	5	mg/kg	25	<5	7	15	6
Nickel	7440-02-0	2	mg/kg	7	<2	3	5	60
Zinc	7440-66-6	5	mg/kg	17	8	<5	32	38
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	—	<0.05	—	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	—	<0.05	—	—
beta-BHC	319-85-7	0.05	mg/kg	<0.05	—	<0.05	—	—
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	—	<0.05	—	—
delta-BHC	319-86-8	0.05	mg/kg	<0.05	—	<0.05	—	—
Heptachlor	76-44-8	0.05	mg/kg	<0.05	—	<0.05	—	—
Aldrin	309-00-2	0.05	mg/kg	<0.05	—	<0.05	—	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	—	<0.05	—	—
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	—	<0.05	—	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	—	<0.05	—	—
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	—	<0.05	—	—
Dieldrin	60-57-1	0.05	mg/kg	<0.05	—	<0.05	—	—
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	—	<0.05	—	—
Endrin	72-20-8	0.05	mg/kg	<0.05	—	<0.05	—	—
beta-Endosulfan	33213-85-9	0.05	mg/kg	<0.05	—	<0.05	—	—
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	—	<0.05	—	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	—	<0.05	—	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	—	<0.05	—	—
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	—	<0.2	—	—
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	—	<0.05	—	—
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	—	<0.2	—	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	—	<0.05	—	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	—	<0.05	—	—

Release



ALS Environmental

Analytical Results

Client Sample ID :				S42	S44	S44	S44	S46
Sample Matrix Type / Description :				3m	0.1m	2m	4m	0.1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				18 Jul 2007 15:00	18 Jul 2007 15:00	18 Jul 2007 15:00	18 Jul 2007 15:00	18 Jul 2007 15:00
Analyte	CAS number	LOR	Units	EB0708137-141	EB0708137-149	EB0708137-151	EB0708137-153	EB0708137-161
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	—	<0.2	—	—
Dimethoate	60-51-5	0.05	mg/kg	<0.05	—	<0.05	—	—
Diazinon	333-41-5	0.05	mg/kg	<0.05	—	<0.05	—	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	—	<0.05	—	—
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	—	<0.2	—	—
Malathion	121-75-5	0.05	mg/kg	<0.05	—	<0.05	—	—
Fenthion	55-38-9	0.05	mg/kg	<0.05	—	<0.05	—	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	—	<0.05	—	—
Parathion	56-38-2	0.2	mg/kg	<0.2	—	<0.2	—	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	—	<0.05	—	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	—	<0.05	—	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	—	<0.05	—	—
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	—	<0.05	—	—
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	—	<0.05	—	—
Ethion	563-12-2	0.05	mg/kg	<0.05	—	<0.05	—	—
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	—	<0.05	—	—
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	—	<0.05	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	—	<0.5	—	—
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	—	<0.5	—	—
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	—	<0.5	—	—
Fluorene	86-73-7	0.5	mg/kg	<0.5	—	<0.5	—	—
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	—	<0.5	—	—
Anthracene	120-12-7	0.5	mg/kg	<0.5	—	<0.5	—	—
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	—	<0.5	—	—
Pyrene	129-00-0	0.5	mg/kg	<0.5	—	<0.5	—	—
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	—	<0.5	—	—
Chrysene	218-01-9	0.5	mg/kg	<0.5	—	<0.5	—	—
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	—	<0.5	—	—
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	—	<0.5	—	—
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	—	<0.5	—	—
Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	<0.5	—	<0.5	—	—
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	—	<0.5	—	—
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	—	<0.5	—	—
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		10	mg/kg	<10	—	<10	—	—

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Analytical Results				Client Sample ID :	S42	S44	S44	S44	S46
				Sample Matrix Type / Description :	3m	0.1m	2m	4m	0.1m
				Sample Date / Time :	SOIL	SOIL	SOIL	SOIL	SOIL
				Laboratory Sample ID :	18 Jul 2007	18 Jul 2007	18 Jul 2007	18 Jul 2007	18 Jul 2007
					15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-141	EB0708137-149	EB0708137-151	EB0708137-153	EB0708137-161	
EP080/071: Total Petroleum Hydrocarbons									
C10 - C14 Fraction		50	mg/kg	<50	—	<50	—	—	
C15 - C28 Fraction		100	mg/kg	<100	—	<100	—	—	
C29 - C36 Fraction		100	mg/kg	<100	—	<100	—	—	
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg	<0.2	—	<0.2	—	—	
Toluene	108-88-3	0.5	mg/kg	<0.5	—	<0.5	—	—	
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	—	<0.5	—	—	
meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	—	<0.5	—	—	
	106-42-3								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	—	<0.5	—	—	
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%	22.5	—	26.7	—	—	
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%	27.0	—	30.4	—	—	
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%	80.9	—	75.9	—	—	
2-Chlorophenol-D4	93951-73-6	0.1	%	90.1	—	87.7	—	—	
2,4,6-Tribromophenol	118-79-6	0.1	%	78.7	—	76.9	—	—	
EP076(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%	92.8	—	87.4	—	—	
Anthracene-d10	1719-06-8	0.1	%	85.9	—	85.6	—	—	
4-Terphenyl-d14	1718-51-0	0.1	%	85.3	—	86.4	—	—	
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	97.7	—	103	—	—	
Toluene-D8	2037-26-5	0.1	%	97.1	—	104	—	—	
4-Bromofluorobenzene	460-00-4	0.1	%	91.0	—	97.0	—	—	

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S46 3m SOIL 18 Jul 2007 15:00	S48 0.1m SOIL 18 Jul 2007 15:00	S48 Qm SOIL 18 Jul 2007 15:00	S48 4m SOIL 18 Jul 2007 15:00	S60 0.1m SOIL 20 Jul 2007 15:00
Sample Matrix Type / Description :								
Sample Date / Time :								
Laboratory Sample ID :				EB0708137-164	EB0708137-173	EB0708137-174	EB0708137-178	EB0708137-185
Analyte	CAS number	LOR	Units					
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0 %		21.1	2.9	11.5	13.2	7.7
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	15	37	8	<5	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	21	7	4	33	9
Copper	7440-50-8	5	mg/kg	31	16	5	12	10
Lead	7439-92-1	5	mg/kg	28	12	10	13	11
Nickel	7440-02-0	2	mg/kg	21	12	7	29	29
Zinc	7440-66-6	5	mg/kg	101	19	15	34	55
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	—	—	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	—	—	<0.2	<0.2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	—	—	<0.05	<0.05

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S46	S48	S48	S48	S50
Sample Matrix Type / Description :				3m	0.1m	Qm	4m	0.1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				18 Jul 2007 15:00	18 Jul 2007 15:00	18 Jul 2007 15:00	18 Jul 2007 15:00	20 Jul 2007 15:00
Analyte	CAS number	LOR	Units	EB0708137-164	EB0708137-173	EB0708137-174	EB0708137-178	EB0708137-185
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	—	—	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	—	—	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	—	—	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	—	—	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	—	—	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		10	mg/kg	<10	—	—	<10	<10

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Analytical Results				Client Sample ID :	S46	S48	S48	S48	S60
				Sample Matrix Type / Description :	3m	0.1m	Qm	4m	0.1m
				Sample Date / Time :	SOIL	SOIL	SOIL	SOIL	SOIL
				Laboratory Sample ID :	18 Jul 2007	18 Jul 2007	18 Jul 2007	18 Jul 2007	20 Jul 2007
					15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-164	EB0708137-173	EB0708137-174	EB0708137-178	EB0708137-185	
EP080/071: Total Petroleum Hydrocarbons									
C10 - C14 Fraction		50	mg/kg	<50	—	—	<50	<50	
C15 - C28 Fraction		100	mg/kg	<100	—	—	<100	<100	
C29 - C36 Fraction		100	mg/kg	<100	—	—	<100	<100	
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg	<0.2	—	—	<0.2	<0.2	
Toluene	108-88-3	0.5	mg/kg	<0.5	—	—	<0.5	<0.5	
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	—	—	<0.5	<0.5	
meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	—	—	<0.5	<0.5	
	106-42-3								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	—	—	<0.5	<0.5	
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%	62.2	—	—	61.8	11.5	
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%	83.5	—	—	61.5	11.0	
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%	79.6	—	—	94.6	98.2	
2-Chlorophenol-D4	93951-73-6	0.1	%	89.7	—	—	94.8	95.8	
2,4,6-Tribromophenol	118-79-6	0.1	%	81.2	—	—	93.0	95.1	
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%	88.8	—	—	98.4	104	
Anthracene-d10	1719-06-8	0.1	%	85.7	—	—	101	100	
4-Terphenyl-d14	1718-51-0	0.1	%	88.8	—	—	89.5	99.9	
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	105	—	—	109	107	
Toluene-D8	2037-26-5	0.1	%	103	—	—	104	102	
4-Bromofluorobenzene	460-00-4	0.1	%	94.6	—	—	97.4	91.9	

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



Analytical Results

Client Sample ID:				S50	S52	S52	S55	S55
Sample Matrix Type / Description:				2m	0.1m	1m	0.1m	1m
Sample Date / Time:				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID:				20 Jul 2007	20 Jul 2007	20 Jul 2007	20 Jul 2007	20 Jul 2007
				15:00	15:00	15:00	15:00	15:00
Analyte	CAS number	LOR	Units	EB0708137-187	EB0708137-194	EB0708137-195	EB0708137-201	EB0708137-202
EA055: Moisture Content								
Moisture Content (dried @ 103°C)				1.0 %	11.4	22.4	18.4	12.3
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	8	<5	<5	8
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	3	6	4	2	5
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg	7	8	10	48	6
Nickel	7440-02-0	2	mg/kg	8	5	12	<2	6
Zinc	7440-66-6	5	mg/kg	8	30	22	55	10
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	<0.05	—	<0.05	—
beta-BHC	319-85-7	0.05	mg/kg	—	<0.05	—	<0.05	—
gamma-BHC	58-89-9	0.05	mg/kg	—	<0.05	—	<0.05	—
delta-BHC	319-86-8	0.05	mg/kg	—	<0.05	—	<0.05	—
Heptachlor	76-44-8	0.05	mg/kg	—	<0.05	—	<0.05	—
Aldrin	309-00-2	0.05	mg/kg	—	<0.05	—	<0.05	—
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	<0.05	—	<0.05	—
trans-Chlordane	5103-74-2	0.05	mg/kg	—	<0.05	—	<0.05	—
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	<0.05	—	<0.05	—
cis-Chlordane	5103-71-9	0.05	mg/kg	—	<0.05	—	<0.05	—
Dieldrin	60-57-1	0.05	mg/kg	—	<0.05	—	<0.05	—
4,4'-DDE	72-55-9	0.05	mg/kg	—	<0.05	—	<0.05	—
Endrin	72-20-8	0.05	mg/kg	—	<0.05	—	<0.05	—
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	<0.05	—	<0.05	—
4,4'-DDD	72-54-8	0.05	mg/kg	—	<0.05	—	<0.05	—
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	<0.05	—	<0.05	—
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	<0.05	—	<0.05	—
4,4'-DDT	50-29-3	0.2	mg/kg	—	<0.2	—	<0.2	—
Endrin ketone	53494-70-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Methoxychlor	72-43-5	0.2	mg/kg	—	<0.2	—	<0.2	—
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	—	<0.05	—	<0.05	—
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	<0.05	—	<0.05	—

Page Number : 37 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S50	S52	S52	S55	S55
Sample Matrix Type / Description :				2m	0.1m	1m	0.1m	1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				20 Jul 2007 15:00	20 Jul 2007 15:00	20 Jul 2007 15:00	20 Jul 2007 15:00	20 Jul 2007 15:00
Analyte	CAS number	LOR	Units	EB0708137-187	EB0708137-194	EB0708137-195	EB0708137-201	EB0708137-202
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	—	<0.2	—	<0.2	—
Dimethoate	60-51-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Diazinon	333-41-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	<0.05	—	<0.05	—
Parathion-methyl	298-00-0	0.2	mg/kg	—	<0.2	—	<0.2	—
Malathion	121-75-5	0.05	mg/kg	—	<0.05	—	<0.05	—
Fenthion	55-38-9	0.05	mg/kg	—	<0.05	—	<0.05	—
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	<0.05	—	<0.05	—
Parathion	56-38-2	0.2	mg/kg	—	<0.2	—	<0.2	—
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	<0.05	—	<0.05	—
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Fenamiphos	22224-92-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Prothiofos	34643-46-4	0.05	mg/kg	—	<0.05	—	<0.05	—
Ethion	563-12-2	0.05	mg/kg	—	<0.05	—	<0.05	—
Carbophenothion	786-19-6	0.05	mg/kg	—	<0.05	—	<0.05	—
Azinphos Methyl	86-50-0	0.05	mg/kg	—	<0.05	—	<0.05	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	—	<0.5	—	—	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	—	<0.5	—	—	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	—	<0.5	—	—	<0.5
Fluorene	86-73-7	0.5	mg/kg	—	<0.5	—	—	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	—	<0.5	—	—	<0.5
Anthracene	120-12-7	0.5	mg/kg	—	<0.5	—	—	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	—	<0.5	—	—	<0.5
Pyrene	129-00-0	0.5	mg/kg	—	<0.5	—	—	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	—	<0.5	—	—	<0.5
Chrysene	218-01-9	0.5	mg/kg	—	<0.5	—	—	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	—	<0.5	—	—	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	—	<0.5	—	—	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	—	<0.5	—	—	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	—	<0.5	—	—	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	—	<0.5	—	—	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	—	<0.5	—	—	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		10	mg/kg	—	<10	—	—	<10

Release

Page Number : 38 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :				S50	S52	S52	S55	S55
Sample Matrix Type / Description :				2m	0.1m	1m	0.1m	1m
Sample Date / Time :				SOIL	SOIL	SOIL	SOIL	SOIL
Laboratory Sample ID :				20 Jul 2007 15:00	20 Jul 2007 15:00	20 Jul 2007 15:00	20 Jul 2007 15:00	20 Jul 2007 15:00
Analyte	CAS number	LOR	Units	EB0708137-187	EB0708137-194	EB0708137-195	EB0708137-201	EB0708137-202
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction		50	mg/kg	—	<50	—	—	<50
C15 - C28 Fraction		100	mg/kg	—	<100	—	—	<100
C29 - C36 Fraction		100	mg/kg	—	<100	—	—	<100
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	—	<0.2	—	—	<0.2
Toluene	108-88-3	0.5	mg/kg	—	<0.5	—	—	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	—	<0.5	—	—	<0.5
meta- & para-Xylene	108-38-3	0.5	mg/kg	—	<0.5	—	—	<0.5
ortho-Xylene	106-42-3	0.5	mg/kg	—	<0.5	—	—	<0.5
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	105	—	83.7	—
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	98.3	—	77.1	—
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	—	95.4	—	—	97.9
2-Chlorophenol-D4	93951-73-6	0.1	%	—	96.1	—	—	95.8
2,4,6-Tribromophenol	118-79-6	0.1	%	—	98.9	—	—	99.1
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	—	101	—	—	102
Anthracene-d10	1719-06-8	0.1	%	—	98.0	—	—	104
4-Terphenyl-d14	1718-51-0	0.1	%	—	90.8	—	—	97.6
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	103	—	—	97.3
Toluene-D8	2037-26-5	0.1	%	—	99.0	—	—	95.2
4-Bromofluorobenzene	460-00-4	0.1	%	—	91.4	—	—	88.2

Release

Page Number : 39 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Analytical Results				Client Sample ID :	S56	S56	S56	S58	S58
				Sample Matrix Type / Description :	0.1m	Qm	2m	0.1m	3m
				Sample Date / Time :	SOIL	SOIL	SOIL	SOIL	SOIL
				Sample Date / Time :	20 Jul 2007	20 Jul 2007	20 Jul 2007	20 Jul 2007	20 Jul 2007
				Sample Date / Time :	15:00	15:00	15:00	15:00	15:00
Laboratory Sample ID :				EB0708137-204	EB0708137-205	EB0708137-206	EB0708137-212	EB0708137-215	
Analyte	CAS number	LOR	Units						
EA055: Moisture Content									
Moisture Content (dried @ 103°C)		1.0	%	19.2	18.5	13.0	16.5	11.4	
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	7	9	11	<5	<5	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1	
Chromium	7440-47-3	2	mg/kg	4	8	13	4	4	
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	<5	
Lead	7439-92-1	5	mg/kg	<5	<5	<5	9	<5	
Nickel	7440-02-0	2	mg/kg	2	8	<2	<2	<2	
Zinc	7440-66-6	5	mg/kg	<5	6	<5	1080	<5	
EG035T: Total Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1	
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
beta-BHC	319-85-7	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
gamma-BHC	58-89-9	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
delta-BHC	319-86-8	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
Heptachlor	76-44-8	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
Aldrin	309-00-2	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
Heptachlor epoxide	1024-57-3	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
trans-Chlordane	5103-74-2	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
alpha-Endosulfan	959-98-8	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
cis-Chlordane	5103-71-9	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
Dieldrin	60-57-1	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
4,4'-DDE	72-55-9	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
Endrin	72-20-8	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
beta-Endosulfan	33213-65-9	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
4,4'-DDD	72-54-8	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
Endrin aldehyde	7421-93-4	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
Endosulfan sulfate	1031-07-8	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
4,4'-DDT	50-29-3	0.2	mg/kg	—	—	<0.2	<0.2	<0.2	
Endrin ketone	53494-70-5	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
Methoxychlor	72-43-5	0.2	mg/kg	—	—	<0.2	<0.2	<0.2	
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	
Demeton-S-methyl	919-86-8	0.05	mg/kg	—	—	<0.05	<0.05	<0.05	

Release

Page Number : 40 of 42
 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :

Sample Matrix Type / Description :

Sample Date / Time :

Laboratory Sample ID :

Analyte	CAS number	LOR	Units	S56 0.1m SOIL 20 Jul 2007 15:00 EB0708137-204	S56 Qm SOIL 20 Jul 2007 15:00 EB0708137-205	S56 2m SOIL 20 Jul 2007 15:00 EB0708137-206	S58 0.1m SOIL 20 Jul 2007 15:00 EB0708137-212	S58 3m SOIL 20 Jul 2007 15:00 EB0708137-215
EP068B: Organophosphorus Pesticides (OP)								
Monocrotophos	6923-22-4	0.2	mg/kg	—	—	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	—	—	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	—	—	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	—	—	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C8 - C9 Fraction		10	mg/kg	—	—	<10	<10	<10

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



ALS Environmental

Analytical Results

Client Sample ID :

Sample Matrix Type / Description :

Sample Date / Time :

Laboratory Sample ID :

Analyte	CAS number	LOR	Units	S56 0.1m SOIL 20 Jul 2007 15:00 EB0708137-204	S56 Qm SOIL 20 Jul 2007 15:00 EB0708137-205	S56 2m SOIL 20 Jul 2007 15:00 EB0708137-206	S58 0.1m SOIL 20 Jul 2007 15:00 EB0708137-212	S58 3m SOIL 20 Jul 2007 15:00 EB0708137-215
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction		50	mg/kg	—	—	<50	<50	<50
C15 - C28 Fraction		100	mg/kg	—	—	<100	<100	<100
C29 - C36 Fraction		100	mg/kg	—	—	<100	<100	<100
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	—	—	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
	106-42-3			—	—			
ortho-Xylene	95-47-6	0.5	mg/kg	—	—	<0.5	<0.5	<0.5
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	—	—	44.7	65.5	42.1
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	—	—	71.8	87.0	34.2
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	—	—	96.7	98.1	93.9
2-Chlorophenol-D4	93951-73-6	0.1	%	—	—	96.8	97.0	97.3
2,4,6-Tribromophenol	118-79-6	0.1	%	—	—	106	101	99.7
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	—	—	102	95.8	97.7
Anthracene-d10	1719-06-8	0.1	%	—	—	108	112	116
4-Terphenyl-d14	1718-51-0	0.1	%	—	—	96.2	98.2	91.8
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	—	—	102	93.5	109
Toluene-D8	2037-26-5	0.1	%	—	—	99.5	91.4	97.7
4-Bromofluorobenzene	460-00-4	0.1	%	—	—	91.8	84.1	90.4

Release

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 Client : GOLDER ASSOCIATES
 Work Order : EB0708137



Surrogate Control Limits

Matrix Type: SOIL - Surrogate Control Limits

Method name	Analyte name	Lower Limit	Upper Limit
EP068: Pesticides by GCMS			
EP068S: Organochlorine Pesticide Surrogate	Dibromo-DDE		
EP068T: Organophosphorus Pesticide Surrogate	DEF	10	136
EP075(SIM): PAH/Phenols (SIM)			
EP075(SIM)S: Phenolic Compound Surrogates	Phenol-d6		
	2-Chlorophenol-D4	24	113
	2,4,6-Tribromophenol	23	134
	2-Fluorobiphenyl	19	122
EP075(SIM)T: PAH Surrogates	Anthracene-d10	30	115
		27	133
	4-Terphenyl-d14	18	137
EP080: TPH Volatiles/BTEX			
EP080S: TPH(V)/BTEX Surrogates	1,2-Dichloroethane-D4		
	Toluene-D8	80	121
	4-Bromofluorobenzene	81	117
		74	121

Release

Forward to:

TESTING REQUEST FORM

ALS

32 STAND STREET STAFFORD Q1.D 4053

GOLDER ASSOCIATES PTY LTD

Unit 1 Dalton Centre

Newspaper Place

Phone: (07) 54433511

Fax : (07) 54436645

Order No.1	MQ 4043	Project No.:	07768350
Project:	Contamination		
C.O.C. No.1	07768350-1r1	Quotation No.:	EN/002/05
Sampled By:	CK	Contact Name:	CTPI 49
Email Report to:	CTPI@sanjiv.com.ni		
Prior Storage:	ESKY		

SAMPLE ID	Sample Depth (m)	Media	No. of 250 ml Jars	SAMPLE		Field	S1	S7	S12
				DATE					
S1	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S1	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S1	2	soil	1	17/07/2007	✓	✓	✓	✓	✓
S2	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S2	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S2	2	soil	1	17/07/2007	✓	✓	✓	✓	✓
S2	3	soil	1	17/07/2007	✓	✓	✓	✓	✓
S3	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S3	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S3	2	soil	1	17/07/2007	✓	✓	✓	✓	✓
S4	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S4	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S4	2	soil	1	17/07/2007	✓	✓	✓	✓	✓
S4	3	soil	1	17/07/2007	✓	✓	✓	✓	✓
S5	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S5	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S5	2	soil	1	17/07/2007	✓	✓	✓	✓	✓
S5	3	soil	1	17/07/2007	✓	✓	✓	✓	✓
S6	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S6	0.10	soil	1	17/07/2007	✓	✓	✓	✓	✓
S6	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S7	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S7	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S7	2	soil	1	17/07/2007	✓	✓	✓	✓	✓
S7	3	soil	1	17/07/2007	✓	✓	✓	✓	✓
S8	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S8	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S8	2	soil	1	17/07/2007	✓	✓	✓	✓	✓
S8	3	soil	1	17/07/2007	✓	✓	✓	✓	✓
S9	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S9	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S9	2	soil	1	17/07/2007	✓	✓	✓	✓	✓
S9	3	soil	1	17/07/2007	✓	✓	✓	✓	✓
S10	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S10	0	soil	1	17/07/2007	✓	✓	✓	✓	✓
S10	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S10	2	soil	1	17/07/2007	✓	✓	✓	✓	✓
S11	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S11	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S11	2	soil	1	17/07/2007	✓	✓	✓	✓	✓
S12	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S12	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S13	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S13	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S13	2	soil	1	17/07/2007	✓	✓	✓	✓	✓
S13	3	soil	1	17/07/2007	✓	✓	✓	✓	✓
S14	0.1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S14	1	soil	1	17/07/2007	✓	✓	✓	✓	✓
S14	2	soil	1						

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CTPI 49-Sch4

Environmental Division
Brisbane

Work Order

EB0708137



Telephone : 61-7-3243 7222



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GOLDER ASSOCIATES PTY LTD

Unit 1 Dulux Centre

Kempsey Place

Maroochydore Qld 4558

Phone: (07) 54435511

Fax: (07) 54436645

Order No.: MQ 4043 Project No.: 077681304
Project: Contamination
C.O.C. No.: 077681304-1 Quotation No.: EN/002/05
Sampled By: CK Contact Name: CTPI 49
Email Report to: CTP@golder.com.au
Prior Storage: ESKY

SAMPLE ID	Sample Depth (m)	Media	No. of 250 ml Jars	SAMPLE DATE	Field	S2	S7	S12
S19 53	0.1	soil	1	17/07/2007	✓			
S19 53	1	soil	1	17/07/2007	✓			
S20 53	0.1	soil	1	17/07/2007	✓			
S20 53	1	soil	1	17/07/2007	✓			
S20 53	2	soil	1	17/07/2007	✓	✓	✓	✓
S20 53	3	soil	1	17/07/2007	✓			
S21 53	0.1	soil	1	17/07/2007	✓			
S21 53	1	soil	1	17/07/2007	✓			
S21 53	2	soil	1	17/07/2007	✓			
S22 53	0.1	soil	1	17/07/2007	✓	✓		
S22 53	1	soil	1	17/07/2007	✓			
S22 53	2	soil	1	17/07/2007	✓	✓		
S22 53	3	soil	1	17/07/2007	✓			
S23 53	0.1	soil	1	17/07/2007	✓			
S23 53	1	soil	1	17/07/2007	✓			
S24 53	0.1	soil	1	17/07/2007	✓	✓	✓	✓
S24 53	1	soil	1	17/07/2007	✓	✓		
S25 53	0.1	soil	1	17/07/2007	✓			
S25 53	1	soil	1	17/07/2007	✓			
S25 53	2	soil	1	17/07/2007	✓			
S25 53	3	soil	1	17/07/2007	✓			
S26 53	0.1	soil	1	17/07/2007	✓	✓		
S26 53	1	soil	1	17/07/2007	✓	✓	✓	✓
S26 53	2	soil	1	17/07/2007	✓			
S27 53	0.1	soil	1	17/07/2007	✓			
S27 53	1	soil	1	17/07/2007	✓			
S27 53	2	soil	1	17/07/2007	✓			
S27 53	3	soil	1	17/07/2007	✓			
S28 53	0.1	soil	1	17/07/2007	✓			
S28 53	1	soil	1	17/07/2007	✓			
S28 53	2	soil	1	17/07/2007	✓			
S29 53	0.1	soil	1	17/07/2007	✓	✓		
S29 53	0	soil	1	17/07/2007	✓			
S29 53	1	soil	1	17/07/2007	✓			
S29 53	2	soil	1	17/07/2007	✓			
S29 53	3	soil	1	17/07/2007	✓			
S30 53	0.1	soil	1	18/07/2007	✓			
S30 53	1	soil	1	18/07/2007	✓			
S30 53	2	soil	1	18/07/2007	✓			
S31 53	0.1	soil	1	18/07/2007	✓			
S31 53	1	soil	1	18/07/2007	✓			
S31 53	2	soil	1	18/07/2007	✓			
S32 53	0.1	soil	1	18/07/2007	✓	✓		
S32 53	1	soil	1	18/07/2007	✓			
S32 53	2	soil	1	18/07/2007	✓			
S32 53	0.1	soil	1	18/07/2007	✓			
S33 53	1	soil	1	18/07/2007	✓			
S33 53	2	soil	1	18/07/2007	✓			
S33 53	3	soil	1	18/07/2007	✓			
S34 53	0.1	soil	1	18/07/2007	✓			
S34 53	1	soil	1	18/07/2007	✓	✓		
S34 53	2	soil	1	18/07/2007	✓			
S34 53	3	soil	1	18/07/2007	✓	✓	✓	✓
S35 53	0.1	soil	1	18/07/2007	✓			
S35 53	1	soil	1	18/07/2007	✓			
S35 53	2	soil	1	18/07/2007	✓			
S35 53	3	soil	1	18/07/2007	✓	✓	✓	✓
S35 53	4	soil	1	18/07/2007	✓			
S36 53	0.1	soil	1	18/07/2007	✓			
S36 53	1	soil	1	18/07/2007	✓			
S36 53	2	soil	1	18/07/2007	✓			
S36 53	3	soil	1	18/07/2007	✓			
S36 53	4	soil	1	18/07/2007	✓			
S37 53	0.1	soil	1	18/07/2007	✓			
S37 53	1	soil	1	18/07/2007	✓			
S37 53	2	soil	1	18/07/2007	✓			
S37 53	3	soil	1	18/07/2007	✓	✓	✓	✓
S37 53	4	soil	1	18/07/2007	✓	✓		
S38 53	0.1	soil	1	18/07/2007	✓			
S38 53	1	soil	1	18/07/2007	✓			
S38 53	2	soil	1	18/07/2007	✓			
S38 53	3	soil	1	18/07/2007	✓			
S38 53	4	soil	1	18/07/2007	✓			

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32 SHAND STREET STAFFORD QLD 4053

GOLDER ASSOCIATES PTY LTD

Unit 1 Dalbus Centre

Newspaper Place

Maroochydore Qld 4558

Phone: (0) 7 54433511

Fax: (0) 7 54436645

Order No.: MQ 4043 Project No.: 077681504
Project: Contamination
C.O.C. No.: 077681504v1 Quotation No.: EN/002/05
Sampled By: CK Contact Name: CTPI 4
Email Report to: CTPI@golder.com.au
Prior Storage: ESKY

SAMPLE ID	Sample Depth (m)	Media	No. of 250 ml Jars	SAMPLE DATE	Field	S-1	S-2	S-3	S-4
S39 126	0.1	soil	1	18/07/2007	✓				
S39 127	1	soil	1	18/07/2007	✓				
S39 128	2	soil	1	18/07/2007	✓				
S39 129	3	soil	1	18/07/2007	✓	✓	✓	✓	✓
S39 130	4	soil	1	18/07/2007	✓				
S40 131	0.1	soil	1	18/07/2007	✓				
S40 132	1	soil	1	18/07/2007	✓				
S40 133	2	soil	1	18/07/2007	✓				
S40 134	3	soil	1	18/07/2007	✓				
S41 135	0.1	soil	1	18/07/2007	✓	✓	✓	✓	✓
S41 136	1	soil	1	18/07/2007	✓				
S41 137	2	soil	1	18/07/2007	✓				
S42 138	0.1	soil	1	18/07/2007	✓	✓			
S42 139	1	soil	1	18/07/2007	✓				
S42 140	2	soil	1	18/07/2007	✓				
S42 141	3	soil	1	18/07/2007	✓	✓	✓	✓	✓
S42 142	4	soil	1	18/07/2007	✓				
S43 143	0.1	soil	1	18/07/2007	✓				
S43 144	1	soil	1	18/07/2007	✓				
S43 145	2	soil	1	18/07/2007	✓				
S43 146	3	soil	1	18/07/2007	✓				
S43 147	4	soil	1	18/07/2007	✓				
S43 148	5	soil	1	18/07/2007	✓				
S44 149	0.1	soil	1	18/07/2007	✓	✓			
S44 150	1	soil	1	18/07/2007	✓				
S44 151	2	soil	1	18/07/2007	✓	✓	✓	✓	✓
S44 152	3	soil	1	18/07/2007	✓				
S44 153	4	soil	1	18/07/2007	✓	✓			
S44 154	5	soil	1	18/07/2007	✓				
S45 155	0.1	soil	1	18/07/2007	✓				
S45 156	1	soil	1	18/07/2007	✓				
S45 157	2	soil	1	18/07/2007	✓				
S45 158	3	soil	1	18/07/2007	✓				
S45 159	4	soil	1	18/07/2007	✓				
S46 160	0.1	soil	1	18/07/2007	✓	✓			
S46 161	1	soil	1	18/07/2007	✓				
S46 162	2	soil	1	18/07/2007	✓				
S46 163	3	soil	1	18/07/2007	✓	✓	✓	✓	✓
S46 164	4	soil	1	18/07/2007	✓				
S46 165	5	soil	1	18/07/2007	✓				
S47 166	0.1	soil	1	18/07/2007	✓				
S47 167	1	soil	1	18/07/2007	✓				
S47 168	2	soil	1	18/07/2007	✓				
S47 169	3	soil	1	18/07/2007	✓				
S47 170	4	soil	1	18/07/2007	✓				
S47 171	5	soil	1	18/07/2007	✓				
S47 172	6	soil	1	18/07/2007	✓				
S48 173	0.1	soil	1	18/07/2007	✓	✓			
S48 174	1	soil	1	18/07/2007	✓				
S48 175	2	soil	1	18/07/2007	✓				
S48 176	3	soil	1	18/07/2007	✓				
S48 177	4	soil	1	18/07/2007	✓	✓	✓	✓	✓
S48 178	5	soil	1	18/07/2007	✓				
S49 179	0.1	soil	1	18/07/2007	✓				
S49 180	1	soil	1	18/07/2007	✓				
S49 181	2	soil	1	18/07/2007	✓				
S49 182	3	soil	1	18/07/2007	✓				
S49 183	4	soil	1	18/07/2007	✓				
S50 184	0.1	soil	1	20/07/2007	✓	✓	✓	✓	✓
S50 185	1	soil	1	20/07/2007	✓				
S50 186	2	soil	1	20/07/2007	✓	✓			
S50 187	3	soil	1	20/07/2007	✓				
S51 188	0.1	soil	1	20/07/2007	✓				
S51 189	1	soil	1	20/07/2007	✓				
S51 190	2	soil	1	20/07/2007	✓				
S51 191	3	soil	1	20/07/2007	✓				
S51 192	4	soil	1	20/07/2007	✓				

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32 SHAND STREET STAFFORD QLD 4051

GOLDER ASSOCIATES PTY LTD

Unit 1 Delta Centre

Newspaper Place

Maroochydore QM 4558

Phone: R: (07) 54433511

Fax: (07) 54436645

Order No.: MQ 4043	Project No.: 077681504
Project: Contamination	
C.O.C. No.: 077681504r1	Quotation No.: EN/002/05
Sampled By: CK	Contact Name: CTPI 4
Email Report to: CTPI@golder.com.au	
Prior Storage: ESKY	

SAMPLE ID	Sample Depth (m)	Media	No. of 250 ml jars	SAMPLE DATE	Field	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
S52 194	0.1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S52 195	1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S52 196	2	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S53 197	0.1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S53 198	1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S53 199	2	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S54 199	0.1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S54 200	1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S55 201	0.1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S55 202	1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S55 203	2	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S56 204	0.1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S56 205	1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S56 206	2	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S56 207	3	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S57 208	0.1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S57 209	1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S57 210	2	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S57 211	3	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S58 212	0.1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S58 213	1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S58 214	2	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S58 215	3	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S58 216	4	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S59 217	0.1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S59 218	1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S59 219	2	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S60 220	0.1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S60 221	1	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S60 222	2	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S60 223	3	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S60 224	4	soil	1	20/07/2007	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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CTPI 49-Sch4

+ EXTRAS

225524 ← THE DEPTH ON THIS SAMPLE
226545 S-O HAS BEEN WIPE OFF ALMOST
227556 1-O COMPLETELY!



QUALITY CONTROL REPORT

Client	: GOLDER ASSOCIATES	Laboratory	: Environmental Division Brisbane	Page	: 1 of 29
Contact	: CTPI 49-Sch4	Contact	: CTPI 49-Sch4	Work order	: EB0708137
Address	: P O BOX 5569 MAROOCHYDORE SOUTH QLD AUSTRALIA 4558	Address	: 32 Shand Street Stafford QLD Australia 4053	Amendment No.	:
Project	: 077683504 Contamination	Quote number	: EN/002/05	Date received	: 24 Jul 2007
Order number	: MQ 4043			Date issued	: 2 Aug 2007
C-O-C number	: 077683504tr1				
Site	: -.Not provided -				
E-mail	: CTPI 49@golder.com.au	E-mail	: Services.Brisbane@alsenviro.com	No. of samples	
Telephone	: 5443 3511	Telephone	: +61-7-3243 7222	Received	: 227
Facsimile	: 5443 6645	Facsimile	: +61-7-3243 7218	Analysed	: 65

This final report for the ALSE work order reference EB0708137 supersedes any previous reports with this reference. Results apply to the samples as submitted. All pages of this report have been checked and approved for release.

This report contains the following information:

- Laboratory Duplicates (DUP); Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Samples (LCS); Recovery and Acceptance Limits
- Matrix Spikes (MS); Recovery and Acceptance Limits

Work order specific comments

EG005T: EB0708137-055 (S18 0.1m) duplicate failed due to sample heterogeneity.

EP068: Particular samples required dilutions prior to analysis due to matrix interferences. LOR values have been adjusted accordingly. Surrogates not determined.

EP068: Poor matrix spike recovery due to sample matrix interference. Confirmed by re-analysis.

ALSE - Excellence in Analytical Testing



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Accredited for compliance with ISO/IEC 17025

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatory

CTPI 49-Sch4
CTPI 49-Sch4

Department

Organics - NATA 825 (818 - Brisbane)
Inorganics - NATA 825 (818 - Brisbane)



Page Number : 2 of 29
Issue Date : 2 Aug 2007

The quality control term **Laboratory Duplicate** refers to an intralaboratory split sample randomly selected from the sample batch. Laboratory duplicates provide information on method precision and sample heterogeneity.

- Anonymous - Client Sample IDs refer to samples which are not specifically part of this work order but formed part of the QC process lot. Abbreviations: **LOR** = *Limit of Reporting*, **RPD** = *Relative Percent Difference*.

* Indicates failed QC. The permitted ranges for the RPD of Laboratory Duplicates (relative percent deviation) are specified in ALS Method QW-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting:- Result < 10 times LOR, no limit - Result between 10 and 20 times LOR, 0% - 50% - Result > 20 times LOR, 0% - 20%

Laboratory Duplicates (DUP) ReportReleas

Client : GOLDER ASSOCIATES
Project : 077683504 Contamination

Work Order : EB0708137
ALS Quote Reference : EN/002/05

Page Number : 3 of 29
Issue Date : 2 Aug 2007



Matrix Type: SOIL

Laboratory Duplicates (DUP) Report

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EG005T: Total Metals by ICP-AES - continued						
EG005T: Total Metals by ICP-AES - (QC Lot: 458450) - continued						
EB0708137-027	S8 - 1m	Zinc	5 mg/kg	7	9	17.8
EG005T: Total Metals by ICP-AES - (QC Lot: 458452)						
EB0708137-050	S16 - 2m	Arsenic	5 mg/kg	13	<5	88.8
		Cadmium	1 mg/kg	<1	<1	0.0
		Chromium	2 mg/kg	4	4	0.0
		Copper	5 mg/kg	14	7	85.7
		Lead	5 mg/kg	7	7	0.0
		Nickel	2 mg/kg	7	12	42.8
		Zinc	5 mg/kg	97	83	15.0
EB0708137-087	S29 - 0.1m	Arsenic	5 mg/kg	6	7	0.0
		Cadmium	1 mg/kg	<1	<1	0.0
		Chromium	2 mg/kg	11	8	29.4
		Copper	5 mg/kg	11	12	10.4
		Lead	5 mg/kg	62	85	4.3
		Nickel	2 mg/kg	15	16	6.4
		Zinc	5 mg/kg	62	76	19.9
EG005T: Total Metals by ICP-AES - (QC Lot: 458454)						
EB0708137-185	S50 - 0.1m	Arsenic	5 mg/kg	8	5	0.0
		Cadmium	1 mg/kg	<1	<1	0.0
		Chromium	2 mg/kg	9	9	0.0
		Copper	5 mg/kg	10	9	16.1
		Lead	5 mg/kg	11	10	18.0
		Nickel	2 mg/kg	29	24	16.6
		Zinc	5 mg/kg	55	50	10.3
EB0708137-215	S58 - 3m	Arsenic	5 mg/kg	<5	<5	0.0
		Cadmium	1 mg/kg	<1	<1	0.0
		Chromium	2 mg/kg	4	4	0.0
		Copper	5 mg/kg	<5	<5	0.0
		Lead	5 mg/kg	<5	<5	0.0

Release

Client : GOLDER ASSOCIATES
Project : 077883504 Contamination

Work Order : EB0708137
ALS Quote Reference : EN/002/05

Page Number : 4 of 29
Issue Date : 2 Aug 2007



Matrix Type: SOIL

Laboratory Duplicates (DUP) Report

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EG005T: Total Metals by ICP-AES - continued:						
EG005T: Total Metals by ICP-AES - (QC Lot: 458454) - continued						
EB0708137-215	S58 - 3m	Nickel	2 mg/kg	<2	<2	0.0
		Zinc	5 mg/kg	<5	<5	0.0
EG005T: Total Metals by ICP-AES - (QC Lot: 458459)						
EB0708137-120	S37 - 4m	Arsenic	5 mg/kg	<5	<5	0.0
		Cadmium	1 mg/kg	<1	<1	0.0
		Chromium	2 mg/kg	7	7	0.0
		Copper	5 mg/kg	<5	<5	0.0
		Lead	5 mg/kg	<5	<5	0.0
		Nickel	2 mg/kg	5	4	0.0
		Zinc	5 mg/kg	<5	<5	0.0
EB0708137-181	S46 - 0.1m	Arsenic	5 mg/kg	7	7	0.0
		Cadmium	1 mg/kg	<1	<1	0.0
		Chromium	2 mg/kg	23	22	4.5
		Copper	5 mg/kg	20	21	8.4
		Lead	5 mg/kg	6	8	29.9
		Nickel	2 mg/kg	60	65	8.6
		Zinc	5 mg/kg	38	47	20.0
EG035T: Total Mercury by FIMS						
EG035T: Total Mercury by FIMS - (QC Lot: 458451)						
EB0708137-001	S1 - 0.1m	Mercury	0.1 mg/kg	<0.1	<0.1	0.0
EB0708137-027	S8 - 1m	Mercury	0.1 mg/kg	<0.1	<0.1	0.0
EG035T: Total Mercury by FIMS - (QC Lot: 458453)						
EB0708137-050	S18 - 2m	Mercury	0.1 mg/kg	<0.1	<0.1	0.0
EB0708137-087	S29 - 0.1m	Mercury	0.1 mg/kg	<0.1	<0.1	0.0
EG035T: Total Mercury by FIMS - (QC Lot: 458455)						
EB0708137-185	S50 - 0.1m	Mercury	0.1 mg/kg	<0.1	<0.1	0.0
EB0708137-215	S58 - 3m	Mercury	0.1 mg/kg	<0.1	<0.1	0.0
EG035T: Total Mercury by FIMS - (QC Lot: 458460)						
EB0708137-120	S37 - 4m	Mercury	0.1 mg/kg	0.1	0.1	0.0

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EG035T: Total Mercury by FIMS - continued						
EG035T: Total Mercury by FIMS - (QC Lot: 458480) - continued						
EB0708137-161	S48 - 0.1m	Mercury	0.1 mg/kg	mg/kg <0.1	mg/kg <0.1	% 0.0
EP068A: Organochlorine Pesticides (OC)						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459927)						
EB0708137-001	S1 - 0.1m	alpha-BHC	0.05 mg/kg	mg/kg <0.05	mg/kg <0.05	% 0.0
		Hexachlorobenzene (HCB)	0.05 mg/kg	<0.05	<0.05	0.0
		beta-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		gamma-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		delta-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		Heptachlor	0.05 mg/kg	<0.05	<0.05	0.0
		Aldrin	0.05 mg/kg	<0.05	<0.05	0.0
		Heptachlor epoxide	0.05 mg/kg	<0.05	<0.05	0.0
		trans-Chlordane	0.05 mg/kg	<0.05	<0.05	0.0
		alpha-Endosulfan	0.05 mg/kg	<0.05	<0.05	0.0
		cis-Chlordane	0.05 mg/kg	<0.05	<0.05	0.0
		Dieldrin	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDE	0.05 mg/kg	<0.05	<0.05	0.0
		Endrin	0.05 mg/kg	<0.05	<0.05	0.0
		beta-Endosulfan	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDD	0.05 mg/kg	<0.05	<0.05	0.0
		Endrin aldehyde	0.05 mg/kg	<0.05	<0.05	0.0
		Endosulfan sulfate	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDT	0.2 mg/kg	<0.2	<0.2	0.0
		Endrin ketone	0.05 mg/kg	<0.05	<0.05	0.0
EB0708137-055	S18 - 0.1m	Methoxychlor	0.2 mg/kg	<0.2	<0.2	0.0
		alpha-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		Hexachlorobenzene (HCB)	0.05 mg/kg	<0.05	<0.05	0.0
		beta-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		gamma-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		delta-BHC	0.05 mg/kg	<0.05	<0.05	0.0

Release

Client : GOLDER ASSOCIATES
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Laboratory Duplicates (DUP) Report

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EP068A: Organochlorine Pesticides (OC) - continued						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459927) - continued						
EB0708137-055	S18 - 0.1m	Heptachlor	0.05 mg/kg	mg/kg <0.05	mg/kg <0.05	% 0.0
		Aldrin	0.05 mg/kg	<0.05	<0.05	0.0
		Heptachlor epoxide	0.05 mg/kg	<0.05	<0.05	0.0
		trans-Chlordane	0.05 mg/kg	<0.05	<0.05	0.0
		alpha-Endosulfan	0.05 mg/kg	<0.05	<0.05	0.0
		cis-Chlordane	0.05 mg/kg	<0.05	<0.05	0.0
		Dieldrin	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDE	0.05 mg/kg	<0.05	<0.05	0.0
		Endrin	0.05 mg/kg	<0.05	<0.05	0.0
		beta-Endosulfan	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDD	0.05 mg/kg	<0.05	<0.05	0.0
		Endrin aldehyde	0.05 mg/kg	<0.05	<0.05	0.0
		Endosulfan sulfate	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDT	0.2 mg/kg	<0.2	<0.2	0.0
		Endrin ketone	0.05 mg/kg	<0.05	<0.05	0.0
		Methoxychlor	0.2 mg/kg	<0.2	<0.2	0.0
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459928)						
EB0708137-141	S42 - 3m	alpha-BHC	0.05 mg/kg	mg/kg <0.05	mg/kg <0.05	% 0.0
		Hexachlorobenzene (HCB)	0.05 mg/kg	<0.05	<0.05	0.0
		beta-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		gamma-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		delta-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		Heptachlor	0.05 mg/kg	<0.05	<0.05	0.0
		Aldrin	0.05 mg/kg	<0.05	<0.05	0.0
		Heptachlor epoxide	0.05 mg/kg	<0.05	<0.05	0.0
		trans-Chlordane	0.05 mg/kg	<0.05	<0.05	0.0
		alpha-Endosulfan	0.05 mg/kg	<0.05	<0.05	0.0
		cis-Chlordane	0.05 mg/kg	<0.05	<0.05	0.0
		Dieldrin	0.05 mg/kg	<0.05	<0.05	0.0

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EP068A: Organochlorine Pesticides (OC) - continued						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459928) - continued						
EB0708137-141	S42 - 3m	4,4'-DDE	0.05 mg/kg	<0.05	<0.05	0.0
		Endrin	0.05 mg/kg	<0.05	<0.05	0.0
EB0708176-001	Anonymous	beta-Endosulfan	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDD	0.05 mg/kg	<0.05	<0.05	0.0
		Endrin aldehyde	0.05 mg/kg	<0.05	<0.05	0.0
		Endosulfan sulfate	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDT	0.2 mg/kg	<0.2	<0.2	0.0
		Endrin ketone	0.05 mg/kg	<0.05	<0.05	0.0
		Methoxychlor	0.2 mg/kg	<0.2	<0.2	0.0
		alpha-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		Hexachlorobenzene (HCB)	0.05 mg/kg	<0.05	<0.05	0.0
		beta-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		gamma-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		delta-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		Heptachlor	0.05 mg/kg	<0.05	<0.05	0.0
		Aldrin	0.05 mg/kg	<0.05	<0.05	0.0
		Heptachlor epoxide	0.05 mg/kg	<0.05	<0.05	0.0
		trans-Chlordane	0.05 mg/kg	<0.05	<0.05	0.0
		alpha-Endosulfan	0.05 mg/kg	<0.05	<0.05	0.0
		cis-Chlordane	0.05 mg/kg	<0.05	<0.05	0.0
		Dieldrin	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDE	0.05 mg/kg	<0.05	<0.05	0.0
		Endrin	0.05 mg/kg	<0.05	<0.05	0.0
		beta-Endosulfan	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDD	0.05 mg/kg	<0.05	<0.05	0.0
		Endrin aldehyde	0.05 mg/kg	<0.05	<0.05	0.0
		Endosulfan sulfate	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDT	0.2 mg/kg	<0.2	<0.2	0.0
		Endrin ketone	0.05 mg/kg	<0.05	<0.05	0.0

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Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EP068A: Organochlorine Pesticides (OC) - continued						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459928) - continued						
EB0708176-001	Anonymous	Methoxychlor	0.2 mg/kg	mg/kg <0.2	mg/kg <0.2	% 0.0
EP068B: Organophosphorus Pesticides (OP)						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 459927)						
EB0708137-001	S1 - 0.1m	Dichlorvos	0.05 mg/kg	mg/kg <0.05	mg/kg <0.05	% 0.0
		Demeton-S-methyl	0.05 mg/kg	<0.05	<0.05	0.0
		Monocrotophos	0.2 mg/kg	<0.2	<0.2	0.0
		Dimethoate	0.05 mg/kg	<0.05	<0.05	0.0
		Diazinon	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorpyrifos-methyl	0.05 mg/kg	<0.05	<0.05	0.0
		Parathion-methyl	0.2 mg/kg	<0.2	<0.2	0.0
		Malathion	0.05 mg/kg	<0.05	<0.05	0.0
		Fenthion	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorpyrifos	0.05 mg/kg	<0.05	<0.05	0.0
		Parathion	0.2 mg/kg	<0.2	<0.2	0.0
		Pirimphos-ethyl	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorfenvinphos	0.05 mg/kg	<0.05	<0.05	0.0
		Bromophos-ethyl	0.05 mg/kg	<0.05	<0.05	0.0
		Fenamiphos	0.05 mg/kg	<0.05	<0.05	0.0
		Prothiofos	0.05 mg/kg	<0.05	<0.05	0.0
		Ethion	0.05 mg/kg	<0.05	<0.05	0.0
		Carbophanathion	0.05 mg/kg	<0.05	<0.05	0.0
EB0708137-055	S18 - 0.1m	Methyl Azinphos	0.05 mg/kg	<0.05	<0.05	0.0
		Dichlorvos	0.05 mg/kg	<0.05	<0.05	0.0
		Demeton-S-methyl	0.05 mg/kg	<0.05	<0.05	0.0
		Monocrotophos	0.2 mg/kg	<0.2	<0.2	0.0
		Dimethoate	0.05 mg/kg	<0.05	<0.05	0.0
		Diazinon	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorpyrifos-methyl	0.05 mg/kg	<0.05	<0.05	0.0
		Parathion-methyl	0.2 mg/kg	<0.2	<0.2	0.0

Released

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Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EP068B: Organophosphorus Pesticides (OP) - continued						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 459927) - continued						
EB0708137-055	S18 - 0.1m	Malathion	0.05 mg/kg	mg/kg <0.05	mg/kg <0.05	% 0.0
		Fenthion	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorpyrifos	0.05 mg/kg	<0.05	<0.05	0.0
		Parathion	0.2 mg/kg	<0.2	<0.2	0.0
		Pirimphos-ethyl	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorfenvinphos	0.05 mg/kg	<0.05	<0.05	0.0
		Bromophos-ethyl	0.05 mg/kg	<0.05	<0.05	0.0
		Fenamiphos	0.05 mg/kg	<0.05	<0.05	0.0
		Prothiofos	0.05 mg/kg	<0.05	<0.05	0.0
		Ethion.	0.05 mg/kg	<0.05	<0.05	0.0
		Carbophenothion	0.05 mg/kg	<0.05	<0.05	0.0
		Methyl Azinphos	0.05 mg/kg	<0.05	<0.05	0.0
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 459928)						
EB0708137-141	S42 - 3m	Dichlorvos	0.05 mg/kg	mg/kg <0.05	mg/kg <0.05	% 0.0
		Demeton-S-methyl	0.05 mg/kg	<0.05	<0.05	0.0
		Monocrotophos	0.2 mg/kg	<0.2	<0.2	0.0
		Dimethoate	0.05 mg/kg	<0.05	<0.05	0.0
		Diazinon	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorpyrifos-methyl	0.05 mg/kg	<0.05	<0.05	0.0
		Parathion-methyl	0.2 mg/kg	<0.2	<0.2	0.0
		Malathion	0.05 mg/kg	<0.05	<0.05	0.0
		Fenthion	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorpyrifos	0.05 mg/kg	<0.05	<0.05	0.0
		Parathion	0.2 mg/kg	<0.2	<0.2	0.0
		Pirimphos-ethyl	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorfenvinphos	0.05 mg/kg	<0.05	<0.05	0.0
		Bromophos-ethyl	0.05 mg/kg	<0.05	<0.05	0.0
		Fenamiphos	0.05 mg/kg	<0.05	<0.05	0.0
		Prothiofos	0.05 mg/kg	<0.05	<0.05	0.0

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Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EP068B: Organophosphorus Pesticides (OP) - continued						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 459928) - continued						
EB0708137-141	S42 - 3m	Ethion	0.05 mg/kg	mg/kg	mg/kg	%
				<0.05	<0.05	0.0
EB0708176-001	Anonymous	Carbophenothion	0.05 mg/kg	<0.05	<0.05	0.0
		Methyl Azinphos	0.05 mg/kg	<0.05	<0.05	0.0
		Dichlorvos	0.05 mg/kg	<0.05	<0.05	0.0
		Demeton-S-methyl	0.05 mg/kg	<0.05	<0.05	0.0
		Monocrotophos	0.2 mg/kg	<0.2	<0.2	0.0
		Dimethoate	0.05 mg/kg	<0.05	<0.05	0.0
		Diazinon	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorpyrifos-methyl	0.05 mg/kg	<0.05	<0.05	0.0
		Parathion-methyl	0.2 mg/kg	<0.2	<0.2	0.0
		Malathion	0.05 mg/kg	<0.05	<0.05	0.0
		Fenthion	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorpyrifos	0.05 mg/kg	<0.05	<0.05	0.0
		Parathion	0.2 mg/kg	<0.2	<0.2	0.0
		Pirimphos-ethyl	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorfenvinphos	0.05 mg/kg	<0.05	<0.05	0.0
		Bromophos-ethyl	0.05 mg/kg	<0.05	<0.05	0.0
		Fenamiphos	0.05 mg/kg	<0.05	<0.05	0.0
		Prothiofos	0.05 mg/kg	<0.05	<0.05	0.0
		Ethion	0.05 mg/kg	<0.05	<0.05	0.0
		Carbophenothion	0.05 mg/kg	<0.05	<0.05	0.0
		Methyl Azinphos	0.05 mg/kg	<0.05	<0.05	0.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 459926)						
EB0708137-003	S1 - 2m	Naphthalene	0.5 mg/kg	mg/kg	mg/kg	%
				<0.5	<0.5	0.0
		Acenaphthylene	0.5 mg/kg	<0.5	<0.5	0.0
		Acenaphthene	0.5 mg/kg	<0.5	<0.5	0.0
		Fluorene	0.5 mg/kg	<0.5	<0.5	0.0
		Phenanthrene	0.5 mg/kg	<0.5	<0.5	0.0

Released

Client : GOLDER ASSOCIATES
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EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - continued								
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 459926) - continued								
EB0708137-003	S1 - 2m	Anthracene	0.5 mg/kg	mg/kg	mg/kg	%		
		Fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0		
		Pyrene	0.5 mg/kg	<0.5	<0.5	0.0		
		Benz(a)anthracene	0.5 mg/kg	<0.5	<0.5	0.0		
		Chrysene	0.5 mg/kg	<0.5	<0.5	0.0		
		Benzo(b)fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0		
		Benzo(k)fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0		
		Benzo(a)pyrene	0.5 mg/kg	<0.5	<0.5	0.0		
		Indeno(1,2,3,cd)pyrene	0.5 mg/kg	<0.5	<0.5	0.0		
		Dibenz(a,h)anthracene	0.5 mg/kg	<0.5	<0.5	0.0		
EB0708137-072	S24 - 0.1m	Benzo(g,h,i)perylene	0.5 mg/kg	<0.5	<0.5	0.0		
		Naphthalene	0.5 mg/kg	<0.5	<0.5	0.0		
		Acenaphthylene	0.5 mg/kg	<0.5	<0.5	0.0		
		Acenaphthene	0.5 mg/kg	<0.5	<0.5	0.0		
		Fluorene	0.5 mg/kg	<0.5	<0.5	0.0		
		Phenanthrene	0.5 mg/kg	<0.5	<0.5	0.0		
		Anthracene	0.5 mg/kg	<0.5	<0.5	0.0		
		Fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0		
		Pyrene	0.5 mg/kg	<0.5	<0.5	0.0		
		Benz(a)anthracene	0.5 mg/kg	<0.5	<0.5	0.0		
		Chrysene	0.5 mg/kg	<0.5	<0.5	0.0		
		Benzo(b)fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0		
		Benzo(k)fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0		
		Benzo(a)pyrene	0.5 mg/kg	<0.5	<0.5	0.0		
		Indeno(1,2,3,cd)pyrene	0.5 mg/kg	<0.5	<0.5	0.0		
		Dibenz(a,h)anthracene	0.5 mg/kg	<0.5	<0.5	0.0		
		Benzo(g,h,i)perylene	0.5 mg/kg	<0.5	<0.5	0.0		
		EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 460637)						
		EB0708137-178	S48 - 4m	Naphthalene	0.5 mg/kg	mg/kg	mg/kg	%
						<0.5	<0.5	0.0

Released

Client : GOLDER ASSOCIATES
Project : 077683504 Contamination

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Matrix Type: SOIL

Laboratory Duplicates (DUP) Report

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - continued						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 460837) - continued						
EB0708137-178	S48 - 4m	Acenaphthylene	0.5 mg/kg	mg/kg	mg/kg	%
		Acenaphthene	0.5 mg/kg	<0.5	<0.5	0.0
		Fluorene	0.5 mg/kg	<0.5	<0.5	0.0
		Phenanthrene	0.5 mg/kg	<0.5	<0.5	0.0
		Anthracene	0.5 mg/kg	<0.5	<0.5	0.0
		Fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0
		Pyrene	0.5 mg/kg	<0.5	<0.5	0.0
		Benz(a)anthracene	0.5 mg/kg	<0.5	<0.5	0.0
		Chrysene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(b)fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(k)fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(a)pyrene	0.5 mg/kg	<0.5	<0.5	0.0
		Indeno(1,2,3,cd)pyrene	0.5 mg/kg	<0.5	<0.5	0.0
		Dibenz(a,h)anthracene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(g,h,i)perylene	0.5 mg/kg	<0.5	<0.5	0.0
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 458967)						
EB0708137-003	S1 - 2m	C6 - C9 Fraction	10 mg/kg	mg/kg	mg/kg	%
EB0708137-072	S24 - 0.1m	C6 - C9 Fraction	10 mg/kg	<10	<10	0.0
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 459235)						
EB0708137-178	S48 - 4m	C6 - C9 Fraction	10 mg/kg	mg/kg	mg/kg	%
EB0708181-006	Anonymous	C6 - C9 Fraction	10 mg/kg	<10	<10	0.0
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 459925)						
EB0708137-003	S1 - 2m	C10 - C14 Fraction	50 mg/kg	mg/kg	mg/kg	%
		C15 - C28 Fraction	100 mg/kg	<50	<50	0.0
		C29 - C36 Fraction	100 mg/kg	<100	<100	0.0
EB0708137-072	S24 - 0.1m	C10 - C14 Fraction	50 mg/kg	120	140	9.4
		C15 - C28 Fraction	100 mg/kg	<50	<50	0.0
		C29 - C36 Fraction	100 mg/kg	<100	<100	0.0

Client : GOLDER ASSOCIATES
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Matrix Type: SOIL

Laboratory Duplicates (DUP) Report

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EP080/071: Total Petroleum Hydrocarbons - continued						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 460636)						
EB0708137-178	S48 - 4m	C10 - C14 Fraction	50 mg/kg	mg/kg	mg/kg	%
		C15 - C28 Fraction	100 mg/kg	<50	<50	0.0
		C29 - C36 Fraction	100 mg/kg	<100	<100	0.0
EP080: BTEX						
EP080: BTEX - (QC Lot: 458967)						
EB0708137-003	S1 - 2m	Benzene	0.2 mg/kg	mg/kg	mg/kg	%
		Toluene	0.5 mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	0.5 mg/kg	<0.5	<0.5	0.0
		meta- & para-Xylene	0.5 mg/kg	<0.5	<0.5	0.0
		ortho-Xylene	0.5 mg/kg	<0.5	<0.5	0.0
EB0708137-072	S24 - 0.1m	Benzene	0.2 mg/kg	<0.5	<0.5	0.0
		Toluene	0.5 mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	0.5 mg/kg	<0.5	<0.5	0.0
		meta- & para-Xylene	0.5 mg/kg	<0.5	<0.5	0.0
		ortho-Xylene	0.5 mg/kg	<0.5	<0.5	0.0
EP080: BTEX - (QC Lot: 459235)						
EB0708137-178	S48 - 4m	Benzene	0.2 mg/kg	mg/kg	mg/kg	%
		Toluene	0.5 mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	0.5 mg/kg	<0.5	<0.5	0.0
		meta- & para-Xylene	0.5 mg/kg	<0.5	<0.5	0.0
		ortho-Xylene	0.5 mg/kg	<0.5	<0.5	0.0
EB0708181-008	Anonymous	Benzene	0.2 mg/kg	<0.5	<0.5	0.0
		Toluene	0.5 mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	0.5 mg/kg	<0.5	<0.5	0.0
		meta- & para-Xylene	0.5 mg/kg	<0.5	<0.5	0.0
		ortho-Xylene	0.5 mg/kg	<0.5	<0.5	0.0

Release

Client : GOLDER ASSOCIATES
Project : 077883504 Contamination.

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Quality Control Report - Method Blank (MB) and Laboratory Control Samples (LCS)

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC type is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a known, interference free matrix spiked with target analytes or certified reference material. The purpose of this QC type is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of actual laboratory data. Flagged outliers on control limits for inorganics tests may be within the NEPM specified data quality objective of recoveries in the range of 70 to 130%. Where this occurs, no corrective action is taken. Abbreviations: LOR = Limit of reporting.

Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EG005T: Total Metals by ICP-AES						
EG005T: Total Metals by ICP-AES - (QC Lot: 458450)		mg/kg	mg/kg	%	%	%
Arsenic	5 mg/kg	—	13.8	97.2	82.9	118
	5 mg/kg	<5	—	—	—	—
Cadmium	1 mg/kg	—	2.82	91.2	81.8	112
	1 mg/kg	<1	—	—	—	—
Chromium	2 mg/kg	<2	—	—	—	—
	2 mg/kg	—	61.6	101	91.2	115
Copper	5 mg/kg	—	54.7	102	92.1	118
	5 mg/kg	<5	—	—	—	—
Lead	5 mg/kg	—	55.5	95.2	88.1	111
	5 mg/kg	<5	—	—	—	—
Nickel	2 mg/kg	<2	—	—	—	—
	2 mg/kg	—	55.1	102	91.1	117
Zinc	5 mg/kg	—	105	100	88.1	116
	5 mg/kg	<5	—	—	—	—
EG005T: Total Metals by ICP-AES - (QC Lot: 458452)		mg/kg	mg/kg	%	%	%
Arsenic	5 mg/kg	<5	—	—	—	—
	5 mg/kg	—	13.8	98.6	82.9	118
Cadmium	1 mg/kg	<1	—	—	—	—
	1 mg/kg	—	2.82	91.3	81.8	112
Chromium	2 mg/kg	—	61.6	101	91.2	115
	2 mg/kg	<2	—	—	—	—
Copper	5 mg/kg	<5	—	—	—	—
	5 mg/kg	—	54.7	104	92.1	118
Lead	5 mg/kg	<5	—	—	—	—
	5 mg/kg	—	55.5	96.4	88.1	111

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Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EG005T: Total Metals by ICP-AES - continued						
EG005T: Total Metals by ICP-AES - (QC Lot: 458452) - continued		mg/kg	mg/kg	%	%	%
Nickel	2 mg/kg	<2	—	—	—	—
	2 mg/kg	—	55.1	102	91.1	117
Zinc	5 mg/kg	<5	—	—	—	—
	5 mg/kg	—	105	102	88.1	116
EG005T: Total Metals by ICP-AES - (QC Lot: 458454)		mg/kg	mg/kg	%	%	%
Arsenic	5 mg/kg	<5	—	—	—	—
	5 mg/kg	—	13.8	98.2	82.9	116
Cadmium	1 mg/kg	—	2.82	88.4	81.8	112
	1 mg/kg	<1	—	—	—	—
Chromium	2 mg/kg	—	61.6	99.8	91.2	115
	2 mg/kg	<2	—	—	—	—
Copper	5 mg/kg	<5	—	—	—	—
	5 mg/kg	—	54.7	97.1	92.1	118
Lead	5 mg/kg	—	55.5	90.2	88.1	111
	5 mg/kg	<5	—	—	—	—
Nickel	2 mg/kg	—	55.1	101	91.1	117
	2 mg/kg	<2	—	—	—	—
Zinc	5 mg/kg	<5	—	—	—	—
	5 mg/kg	—	105	95.7	88.1	116
EG005T: Total Metals by ICP-AES - (QC Lot: 458458)		mg/kg	mg/kg	%	%	%
Arsenic	5 mg/kg	—	13.8	103	82.9	116
	5 mg/kg	<5	—	—	—	—
Cadmium	1 mg/kg	—	2.82	90.5	81.8	112
	1 mg/kg	<1	—	—	—	—
Chromium	2 mg/kg	<2	—	—	—	—
	2 mg/kg	—	61.6	102	91.2	115
Copper	5 mg/kg	—	54.7	107	92.1	118
	5 mg/kg	<5	—	—	—	—
Lead	5 mg/kg	<5	—	—	—	—
	5 mg/kg	—	55.5	96.6	88.1	111

Client : GOLDER ASSOCIATES
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Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
					LCS	Low
EG005T: Total Metals by ICP-AES - continued						
EG005T: Total Metals by ICP-AES - (QC Lot: 458459) - continued		mg/kg	mg/kg	%	%	%
Nickel	2 mg/kg	—	55.1	102	91.1	117
	2 mg/kg	<2	—	—	—	—
Zinc	5 mg/kg	—	105	102	88.1	116
	5 mg/kg	<5	—	—	—	—
EG035T: Total Mercury by FIMS						
EG035T: Total Mercury by FIMS - (QC Lot: 458451)		mg/kg	mg/kg	%	%	%
Mercury	0.1 mg/kg	<0.1	—	—	—	—
	0.10 mg/kg	—	1.34	105	70	129
EG035T: Total Mercury by FIMS - (QC Lot: 458453)		mg/kg	mg/kg	%	%	%
Mercury	0.10 mg/kg	—	1.34	104	70	129
	0.1 mg/kg	<0.1	—	—	—	—
EG035T: Total Mercury by FIMS - (QC Lot: 458455)		mg/kg	mg/kg	%	%	%
Mercury	0.1 mg/kg	<0.1	—	—	—	—
	0.10 mg/kg	—	1.34	97.0	70	129
EG035T: Total Mercury by FIMS - (QC Lot: 458460)		mg/kg	mg/kg	%	%	%
Mercury	0.10 mg/kg	—	1.34	101	70	129
	0.1 mg/kg	<0.1	—	—	—	—
EP068A: Organochlorine Pesticides (OC)						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459927)		mg/kg	mg/kg	%	%	%
4,4'-DDD	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	89.4	38	126
4,4'-DDE	0.025 mg/kg	—	0.25	91.5	43	120
	0.05 mg/kg	<0.05	—	—	—	—
4,4'-DDT	0.2 mg/kg	<0.2	—	—	—	—
	0.025 mg/kg	—	0.25	93.3	40	130
Aldrin	0.025 mg/kg	—	0.25	91.1	50	109
	0.05 mg/kg	<0.05	—	—	—	—

Released

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Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EP068A: Organochlorine Pesticides (OC) - continued						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459927) - continued		mg/kg	mg/kg	%	%	%
alpha-BHC	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	101	50	114
alpha-Endosulfan	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	92.2	50	113
beta-BHC	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	97.6	50	115
beta-Endosulfan	0.025 mg/kg	—	0.25	91.8	39	124
	0.05 mg/kg	<0.05	—	—	—	—
cis-Chlordane	0.025 mg/kg	—	0.25	89.0	49	113
	0.05 mg/kg	<0.05	—	—	—	—
delta-BHC	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	93.2	48	116
Dieldrin	0.025 mg/kg	—	0.25	89.9	45	116
	0.05 mg/kg	<0.05	—	—	—	—
Endosulfan sulfate	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	90.7	38	125
Endrin	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	92.5	38	123
Endrin aldehyde	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	88.2	36	115
Endrin ketone	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	79.7	44	120
gamma-BHC	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	96.8	52	113
Heptachlor	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	91.1	47	115
Heptachlor epoxide	0.025 mg/kg	—	0.25	93.6	50	112
	0.05 mg/kg	<0.05	—	—	—	—
Hexachlorobenzene (HCB)	0.025 mg/kg	—	0.25	94.8	48	120
	0.05 mg/kg	<0.05	—	—	—	—

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Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
					LCS	Low
EP068A: Organochlorine Pesticides (OC) - continued						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459927) - continued		mg/kg	mg/kg	%	%	%
Methoxychlor	0.2 mg/kg	<0.2	—	—	—	—
	0.025 mg/kg	—	0.25	96.2	27	130
trans-Chlordane	0.025 mg/kg	—	0.25	87.4	42	120
	0.05 mg/kg	<0.05	—	—	—	—
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459928)		mg/kg	mg/kg	%	%	%
4,4'-DDD	0.025 mg/kg	—	0.25	87.8	38	128
	0.05 mg/kg	<0.05	—	—	—	—
4,4'-DDE	0.025 mg/kg	—	0.25	87.6	43	120
	0.05 mg/kg	<0.05	—	—	—	—
4,4'-DDT	0.025 mg/kg	—	0.25	87.8	40	130
	0.2 mg/kg	<0.2	—	—	—	—
Aldrin	0.025 mg/kg	—	0.25	84.9	50	109
	0.05 mg/kg	<0.05	—	—	—	—
alpha-BHC	0.025 mg/kg	—	0.25	84.2	50	114
	0.05 mg/kg	<0.05	—	—	—	—
alpha-Endosulfan	0.025 mg/kg	—	0.25	87.6	50	113
	0.05 mg/kg	<0.05	—	—	—	—
beta-BHC	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	88.2	50	115
beta-Endosulfan	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	88.7	39	124
cis-Chlordane	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	88.7	49	113
delta-BHC	0.025 mg/kg	—	0.25	88.0	48	118
	0.05 mg/kg	<0.05	—	—	—	—
Dieldrin	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	87.0	45	116
Endosulfan sulfate	0.025 mg/kg	—	0.25	88.6	38	125
	0.05 mg/kg	<0.05	—	—	—	—

Release

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Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EP068A: Organochlorine Pesticides (OC) - continued						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459928) - continued		mg/kg	mg/kg	%	%	%
Endrin	0.025 mg/kg	—	0.25	90.3	38	123
	0.05 mg/kg	<0.05	—	—	—	—
Endrin aldehyde	0.025 mg/kg	—	0.25	80.8	36	115
	0.05 mg/kg	<0.05	—	—	—	—
Endrin ketone	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	85.8	44	120
gamma-BHC	0.025 mg/kg	—	0.25	85.0	52	113
	0.05 mg/kg	<0.05	—	—	—	—
Heptachlor	0.025 mg/kg	—	0.25	83.6	47	115
	0.05 mg/kg	<0.05	—	—	—	—
Heptachlor epoxide	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	86.7	50	112
Hexachlorobenzene (HCB)	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	82.4	48	120
Methoxychlor	0.025 mg/kg	—	0.25	88.4	27	130
	0.2 mg/kg	<0.2	—	—	—	—
trans-Chlordane	0.025 mg/kg	—	0.25	84.3	42	120
	0.05 mg/kg	<0.05	—	—	—	—
EP068B: Organophosphorus Pesticides (OP)						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 459927)		mg/kg	mg/kg	%	%	%
Methyl Azinphos	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	89.0	42	130
Bromophos-ethyl	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	91.5	42	122
Carbophenothion	0.025 mg/kg	—	0.25	90.9	50	126
	0.05 mg/kg	<0.05	—	—	—	—
Chlorfenvinphos	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	91.6	34	128
Chlorpyrifos	0.025 mg/kg	—	0.25	91.4	47	120
	0.05 mg/kg	<0.05	—	—	—	—

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Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
					LCS	Low
EP068B: Organophosphorus Pesticides (OP) - continued						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 459927) - continued		mg/kg	mg/kg	%	%	%
Chlorpyrifos-methyl	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	90.9	48	114
Demeton-S-methyl	0.025 mg/kg	—	0.25	101	33	109
	0.05 mg/kg	<0.05	—	—	—	—
Diazinon	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	94.8	35	125
Dichlorvos	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	74.4	30	124
Dimethoate	0.025 mg/kg	—	0.25	93.2	41	119
	0.05 mg/kg	<0.05	—	—	—	—
Ethion	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	90.7	37	132
Fenamiphos	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	91.2	28	101
Fenthion	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	89.2	68	110
Malathion	0.025 mg/kg	—	0.25	88.1	37	129
	0.05 mg/kg	<0.05	—	—	—	—
Monocrotophos	0.2 mg/kg	<0.2	—	—	—	—
	0.025 mg/kg	—	0.25	105	23	130
Parathion	0.025 mg/kg	—	0.25	91.1	39	123
	0.2 mg/kg	<0.2	—	—	—	—
Parathion-methyl	0.2 mg/kg	<0.2	—	—	—	—
	0.025 mg/kg	—	0.25	91.0	35	126
Pirimphos-ethyl	0.025 mg/kg	—	0.25	88.5	50	128
	0.05 mg/kg	<0.05	—	—	—	—
Prothiofos	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	90.9	38	126
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 459928)		mg/kg	mg/kg	%	%	%

Released

Client : GOLDER ASSOCIATES
Project : 077683504 Contamination

Work Order : EB0708137
ALS Quote Reference : EN/002/05

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ALS Environmental

Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
					LCS	Low
EP088B: Organophosphorus Pesticides (OP) - continued						
EP088B: Organophosphorus Pesticides (OP) - (QC Lot: 459928) - continued		mg/kg	mg/kg	%	%	%
Methyl Azinphos	0.025 mg/kg	—	0.25	93.4	42	130
	0.05 mg/kg	<0.05	—	—	—	—
Bromophos-ethyl	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	87.4	42	122
Carbophenothion	0.025 mg/kg	—	0.25	85.1	50	126
	0.05 mg/kg	<0.05	—	—	—	—
Chlorfenvinphos	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	91.2	34	128
Chlorpyrifos	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	86.0	47	120
Chlorpyrifos-methyl	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	84.9	48	114
Demeton-S-methyl	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	90.0	33	109
Diazinon	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	85.9	35	125
Dichlorvos	0.025 mg/kg	—	0.25	75.1	30	124
	0.05 mg/kg	<0.05	—	—	—	—
Dimethoate	0.025 mg/kg	—	0.25	88.8	41	119
	0.05 mg/kg	<0.05	—	—	—	—
Ethion	0.025 mg/kg	—	0.25	90.0	37	132
	0.05 mg/kg	<0.05	—	—	—	—
Fenamiphos	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	94.1	28	101
Fenthion	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	86.8	68	110
Malathion	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	89.6	37	129
Monocrotophos	0.025 mg/kg	—	0.25	102	23	130
	0.2 mg/kg	<0.2	—	—	—	—

Release

Client : GOLDER ASSOCIATES
Project : 077883504 Contamination

Work Order : EB0708137
ALS Quote Reference : EN/002/05

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Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery LCS	Dynamic Recovery Limits	
					Low	High
EP068B: Organophosphorus Pesticides (OP) - continued						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 459928) - continued		mg/kg	mg/kg	%	%	%
Parathion	0.025 mg/kg	—	0.25	88.7	39	123
	0.2 mg/kg	<0.2	—	—	—	—
Parathion-methyl	0.025 mg/kg	—	0.25	88.9	35	128
	0.2 mg/kg	<0.2	—	—	—	—
Pirimphos-ethyl	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	88.5	50	128
Prothiofos	0.05 mg/kg	<0.05	—	—	—	—
	0.025 mg/kg	—	0.25	88.1	38	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 459926)		mg/kg	mg/kg	%	%	%
Acenaphthene	0.25 mg/kg	—	5	85.0	56	114
	0.5 mg/kg	<0.5	—	—	—	—
Acenaphthylene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	82.9	59	113
Anthracene	0.25 mg/kg	—	5	79.4	54	110
	0.5 mg/kg	<0.5	—	—	—	—
Benz(a)anthracene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	79.5	51	115
Benzo(a)pyrene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	73.9	50	116
Benzo(b)fluoranthene	0.25 mg/kg	—	5	77.5	43	124
	0.5 mg/kg	<0.5	—	—	—	—
Benzo(g,h,i)perylene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	70.3	47	123
Benzo(k)fluoranthene	0.25 mg/kg	—	5	74.3	43	124
	0.5 mg/kg	<0.5	—	—	—	—
Chrysene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	76.6	51	114
Dibenz(a,h)anthracene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	68.9	47	124

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Client : GOLDER ASSOCIATES
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Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
					LCS	Low
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - continued						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 459926) - continued		mg/kg	mg/kg	%	%	%
Fluoranthene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	80.9	54	111
Fluorene	0.25 mg/kg	—	5	83.5	58	111
	0.5 mg/kg	<0.5	—	—	—	—
Indeno(1,2,3,cd)pyrene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	70.3	47	124
Naphthalene	0.25 mg/kg	—	5	84.6	56	114
	0.5 mg/kg	<0.5	—	—	—	—
Phenanthrene	0.25 mg/kg	—	5	81.5	54	112
	0.5 mg/kg	<0.5	—	—	—	—
Pyrene	0.25 mg/kg	—	5	79.8	55	111
	0.5 mg/kg	<0.5	—	—	—	—
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 460637)		mg/kg	mg/kg	%	%	%
Acenaphthene	0.25 mg/kg	—	5	89.1	56	114
	0.5 mg/kg	<0.5	—	—	—	—
Acenaphthylene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	88.0	59	113
Anthracene	0.25 mg/kg	—	5	85.8	54	110
	0.5 mg/kg	<0.5	—	—	—	—
Benz(a)anthracene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	86.1	51	115
Benzo(a)pyrene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	85.0	50	116
Benzo(b)fluoranthene	0.25 mg/kg	—	5	81.1	43	124
	0.5 mg/kg	<0.5	—	—	—	—
Benzo(g,h,i)perylene	0.5 mg/kg	<0.5	—	—	—	—
	0.25 mg/kg	—	5	83.1	47	123
Benzo(k)fluoranthene	0.25 mg/kg	—	5	90.2	43	124
	0.5 mg/kg	<0.5	—	—	—	—

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Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

Analyte name		LOR	Method blank result	Actual Results		Recovery Limits	
				Spike concentration	Spike Recovery	Dynamic Recovery Limits	
					LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - continued							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 480637) - continued			mg/kg	mg/kg	%	%	%
Chrysene	0.5 mg/kg	<0.5	—	—	—	—	—
	0.25 mg/kg	—	5	78.2	51	114	
Dibenz(a,h)anthracene	0.5 mg/kg	<0.5	—	—	—	—	
	0.25 mg/kg	—	5	81.8	47	124	
Fluoranthene	0.5 mg/kg	<0.5	—	—	—	—	
	0.25 mg/kg	—	5	85.4	54	111	
Fluorene	0.5 mg/kg	<0.5	—	—	—	—	
	0.25 mg/kg	—	5	80.5	58	111	
Indeno(1,2,3,cd)pyrene	0.5 mg/kg	<0.5	—	—	—	—	
	0.25 mg/kg	—	5	81.7	47	124	
Naphthalene	0.5 mg/kg	<0.5	—	—	—	—	
	0.25 mg/kg	—	5	85.6	58	114	
Phenanthrene	0.5 mg/kg	<0.5	—	—	—	—	
	0.25 mg/kg	—	5	86.5	54	112	
Pyrene	0.25 mg/kg	—	5	83.5	55	111	
	0.5 mg/kg	<0.5	—	—	—	—	
EP080/071: Total Petroleum Hydrocarbons							
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 458967)			mg/kg	mg/kg	%	%	%
C8 - C9 Fraction	10 mg/kg	—	25	86.0	71	123	
	10 mg/kg	<10	—	—	—	—	
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 459235)			mg/kg	mg/kg	%	%	%
C8 - C9 Fraction	10 mg/kg	<10	—	—	—	—	
	10 mg/kg	—	25	107	71	123	
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 459925)			mg/kg	mg/kg	%	%	%
C10 - C14 Fraction	50 mg/kg	<50	—	—	—	—	
	50 mg/kg	—	314	94.9	58	118	
C15 - C28 Fraction	100 mg/kg	<100	—	—	—	—	
	100 mg/kg	—	496	113	54	117	
C29 - C36 Fraction	100 mg/kg	<100	—	—	—	—	

Release

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Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery LCS	Dynamic Recovery Limits	
					Low	High
EP080/071: Total Petroleum Hydrocarbons - continued						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 460636)		mg/kg	mg/kg	%	%	%
C10 - C14 Fraction	50 mg/kg	—	314	83.8	58	118
	50 mg/kg	<50	—	—	—	—
C15 - C28 Fraction	100 mg/kg	—	496	94.9	54	117
	100 mg/kg	<100	—	—	—	—
C29 - C36 Fraction	100 mg/kg	<100	—	—	—	—
EP080: BTEX						
EP080: BTEX - (QC Lot: 458967)		mg/kg	mg/kg	%	%	%
Benzene	0.2 mg/kg	—	1	83.3	78	128
	0.2 mg/kg	<0.2	—	—	—	—
Ethylbenzene	0.5 mg/kg	—	1	82.9	72	119
	0.5 mg/kg	<0.5	—	—	—	—
meta- & para-Xylene	0.5 mg/kg	—	1	80.1	68	118
	0.5 mg/kg	<0.5	—	—	—	—
ortho-Xylene	0.5 mg/kg	—	1	83.2	70	116
	0.5 mg/kg	<0.5	—	—	—	—
Toluene	0.5 mg/kg	<0.5	—	—	—	—
	0.5 mg/kg	—	1	83.2	78	132
EP080: BTEX - (QC Lot: 459235)		mg/kg	mg/kg	%	%	%
Benzene	0.2 mg/kg	<0.2	—	—	—	—
	0.2 mg/kg	—	1	95.1	78	128
Ethylbenzene	0.5 mg/kg	<0.5	—	—	—	—
	0.5 mg/kg	—	1	92.8	72	119
meta- & para-Xylene	0.5 mg/kg	<0.5	—	—	—	—
	0.5 mg/kg	—	1	94.8	68	118
ortho-Xylene	0.5 mg/kg	<0.5	—	—	—	—
	0.5 mg/kg	—	1	93.9	70	116
Toluene	0.5 mg/kg	—	1	97.7	78	132
	0.5 mg/kg	<0.5	—	—	—	—

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Quality Control Report - Matrix Spikes (MS)

The quality control term **Matrix Spike (MS)** refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC type is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQO's). 'Ideal' recovery ranges stated may be waived in the event of sample matrix interferences. - Anonymous - Client Sample IDs refer to samples which are not specifically part of this work order but formed part of the QC process lot. Abbreviations: **LOR** = Limit of Reporting, **RPD** = Relative Percent Difference.

* Indicates failed QC

Matrix Type: SOIL

Matrix Spike (MS) Report

					Actual Results		Recovery Limits	
Analyte name	Laboratory Sample ID	Client Sample ID	LOR	Spike Concentration	Sample Result	Spike Recovery MS	Static Limits	
							Low	High
EG005T: Total Metals by ICP-AES								
EG005T: Total Metals by ICP-AES - (QC Lot: 458450)					mg/kg	mg/kg	%	%
Arsenic	EB0708137-003	S1 - 2m	5 mg/kg	50	<5	100	70	130
Cadmium			1 mg/kg	25	<1	102	70	130
Chromium			2 mg/kg	50	<2	103	70	130
Copper			5 mg/kg	50	<5	102	70	130
Lead			5 mg/kg	50	<5	95.9	70	130
Nickel			2 mg/kg	50	<2	99.5	70	130
Zinc			5 mg/kg	50	<5	104	70	130
EG005T: Total Metals by ICP-AES - (QC Lot: 458452)					mg/kg	mg/kg	%	%
Arsenic	EB0708137-055	S18 - 0.1m	5 mg/kg	50	5	97.2	70	130
Cadmium			1 mg/kg	25	<1	105	70	130
Chromium			2 mg/kg	50	3	104	70	130
Copper			5 mg/kg	50	<5	108	70	130
Lead			5 mg/kg	50	5	98.2	70	130
Nickel			2 mg/kg	50	<2	103	70	130
Zinc			5 mg/kg	50	15	136	70	130
EG005T: Total Metals by ICP-AES - (QC Lot: 458454)					mg/kg	mg/kg	%	%
Cadmium	EB0708137-187	S50 - 2m	1 mg/kg	25	<1	97.8	70	130
Chromium			2 mg/kg	50	3	98.1	70	130
Copper			5 mg/kg	50	<5	93.1	70	130
Lead			5 mg/kg	50	7	92.0	70	130
Nickel			2 mg/kg	50	6	91.5	70	130
Zinc			5 mg/kg	50	6	94.0	70	130
EG005T: Total Metals by ICP-AES - (QC Lot: 458459)					mg/kg	mg/kg	%	%
Arsenic	EB0708137-126	S39 - 0.1m	5 mg/kg	50	<5	110	70	130
Cadmium			1 mg/kg	25	<1	99.3	70	130

Released

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Matrix Type: SOIL

Matrix Spike (MS) Report

					Actual Results		Recovery Limits	
Analyte name	Laboratory Sample ID	Client Sample ID	LOR	Spike Concentration	Sample Result	Spike Recovery MS	Static Limits	
							Low	High
EG005T: Total Metals by ICP-AES - continued								
EG005T: Total Metals by ICP-AES - (QC Lot: 458459) - continued				mg/kg	mg/kg	%	%	%
Chromium	EB0708137-126	S39 - 0.1m	2 mg/kg	50	8	105	70	130
Copper			5 mg/kg	50	10	101	70	130
Lead			5 mg/kg	50	5	97.2	70	130
Nickel			2 mg/kg	50	18	90.0	70	130
Zinc			5 mg/kg	50	14	100	70	130
EG035T: Total Mercury by FIMS								
EG035T: Total Mercury by FIMS - (QC Lot: 458451)				mg/kg	mg/kg	%	%	%
Mercury	EB0708137-003	S1 - 2m	0.1 mg/kg	5.0	<0.1	95.0	70	130
EG035T: Total Mercury by FIMS - (QC Lot: 458453)				mg/kg	mg/kg	%	%	%
Mercury	EB0708137-055	S18 - 0.1m	0.1 mg/kg	5.0	<0.1	95.6	70	130
EG035T: Total Mercury by FIMS - (QC Lot: 458455)				mg/kg	mg/kg	%	%	%
Mercury	EB0708137-187	S50 - 2m	0.1 mg/kg	5.0	<0.1	90.6	70	130
EG035T: Total Mercury by FIMS - (QC Lot: 458460)				mg/kg	mg/kg	%	%	%
Mercury	EB0708137-126	S39 - 0.1m	0.1 mg/kg	5.0	<0.1	96.2	70	130
EP068A: Organochlorine Pesticides (OC)								
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459927)				mg/kg	mg/kg	%	%	%
gamma-BHC	EB0708137-003	S1 - 2m	0.05 mg/kg	0.25	<0.05	91.0	70	130
Heptachlor			0.05 mg/kg	0.25	<0.05	80.8	70	130
Aldrin			0.05 mg/kg	0.25	<0.05	35.4	70	130
Dieldrin			0.05 mg/kg	0.25	<0.05	72.8	70	130
Endrin			0.05 mg/kg	0.25	<0.05	78.4	70	130
4,4'-DDT			0.20 mg/kg	1.0	<0.2	37.8	70	130
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459928)				mg/kg	mg/kg	%	%	%
gamma-BHC	EB0708137-151	S44 - 2m	0.05 mg/kg	0.25	<0.05	84.0	70	130
Heptachlor			0.05 mg/kg	0.25	<0.05	76.7	70	130
Aldrin			0.05 mg/kg	0.25	<0.05	28.1	70	130
Dieldrin			0.05 mg/kg	0.25	<0.05	75.1	70	130
Endrin			0.05 mg/kg	0.25	<0.05	94.7	70	130

Release

Client : GOLDER ASSOCIATES
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Matrix Type: SOIL

Matrix Spike (MS) Report

					Actual Results		Recovery Limits	
Analyte name	Laboratory Sample ID	Client Sample ID	LOR	Spike Concentration	Sample Result	Spike Recovery MS	Static Limits	
							Low	High
EP068A: Organochlorine Pesticides (OC) - continued								
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 459928) - continued					mg/kg	mg/kg	%	%
4,4'-DDT	EB0708137-151	S44 - 2m	0.20 mg/kg	1.0	<0.2	4.6	70	130
EP068B: Organophosphorus Pesticides (OP)								
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 459927)					mg/kg	mg/kg	%	%
Diazinon	EB0708137-003	S1 - 2m	0.05 mg/kg	0.25	<0.05	80.6	70	130
Chlorpyrifos-methyl			0.05 mg/kg	0.25	<0.05	88.5	70	130
Pirimphos-ethyl			0.05 mg/kg	0.25	<0.05	77.6	70	130
Bromophos-ethyl			0.05 mg/kg	0.25	<0.05	79.2	70	130
Prothiofos			0.05 mg/kg	0.25	<0.05	70.2	70	130
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 459928)					mg/kg	mg/kg	%	%
Diazinon	EB0708137-151	S44 - 2m	0.05 mg/kg	0.25	<0.05	83.7	70	130
Chlorpyrifos-methyl			0.05 mg/kg	0.25	<0.05	96.1	70	130
Pirimphos-ethyl			0.05 mg/kg	0.25	<0.05	81.4	70	130
Bromophos-ethyl			0.05 mg/kg	0.25	<0.05	86.3	70	130
Prothiofos			0.05 mg/kg	0.25	<0.05	75.8	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 459926)					mg/kg	mg/kg	%	%
Acenaphthene	EB0708137-010	S3 - 2m	0.5 mg/kg	2.5	<0.5	85.7	70	130
Pyrene			0.5 mg/kg	2.5	<0.5	81.6	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 460637)					mg/kg	mg/kg	%	%
Acenaphthene	EB0708137-194	S52 - 0.1m	0.5 mg/kg	2.5	<0.5	77.6	70	130
Pyrene			0.5 mg/kg	2.5	<0.5	92.0	70	130
EP080/071: Total Petroleum Hydrocarbons								
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 458967)					mg/kg	mg/kg	%	%
C6 - C9 Fraction	EB0708137-010	S3 - 2m	10 mg/kg	28	<10	87.4	70	130
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 459235)					mg/kg	mg/kg	%	%
C6 - C9 Fraction	EB0708137-185	S50 - 0.1m	10 mg/kg	28	<10	102	70	130
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 459925)					mg/kg	mg/kg	%	%
C10 - C14 Fraction	EB0708137-010	S3 - 2m	50 mg/kg	314	<50	86.3	70	130

Client : GOLDER ASSOCIATES
Project : 077683504 Contamination

Work Order : EB0708137
ALS Quote Reference : EN/002/05

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Issue Date : 2 Aug 2007



Matrix Type: SOIL

Matrix Spike (MS) Report

					Actual Results		Recovery Limits	
Analyte name	Laboratory Sample ID	Client Sample ID	LOR	Spike Concentration	Sample Result	Spike Recovery MS	Static Limits	
							Low	High
EP080/071: Total Petroleum Hydrocarbons - continued								
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 459925) - continued					mg/kg	mg/kg	%	%
C15 - C28 Fraction	EB0708137-010	S3 - 2m	100 mg/kg	496	<100	98.8	70	130
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 460636)					mg/kg	mg/kg	%	%
C10 - C14 Fraction	EB0708137-185	S50 - 0.1m	50 mg/kg	314	<50	83.0	70	130
C15 - C28 Fraction			100 mg/kg	496	<100	97.4	70	130
EP080: BTEX								
EP080: BTEX - (QC Lot: 458967)					mg/kg	mg/kg	%	%
Benzene	EB0708137-010	S3 - 2m	0.2 mg/kg	2	<0.2	86.3	70	130
Toluene			0.5 mg/kg	2	<0.5	82.5	70	130
EP080: BTEX - (QC Lot: 459235)					mg/kg	mg/kg	%	%
Benzene	EB0708137-185	S50 - 0.1m	0.2 mg/kg	2	<0.2	91.3	70	130
Toluene			0.5 mg/kg	2	<0.5	92.9	70	130

Release



ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive report

Client Details

Client : **GOLDER ASSOCIATES**
Contact : **CTPI 49-Sch4**
Address : **P O BOX 5569 MAROOCHYDORE SOUTH
QLD AUSTRALIA 4558**

Project : **077683504 Contamination**
Order number : **MQ 4043**
C-O-C Number : **077683504tr1**
Site : **- Not provided -**
Sampler : **CK**

E-mail : **CTPI 49@golder.com.au**
Telephone : **5443 3511**
Facsimile : **5443 6645**

Laboratory Details

Laboratory : **Environmental Division Brisbane**
Manager : **CTPI 49-Sch4**
Address : **32 Shand Street Stafford QLD Australia 4053**

Quote number : **ES20050035**
Work order : **EB0708137**

E-mail : **Services.Brisbane@alsenviro.com**
Telephone : **61-7-3243 7222**
Facsimile : **61-7-3243 7259**

Dates

Date Samples Received : **24 Jul 2007** SRA Issue Date : **25 Jul 2007**
Scheduled Reporting Date : **1 Aug 2007** Client Requested Date : **1 Aug 2007**

Delivery Details

Mode of Delivery : **Carrier.** Temperature : **1.2 C - Ice present**
No. of coolers/boxes : **5 MEDIUM, 1 LARGE** No. of samples - Received : **227**
Security Seal : **Intact.** - Analysed : **65**

Comments

- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) have been received within recommended holding times.**
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.
- Please direct any queries related to sample condition / numbering / breakages to Maggi Kahi.
- Analytical work for this work order will be conducted at ALSE Brisbane.
- Please see scanned COC for sample discrepancies: sample not received S26 -0.1m.
Extra samples received ID: S45-5.0m; S56 -1.0m and S24 the depth been wiped off
samples will be put on hold unless notified.
- When the sampling time is not supplied on the COC documentation, ALSE defaults the sampling time to that of the COC
'relinquishment' time (if supplied). If this also is not supplied, ALSE defaults the sampling time to the 'time of receipt at Laboratory'.

Disclaimer : This document contains privileged and confidential information intended only for the use of the addressee. If you are not the addressee, you are hereby notified that you must not disseminate, copy or take action of its contents. If you have received this document in error, please notify ALS immediately.

Client : GOLDER ASSOCIATES
Project : 077683504 Contamination

Work Order : EB0708137
ALS Quote Reference : ES20050035



Summary of Sample(s) / Container(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as moisture and preparation tasks, that form an implicit part of that package.

ALS Sample ID.	Client Sample ID - Sample Date	Requested Analysis									
		S-02 - SOIL 8 Metals (incl. Digestion)	S-07 - SOIL TPH/BTEX/PAH (SIM)	S-12 - SOIL OC/OP Pesticides							
EB0708137-001	S1 - 0.1m - 17 Jul 2007	•		•							
EB0708137-002	S1 - 1m - 17 Jul 2007										
EB0708137-003	S1 - 2m - 17 Jul 2007	•	•	•							
EB0708137-004	S2 - 0.1m - 17 Jul 2007										
EB0708137-005	S2 - 1m - 17 Jul 2007										
EB0708137-006	S2 - 2m - 17 Jul 2007										
EB0708137-007	S2 - 3m - 17 Jul 2007										
EB0708137-008	S3 - 0.1m - 17 Jul 2007	•									
EB0708137-009	S3 - 1m - 17 Jul 2007										
EB0708137-010	S3 - 2m - 17 Jul 2007	•	•	•							
EB0708137-011	S4 - 0.1m - 17 Jul 2007										
EB0708137-012	S4 - 1m - 17 Jul 2007										
EB0708137-013	S4 - 2m - 17 Jul 2007										
EB0708137-014	S4 - 3m - 17 Jul 2007										
EB0708137-015	S5 - 0.1m - 17 Jul 2007	•	•	•							
EB0708137-016	S5 - 1m - 17 Jul 2007										
EB0708137-017	S5 - 2m - 17 Jul 2007	•	•	•							
EB0708137-018	S5 - 3m - 17 Jul 2007										
EB0708137-019	S6 - 0.1m - 17 Jul 2007	•									
EB0708137-020	S6 - 0.1Qm - 17 Jul 2007	•									
EB0708137-021	S6 - 1m - 17 Jul 2007										
EB0708137-022	S7 - 0.1m - 17 Jul 2007										
EB0708137-023	S7 - 1m - 17 Jul 2007										
EB0708137-024	S7 - 2m - 17 Jul 2007										
EB0708137-025	S7 - 3m - 17 Jul 2007										
EB0708137-026	S8 - 0.1m - 17 Jul 2007	•									
EB0708137-027	S8 - 1m - 17 Jul 2007	•									
EB0708137-028	S8 - 2m - 17 Jul 2007	•	•	•							
EB0708137-029	S9 - 0.1m - 17 Jul 2007										
EB0708137-030	S9 - 1m - 17 Jul 2007										
EB0708137-031	S9 - 2m - 17 Jul 2007										
EB0708137-032	S10 - 0.1m - 17 Jul 2007	•									
EB0708137-033	S10 - Qm - 17 Jul 2007	•									
EB0708137-034	S10 - 1m - 17 Jul 2007	•	•	•							
EB0708137-035	S10 - 2m - 17 Jul 2007										
EB0708137-036	S11 - 0.1m - 17 Jul 2007										
EB0708137-037	S11 - 1m - 17 Jul 2007										
EB0708137-038	S11 - 2m - 17 Jul 2007										
EB0708137-039	S12 - 0.1m - 17 Jul 2007	•	•	•							
EB0708137-040	S12 - 1m - 17 Jul 2007	•									
EB0708137-041	S13 - 0.1m - 17 Jul 2007										
EB0708137-042	S13 - 1m - 17 Jul 2007										
EB0708137-043	S13 - 2m - 17 Jul 2007										
EB0708137-044	S13 - 3m - 17 Jul 2007										
EB0708137-045	S15 - 0.1m - 17 Jul 2007	•	•	•							

SAMPLE NOTIFICATION (SRN) - continued

Client : GOLDER ASSOCIATES
Project : 077683504 Contamination

Work Order : EB0708137
ALS Quote Reference : ES20050035



ALS Sample ID.	Client Sample ID - Sample Date	Requested Analysis									
		S-02 - SOIL 8 Metals (incl. Digestion)	S-07 - SOIL TPH/BTEX/PAH (SIM)	S-12 - SOIL OC/OP Pesticides							
EB0708137-046	S15 - 1m - 17 Jul 2007	•									
EB0708137-047	S15 - 2m - 17 Jul 2007	•									
EB0708137-048	S16 - 0.1m - 17 Jul 2007	•									
EB0708137-049	S16 - 1m - 17 Jul 2007	•									
EB0708137-050	S16 - 2m - 17 Jul 2007	•	•	•							
EB0708137-051	S16 - 3m - 17 Jul 2007	•									
EB0708137-052	S17 - 0.1m - 17 Jul 2007	•									
EB0708137-053	S17 - 1m - 17 Jul 2007	•									
EB0708137-054	S17 - 2m - 17 Jul 2007	•									
EB0708137-055	S18 - 0.1m - 17 Jul 2007	•		•							
EB0708137-056	S18 - 1m - 17 Jul 2007	•									
EB0708137-057	S19 - 0.1m - 17 Jul 2007	•									
EB0708137-058	S19 - 1m - 17 Jul 2007	•									
EB0708137-059	S20 - 0.1m - 17 Jul 2007	•									
EB0708137-060	S20 - 1m - 17 Jul 2007	•									
EB0708137-061	S20 - 2m - 17 Jul 2007	•	•	•							
EB0708137-062	S20 - 3m - 17 Jul 2007	•									
EB0708137-063	S21 - 0.1m - 17 Jul 2007	•									
EB0708137-064	S21 - 1m - 17 Jul 2007	•									
EB0708137-065	S21 - 2m - 17 Jul 2007	•									
EB0708137-066	S22 - 0.1m - 17 Jul 2007	•									
EB0708137-067	S22 - 1m - 17 Jul 2007	•									
EB0708137-068	S22 - 2m - 17 Jul 2007	•									
EB0708137-069	S22 - 3m - 17 Jul 2007	•									
EB0708137-070	S23 - 0.1m - 17 Jul 2007	•									
EB0708137-071	S23 - 1m - 17 Jul 2007	•									
EB0708137-072	S24 - 0.1m - 17 Jul 2007	•	•	•							
EB0708137-073	S24 - 1m - 17 Jul 2007	•									
EB0708137-074	S25 - 0.1m - 17 Jul 2007	•									
EB0708137-075	S25 - 1m - 17 Jul 2007	•									
EB0708137-076	S25 - 2m - 17 Jul 2007	•									
EB0708137-077	S25 - 3m - 17 Jul 2007	•									
EB0708137-078	S26 - 1m - 17 Jul 2007	•	•	•							
EB0708137-079	S26 - 2m - 17 Jul 2007	•									
EB0708137-080	S27 - 0.1m - 17 Jul 2007	•									
EB0708137-081	S27 - 1m - 17 Jul 2007	•									
EB0708137-082	S27 - 2m - 17 Jul 2007	•									
EB0708137-083	S27 - 3m - 17 Jul 2007	•									
EB0708137-084	S28 - 0.1m - 17 Jul 2007	•									
EB0708137-085	S28 - 1m - 17 Jul 2007	•									
EB0708137-086	S28 - 2m - 17 Jul 2007	•									
EB0708137-087	S29 - 0.1m - 17 Jul 2007	•									
EB0708137-088	S29 - Qm - 17 Jul 2007	•									
EB0708137-089	S29 - 1m - 17 Jul 2007	•									
EB0708137-090	S29 - 2m - 17 Jul 2007	•									
EB0708137-091	S29 - 3m - 17 Jul 2007	•	•	•							
EB0708137-092	S30 - 0.1m - 18 Jul 2007	•									
EB0708137-093	S30 - 1m - 18 Jul 2007	•									
EB0708137-094	S30 - 2m - 18 Jul 2007	•									

SAMPLE NOTIFICATION (SRN) - continued

Client : GOLDER ASSOCIATES
Project : 077683504 Contamination

Work Order : EB0708137
ALS Quote Reference : ES20050035



ALS Sample ID.	Client Sample ID - Sample Date	Requested Analysis									
		S-02 - SOIL 8 Metals (incl. Digestion)	S-07 - SOIL TPH/BTEX/PAH (SIM)	S-12 - SOIL OC/OP Pesticides							
EB0708137-095	S31 - 0.1m - 18 Jul 2007										
EB0708137-096	S31 - 1m - 18 Jul 2007										
EB0708137-097	S31 - 2m - 18 Jul 2007										
EB0708137-098	S32 - 0.1m - 18 Jul 2007	•		•							
EB0708137-099	S32 - 1m - 18 Jul 2007	•									
EB0708137-100	S32 - 2m - 18 Jul 2007										
EB0708137-101	S33 - 0.1m - 18 Jul 2007										
EB0708137-102	S33 - 1m - 18 Jul 2007										
EB0708137-103	S33 - 2m - 18 Jul 2007										
EB0708137-104	S33 - 3m - 18 Jul 2007										
EB0708137-105	S35 - 0.1m - 18 Jul 2007										
EB0708137-106	S35 - 1m - 18 Jul 2007	•									
EB0708137-107	S35 - 2m - 18 Jul 2007										
EB0708137-108	S35 - 3m - 18 Jul 2007	•	•	•							
EB0708137-109	S35 - 4m - 18 Jul 2007										
EB0708137-110	S36 - 0.1m - 18 Jul 2007										
EB0708137-111	S36 - 1m - 18 Jul 2007										
EB0708137-112	S36 - 2m - 18 Jul 2007										
EB0708137-113	S36 - 3m - 18 Jul 2007										
EB0708137-114	S36 - 4m - 18 Jul 2007										
EB0708137-115	S37 - 0.1m - 18 Jul 2007	•									
EB0708137-116	S37 - Qm - 18 Jul 2007	•									
EB0708137-117	S37 - 1m - 18 Jul 2007										
EB0708137-118	S37 - 2m - 18 Jul 2007										
EB0708137-119	S37 - 3m - 18 Jul 2007	•	•	•							
EB0708137-120	S37 - 4m - 18 Jul 2007	•									
EB0708137-121	S38 - 0.1m - 18 Jul 2007										
EB0708137-122	S38 - 1m - 18 Jul 2007										
EB0708137-123	S38 - 2m - 18 Jul 2007										
EB0708137-124	S38 - 3m - 18 Jul 2007										
EB0708137-125	S38 - 4m - 18 Jul 2007										
EB0708137-126	S39 - 0.1m - 18 Jul 2007	•									
EB0708137-127	S39 - 1m - 18 Jul 2007										
EB0708137-128	S39 - 2m - 18 Jul 2007										
EB0708137-129	S39 - 3m - 18 Jul 2007	•	•	•							
EB0708137-130	S39 - 4m - 18 Jul 2007										
EB0708137-131	S40 - 0.1m - 18 Jul 2007										
EB0708137-132	S40 - 1m - 18 Jul 2007										
EB0708137-133	S40 - 2m - 18 Jul 2007										
EB0708137-134	S40 - 3m - 18 Jul 2007										
EB0708137-135	S41 - 0.1m - 18 Jul 2007	•	•	•							
EB0708137-136	S41 - 1m - 18 Jul 2007	•									
EB0708137-137	S41 - 2m - 18 Jul 2007										
EB0708137-138	S42 - 0.1m - 18 Jul 2007	•									
EB0708137-139	S42 - 1m - 18 Jul 2007										
EB0708137-140	S42 - 2m - 18 Jul 2007										
EB0708137-141	S42 - 3m - 18 Jul 2007	•	•	•							
EB0708137-142	S42 - 4m - 18 Jul 2007										
EB0708137-143	S43 - 0.1m - 18 Jul 2007										

Client : GOLDER ASSOCIATES
Project : 077683504 Contamination

Work Order : EB0708137
ALS Quote Reference : ES20050035



ALS Sample ID.	Client Sample ID - Sample Date	Requested Analysis									
		S-02 - SOIL 8 Metals (incl. Digestion)	S-07 - SOIL TPH/BTEX/PAH (SIM)	S-12 - SOIL OC/OP Pesticides							
EB0708137-144	S43 - 1m - 18 Jul 2007										
EB0708137-145	S43 - 2m - 18 Jul 2007										
EB0708137-146	S43 - 3m - 18 Jul 2007										
EB0708137-147	S43 - 4m - 18 Jul 2007										
EB0708137-148	S43 - 5m - 18 Jul 2007										
EB0708137-149	S44 - 0.1m - 18 Jul 2007	•									
EB0708137-150	S44 - 1m - 18 Jul 2007										
EB0708137-151	S44 - 2m - 18 Jul 2007	•	•	•							
EB0708137-152	S44 - 3m - 18 Jul 2007										
EB0708137-153	S44 - 4m - 18 Jul 2007	•									
EB0708137-154	S44 - 5m - 18 Jul 2007										
EB0708137-155	S45 - 0.1m - 18 Jul 2007										
EB0708137-156	S45 - Qm - 18 Jul 2007										
EB0708137-157	S45 - 1m - 18 Jul 2007										
EB0708137-158	S45 - 2m - 18 Jul 2007										
EB0708137-159	S45 - 3m - 18 Jul 2007										
EB0708137-160	S45 - 4m - 18 Jul 2007										
EB0708137-161	S46 - 0.1m - 18 Jul 2007	•									
EB0708137-162	S46 - 1m - 18 Jul 2007										
EB0708137-163	S46 - 2m - 18 Jul 2007										
EB0708137-164	S46 - 3m - 18 Jul 2007	•	•	•							
EB0708137-165	S46 - 4m - 18 Jul 2007										
EB0708137-166	S46 - 5m - 18 Jul 2007										
EB0708137-167	S47 - 0.1m - 18 Jul 2007										
EB0708137-168	S47 - 2m - 18 Jul 2007										
EB0708137-169	S47 - 3m - 18 Jul 2007										
EB0708137-170	S47 - 4m - 18 Jul 2007										
EB0708137-171	S47 - 5m - 18 Jul 2007										
EB0708137-172	S47 - 6m - 18 Jul 2007										
EB0708137-173	S48 - 0.1m - 18 Jul 2007	•									
EB0708137-174	S48 - Qm - 18 Jul 2007	•									
EB0708137-175	S48 - 1m - 18 Jul 2007										
EB0708137-176	S48 - 2m - 18 Jul 2007										
EB0708137-177	S48 - 3m - 18 Jul 2007										
EB0708137-178	S48 - 4m - 18 Jul 2007	•	•	•							
EB0708137-179	S48 - 5m - 18 Jul 2007										
EB0708137-180	S49 - 0.1m - 18 Jul 2007										
EB0708137-181	S49 - 1m - 18 Jul 2007										
EB0708137-182	S49 - 2m - 18 Jul 2007										
EB0708137-183	S49 - 3m - 18 Jul 2007										
EB0708137-184	S49 - 4m - 18 Jul 2007										
EB0708137-185	S50 - 0.1m - 20 Jul 2007	•	•	•							
EB0708137-186	S50 - 1m - 20 Jul 2007										
EB0708137-187	S50 - 2m - 20 Jul 2007	•									
EB0708137-188	S50 - 3m - 20 Jul 2007										
EB0708137-189	S50 - 0.1m - 20 Jul 2007										
EB0708137-190	S51 - 1m - 20 Jul 2007										
EB0708137-191	S51 - 2m - 20 Jul 2007										
EB0708137-192	S51 - 3m - 20 Jul 2007										

SAMPLE RECEIPT NOTIFICATION (SRN) - continued

Client : GOLDER ASSOCIATES
Project : 077683504 Contamination

Work Order : EB0708137
ALS Quote Reference : ES20050035



ALS Sample ID.	Client Sample ID - Sample Date	Requested Analysis									
		S-02 - SOIL 8 Metals (incl. Digestion)	S-07 - SOIL TPH/BTEX/PAH (SIM)	S-12 - SOIL OC/OP Pesticides							
EB0708137-193	S51 - 4m - 20 Jul 2007										
EB0708137-194	S52 - 0.1m - 20 Jul 2007	•	•	•							
EB0708137-195	S52 - 1m - 20 Jul 2007	•									
EB0708137-196	S52 - 2m - 20 Jul 2007										
EB0708137-197	S53 - 0.1m - 20 Jul 2007										
EB0708137-198	S53 - 2m - 20 Jul 2007										
EB0708137-199	S54 - 0.1m - 20 Jul 2007										
EB0708137-200	S54 - 1m - 20 Jul 2007										
EB0708137-201	S55 - 0.1m - 20 Jul 2007	•		•							
EB0708137-202	S55 - 1m - 20 Jul 2007	•	•								
EB0708137-203	S55 - 2m - 20 Jul 2007										
EB0708137-204	S56 - 0.1m - 20 Jul 2007	•									
EB0708137-205	S56 - Qm - 20 Jul 2007	•									
EB0708137-206	S56 - 2m - 20 Jul 2007	•	•	•							
EB0708137-207	S56 - 3m - 20 Jul 2007										
EB0708137-208	S57 - 0.1m - 20 Jul 2007										
EB0708137-209	S57 - 1m - 20 Jul 2007										
EB0708137-210	S57 - 2m - 20 Jul 2007										
EB0708137-211	S57 - 3m - 20 Jul 2007										
EB0708137-212	S58 - 0.1m - 20 Jul 2007	•	•	•							
EB0708137-213	S58 - 1m - 20 Jul 2007										
EB0708137-214	S58 - 2m - 20 Jul 2007										
EB0708137-215	S58 - 3m - 20 Jul 2007	•	•	•							
EB0708137-216	S58 - 4m - 20 Jul 2007										
EB0708137-217	S59 - 0.1m - 20 Jul 2007										
EB0708137-218	S59 - 1m - 20 Jul 2007										
EB0708137-219	S59 - 2m - 20 Jul 2007										
EB0708137-220	S60 - 0.1m - 20 Jul 2007										
EB0708137-221	S60 - Qm - 20 Jul 2007										
EB0708137-222	S60 - 1m - 20 Jul 2007										
EB0708137-223	S60 - 2m - 20 Jul 2007										
EB0708137-224	S60 - 3m - 20 Jul 2007										
EB0708137-225	S24 - 15 Jul 2007										
EB0708137-226	S45 - 5.0M - 18 Jul 2007										
EB0708137-227	S56 - 1.0M - 20 Jul 2007										
Total(s) :		65	27	30							

Client : GOLDER ASSOCIATES
Project : 077683504 Contamination

Work Order : EB0708137
ALS Quote Reference : ES20050035



Requested Reports

- CTPI 49-Sch4
 - A4 - AU Interpretive Quality Control Report - NEPM format Email CTPI 49-@golder.com.au
 - A4 - AU Certificate of Analysis - NEPM format Email @golder.com.au
 - A4 - AU Quality Control Report - NEPM format Email @golder.com.au
 - EDI Format - GHDNEW Email @golder.com.au
 - Default - Chain of Custody Email @golder.com.au
 - A4 - AU Sample Receipt Notification - Comprehensive format Email @golder.com.au
- THE ACCOUNTS PAYABLE (MRCHYDRE)
 - A4 - AU Tax Invoice Email apmaroochydore@golder.com.au

Sample Container(s) / Preservation Non-Compliance Log

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exist.

Published on DES Disclosure Log
RTI Act 2009

Attachment F
Limitations

LIMITATIONS

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Release

At Golder Associates we strive to be the most respected global group of companies specialising in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organisational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

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Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 55 21 3095 9500

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T: +61 7 5475 5900



Amy Mortleman

From: Kim Barry
Sent: Tuesday, 1 September 2009 6:59 PM
To: Amy Mortleman
Subject: FW: TPR application [CTPI 49-S] Drury La Dundowran L11 RP909375, L2 SP136512

Amy,
this is in the pile to go to Iron Mountain - please retain for me.
thanks
Kim

-----Original Message-----

From: Greg O'Brien
Sent: Tue 1/09/2009 4:29 PM
To: Kim Barry
Cc: Gary O'Connor
Subject: FW: TPR application [CTPI 49-Sch] Drury La Dundowran L11 RP909375, L2 SP136512

Kim

On the one below for [CTPI 49-Sch4] we approved the same site (L2 SP136512) for [CTPI 49-Sch4] in 2007. Do you know if there was any outcome for this site or can we assume [CTPI 49-Sch4] has lapsed as a TPR?

Greg O'Brien
Chief Scientific Advisor, Project Support Environmental Services Department of
Environment and Resource Management

ph 61 07 32244514
fax 61 07 32277677
Visit us on line: www.epa.qld.gov.au

-----Original Message-----

From: Greg O'Brien
Sent: Tuesday, 1 September 2009 4:18 PM
To: Kim Barry; Gary O'Connor
Subject: TPR application [CTPI 49-Sch4] Drury La Dundowran L11 RP909375, L2 SP136512

Kim/Gary

Former landfill site, proposed commercial use site. Kim, are there any concerns here? If not, recommend conditioning with landfill gas investigation provisions.

Greg O'Brien
Chief Scientific Advisor, Project Support Environmental Services Department of
Environment and Resource Management

ph 61 07 32244514
fax 61 07 32277677
Visit us on line: www.epa.qld.gov.au

Peter Koorockin

From: Kim Barry
Sent: Thursday, 23 July 2009 12:37 PM
To: Amy Mortleman
Cc: Peter Koorockin
Subject: RE: IRON MOUNTAIN FILE REQUEST 23/07/09

Follow Up Flag: Follow up
Flag Status: Red

Amy,
This doesn't require the expensive urgent recall, a standard recall will be adequate.
Kim

Kim Barry
Team Leader, Contaminated Land Unit
Telephone: (07) 3225 1045 **Facsimile:** (07) 3247 3278 **Mobile:** CTPI 49-Sch4
www.derm.qld.gov.au
Department of Environment and Resource Management 288 Edward Street, Brisbane Q 4000
PO Box 15155, City East Q 4002
http://www.epa.qld.gov.au/environmental_management/land/contaminated_land/

From: Amy Mortleman
Sent: Thursday, 23 July 2009 11:57 AM
To: Paul Vallance
Cc: Peter Koorockin; Kim Barry
Subject: IRON MOUNTAIN FILE REQUEST 23/07/09

Hi,

I would like the following file from iron mountain:

Thursday 23/07/09

FILE	BOX	IM CODE	
BNE34771-1	922	BULN72	FILE URGENTLY NEED FOR PETER KOOROC

Thanks,

Amy Mortleman
Administration Assistant, Contaminated Land Unit
Telephone: (07) 3227 7370 **Facsimile:** (07) 3247 3278
www.derm.qld.gov.au

Department of Environment and Resource Management 288 Edward Street, Brisbane Q 4000
PO Box 15155, City East Q 4002
http://www.epa.qld.gov.au/environmental_management/land/contaminated_land/



Queensland
Government

EMR updated
on 22/02/2008

CTPI

Enquiries
Telephone
Your reference
Our reference

Angelina Smolkova-Bismarck
(07) 3224 8244
514/3-072167
Appl'n No: 9437 Part: 1 File No.: BNE34771

Environmental Protection Agency
Incorporating the
Queensland Parks and Wildlife Service

19 February 2008

Hervey Bay City Council
PO Box 5045
TORQUAY QLD 4655

Attention: Mr Michael Ellery

Re: Application (No. 514/3-072167) for development approval for assessable development to be carried out at Dundowran Road, Dundowran (Lot 2 on SP136512).

The Environmental Protection Agency, acting as a referral agency under the *Integrated Planning Act 1997* for the above application, advises that the correspondence indicated below is attached:

- Notice of Concurrence Agency Response - Contaminated land;
- Notice of Advice Agency Response - Wetlands

Should you require any further information in relation to the above please do not hesitate to contact the above officer on the telephone number listed.

Yours sincerely

CTPI 49-Sch4

Miguel Zavaleta
Team Leader (Contaminated Land Unit)
Environmental Services
Environmental Protection Agency

CC: Bay Survey Consultants obo AHC Ltd
PO Box 5129
TORQUAY QLD 4655



Notice of concurrence agency response

Sections 3.3.16 and 3.3.18 Integrated Planning Act 1997

This notice is issued by the administering authority pursuant to sections 3.3.16 and 3.3.18 of the *Integrated Planning Act 1997*, to advise you of a decision or action.

Enquiries to: Angelina Bismarck
Telephone: (07) 3224 8244
Your reference: 514/3-072167
Our reference: Appl'n: 9437 Part 1 File No.: BNE34771

CC: Bay Survey Consultants obo AHC Ltd
PO Box 5129
TORQUAY QLD 4655

Hervey Bay City Council
PO Box 5045
TORQUAY QLD 4655

Attention: Mr Michael Ellery

Re: Application (No. 514/3-072167) for development approval for assessable development to be carried out at Dundowran Road, Dundowran (Lot 2 on SP136512).

Pursuant to the following items of Table 2 Schedule 2 of the *Integrated Planning Regulation 1998*, the Environmental Protection Agency (EPA) – Contaminated Land Unit (CLU) is a concurrence agency for the development application:

- ☒ Item 21, Table 2 of Schedule 2 of the *Integrated Planning Regulation 1998*
- ☐ Item 22, Table 2 of Schedule 2 of the *Integrated Planning Regulation 1998*

The EPA-CLU, acting as a concurrence agency under the *Integrated Planning Act 1997*, provides its response to the application detailed above as attached.

It would be appreciated if Council could provide a signed hard copy of the final development approval issued by Council (which includes the Agency's concurrence conditions).

The EPA-CLU has not provided a notification to native title parties for this application. The State's Native Title Work Procedures indicate that responsibility for assessment of native title issues for an IDAS application rest with the Assessment Manager. It is recommended that you undertake an assessment using your own guidelines to determine if a native title notification is required for this application.

Should you require any further information please do not hesitate to contact the above officer on the telephone number provided.

CTPI 49-Sch4

Signed

Date

Delegate of Administering Authority
Environmental Protection Act 1994.

Concurrence agency response

Sections 3.3.16 and 3.3.18 *Integrated Planning Act 1997*

Applicant:	Bay Survey Consultants obo AHC Ltd
Council Application Number:	514/3-072167
EPA Application Number:	9437 Part 1
Date application received by EPA:	29/01/2008
Relevant Laws and Policies:	<i>Environmental Protection Act 1994</i>
Jurisdiction:	Chapter 7, Part 8 <i>Environmental Protection Act 1994</i>

Development Description:

Reconfiguration of a Lot - Reconfiguring a Lot - 1 Lot into 20 Industrial Lots

where:

- ☐ the existing use of the land is, or if the land is vacant land with no existing use the most recent use of the land was, for a notifiable activity under the *Environmental Protection Act 1994*.
- ☐ the proposed use of the land is for child care, educational, recreational, residential or similar purposes and the existing use of the land is, or if the land is vacant land with no existing use the most recent use of the land was, for an industrial activity.
- ☒ **the land is on the Environmental Management Register or Contaminated Land Register under the *Environmental Protection Act 1994*.**
- ☐ the land is wholly or partly within an area for which an Area Management Advice for industrial activity or natural mineralisation has been issued and the proposed use of the land is for child care, educational, recreational, residential or similar purposes.
- ☐ the land is wholly or partly in an area for which an Area Management Advice for unexploded ordnance has been issued.

at the following place(s):

Dundowran Road, Dundowran
(Lot 2 on SP136512)

Response to Development Application

The Environmental Protection Agency, acting as a concurrence agency under the *Integrated Planning Act 1997*, provides its response to the application detailed above.

The concurrence agency response is that

- ☒ **conditions must attach to any development approval**
- ☐ any approval must be for part only of the development
- ☐ any approval must be a preliminary approval only
- ☐ there are no concurrence agency requirements
- ☐ the application must be refused

Released

Page 2 of 3

Conditions of the development approval

The reconfiguration of the **Lot 2 on SP136512** where the notifiable activity No.: 20 - Landfill has been carried out must be in accordance with the survey plan of Lots 1 – 20 and 1000 on plan titled *Proposed Reconfiguration, Lot 2 on SP136512, 1 into 20 plus Drainage Reserve, Dundowran – Hervey Bay*, drawing number DWG2444C (issue A) prepared by Bay Survey Consultants dated 25/10/2007.

It is a requirement that the applicant notifies the Environmental Protection Agency (EPA) (Contaminated Land Unit) in writing within 5 working days of the survey plan being endorsed and provides a copy of the registered plan to the EPA (Contaminated Land Unit) to enable the registration in the Environmental Management Register (EMR) of all new parcels.

Additional comments or advice about the application

The Environmental Protection Agency – Contaminated Land Unit is the referral agency for any development application for **Lot 2 on SP136512** and/or the new above proposed parcels unless it is exempted under the provisions of the *Integrated Planning Act 1997*.

Reasons for inclusion of development conditions or refusal

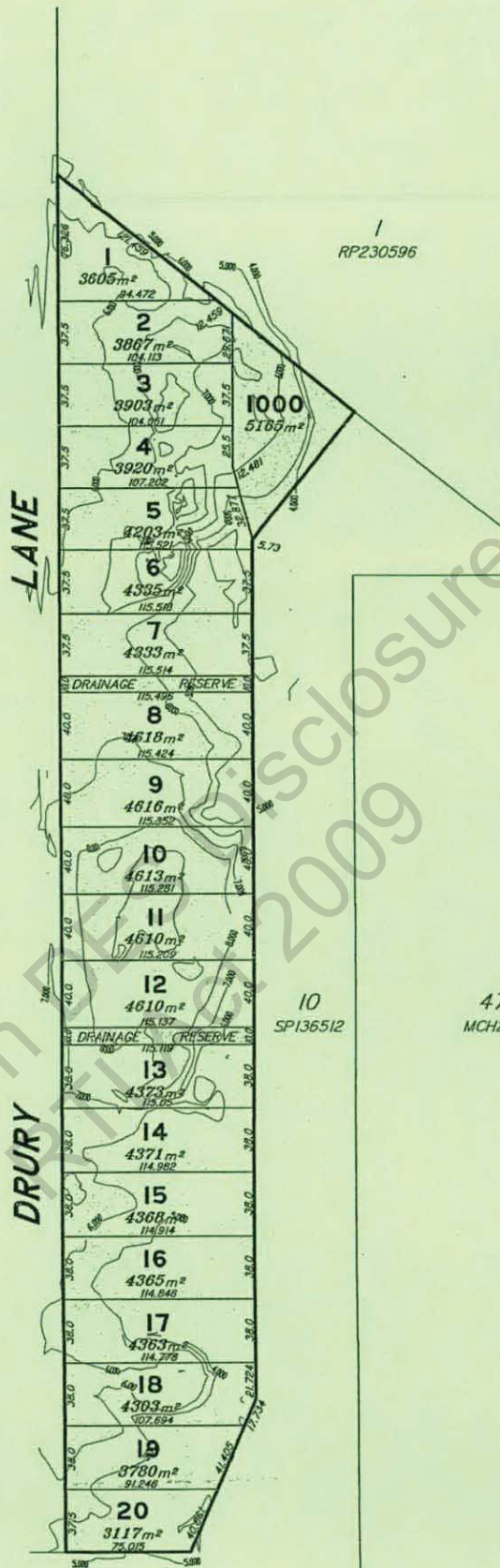
In accordance with section 3.3.18 of the *Integrated Planning Act 1997* and section 27B of the *Acts Interpretation Act 1954*, a concurrence response must include reasons for a refusal or for the inclusion of development conditions.

The Environmental Protection Agency is recognised as a concurrence agency under the *Integrated Planning Regulation 1998* for the protection of the environment by the management of contaminated land. The Environmental Protection Agency concurrence agency conditions for this proposed development that are contained within this response are required to prevent or mitigate any potential risk to human health or the environment from possible hazardous contaminants present on the site.

Additional information for applicants

This concurrence response pursuant to Chapter 7, Part 8 of the *Environmental Protection Act 1994* applies only to contaminated land issues and does not remove the need to obtain any further approval for this development which may be required by this or other legislation, State and/or Commonwealth. Applicants are advised to check with all relevant statutory authorities for such approvals as may be required.

~ End of Concurrence Agency Response ~



All dimensions are subject to final survey
 Heights are to AHD
 Contours at 1m intervals

ENDORSED: Accredited
 EXAMINED: L.M.Ratten C.S.
 PASSED:

Release

DRAWN BY: MICHAEL STEY

BAY SURVEY CONSULTANTS
 CONSULTING LAND, ENGINEERING & HYDROGRAPHIC
 DEVELOPMENT CONSULTANTS

HERVEY BAY
 12/40 Torquay Road
 P.O. Box 5129
 Torquay 4605
 Ph: 07 4128 4941
 Fax: 07 4128 4551

SUNSHINE COAST
 P.O. Box 24
 Landsborough 4550
 Ph: 07 5494 8288
 Fax: 07 5494 1400

19-29-2009: Esurveyz@bigpond.net.au

PROPOSED RECONFIGURATION
 Lot 2 on SP136512
 1 Lot into 20 plus Drainage Reserve
 DUNDOWRAN - HERVEY BAY

Client: RADWAY P/L

File A

PROPOSED SUBDIVISION

PARISH	VERNON	ISSU
COUNTY	MARCH	A
LOCAL GOVERNMENT	Hervey Bay C.C.	

Scale: 1:3000 Date: 25/10/07

Job No: HB/06/2444 Dwg No: DWG2444C
 Page 181 of 397

Notice

Advice Agency Response — Wetlands

This notice is issued by the Environmental Protection Agency pursuant to section 3.3.19 of the *Integrated Planning Act 1997*.

Michael Ellery
Hervey Bay City Council
PO Box 5045
HERVEY BAY QLD 4655

cc: Bay Survey Consultants obo Radway Pty Ltd
PO Box 5129
TORQUAY QLD 4655

Your reference : HB/06/2444

Our reference : 321413

Attention: Michael Ellery

Dear Michael

Re: Advice concerning application for development at Drury Lane, Dundowran (Lot 2 on SP136512). Please treat this response as a properly made submission

EPA referral number: IPAR00849808

Response type: Advice Agency Response

Date application received by EPA: 31 January 2008

ADVICE AGENCY JURISDICTION:	Item 38 of Table 2 of Schedule 2 of the <i>Integrated Planning Regulation 1998</i> .
ASSESSMENT MANAGER REFERENCE NUMBER:	HB/06/2444
APPLICANT:	Bay Survey Consultants obo Radway Pty Ltd
ACTIVITY DESCRIPTION:	Reconfiguration of a Lot
DESCRIPTION OF	Drury Lane Dundowran

SUBJECT LAND:	Lot: 2 Plan: SP136512
---------------	-----------------------

Response to Development Application

The EPA, acting as an advice agency under the *Integrated Planning Act 1997*, provides the following advice to the application as detailed above.

EPA advice

The EPA has reviewed the proposal for the reconfiguration Lot 2 on SP136512 which is located 'in or within 100m of a wetland' and offers the following advice:

Maintaining ecological values of the wetland

As an overall outcome for the development there should be 'no loss of wetland habitat and adverse impacts from development should be avoided. If loss to the wetland or its values is unavoidable, impacts should be minimised and mitigated to ensure the ongoing ecological functioning of wetland environments'. To achieve this overall outcome the following specific outcomes and acceptable solutions should be considered:

Specific outcomes	Acceptable solutions
1.0 Development does not result in the loss or reduction of a wetland .	<p>1.1 Development is located outside wetlands OR</p> <p>1.2 Development avoids or minimises impacts consistent with solutions 2.2 below and mitigates the loss or reduction of a wetland by providing compensatory wetland habitat that is:</p> <ul style="list-style-type: none"> (a) habitat of direct benefit to the impacted populations; (b) habitat in close proximity to the lost or degraded habitat (or a small proportion of habitat may be provided elsewhere where it can be demonstrated that no feasible option exists to provide the full value locally); (c) like for like habitat or value (e.g. frog habitat for frog habitat); and (d) habitat of extent, condition and viability that is greater or better than the habitat that is lost or degraded.
2.0 Development avoids or minimises adverse impacts on the functioning and integrity of a wetland .	<p>2.1 Development is set back a sufficient distance from a wetland to maintain the integrity and functioning of the wetland. Issues to consider when establishing a setback include:</p> <ul style="list-style-type: none"> (a) maintaining wetland habitat values (see 2.2 below); and (b) safeguarding natural fluctuations in size and location of the wetland and the migration of wetland vegetation as a result of natural hazards including drought, flood, storm tide and sea level rise. <p>AND</p> <p>2.2 Development minimises impacts on the wetland by:</p> <ul style="list-style-type: none"> (a) retaining and allowing for regeneration of wetland vegetation, riparian vegetation and vegetation native to the locality; (b) maintaining and, where fragmented, enhancing connectivity between habitat areas on and off site;

Release

Specific outcomes	Acceptable solutions
	<ul style="list-style-type: none"> (c) maintaining existing landforms, e.g. limits site disturbance from excavation and filling, dredging or installing bunds; (d) minimising alteration of the site's fire regime; (e) undertaking measures, such as fencing, to prevent non-native plant and animal incursion and uncontrolled human access; (f) minimising the need for local government mosquito/biting midge control measures by: <ul style="list-style-type: none"> (i) limiting encroachment of development on mosquito/ biting midge habitat; and (ii) limiting the creation of conditions conducive to new breeding or feeding mosquito or biting midge habitat..

Proposed lots 20, 19 and part lot 18 are located within an area of mapped refrerrable wetland and development on these lots would result in the direct loss or reduction the wetland, and therefore does not satisfy specific outcome 1.0.

The applicant has also made no provision to satisfy outcome 2.0, to 'avoid or minimise impacts on the functioning and integrity of a wetland' and has stated 'there is no vegetation on the site that is worthy of retention or management'. The proponents consultant reported ecological values in these areas, including presence of wetland dependant vegetation (*Allocasuarina* sp., *Baekkea frutescens* and *Gahnia aspera*) as well as suitable habitat for the Vulnerable Wallum froglet *Crinia tinnula*.

Wetland water regime

Existing water regime within and linked to the **wetland** is maintained and managed to protect existing natural hydrological processes within the **wetland** ecosystem. To achieve this overall outcome the following specific outcomes and acceptable solutions should be considered by the Assessment Manager:

Specific outcomes	Acceptable solutions
1.0 Development ensures that the natural water regime of the wetland is maintained.	1.1 Development maintains the natural water regime of the wetland by: <ul style="list-style-type: none"> (a) maintaining natural hydrological flows, e.g. engineering such a culverts, bridges and pylons to raise the development above the natural surface hydrological flows; (b) maintaining natural landforms and natural surface drainage patterns and groundwater recharge processes; (c) avoiding or minimising groundwater abstraction.

Any future development of the lots proposed should ensure the maintainance and protection of the existing hydrological regime of the wetland area and an identified wetland buffer zone.

Release

Recommendation

It is recommended that the application to reconfigure lot 1 on MCH2108 and Lot 2 on SP136512 be approved in part only. Lots which should be excluded from any approval include proposed lots 16, 17, 18, 19, and 20. These lots should be refused on the basis of their location within a mapped wetland area or within an appropriate wetland buffer zone.

It is advised that the following condition(s) also be applied to any approval of the application

1. Future development of the reconfigured lots must ensure maintenance and protection of existing hydrological processes relative to the health of the identified wetland area.

Additional information for applicants

It is a requirement of the *Environmental Protection Act 1994* that if the owner or occupier of this site becomes aware that a Notifiable Activity (as defined under Schedule 2 of the *Environmental Protection Act 1994*) is being carried out on this land or that the land has been affected by a hazardous contaminant, they must, within thirty (30) days after becoming aware the activity is being carried out, give notice to the Environmental Protection Agency. A list of Notifiable Activities is provided within Schedule 2 of the *Environmental Protection Act 1994*.

Yours sincerely

CTPI 49-Sch4

Signature

Stephen Barry
A/Planning Manager
Delegate for
Environmental Protection Agency

15/2/08

Date

Enquiries:
Alison Hamilton
PO Box 101, Maryborough QLD 4650
Telephone: 41211886
Facsimile: 4121 1650

Assessment Due Date: 26/02/2008

- Following the assessment of these reports, it was concluded that the site is suitable for the proposed industrial subdivision as levels of contamination were below HIL(F);
- Peer review agreed with recommendation to issue a CAR with standard conditions for reconfiguration

4. ASSESSMENT OUTCOME

Conclusion: (Is the site suitable for the proposed development?)

The site is suitable for reconfiguration as proposed.

Recommendation:

It is recommended to issue a CAR with standard conditions.

Assessor name: Angelina Bismarck **Assessor signature:**

Date: 19/02/2008

CTPI 49-Sch4

Reviewer is required when EPA Assessment is involved (Site Investigation/Validation Report was submitted with the application or as a response of an Information Request Notice)

Reviewer Name: **Reviewer signature:**

Revision Date:

Reviewer Comment(s)/Recommendation:

----- End of the Assessment -----

ASSESSMENT REPORT- SUMMARY

Decision: : **Stage 1 Preliminary Site Investigation,
Stage 2 Detailed Site Investigation** for
Lot 2 on SP136512, Drury Lane, Dundowran, Qld 4655

Section: : **s.384, Environmental Protection Act 1994**

Applicant : CTPI 49-Sch4

Consultant : CTPI 49-Sch4 of Golders Associates

Site Owner : Radway Pty Ltd

Property details : **Lot 2 on SP 136512**

Site Location : Drury Lane, Dundowran, Qld

FILE : **BNE 34771**

Goal: to demonstrate that land is suitable for industrial use.

Background:

- Lot 2 on SP136512 is on the EMR because of parent Lot 2 on RP230596 that was on the EMR for a notifiable activity of landfill;
- The site was historically used for sand extraction, that was followed by uncontrolled filling across the majority of the site to return is to about its original level. Demolition wastes including concrete, bitumen, bricks and gravel were observed in stockpiles located across the central part of the site.
- A development application was submitted for reconfiguration of this lot into 20 lots to form a part of industrial estate Industrial subdivision.
- Stage 1 and Stage 2 investigations were conducted and concluded that the site is suitable for the proposed commercial/industrial use providing a SMP is prepared for the management of the uncontrolled fill across the site.

Site Description

Site area: approx. 9.174 Ha
Current Zoning: Industrial

Adjoining Land Uses

North: Vacant land and existing drainage channel, and further Drury Sand Plant works which is still in operation.;

West: Large acreage property;

East: was not specified;

South: Wide drainage channel

Topography – The regional topography is generally low and flat. The nearest creek is approx. 2 km north (Eli Creek) and the ocean is approx. 500m beyond Eli Creek. A manmade lake is located approx 300m to the north east of the site.

The site shows the effects of past sand extraction work and filling. The central part of the site is about 2-3 m higher than the northern and southern portions of the site. Much of the site is variable in slope, with elevated areas of fill materials. At the time of investigation, the SE portion of the site was inundated with water. Excavation works were conducted in 2007 and most of the site was covered in bare earth with minimal grass cover.

Geology and Hydrology – The site is underlain by Quaternary (Holocene) age “beach ridges: sand, shelly sand, and minor gravel” possibly overlying slightly older (Pleistocene) sediments of “undifferentiated coastal plains: sand, silt mud”. For most of the site, the upper sand appears to have been removed as part of previous sand extraction works and replaced with uncontrolled fill.

Groundwater (GW) was not encountered during the Stage 1 investigation, however, an acid sulphate soils investigation report by Golders Associates indicated GW to be between 2.2 to 3.7 m below existing ground level. The possible use of GW within the area and surrounding suburbs is expected to be limited to irrigation.

History – description of aerial photographs, title searches, interviews
Prior 1960s – no activities, site was covered with dense vegetation;
From late 1960s, site was used for sand extraction, and vegetation has progressively been removed prior to sand extraction.
1980-1990s – site had received uncontrolled fill consisting of road construction waste – concrete, steel, wood and bitumen. No putrescibles wastes were disposed of at the site.

Stage 1 Site Investigation

Was conducted on 19 January 2006, 10 hand auger holes were drilled to a depth of 0.1m below the existing ground surface across the central part of the site.

10 samples were collected in accordance with standard QA/QC procedures and sent to the NATA approved laboratory. All samples were analysed for heavy metals, TPHs, BTEX, PAHs, phenols, PCBs and OC/OP pesticides. As no fragments of fibrous sheeting were detected, sampling for asbestos was not conducted during Stage 1 investigation.

Results:

TPHs, BTEX, PAHs, phenols, PCBs and OC/OP pesticides concentrations in all soil samples were below laboratory detection levels and the HIL for industrial land use.

From results for heavy metals, soil samples S8 and S10 revealed a concentration of As (22mg/kg) and Ni (90mg/kg) exceeding the EIL but below HIL. Metal concentrations in all other soil samples analysed for these parameters were below the EIL.

Stage 1 investigation has not detected concentration of contaminants in surface soil samples that would represent a human health or environmental risk. However, the vertical and horizontal extent of uncontrolled fill has not been delineated and therefore, further investigation was recommended.

Stage 2 Site Investigation

Was conducted on 17 and 18 July 2007, included excavation of 60 investigation locations up to 6 m depth within the uncontrolled fill and collection of representative samples at surface, 1m, 2m, and every meter thereafter to the depth of each test pit. Three GW monitoring wells to a depth of 6 m were installed.

216 soil samples were selected and analysed for heavy metals, TPHs, BTEX, PAHs, phenols, PCBs and OC/OP pesticides. 14 soil samples were examined for asbestos due to the presence of building rubble.

All GW samples were submitted for analysis for heavy metals, TPHs, BTEX, PAHs and OC/OP pesticides. Additional GW samples were collected on 07/11/2008 and analysed for TPH and BTEX.

8 blind duplicate samples were analysed (the AS requires for every 20 samples one set of blind samples should be taken. For 216 samples it should be 11 blind duplicates).

Standard QA/QC procedures were followed.

Results:

The subsurface conditions encountered within the uncontrolled fill comprised sandy clay fill containing approx. 40% concrete, steel, wood, bitumen, bricks, gravel, wire and plastic to depth of approx. 6 m. The concrete pieces were greater than 300mm, and there was no evidence of asbestos sheeting fragments within the areas of fill.

Soil samples S23(0.1m), S36(2m), S47(5m), S55(2m) revealed concentrations of As exceeding the EIL, however, well below the health based assessment criteria.

Soil sample S57 at 0.1m depth had As concentration of 111mg/kg exceeding HIL(A) but below HIL(F). The same sample had a concentration of Cr of 86mg/kg exceeding EIL, but below the HIL.

Soil sample S30 at 2 m depth had Cr of 182mg/kg.

Samples S32 at 2 m and S46 at 0.1m had concentration of Ni being 83mg/kg and 60mg/kg respectively, which are above the EIL but below the HIL.

Soil samples S57 at 1m and 2 m had concentration of Zn of 876mg/kg and 771mg/kg respectively, which are above the EIL but below the HIL.

Soil sample S58 at 0.1m had concentration of Zn being 1060mg/kg, which is above the EIL but below the HIL.

Metal concentrations in remaining soil samples were below EIL.

TPHs, BTEX, PAHs and OC/OP pesticides concentrations in all soil samples analysed for these parameters were generally below the laboratory limits of reporting and below the adopted EIL and HIL.

Groundwater (GW):

GW was encountered at depth between 0.7 and 3.7m below ground surface, with the direction of GW flow to the east, following the gradient of the land.

Samples collected on 02/08/2008 from BH1 and BH3 exceeded the environmental assessment criterion for TPH (Dutch Guidelines), even though no TPH were detected in soil samples, and no sheens or odours in the samples. On 07/11/2007, GW was re-sampled. The concentrations of TPH in this round of sampling were below the EIL, that confirmed that the initial sample results were erroneous, and that there is low environmental risk associated with TPH in GW.

Levels of Cu (B1 and B2) and Zn (B1-B3) were exceeding the environmental assessment criterion. Given the absence of Cu or significant Zn impact detected in soil samples of uncontrolled fill, these concentrations in GW were not considered to represent a risk to the environment.

Water samples revealed concentrations of OP/OC pesticides below the laboratory limit of reporting, but above all adopted environmental assessment criteria. Given the lack of

OP/OC pesticide detection in the soil samples, the risk of impact to GW is considered to be low.

As, Cd, Cr, Ni, Pb, Hg, BTEX and PAH concentrations in all samples analysed for these parameters were generally below the laboratory limits of reporting and all were below the adopted environmental assessment criteria.

Conclusions and recommendations:

Consultant:

- Limited testing of the uncontrolled fill confirmed the presence of some metal impacted soil at concentrations exceeding EIL. Concentrations of As and Cr were detected exceeding the HIL(A), but well below HIL(F).
- Analysis of GW did not detect concentrations of potential contaminants that would represent an environmental risk.
- It is considered that the site is suitable for future commercial/industrial land use providing that a SMP is prepared for management of the uncontrolled fill across the site. (The draft SMP was attached to the Stage 2 report)

Assessment officer:

- The Stage 1 and Stage 2 investigation of the site demonstrated that the site has been filled with construction and demolition waste to the depth up 6 m.
- Sampling of fill material revealed that only concentration of As in one sample exceeds HIL(A) but it is below the HIL(F). This exceedence does not provide sufficient ground for preparation of the SMP for this site.
- The proposed use of this site is industrial/commercial, and the level of detected on site contamination is below HIL(F), therefore, the site is suitable for the proposed use.

Recommendation:

- It is recommended to issue a Notice under s384 of EPAct stating that the site will remain on the EMR without the change of status.
- It is recommended to issue a concurrence agency response recommending reconfiguration of a lot with the following condition:

If during any site earthworks or excavation, offensive or noxious odours and/or evidence of gross contamination not previously detected is observed, site works are to cease in that area and action taken to immediately abate the potential environmental harm. The administering authority is to be notified in writing within two (2) business days of detection and advised of appropriate remedial action.

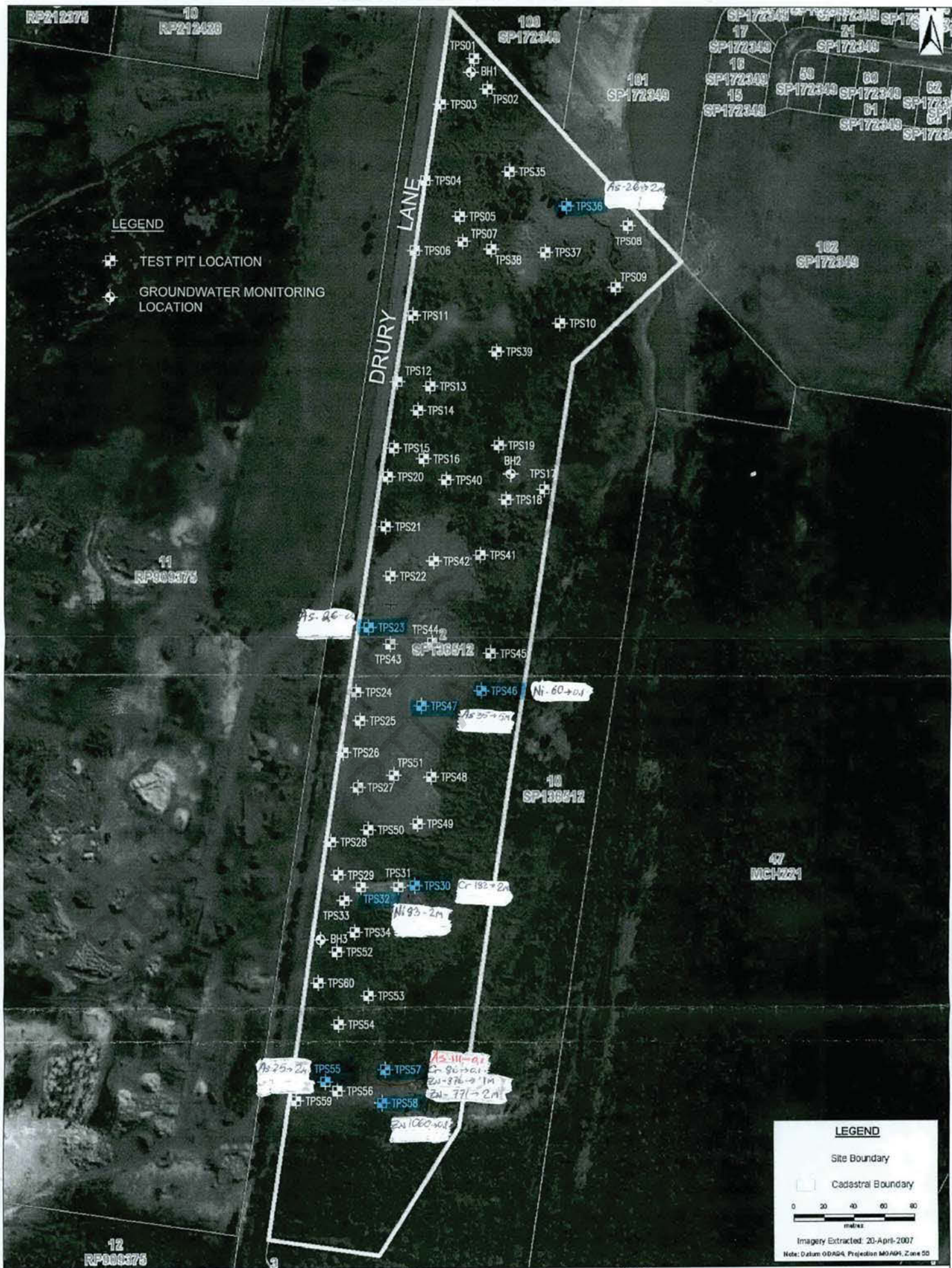
Any remedial action is to be developed by an appropriate qualified and experienced person in accordance with Section 381 of the EP Act.

CTPI 49-Sch4

Angelina S. Bismarck
Senior Environmental Officer

Reviewing Officer:
Kim Barry
Principal Scientific Advisor

CTPI 49-Sch4



NOTE:

- 1) 19-295
DCDB COPYRIGHT THE STATE OF QUEENSLAND
(DEPARTMENT OF NATURAL RESOURCES & WATER)
- 2) IMAGERY COPYRIGHT GOOGLE EARTH 2007



CLIENT		Radway Pty Ltd	
DRAWN	File/W	DATE	25-07-07
CHECKED	PKS*	DATE	27-07-07
SCALE	As Shown		

PROJECT Industrial, Lot 2 Drury Lane, Dundowran

TITLE **SAMPLING LOCATIONS**

Release

PROJECT No 0776R3504 FIGURE No 2 REV No A3

LEGEND

Site Boundary

Cadastral Boundary



Imagery Extracted: 20-April-2007

Note: Datum ODAG4, Projection MGA94, Zone 50

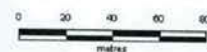


LEGEND

-  1m (APPROXIMATE FILL DEPTH)
-  2m (APPROXIMATE FILL DEPTH)
-  3m (APPROXIMATE FILL DEPTH)
-  4m (APPROXIMATE FILL DEPTH)
-  5m (APPROXIMATE FILL DEPTH)
-  6m (APPROXIMATE FILL DEPTH)

LEGEND

-  Site Boundary
-  Cadastral Boundary



Imagery Extracted: 20-April-2007

Note: Datum GDA94, Projection MGA94, Zone 55

NOTE:

- 1) DCDB COPYRIGHT THE STATE OF QUEENSLAND (DEPARTMENT OF NATURAL RESOURCES & WATER)
- 2) IMAGERY COPYRIGHT 2005 EARTH 2007



CLIENT Radway Pty Ltd		PROJECT Industrial, Lot 2 Drury Lane, Dundowran	
DRAWN JM	DATE 10-10-07	TITLE APPROXIMATE DEPTHS OF UNCONTROLLED FILL	Releas
CHECKED PKS*	DATE 10-10-07		
SCALE As Shown		PROJECT NO. 077683504	REV No 3
File A		Page 193 of 397	A3

NOTE: THE * BESIDE THE TYPED INITIALS DENOTES THE ORIGINAL DRAWING ISSUE WAS SIGNED OR INTALLIED BY THAT RESPECTIVE PERSON.

Operational policy

Environmental Operations

Licensing requirements for construction and demolition wastes

Operational policies provide a framework for consistent application and interpretation of legislation by the Environmental Protection Agency, which incorporates the Queensland Parks and Wildlife Service. Operational policies will not be applied inflexibly to all circumstances. Individual circumstances may require an alternative application of policy. This policy concerns Schedule 1, Item 75 under the Environmental Protection Regulation 1998.

Policy issue

A survey¹ of construction and demolition (C&D) wastes in Queensland found that they typically consisted of the following:

WASTE	CONSTRUCTION %	DEMOLITION %	AVERAGE PERCENTAGE IN C&D
Bricks/Paver	10	16	13
Concrete	11	21	16.5
Earthen fill	23	6	14.5
Glass	2	2	2
Green waste	7	5	6
Plastics	3	4	3.5
Metal	8	9	8.5
Plasterboard	12	8	10
Cardboard/paper	9	10	9.5
Timber	15	19	17

What is the Agency's approach to the use of C&D wastes as fill, and what are the licensing requirements under the *Environmental Protection Act 1994* (the EP Act)?

Determination

C&D waste that does not contain asbestos or other regulated waste is general waste, and disposal of this waste to a facility is to be licensed under ERA 75(a).

If C&D waste is separated into its constituent parts, the inert² parts may be used as clean fill. There is no requirement to obtain a licence to carry out ERA 75(a) for such use, provided that the use:

- (i) is not likely to cause environmental harm;
- (ii) is otherwise lawful under any other Act; and
- (iii) is incidental and associated with an authorised activity³, which is regulated by conditions that adequately address the environmental impacts likely to be caused by using the C&D wastes as fill at the site.

For the purpose of this policy only the following wastes can be considered as inert:

- (i) bricks/pavers/ceramics;

Licensing requirements for construction and demolition wastes

- X
- (ii) concrete (including embedded steel reinforcing rods), pulverised to a maximum 300mm nominal size; and
 - (iii) clean earthen fill.

However, a person disposing of C&D waste must do so at a place and in a manner as approved by the local government, as prescribed in section 16(1) of the *Environmental Protection (Interim Waste) Regulation 1996*.

Under section 369(1) of the EP Act, a person must not for fee or reward perform waste management works⁴ in a local government area other than under:

- (i) a written contract with the local government; or
- (ii) the local government's written approval under this section.

For the screening, segregation and any processing (crushing, milling) of C&D waste using plant or equipment, an environmental authority may be required under ERA 22 (screening etc. materials) and/or ERA 45 (crushing, milling or grinding), dependant on the origin of the wastes and the design production capacity of the plant and equipment used.

When C&D waste is collected (for recycling/disposal) at a facility designed to receive waste at a rate of more than 20,000t per year, an environmental authority for ERA 82 (waste transfer station) will be required.

Other issues to consider

Soils that have the characteristics of acid sulfate or potential acid sulfate soils, as identified in the *Guidelines for Sampling and Analysing Lowland Acid Sulfate Soils (ASS) in Queensland 1998*, are not acceptable as clean earthen fill.

Only earthen fill that has trace elements and contaminant levels within the Interim Urban Ecological Investigation Levels (EILS) described in guideline B1, Table 5-A of the *National Environment Protection Measure, Assessment of Site Contamination* will be acceptable as clean earthen fill. When soil criteria exceeds EILS guideline B1 or the land is affected by a hazardous contaminant, assessment will be required according to the *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland 1998*. Earthen fill found to be contaminated under these guidelines must not be removed or disposed of without a disposal permit, under section 424 of the EP Act.

Disclaimer:

While this document has been prepared with care, it contains general information and does not profess to offer legal, professional or commercial advice. The Queensland Government accepts no liability for any external decisions or actions taken on the basis of this document. Persons external to the Environmental Protection Agency should satisfy themselves independently and by consulting their own professional advisors before embarking on any proposed course of action.

Approved by

Mark Williamson
Executive Director, Environmental Operations
Environmental Protection Agency

Date: 18 September 2002

Enquiries:

Ecoaccess Customer Service Unit
Ph. 1300 368 326
Fax. (07) 3115 9600

¹ *Construction and demolition waste study (Draft)*, EPA, 2001. The information in figures 2.2 and 2.3 has been tabulated in this operational policy.

² Inert material used as fill must be suitable, when considering the end use which is applicable for the site.

³ Authorised activities, include activities which have ceased operating, but have conditions that require post-closure rehabilitation of the site using fill.

⁴ To "remove, collect, transport, treat or dispose of waste" is included in waste management works under section 368(a)(i) of the EP Act.

Notice

Advice Agency Response — Wetlands

This notice is issued by the Environmental Protection Agency pursuant to section 3.3.19 of the *Integrated Planning Act 1997*.

Michael Ellery
Hervey Bay City Council
PO Box 5045
HERVEY BAY QLD 4655

cc: Bay Survey Consultants obo Radway Pty Ltd
PO Box 5129
TORQUAY QLD 4655

Your reference : HB/06/2444

Our reference : 321413

Attention: Michael Ellery

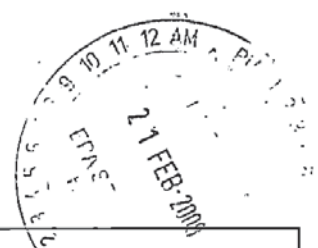
Dear Michael

Re: Advice concerning application for development at Drury Lane, Dundowran (Lot 2 on SP136512). Please treat this response as a properly made submission

EPA referral number: IPAR00849808

Response type: Advice Agency Response

Date application received by EPA: 31 January 2008



ADVICE AGENCY JURISDICTION:	Item 38 of Table 2 of Schedule 2 of the <i>Integrated Planning Regulation 1998</i> .
ASSESSMENT MANAGER REFERENCE NUMBER:	HB/06/2444
APPLICANT:	Bay Survey Consultants obo Radway Pty Ltd
ACTIVITY DESCRIPTION:	Reconfiguration of a Lot
DESCRIPTION OF	Drury Lane <u>Dundowran</u>



SUBJECT LAND:	Lot: 2 Plan: SP136512
---------------	-----------------------

Response to Development Application

The EPA, acting as an advice agency under the *Integrated Planning Act 1997*, provides the following advice to the application as detailed above.

EPA advice

The EPA has reviewed the proposal for the reconfiguration Lot 2 on SP136512 which is located 'in or within 100m of a wetland' and offers the following advice:

Maintaining ecological values of the wetland

As an overall outcome for the development there should be 'no loss of wetland habitat and adverse impacts from development should be avoided. If loss to the wetland or its values is unavoidable, impacts should be minimised and mitigated to ensure the ongoing ecological functioning of wetland environments'. To achieve this overall outcome the following specific outcomes and acceptable solutions should be considered:

Specific outcomes	Acceptable solutions
1.0 Development does not result in the loss or reduction of a wetland .	<p>1.1 Development is located outside wetlands</p> <p>OR</p> <p>1.2 Development avoids or minimises impacts consistent with solutions 2.2 below and mitigates the loss or reduction of a wetland by providing compensatory wetland habitat that is:</p> <ul style="list-style-type: none"> (a) habitat of direct benefit to the impacted populations; (b) habitat in close proximity to the lost or degraded habitat (or a small proportion of habitat may be provided elsewhere where it can be demonstrated that no feasible option exists to provide the full value locally); (c) like for like habitat or value (e.g. frog habitat for frog habitat); and (d) habitat of extent, condition and viability that is greater or better than the habitat that is lost or degraded.
2.0 Development avoids or minimises adverse impacts on the functioning and integrity of a wetland .	<p>2.1 Development is set back a sufficient distance from a wetland to maintain the integrity and functioning of the wetland. Issues to consider when establishing a setback include:</p> <ul style="list-style-type: none"> (a) maintaining wetland habitat values (see 2.2 below); and (b) safeguarding natural fluctuations in size and location of the wetland and the migration of wetland vegetation as a result of natural hazards including drought, flood, storm tide and sea level rise. <p>AND</p> <p>2.2 Development minimises impacts on the wetland by:</p> <ul style="list-style-type: none"> (a) retaining and allowing for regeneration of wetland vegetation, riparian vegetation and vegetation native to the locality; (b) maintaining and, where fragmented, enhancing connectivity between habitat areas on and off site;

Release

Specific outcomes	Acceptable solutions
	<ul style="list-style-type: none"> (c) maintaining existing landforms, e.g. limits site disturbance from excavation and filling, dredging or installing bunds; (d) minimising alteration of the site's fire regime; (e) undertaking measures, such as fencing, to prevent non-native plant and animal incursion and uncontrolled human access; (f) minimising the need for local government mosquito/biting midge control measures by: <ul style="list-style-type: none"> (i) limiting encroachment of development on mosquito/ biting midge habitat; and (ii) limiting the creation of conditions conducive to new breeding or feeding mosquito or biting midge habitat..

Proposed lots 20, 19 and part lot 18 are located within an area of mapped referable wetland and development on these lots would result in the direct loss or reduction the wetland, and therefore does not satisfy specific outcome 1.0.

The applicant has also made no provision to satisfy outcome 2.0, to 'avoid or minimise impacts on the functioning and integrity of a wetland' and has stated 'there is no vegetation on the site that is worthy of retention or management'. The proponents consultant reported ecological values in these areas, including presence of wetland dependant vegetation (*Allocasuarina* sp., *Baeckea frutescens* and *Gahnia aspera*) as well as suitable habitat for the Vulnerable Wallum froglet *Crinia tinnula*.

Wetland water regime

Existing water regime within and linked to the **wetland** is maintained and managed to protect existing natural hydrological processes within the **wetland** ecosystem. To achieve this overall outcome the following specific outcomes and acceptable solutions should be considered by the Assessment Manager:

Specific outcomes	Acceptable solutions
1.0 Development ensures that the natural water regime of the wetland is maintained.	1.1 Development maintains the natural water regime of the wetland by: <ul style="list-style-type: none"> (a) maintaining natural hydrological flows, e.g. engineering such a culverts, bridges and pylons to raise the development above the natural surface hydrological flows; (b) maintaining natural landforms and natural surface drainage patterns and groundwater recharge processes; (c) avoiding or minimising groundwater abstraction.

Any future development of the lots proposed should ensure the maintenance and protection of the existing hydrological regime of the wetland area and an identified wetland buffer zone.

Release

Recommendation

It is recommended that the application to reconfigure lot 1 on MCH2108 and Lot 2 on SP136512 be approved in part only. Lots which should be excluded from any approval include proposed lots 16, 17, 18, 19, and 20. These lots should be refused on the basis of their location within a mapped wetland area or within an appropriate wetland buffer zone.

It is advised that the following condition(s) also be applied to any approval of the application

1. Future development of the reconfigured lots must ensure maintenance and protection of existing hydrological processes relative to the health of the identified wetland area.

Additional information for applicants

It is a requirement of the *Environmental Protection Act 1994* that if the owner or occupier of this site becomes aware that a Notifiable Activity (as defined under Schedule 2 of the *Environmental Protection Act 1994*) is being carried out on this land or that the land has been affected by a hazardous contaminant, they must, within thirty (30) days after becoming aware the activity is being carried out, give notice to the Environmental Protection Agency. A list of Notifiable Activities is provided within Schedule 2 of the *Environmental Protection Act 1994*.

Yours sincerely

CTPI 49-Sch4

Signature

Stephen Barry
A/Planning Manager
Delegate for
Environmental Protection Agency

15/2/08

Date

Enquiries:
Alison Hamilton
PO Box 101, Maryborough QLD 4650
Telephone: 41211886
Facsimile: 4121 1650

IDAS APPLICATIONS CHECKLIST

APPLICATION NUMBER: 9437

FILE NUMBER: BNE 34771

REFERRAL DATE: ~~22/1/08~~ ✓ 29/01/08INFORMATION REQUEST DUE: ~~6/2/08~~ ✓ 12/02/08RCU NUMBER: ~~20/2/08 EXT~~
Decision: 26/02/08☒ ACKNOWLEDGEMENT NOTICE**IPA FORMS**☒ COMMON DETAILS – PART A
☒ OWNERS CONSENT☐ PART D – MATERIAL CHANGE OF USE

AND OR

☒ PART F – RECONFIGURATION A LOT☒ PART N – CONTAMINATED LAND requested 11/12/07
received 22/1/08☒ IDAS ASSESSMENT CHECKLIST☐ REFERRAL COORDINATION REQUIRED

Angelina Smolkova-Bismarck

From: nathan.siri@epa.qld.gov.au
Sent: Wednesday, 30 January 2008 11:36 AM
To: Angelina Smolkova-Bismarck
Subject: Bring Up - 321413 - Advice - Reconfig on land in or within 100m of a wetland/Drury Lane, Dundowran QLD 4655/Radway Pty Ltd - 30-JAN-2008

There is a bring up for your attention for reference - 321413 - Advice - Reconfig on land in or within 100m of a wetland/Drury Lane, Dundowran QLD 4655/Radway Pty Ltd - 30-JAN-2008. You can see the form using the following link:

http://bneapp01.epa.qld.gov.au/forms/frmservlet?config=cedsprd&otherparams=term=C:\ora00\apps\ecotrack\java\keymap.res+p_database=trees/PRD1+p_cmd_line=CE_AD_OFFICER_TASKS

Note: This is an automated message. Please do not reply as no one will receive.

Published on DES Disclosure Log
RTI Act 2009

Fax



Queensland Government

Environmental Protection Agency

Incorporating the
Queensland Parks and Wildlife Service

To: Alison Hamilton

Fax: 4121 1650

From: Angelina Bismarck

Telephone: 3224 8244

Fax: 3247 3278

E-mail:

Date: 12 February 2008

Pages: 16 (including this page)

Subject: Proj.# 321413 -Drury Lane - Advice

Confidential

Privacy and confidentiality notice

The information contained in this facsimile is intended for the named recipient/s only. It may contain privileged and confidential information and if you are not an intended recipient, you must not copy, distribute or take any action in reliance on it. If you have received this facsimile in error, please notify the sender.

Alison

Please find attached a copy of the application as discussed this morning.
Should you have any questions please contact me on 3224 8244 or e-mail:
Angelina.bismarck@epa.qld.gov.au

Kind regards, CTPI 49-Sch4

Angelina Bismarck
Senior Environmental Officer
Contaminated Land Unit

Bring Up Details Report

321413 - Advice - Reconfig on land in or within 100m of a wetland/Drury Lane, Dundowran QLD 4655/Radway Pty Ltd - 30-JAN-2008

Ref: 29843

Created Date: 30-JAN-08

Status: Submitted

Closed Date:

Assigned To: SMOLKOVA-BISMARCK, Angelina

Due Date: 31-JAN-08

Email Address: angelina.bismarck@epa.qld.gov.au

Reminder Date:

Project Director:

Project Manager:

CC: HESSE, Robyn

CC: MOORE, Nikki

Subject: Advice Agency Referral

Comments: Project ref: 321413
Permit ref: IPAR00849808
Client: 608816

Dear Angelina

An application has been received for an Advice Agency Referral. It has been entered into ecotrack on Wednesday the 30/01/08 and will be forwarded to you at Southern Region the same on the 30/01/08 as well.

Regards
Nathan





Project Running Report

Project Ref 321413	Project Name Advice - Reconfig on land in or within 100m of a wetland/Drury Lane, Dundowran QLD 4655/Radway Pty Ltd	Status Active	Project Director SMOLKOVA- BISMARCK, Angellina	Project Manager NOT, Allocated	Office Responsible SouthReg Env Ops (Brisbane) Waste and Contaminated Land
------------------------------	--	-------------------------	---	--	--

Assessing Officers

Name

Applications: 1

Date 30-JAN-2008	Status Assessment	Decision Level 2
----------------------------	-----------------------------	----------------------------

Primary Clients

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Radway Pty Ltd	C/- Bay Survey Consultants	PO Box 5129	TORQUAY	4655	QLD

Primary Contact

Name	Contact Number
Hervey Bay City Council	4197 4444

Activities

Name
Advice - Reconfig on land in or within 100m of a wetland

Locations

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Drury Lane, Dundowran QLD 4655					

Agency Interests/Ratings

Category	Type	Rating
Biodiversity	Biodiversity - riparian buffer zones	Unknown (default)
Land	Land - erosion/stability	Unknown (default)

Permits: 1

Permit Ref	Permit Type	Status
IPAR00849808	Advice Agency Response	Assessment



**Queensland
Government**
Environmental
Protection Agency
Queensland Parks
and Wildlife Service

Ecoaccess Customer Service Unit
160 Ann Street
Brisbane
Queensland

ecoaccess@epa.qld.gov.au

15155
ST Qld 4002
1300 368 326
17) 3115 9600

IPA Referral
advice bring up
sent to:

☐ ☒

Project Director
Project Manager

FOR THE ATTENTION OF:

**PROJECT DIRECTOR/
PROJECT MANAGER**

OFFICE:

PROJECT REFERENCE

Angelina Smolhahn-Bismark

Southern Region

321413

(CONTAM. LAND UNIT)

15th FLOOR

Please Note:

This application has already been entered in Ecotrack and forwarded to you for
Regional/District assessment and decision.

With compliments

Admin Office/s: Southern Region Project No: 321413
 Client No/s: 608 816 Permit No/s: IPAR00849808
 PD#



Ecoaccess Customer Service Unit - Validation Checklist

Crow # 87101

Advice Agency referral

ADVICE AGENCY TRIGGERS		
☒ Wetlands –within 100m of a wetland	☐ MCU assessable under the planning scheme	☒ Reconfig a lot – ≥10 lots or any lot <5ha
☐ Conservation Estate – within 100m	☐ protected area, forest reserve, critical habitat or area of interest under NC Act 1992 ☐ State Forest or timber reserve - Forestry Act 1959 ☐ marine park - Marine Parks Act 2004 ☐ recreation area – Recreation Area Management Act 1998 ☐ world heritage area – World Heritage Convention ☐ BFP – Brisbane Forest Park Act 1977	☐ MCU for urban purposes ☐ Reconfig a lot – ≥10 lots or any lot <5ha
☐ Heritage – shares a common boundary	☐ MCU assessable under the planning scheme	☐ Reconfig a lot
Heritage Register No: 60.....		

Applicant: Bay Survey Consultants dba Radway P/L
 Location: Lot 2 on SP136512
Drury Lane - Dundowran QLD 4655
 Application type: Reconfig

OTHER AGENCY INTERESTS	
☒ EMR/CLR or notifiable activity	Send 'bring-up' to Contaminated Land Unit
☒ Endangered remnant ecosystem	
☐ Koala Area – non statutory	
☐ Erosion prone area	
☐ Other	

Referral Received: 29.1.2008 Advice due: 12.3.2008

Is the referral Valid ☒ if ☒, proceed with Notice of Invalid Referral
 Application entered on Ecotrack ☒ Processor's initials: ND
 CROW updated ☒ Processor's initials: ND

CAC Review Date: <u>non cal</u> <u>2008</u> if required	Decision Level ☒ 2 ☐ 3 ☐ 4
---	--

Release

Record of consultation

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	Ecoaccess CSU Staff:			

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	Ecoaccess CSU Staff:			

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	Ecoaccess CSU Staff:			

Date	Person Contacted:		Phone No:	
	Information Requested:			
	Response:			
	Ecoaccess CSU Staff:			

Released

Memorandum

Enquiries
Telephone
Application No:

Angelina Smolkova - Bismarck
3224 8244
9437

29 January 2008

To: Nikki Moore, Manager, Southern Region, Planning

Through: CTPI 49 Miguel Zavaleta-Romero, Principle Environmental Officer, Contaminated Lands Unit, Southern Region

Project Manager: Angelina Smolkova-Bismarck, Senior Environmental Officer

Subject: Site listed on the ERM for works that involve ROL at Drury Lane (Lot 2 on SP136512) Dundowran

Bay Survey Consultants obo Radway Pty Ltd has lodged an application for the above mentioned works. A copy of the application for your assessment may be obtained by contacting Angelina Smolkova-Bismarck.

Planning Triggers:

Permit Type: Advice Agency Response.
IPA Trigger: Reconfiguring a lot in or within 100m of a wetland that will result in:
(a) more than 10 lots being created.

As project manager could you please provide any information that may be required for your assessment under the relevant state planning policies or legislation. Any information that you may require will be incorporated into the information request. Please send an electronic version of your response.

Alternately if you do not require any further information please provide the final signed advice agency response.

Due to IPA time frames please advise by **CoB 8 Feb 2008** of your comments for the proposed works, to be incorporated into the information request.

Thankyou for your assistance and support on this matter.

Yours sincerely

CTPI 49-Sch4

Angelina Smolkova-Bismarck
Senior Environmental Officer
Contaminated lands - Southern Region

[QNTIME](#) > [Specific Parcel Search](#) > [Specific Parcel Report](#)

Specific Parcel Report

Lot: 2 on Plan: SP136512
Parcel: on Segment:

DCDB:

Tenure:

FH

Description:

FREEHOLD

CISP:

Previous Plan Details:

Plan	Registered Description
------	------------------------

DP200633	15/03/2007 LOTS 2 & 3 CANCELLING LOT 2 ON SP136512
----------	--

SP136512	04/04/2001 LOTS 2 AND 10 CANCELLING LOT 2 ON RP230596
----------	---

RP230596	06/03/1990 LOTS 1-3 (PROP) EMTS D & E IN LOT 1 (PROP) EMT C IN LOT 2 CANCELLING LOT 4 ON RP190323
----------	---

RP191932	29/03/1985 EMT A&B IN LOT 4 ON RP190323
----------	---

RP190323	26/06/1984 LOTS 2 TO 4 CANCELLING LOT 2 ON RP177006
----------	---

RP177006	01/09/1981 LOTS 1 AND 2 CANCELLING LOT 45 ON MCH221
----------	---

MCH762	30/09/1910 RD IN POR.45
--------	-------------------------

MCH221	15/08/1905 POR.45&47
--------	----------------------

ATS:

Title Reference:

50348760

Original Deed of Grant:

11265143 (POR 45)

Previous Title References:

17478158

QVAS:

Registered Owner:

RADWAY PTY LTD

Address:

DRURY LA, DUNDOWRAN QLD 4655

Primary Land Use Code:

VACANT - LARGE HOUSESITE(4)

Secondary Land Use Code:

NONE(0)

TAS:

No TAS data found.

[View on Keymap](#)

[Back to Search](#)

Logged in as markhamk

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[Queensland Government Gateway](#)

Release



Hervey Bay City Council

77 TAVISTOCK STREET TORQUAY HERVEY BAY Q 4655
P O Box 5045, Torquay Q 4655 Phone 4197 4501 Fax 4197 4455

Amended Acknowledgement Notice to Applicant Integrated Planning Act 1997

File No: 514/3-072167 For further information Michael Ellery Phone: 4197 4318
Your Ref: HB/06/2444 regarding this notice,
please contact:

1. APPLICANT DETAILS

Name Bay Survey Consultants obo Radway Pty Ltd
Postal Address Po Box 5129 Torquay Qld 4655

2. PROPERTY DETAILS

Property Address

Dundowran Road Dundowran Qld 4655

Property Description

Lot 2 SP 136512

3. OWNER DETAILS

Name Radway Pty Ltd

4. DEVELOPMENT APPROVAL

What type of Approval is being sought?

Preliminary
Approval

Development
Permit

Reconfiguring a Lot - 1 Lot into 20 Lots

No

Yes

5. CODE ASSESSMENT

Will Code Assessment be required?

Yes

If Yes, the following codes are applicable to this application:

Urban Locality (Industrial Zone) Code

Reconfiguring a Lot Code

Landscaping Code

Structure Planning Code

Works, Services and Infrastructure Code

Natural Areas Overlay Code

Hervey Bay City Council IDAS Development Application Acknowledgement Notice

6. IMPACT ASSESSMENT

Will Impact Assessment be required?

No

7. PUBLIC NOTIFICATION DETAILS

What is required for Public Notification?

Not Applicable

8. REFERRAL AGENCIES

Are there any Referral Agencies?

Yes

As there are referral agencies applicable to this application, it is advised that the applicant is required to give each referral agency the following:

- (a) A copy of the application; and
- (b) A copy of the acknowledgment notice; and
- (c) The fee prescribed under a regulation under the *Integrated Planning Act 1997* or another Act.

In accordance with Section 3.3.4.(1) of the *Integrated Planning Act 1997* the applicant is to give the assessment manager written notice of:

- (a) the day the applicant gave each referral agency the things mentioned above; and
- (b) if referral coordination is required - the day the applicant complied with Section 3.3.5(2) of the *Integrated Planning Act 1997*.

The following are Referral Agencies for this application:-

Name and Address of Referral Agencies?

Referral Agency	Address
Environmental Protection Agency	PO BOX 15155 City East Qld 4002
Environmental Protection Agency - Contaminated Land Unit	PO Box 2771 Brisbane QLD 4001
Department of Main Roads	PO BOX 486 Bundaberg Qld 4670
Department of Natural Resources and Water	PO BOX 1167 Bundaberg Qld 4670

Referral - Basis

Advice Agency - site contains or is within 100 metres of a wetland.

Concurrence Agency - contaminated land matters.

Concurrence Agency - development not contiguous to a state controlled road exceeding the threshold in Schedule 5 of the IPA Regulation.

Concurrence Agency - Clearing Vegetation.

9. INFORMATION REQUEST

Will a further Information Request be made by the Assessment Manager?

Yes

Hervey Bay City Council IDAS Development Application Acknowledgement Notice

10. REFERRAL COORDINATION

Does the application require Referral Coordination?

No

11. APPLICATION REQUESTING ASSESSMENT UNDER THE SUPERSEDED PLANNING SCHEME

No

12. ADJOINING PROPERTY OWNERS DETAILS

Legal Description

Owner Name

Address

Not Applicable

13. ASSESSMENT MANAGER, PER

Name: Michael Ellery

Signature

CTPI 49-Sch4

Date: 17 January 2008

Published on DES Disclosure Log
RTI Act 2009



BAY SURVEY CONSULTANTS

BNE 2007/114770
BNE 34771
LAND, ENGINEERING & HYDROGRAPHIC
SURVEYORS
CONSTRUCTION SURVEYORS
LAND DEVELOPMENT PLANNERS

HERVEY BAY

Suite 13, 40 Torquay Road, Pialba Q 4655
PO Box 5129, TORQUAY Q 4655
Phone: (07) 4128 4941
Fax : (07) 4128 4551

CTPI 49-Sch4 L.S. M.S.S.I.
Licensed: Qld, N.T. & Vic.

Also Trading as BR SURVEYS

22 November 2007
Ref: HB/06/2444

SUNSHINE COAST

PO Box 24, Landsborough Q 4550
Phone: (07) 5494 8288
Fax : (07) 5494 1400

Environmental Protection Agency
PO Box 15155
CITY EAST QLD 4002

Mobile: CTPI 49-Sch4
E-Mail: bsurveys@bigpond.net.au

Dear Sir / Madam

Re: **Reconfiguration of a Lot Applications**
1 Lot into 20 Lots - Lot 2 on SP 136512 - Dundowran Rd - Dundowran
And 1 Lot into 15 Lots - Lot 11 on RP 909375 - Drury Lane - Craignish

Applications have been placed before Hervey Bay City Council for the above-mentioned proposed developments.

Council has nominated your Department as a Referral Agency on the basis of:-

An Advice Agency - site contains or is within 100 metres of wetland.

As these two applications are to be developed concurrently we enclose copy of the Development Applications, copy of Council's Acknowledgement Notices and associated reports for your information and requirement, if any.

We would appreciate your advice / response at your earliest convenience so our applications can proceed for Council's assessment.

Yours faithfully

CTPI 49-Sch4

CTPI 49-Sch4

L.S. M.S.S.I.

Enc





BAY SURVEY CONSULTANTS

LAND, ENGINEERING & HYDROGRAPHIC
SURVEYORS
CONSTRUCTION SURVEYORS
LAND DEVELOPMENT PLANNERS

HERVEY BAY

Suite 13, 40 Torquay Rd Pialba Q 4655
PO Box 5129, TORQUAY Q 4655
Phone : (07) 4128 4941
Fax : (07) 4128 4551

CTPI 49-Sch4

L.S. M.S.S.I.

Licensed: Qld, N.T. & Vic.

Also Trading as BR SURVEYS
SUNSHINE COAST
PO Box 24, Landsborough Q 4550
Phone: (07) 5494 8288
Fax : (07) 5494 1400

Ref: HB/06/2444

Mobile: CTPI 49-Sch4

E-Mail: bsurveys@bigpond.net.au

DEVELOPMENT REPORT

APPLICATION TO HERVEY BAY CITY COUNCIL

RECONFIGURATION OF A LOT

ONE LOT INTO 20 LOTS & BALANCE LOT TO CREATE AN ESTATE OF INDUSTRIAL LOTS

Bay Survey Consultants
PO Box 5129
TORQUAY QLD 4655

October 2007

SITE DETAILS:

Site Description: Lot 2 on SP 136512
Parish of Vernon

Site Location: Lot 2 Drury Lane
Dundowran

Site Area: 9.17ha

Zoning: Hervey Bay City Council 2006 Planning Scheme - Industrial

Topography: The subject site slopes gently from the Drury Lane frontage to the eastern boundary where the adjoining property (Council) contains a trunk drainage channel that drains to the north through the Yarrilee Residential Estate thence into the Condor Lakes drainage system.

Vegetation: The subject site has undergone vegetation clearing, filling activities and this stockpiling of materials surplus from construction activities. There is no vegetation established on the site that is worthy of retention or management.

Released

SITE ASPECTS:

The subject site has a long frontage to Drury Lane, a formed road with a bitumen seal.

The site was previously owned by Council and used as a site to stockpile waste / surplus materials from various construction projects undertaken by Council.

The terms of the sales contract issued by Council included the purchaser to provide to Council a segment of land (triangular in shape at the north-west corner, for stormwater drainage purposes).

Published on DES Disclosure Log
RTI Act 2009

Release

APPLICATION DETAILS:

- This application seeks Council's approval for the reconfiguration of the subject allotment into 20 lots plus the land parcel required by Council for stormwater drainage purposes.
- Each of the proposed lots to be commensurate with the provisions of the HBCC 2006 Planning Scheme for allotments created in the Industrial Zone.
- The proposed industrial estate to be a component of a larger estate that incorporates a land parcel immediately adjacent on the western side of Drury Lane.
- The proposed subdivision to be undertaken in conjunction with the land parcel on the western side of Drury Lane, with the first stage of both developments being contemporary and assessed by Council as an overall development scheme for the area.

PLANNING ASPECTS:

- The subject site is designated "Industrial" in the HBCC 2006 Planning Scheme, and the proposed reconfiguration is for the formation of allotments to form an Industrial Estate of allotments fronting on to Drury Lane.
- Each lot to be of frontage in conformity with the minimum sizes for frontage, depth to frontage ratio and area as listed in the planning scheme for lots created in the industrial zone.
- Deviation from these minimum dimensions are the result of making the 'best use' of the land parcel available given the restraints of the existing land parcel dimensions and the fact that the proposed estate design has been undertaken with due respect to a structure plan supported by Council and created over an enlarged district of adjacent land parcels.
- This subject application is one of two applications lodged with Council at the same time under separate ownership but to be developed concurrently by the two entities virtually as one development.
- Preliminary discussions at a pre-lodgement meeting has been undertaken between the Developer and Council's Development Services officers and the estate design has been undertaken in accordance with the advices given.
- Consulting Engineers Cardno, have been engaged to undertake specific studies to establish infrastructure strategies for traffic servicing the new estate and for strategies for servicing the estate with infrastructure components, sewerage, water and stormwater.
- The following Cardno and Associate Reports are attached to this document:

▪ Attachment A	Stormwater Assessment
▪ Attachment B	Traffic Impact Assessment
▪ Attachment C	Water Supply & Sewerage
▪ Attachment D	Preliminary Ecological Advice
▪ Attachment E	Acid Sulphate Soil Investigation

SUMMARY:

- The proposed application is for the reconfiguration of a lot into 20 lots to create an industrial estate.
- All lots conform with the requirement for dimensions and size as defined in the HBCC Planning Scheme 2006.
- The subject land parcel is located in the Industrial Zone and this application is available for code assessment.
- The estate design has been discussed and reviewed with Council's staff to ensure that the development is in accordance with an acceptable 'structure' plan for the surrounding industrial zoned area.
- Specific investigations have been undertaken and reports attached in support of this application are:

• Stormwater assessment	Cardno
• Traffic Impact	Cardno
• Water and Sewerage Supply	Cardno
• Geotechnical Investigation Lot 2 on SP 136512	Golder
• Ecological Advice Letter Lot 2 on SP 136512	Cardno
- This application is one of two (2) applications lodged concurrently with Council affecting 2 separate land parcels either side of Drury Lane. Both applications, albeit in different ownerships, will be developed concurrently, in conjunction by the two entities.
- The Developer / Applicant and Council's Open Space and Parks Manager have been discussing Council's needs for recreational facilities in the Dundowran area. The Developer will make a submission under separate cover whereby an allotment of some 1.6 hectares at the northern entrance to the estate is offered for dedication to Council for the use as a Netball Courts Complex. This dedication to be credited in lieu of the total park contributions attributed to both Lot 2 and Lot 11.
- An allotment is to be created and dedicated to Council as a drainage reserve (5165m²) situated in the north-eastern corner of Lot 2 on SP 136512 shown as Lot 1000 on the proposed plan of development.
- The Developer is to construct Council's trunk drain along the drainage reserve adjacent to the eastern boundary of Lot 2 on SP 136512 with spoil from these works being available as fill for the development of Lot 2.

Release

- Radway P/L (registered owners of Lot 2 on SP 136512) have given written authority for Lot 11 on RP 909375 to drain stormwater across Lot 2 in the drainage reserves shown on the development plans (authorisation letter attached).
- As part of the Structure Plan, the Urraween Road bypass corridor is shown on the development plan and will be dedicated to Council as the development progresses, again with land value to be credited in lieu of Trunk Road Infrastructure Charges.
- The Cardno Traffic Report identifies that the Drury Lane / Burrum Heads Road intersection is to be upgraded and constructed as a 'seagull' intersection (non signalised) in this stage.
 - This intersection to be upgraded to a signalised 'seagull' or signalised 'T' intersection when the development reaches an occupational / use equivalent to 25% of the land area.
 - The Developer offers to bond these projected works to ensure that construction will be achieved once building application and/or occupancy reaches the threshold stated above.
 - The Developer also advises that conduits and other such elements will be included in the initial intersection construction works to eliminate disruptive works which would be required when signalisation is provided.

CONCLUSION:

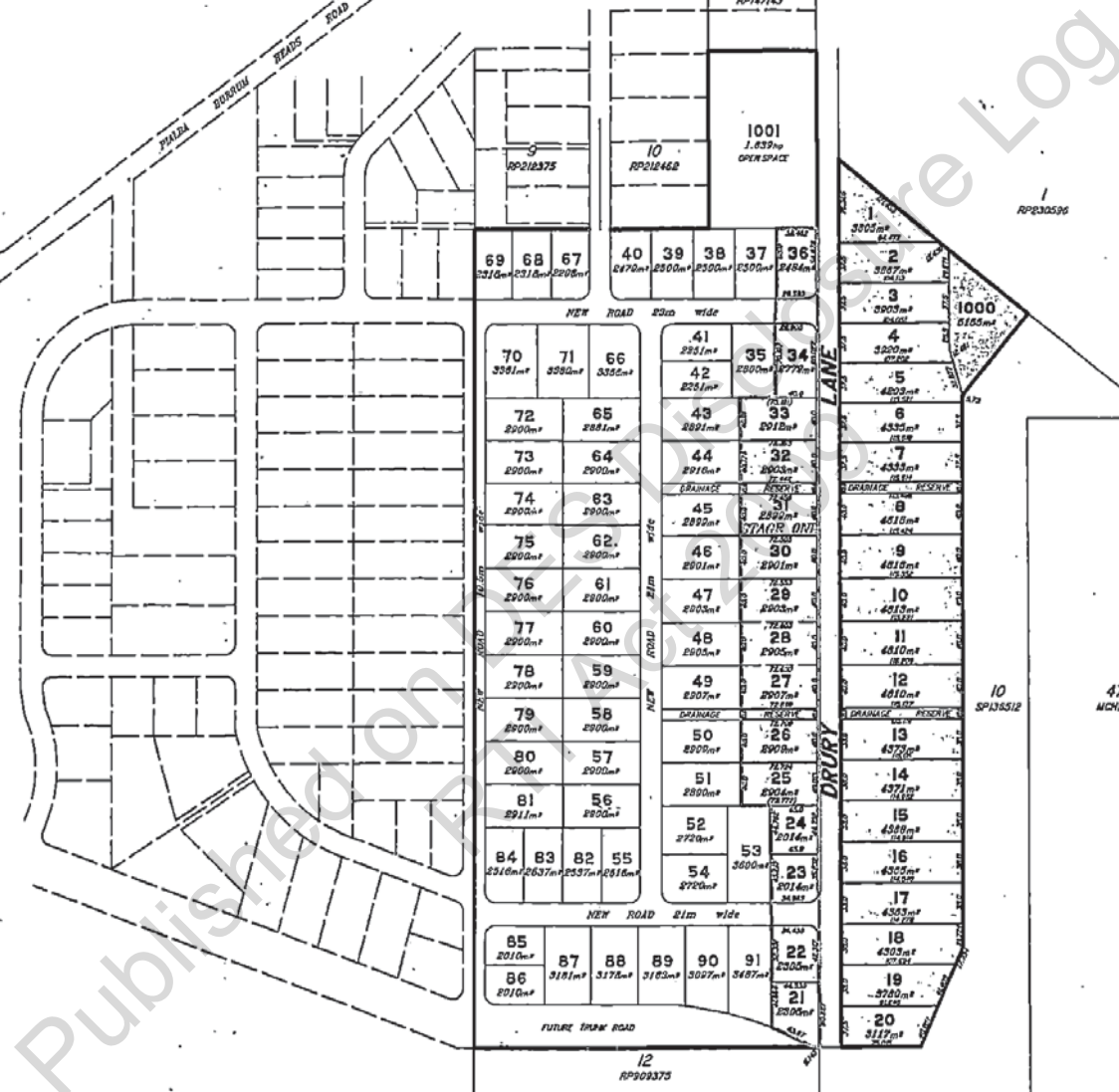
- This application has undergone preliminary meetings including a DART meeting convened by Council and the development proposed has progressed in accordance with the advices provided.
It is submitted that the reports provided as attachments adequately address the development requirements of the HBCC Planning Scheme 2006 and that the proposed estate design 'fits well' in the overall structure plan for the Eli Creek / Dundowran Industrial Precinct.
- It is submitted that this application can be assessed for approval with relevant and reasonable conditions.

CTPI 49-Sch4

CTPI 49-Sch4

L.S. M.S.S.I.

Atc



ENDORSED: Accredited
EXAMINED: L.M.Ratten C.S.
PASSED:

Release

DRAWN BY: MICHAEL STEWART

BAY SURVEY CONSULTANTS
CONSULTING LAND, ENGINEERING & HYDROGRAPHIC
SURVEYORS. DEVELOPMENT CONSULTANTS

HERVEY BAY SUNSHINE COAST
18/40 Torquay Road P.O. Box 24
P.O. Box 5129 Landsborough 4550
Torquay 4655
Ph: 07 4128 4041 Ph: 07 5494 8280
07 4129 4129 Fax: 07 5494 1400
Email: Esurveyor@bigpond.net.au

STRUCTURE PLAN .

Lot 11 on RP909375

Lot 2 on SP196512

DUNDOWRAN - HERVEY BAY

Client: RADWAY P/L

Client: A.H.C. LTD

LOCALITY PLAN

PARISH
COUNTY
LOCAL GOVERNMENT

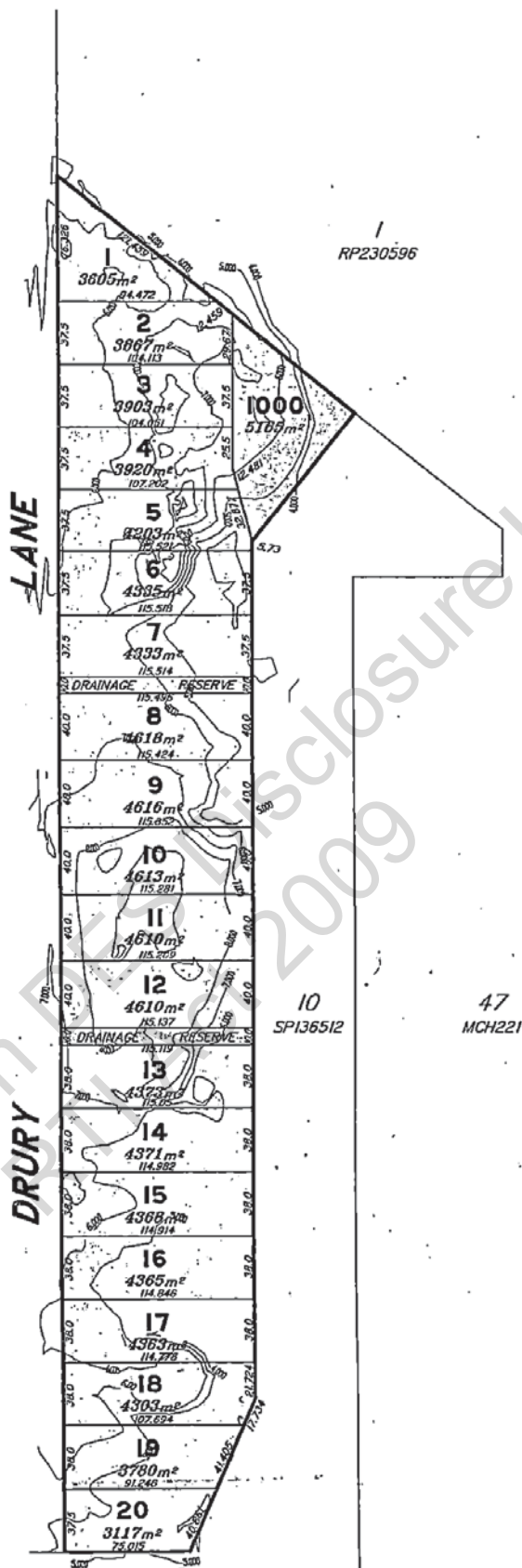
VERNON
MARCH
HERVEY BAY C.C.

Scale: 1:5000

Date: 25/10/07

Job No: HB/08/

Page 222 of 397



All dimensions are subject to final survey
 Heights are to AHD
 Contours at 1m intervals

ENDORSED: Accredited
 EXAMINED: L.M.Ratten C.S.
 PASSED:

Release

DRAWN BY: MICHAEL STEVA

BAY SURVEY CONSULTANTS CONSULTING LAND, ENGINEERING & HYDROGRAPHIC SURVEYORS.

HERVEY BAY
 12/40 Torquay Road
 P.O. Box 5129
 Torquay 4655
 Ph: 07 4128 4941
 Fax: 07 4128 4551
 Email: bsurveys@bigpond.net.au

SUNSHINE COAST
 P.O. Box 24
 Landsborough 4560
 Ph: 07 5494 8288
 Fax: 07 5494 1400

PROPOSED RECONFIGURATION
 Lot 2 on SPI36512
 1 Lot into 20 plus Drainage Reserve
 DUNDOWRAN - HERVEY BAY

Client: RADWAY P/L

PROPOSED SUBDIVISION

PARISH	VERNON	ISSU
COUNTY	MARCH	A
LOCAL GOVERNMENT	Hervey Bay C.C.	

Scale:	1:3000	Date:	25/10/07
Job No:	HB/06/2444	Dwg No:	DWG2444C

* * * COMMUNICATION RESULT REPORT (12.FEB.2008 11:56) * * *

TTI EPA SOUTHERN REGION 07 32258723

FILE MODE	OPTION	ADDRESS (GROUP)	RESULT	PAGE
6600 MEMORY TX		G3 :41211650	E-2) 2) 2)	0/17

REASON FOR ERROR
 E-1) HANG UP OR LINE FAIL
 E-3) NO ANSWER

E-2) BUSY
 E-4) NO FACSIMILE CONNECTION

Fax



Queensland Government
 Environmental Protection Agency
 Incorporating the
 Queensland Parks and Wildlife Service

To: Alison Hamilton **Fax:** 4121 1650

From: Angelina Bismarck

Telephone: 3224 8244 **Fax:** 3247 3278

E-mail:

Date: 12 February 2008 **Pages:** 169 (including this page)

Subject: Proj.# 321413 -Drury Lane - Advice

Confidential

Privacy and confidentiality notice

The information contained in this facsimile is intended for the named recipient/s only. It may contain privileged and confidential information and if you are not an intended recipient, you must not copy, distribute or take any action in reliance on it. If you have received this facsimile in error, please notify the sender.

Alison

Please find attached a copy of the application as discussed this morning

Release



AHC Limited

A.B.N. 73 010 544 699

4 Helensvale Road, Helensvale. P.O. Box 34, Oxenford. Q. 4210

Telephone: (07) 5573 2666 Fax: (07) 5573 3324 EMail: ahc1@ahc.com.au Website: <http://www.ahc.com.au>

5th October 2007

Hervey Bay City Council
P O Box 5045
TORQUAY Q 4655

FAX : 4197 4303

Dear Sir

**Re : The Contribution of Land for Netball Courts in lieu of the Headworks
Contribution for Parks & Gardens**

The land offered on Lot 11 is the best land on the estate in terms of accessibility.

This land contribution is for both Lots 2 on SP200633 and Lot 11 on RP909375.

When fully serviced with roads, stormwater, drainage, sewerage, power and water infrastructure the land value will be \$2.1 million.

Yours faithfully
AHC LIMITED

CTPI 49-Sch4

CTPI 49-Sch4

CHAIRMAN



AHC Limited

A.B.N. 73 010 544 699

4 Helensvale Road, Helensvale. P.O. Box 34, Oxenford. Q. 4210
Telephone: (07) 5573 2666 Fax: (07) 5573 3324 EMail: ahc1@ahc.com.au Website: http://www.ahc.com.au

5th October 2007

Hervey Bay City Council
P O Box 5045
TORQUAY Q 4655

FAX : 4197 4303

Dear Sir

Re : ROADWORKS FOR THE DUNDOWRAN INDUSTRIAL ESTATE

AHC Ltd and Radway Pty Ltd are sharing the cost of the building and upgrading of Drury Lane and the Drury Lane intersection.

If, for any reason whatsoever AHC Ltd does not complete its' share of the roads then Radway Pty Ltd agree to complete the roadworks to fully comply with the Council and Main Roads' roadworks approvals for access to Lot 11 on RP909375.

Yours faithfully

CTPI 49-Sch4

CTPI 49-Sch4

CHAIRMAN

RADWAY PTY LTD

PO Box 634
OXENFORD QLD 4210

5th October 2007

Hervey Bay City Council
P O Box 5045
TORQUAY Q 4655

FAX : 4197 4303

Dear Sir

Re : ROADWORKS FOR THE DUNDOWRAN INDUSTRIAL ESTATE

Radway Pty Ltd and AHC Ltd are sharing the cost of the building and upgrading of Drury Lane and the Drury Lane intersection.

If, for any reason whatsoever Radway Pty Ltd does not complete its' share of the roads then AHC Ltd agree to complete the roadworks to fully comply with the Council and Main Roads' roadworks approvals for access to Lot 2 on SP200633

Yours faithfully

RADWAY PTY LTD

CTPI 49-Sch4

CTPI 49-Sch4

DIRECTOR

RADWAY PTY LTD

PO Box 634
OXENFORD QLD 4210

9th October 2007

Hervey Bay City Council
P O Box 5045
TORQUAY Q 4655

FAX : 4197 4303

Dear Sir

Re : STORMWATER DRAINAGE OF LOT 11 on RP909375

Radway Pty Ltd agrees to allow two stormwater drainage reserves (dedicated to Hervey Bay City Council) 10m wide, with 5.5m wide drain to cross Lot 2 on SP200633 discharging into the main stormwater drainage canal system.

This will allow Lot 11 on RP909375 to be drained into the trunk drainage canal (the Eli Creek catchment system)

Yours faithfully

RADWAY PTY LTD

CTPI 49-Sch4

CTPI 49-Sch4

DIRECTOR

Form 1 Development Application

idas

Contaminated land

Completion of **all questions** on Part N is **mandatory** for all applications involving assessment against the *Environmental Protection Act 1994* when development is proposed on contaminated or potentially contaminated land.

For further information refer to **Guide 5 Contaminated land matters** available free from www.epa.qld.gov.au or the Environmental Protection Agency's (EPA's) information sheets available free from www.epa.qld.gov.au under Ecoaccess/ business and industry. Alternatively, contact the local government.

Nature of the application

Exemptions may apply to your proposal. Refer to **Guide 5 Contaminated land matters** for advice regarding development that is exempt from this assessable development trigger.

1. This application is for: (Tick one (1) or both if applicable)

Aspect of development	Type of approval being sought	
☐ Material change of use	☐ Preliminary approval	☐ Development permit
☒ Reconfiguring a lot	☐ Preliminary approval	☒ Development permit

2. Does this application require assessment against a planning scheme?

☐ NO

☒ YES – complete other relevant parts of the IDAS Application Form 1

The subject land

3. Has an Environmental Management Register (EMR) and/or Contaminated Land Register (CLR) search been conducted for the land the subject of the application?

☒ NO

☐ YES – attach results of the search and complete Q4

4. All or part of the land the subject of the application is:

☐ (i) on the EMR or the CLR under the *Environmental Protection Act 1994*;

☐ (ii) used for, or if the land is vacant, was last used for-

☐ (a) a notifiable activity

☒ (b) an industrial activity and the proposed use is for a child care centre, educational, recreational or residential purpose (including a caretaker residence on industrial land);

☐ (iii) in an area for which an area management advice has been given for natural mineralisation or industrial activity and the proposed use is for child care, educational, recreational or residential purpose (including a caretaker residence on industrial land);

☐ (iv) in an area for which an area management advice has been given for unexploded ordnance.

Plans and documents

For further information about preparing a proposal report, refer to **Guide 7 Preparing a proposal report**.

5. Confirm, by ticking the applicable box(es), that the following details are provided in plans and written information supporting this application:

☒ (i) plans showing where any Notifiable Activity, Hazardous Contaminant, or potentially contaminated activity / activities have occurred on site;

☐ (ii) if the application involves a material change of use from an industrial use to a more sensitive use (eg. child care, educational, recreational or residential purposes), supply a detailed site history outlining previous potentially contaminated uses on the site

PLEASE NOTE

PART N of Form 1 **cannot** be accepted by the assessment manager unless accompanied by PART A of Form 1.

The assessment manager may refuse to accept an application that, at the time of lodgement, fails to provide all applicable information requested by Part A and any other relevant part of Form 1.

OFFICE USE ONLY (applicable to assessment manager)

DATE RECEIVED

REFERENCE
NUMBER/S

Release



Enquiries
Telephone
Your reference
Our reference

Belinda Thomson
(07) 3227 7370

Appl'n No: 9437 Part: 1 File No.: BNE34771

Environmental Protection Agency

Incorporating the
Queensland Parks and Wildlife Service

11 December 2007

CTPI 49-Sch4

Bay Survey Consultants obo AHC Ltd
PO Box 5129
Torquay QLD 4655

Dear CTPI 49-

RE: Application (No. 514/3-072167) for development approval for assessable development (Reconfiguration of a Lot) to be carried out at Dundowran Road, Dundowran (Lot 2 on SP136512).

On 28th November 2007, the Environmental Protection Agency – Contaminated Land Unit (EPA-CLU) has received an incomplete development application in relation to the above site.

Please note that it is a requirement under Section 3.3.3 of the *Integrated Planning Act 1997* (IP Act) that, as a concurrence agency, the EPA-CLU be provided with a copy of the application (unless the referral agency already has a copy of the application); and, a copy of the acknowledgement notice, for assessment.

Under the above circumstances, and, pursuant to section 3.3.3 (1) of the IP Act, the EPA-CLU advises that the material submitted is not considered a properly made application and the information to be submitted should include but not be limited to:

- ☐ A council acknowledgement notice on letterhead
- ☒ **IDAS application forms (Part N);** (IDAS forms can be downloaded from **Local Government and Planning website:**
<http://www.ipa.qld.gov.au/idas/idasformsdevform1.asp>;
- ☐ Details of the proposal (including plans, any reports submitted to council, etc).

In accordance with the Section 3.2.12(2)(a) IP Act this application will lapse if you do not comply with Section 3.3.3 IP Act within the 3 months of the acknowledgement notice issued date.

Should you require any further information please do not hesitate to contact the above officer on the telephone number provided.

Yours sincerely

CTPI 49-Sch4

Belinda Thomson
Administration Officer (Registry Support Unit)
Environmental Protection Agency

Cc Hervey Bay City Council
PO Box 5045
TORQUAY QLD 4655
(Attn: Michael Ellery)

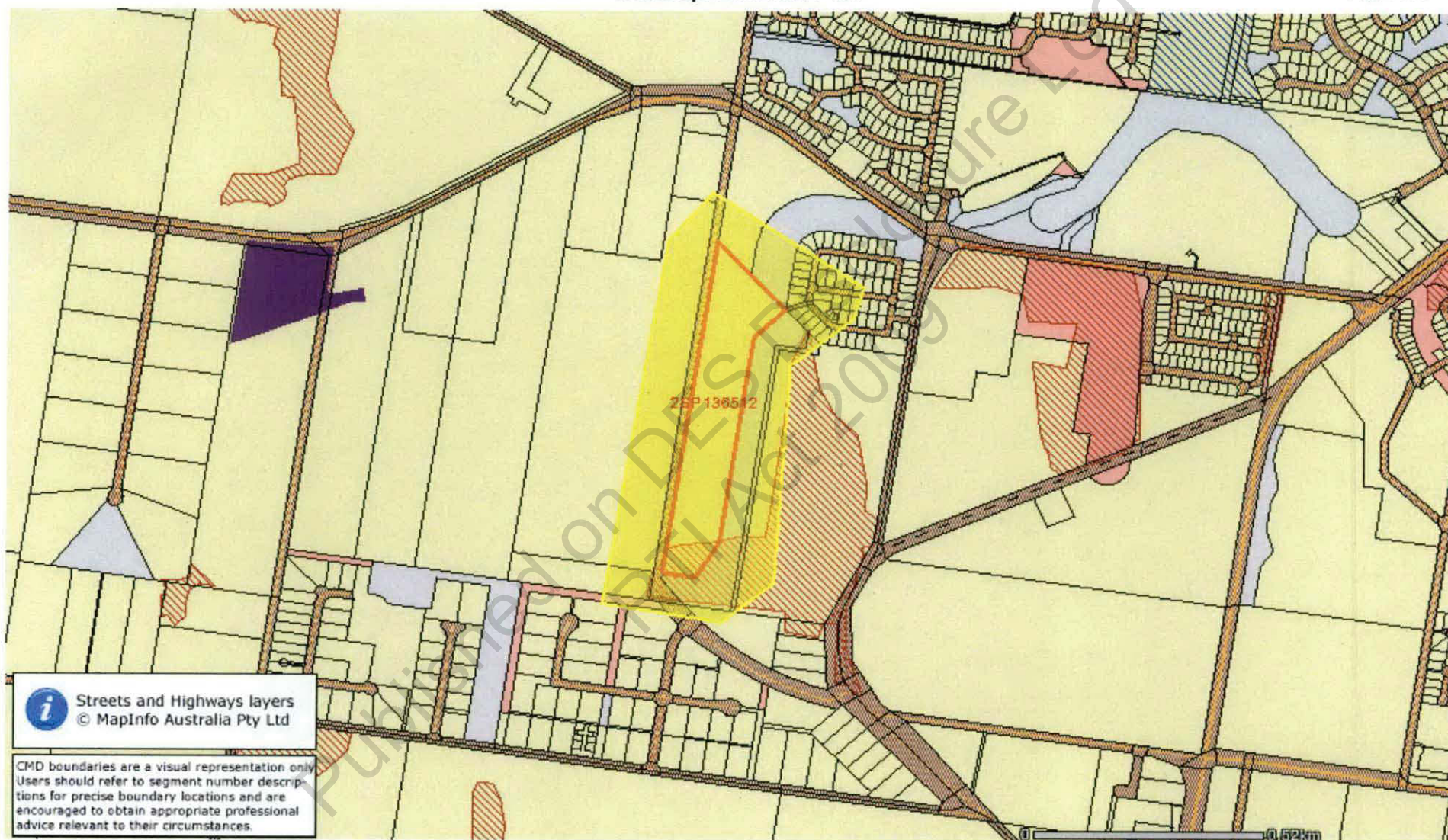
ecomaps

30/01/2008

Queensland Environmental Protection Agency

ecomaps Screen Plot

Page 1 of 2



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Cadastre

No.	Lot Number	Plan Number	Lot and Plan Number	Street No.	Street Suffix	Street No. 2	Street Suffix 2	Street Name	Street Type	Street Part	Loc Name	Area in sq metres	Tenure	Parish	County	LGA	Feature Name	Locality
73(2)Irrelevant													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
3	10	SP136512	10SP136512									56660.532	RE	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
73(2)Irrelevant													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY	YARRILEE PLACE	DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY	YARRILEE PLACE	DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
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													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN

Release

73(2)Irrelevant

FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
SL	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY	YARRILEE PLACE	DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN

Next 25 Records

EPA Referrable Wetlands

No.	Wetland Type
1	Palustrine

Local Government Areas

No.	LGA Name
1	HERVEY BAY CITY

EPA Districts

--

Release

No.	EPA District Name
1	Wide Bay/Burnett

Streets

No.	Street Name	Left Number From	Left Number To	Right Number From	Right Number To	Locality
1	YARRILEE CIRCUIT	0	0	0	0	DUNDOWRAN
2	DRURY LANE	0	0	0	0	DUNDOWRAN
3	YARRILEE CIRCUIT	0	0	0	0	DUNDOWRAN
4	LAKERIDGE DRIVE	0	0	0	0	DUNDOWRAN

Cadastre shaded by Base Parcel tenure

No.	Lot Number	Plan Number	Lot and Plan Number	Street No.	Street Suffix	Street No. 2	Street Suffix 2	Street Name	Street Type	Street Part	Loc Name	Area in sq metres	Tenure	Parish	County	LGA	Feature Name	Locality
73(2)Irrelevant													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
3	10	SP136512	10SP136512									56660.532	RE	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
73(2)Irrelevant													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY	YARRILEE PLACE	DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY	YARRILEE PLACE	DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
													FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
																HERVEY		

73(2) Irrelevant

FH	VERNON	MARCH	BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
SL	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY	YARRILEE PLACE	DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN
FH	VERNON	MARCH	HERVEY BAY CITY		DUNDOWRAN

Next 25 Records

Release

Aboriginal Representative Bodies

No.	Representative Body Name
1	GURANG LAND COUNCIL ABORIGINAL CORPORATION PO BOX 1551 BUNDABERG QLD 4670

Native Title Claim Boundaries

No.	Claim Number	Name and Number	Federal Court Number
1	QC06/004	BUTCHULLA QC06/004	QUD16/06

Erosion Prone Area Plans

No.	Local Authority	Erosion Prone Area
1	Hervey Bay City	View Erosion Prone Area Plan

Queensland Fire and Rescue Service regional office boundaries

No.	QFRS Region	Office	Street Address	Postal Address	Phone No.	Fax No.	Mobile No.
1	North Coast Region (Maryborough)	MARYBOROUGH COMMUNITY SAFETY OFFICE	98 Lennox Street, Maryborough, Qld, 4650	98 Lennox Street, Maryborough, Qld, 4650	(07) 4121 7841	(07) 4121 7768	CTPI 49-Sch4

Regional Harbour Master Areas

No.	Region Name
1	GLADSTONE REGION

Queensland

No.	Feature
1	Queensland Mainland

No Features Found in the following layer(s):

- Recreation Areas
- Nature Refuges and Coordinated Conservation Areas
- Wet Tropics World Heritage Area
- Coastal Permits ecotrack post October 2003
- Coastal Permits ecotrack pre October 2003
- S86 Point Permits
- S86 Line Permits
- Canal Estate Developments
- EPA Estate
- Draft Pre clearing Endangered Regional Ecosystems Cape York Peninsula Biodiversity Status

- Draft Pre clearing Endangered Regional Ecosystems Central Western Queensland Biodiversity Status
- Draft Pre clearing Endangered Regional Ecosystems South Western Queensland Biodiversity Status
- Directory of Important Wetlands
- State Marine Parks
- Great Barrier Reef Marine Park Zones
- Coastal Aerial Photos
- Marine Park Permits
- SEQ RCMP CMD Points
- SEQ RCMP Coastal Management District line
- SEQ RCMP Developed and Undeveloped Waterways
- Areas under Coastal Management Plans
- Coastal Management Control Districts
- Ramsar Sites
- Port Limits
- Wet Tropical Coast Coastal Management District
- Cardwell Hinchinbrook Coastal Management District
- Curtis Coast Coastal Management District
- Koala Plan 2006 2016
- Coastal Building Line
- Marine Plants
- Queensland Heritage Register Boundaries
- Fish Habitat Areas
- Major Towns
- Other States

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FOR INTERNAL USE ONLY
ENVIRONMENTAL PROTECTION AGENCY

SEARCH RESPONSE

ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Transaction ID: 1021018 EMR Site Id: 34287 30 January 2008

This response relates to a search request received for the site:
Lot: 2 Plan: SP136512

EMR RESULT

The above site **IS included on the** Environmental Management Register.
The site you have searched has been subdivided from the following site, which is included on the EMR. Subdivided new parcels will remain on the EMR unless it can be shown that they are not located near the contaminating activity.

Lot: 2 Plan: RP230596
Address: DUNDOWRAN ROAD
 DUNDOWRAN 4655

The site has been subject to the following Notifiable Activity pursuant to section 374 of the *Environmental Protection Act 1994*.

LANDFILL - disposing of waste (excluding inert construction and demolition waste).

CLR RESULT

The above site is NOT included on the Contaminated Land Register.

ADDITIONAL ADVICE

Note: Searches maybe conducted online through the State Government Website www.smartservice.qld.gov.au or Citec Confirm www.confirm.com.au. *** CULTURAL HERITAGE SEARCHES: are now available at www.smartservice.qld.gov.au for \$29.30 per lot/plan *******

If you have any queries in relation to this search please phone (07) 3227 7370.

Release

Lindi Bowen
Registrar, Contaminated Land Unit

To execute a new search, select the "Back" button on the browser twice

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Released

Allen Johns

RECEIVED
30 JAN 2008
ECSH

From: Bay Survey Consultants [bsurveys@bigpond.net.au]
Sent: Tuesday, 29 January 2008 2:42 PM
To: Allen Johns
Subject: AHC Ltd & Radway P/L Development - Drury Lane - Craignish - Hervey Bay
Attachments: Amended Ack Notice 1 into 15 - 29-01-08.pdf; Amended Ack Notice 1 into 20 - 29-1-08.pdf

Allen

As requested, attached please find Amended Acknowledgement Notices issued by Hervey Bay City Council for the 2 above-mentioned developments.

Regards
CTPI 49-Sch4

Bay Survey Consultants
PO Box 5129, Torquay Qld 4655

Ph: 07 4128 4941 Fax: 07 4128 4551

This e-mail message & attachments are confidential to our organisation & subject to legal privilege. If received in error, please advise the sender immediately & destroy the message & any attachments. If you are not the intended recipient you are notified that any use, distribution, amendment, copying or any action taken or omitted to be taken in reliance of this message or attachments is prohibited. Our systems are designed to protect against virus infection, however it is impossible to guard against every possible virus. We do not accept liability for any loss or damage which may arise from receipt of this e-mail & any attachments.

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Hervey Bay City Council

77 TAVISTOCK STREET TORQUAY HERVEY BAY Q 4655
P O Box 5045, Torquay Q 4655 Phone 4197 4501 Fax 4197 4455

Acknowledgement Notice to Applicant

Integrated Planning Act 1997

File No: 514/3-072167 For further information Michael Ellery Phone: 4197 4318
Your Ref: HB/06/2444 regarding this notice,
please contact:

1. APPLICANT DETAILS

Name Bay Survey Consultants obo Radway Pty Ltd

Postal Address Po Box 5129 Torquay Qld 4655

2. PROPERTY DETAILS

Property Address

Dundowran Road Dundowran Qld 4655

Property Description

Lot 2 SP 136512

3. OWNER DETAILS

Name Radway Pty Ltd

4. DEVELOPMENT APPROVAL

What type of Approval is being sought?

Reconfiguring a Lot - 1 Lot into 20 Lots

5. CODE ASSESSMENT

Will Code Assessment be required?

Yes

If Yes, the following codes are applicable to this application:

Urban Locality (Industrial Zone) Code

Landscaping Code

Works, Services and Infrastructure Code

Reconfiguring a Lot Code

Structure Planning Code

Natural Areas Overlay Code

Preliminary
Approval

Development
Permit

CONTAMINATED
LAND SECTION

No

Yes

11 DEC 2007

Release

6. IMPACT ASSESSMENT

Will Impact Assessment be required?

No

7. PUBLIC NOTIFICATION DETAILS

What is required for Public Notification?

Not Applicable

8. REFERRAL AGENCIES

Are there any Referral Agencies?

Yes

As there are referral agencies applicable to this application, it is advised that the applicant is required to give each referral agency the following:

- (a) A copy of the application; and
- (b) A copy of the acknowledgment notice; and
- (c) The fee prescribed under a regulation under the *Integrated Planning Act 1997* or another Act.

In accordance with Section 3.3.4.(1) of the *Integrated Planning Act 1997* the applicant is to give the assessment manager written notice of:

- (a) the day the applicant gave each referral agency the things mentioned above; and
- (b) if referral coordination is required - the day the applicant complied with Section 3.3.5(2) of the *Integrated Planning Act 1997*.

The following are Referral Agencies for this application:-

Name and Address of Referral Agencies?

Referral Agency	Address	Referral - Basis
Environmental Protection Agency	PO BOX 15155 City East Qld 4002	Advice Agency - site contains or is within 100 metres of a wetland.
Department of Main Roads	PO BOX 486 Bundaberg Qld 4670	Concurrence Agency - development not contiguous to a state controlled road exceeding the threshold in Schedule 5 of the IPA Regulation.
Department of Natural Resources and Water	PO BOX 1167 Bundaberg Qld 4670	Concurrence Agency - Clearing Vegetation.

9. INFORMATION REQUEST

Will a further Information Request be made by the Assessment Manager?

Yes

Release

10. REFERRAL COORDINATION

Does the application require Referral Coordination?

No

11. APPLICATION REQUESTING ASSESSMENT UNDER THE SUPERSEDED PLANNING SCHEME

No

12. ADJOINING PROPERTY OWNERS DETAILS

Legal Description

Owner Name

Address

Not Applicable

13. ASSESSMENT MANAGER, PER

Name: Michael Ellery

Signature

CTPI 49-Sch4

Date: 20 November 2007



Hervey Bay City Council

77 TAVISTOCK STREET TORQUAY HERVEY BAY Q 4655
P O Box 5045, Torquay Q 4655 Phone 4197 4501 Fax 4197 4455

Amended Acknowledgement Notice to Applicant Integrated Planning Act 1997

File No: 514/3-072169 For further information Michael Ellery Phone: 4197 4318
Your Ref: HB/06/2444 regarding this notice,
please contact:

1. APPLICANT DETAILS

Name Bay Survey Consultants obo AHC Ltd
Postal Address PO Box 5129 Torquay Qld 4655

2. PROPERTY DETAILS

Property Address

Drury Lane Craignish Qld 4655

Property Description

Lot 11 RP 909375

3. OWNER DETAILS

Name AHC Limited

4. DEVELOPMENT APPROVAL

What type of Approval is being sought?

Preliminary
Approval

Development
Permit

Reconfiguring a Lot - 1 Lot into 15 Lots and a balance lot

No

Yes

5. CODE ASSESSMENT

Will Code Assessment be required?

Yes

If Yes, the following codes are applicable to this application:

Urban Locality (Industrial Zone) Code

Reconfiguring a Lot Code

Landscaping Code

Structure Planning Code

Works, Services and Infrastructure Code

Hervey Bay City Council IDAS Development Application Acknowledgement Notice

6. IMPACT ASSESSMENT

Will Impact Assessment be required?

No

7. PUBLIC NOTIFICATION DETAILS

What is required for Public Notification?

Not Applicable

8. REFERRAL AGENCIES

Are there any Referral Agencies?

Yes

As there are referral agencies applicable to this application, it is advised that the applicant is required to give each referral agency the following:

- (a) A copy of the application; and
- (b) A copy of the acknowledgment notice; and
- (c) The fee prescribed under a regulation under the *Integrated Planning Act 1997* or another Act.

In accordance with Section 3.3.4.(1) of the *Integrated Planning Act 1997* the applicant is to give the assessment manager written notice of:

- (a) the day the applicant gave each referral agency the things mentioned above; and
- (b) if referral coordination is required - the day the applicant complied with Section 3.3.5(2) of the *Integrated Planning Act 1997*.

The following are Referral Agencies for this application:-

Name and Address of Referral Agencies?

Referral Agency	Address	Referral - Basis
Environmental Protection Agency	PO BOX 15155 City East Qld 4002	Advice Agency - site contains or is within 100 metres of a wetland.
Environmental Protection Agency - Contaminated Land Unit	GPO Box 2771 Brisbane QLD 4001	Concurrence Agency - contaminated land matters
Department of Main Roads	PO BOX 486 Bundaberg Qld 4670	Concurrence Agency - development not contiguous to a state controlled road exceeding the threshold in Schedule 5 of the IPA Regulation.
Department of Natural Resources and Water	PO Box 1143 Bundaberg QLD 4670	Concurrence Agency - remnant vegetation matters.

9. INFORMATION REQUEST

Will a further Information Request be made by the Assessment Manager?

Yes

Hervey Bay City Council IDAS Development Application Acknowledgement Notice

10. REFERRAL COORDINATION

Does the application require Referral Coordination?

No

11. APPLICATION REQUESTING ASSESSMENT UNDER THE SUPERSEDED PLANNING SCHEME

No

12. ADJOINING PROPERTY OWNERS DETAILS

Legal Description

Owner Name

Address

Not Applicable

13. ASSESSMENT MANAGER, PER

Name: Michael Ellery

Signature:

CTPI 49-Sch4

Date: 17 January 2008

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BAY SURVEY CONSULTANTS

LAND, ENGINEERING & HYDROGRAPHIC
SURVEYORS
CONSTRUCTION SURVEYORS
LAND DEVELOPMENT PLANNERS

HERVEY BAY

Suite 13, 40 Torquay Road, Pialba Q 4655
PO Box 5129, TORQUAY Q 4655
Phone : (07) 4128 4941
Fax : (07) 4128 4551

Also Trading as BR SURVEYS

SUNSHINE COAST

PO Box 24, Landsborough Q 4550
Phone: (07) 5494 8288
Fax : (07) 5494 1400

Mobile: CTPI 49-Sch4

E-Mail: bsurveys@bigpond.net.au

CTPI 49-Sch4

L.S. M.S.S.I.

Licensed: Qld, N.T. & Vic.

30 October 2007

Ref: HB/06/2444

The Chief Executive Officer
Hervey Bay City Council
PO Box 5045
TORQUAY QLD 4655

Attn: City Growth & Development

Dear Sir / Madam

**Re: Development Application
Reconfiguration of a Lot – One Lot into Twenty (20) Lots
Lot 2 on SP 136512
Drury Lane - Dundowran**

Please find enclosed herewith, for Council's assessment, one copy each of Form 1 Development Application – Part A, Part F and IDAS Assessment Checklist, and four (4) copies of a Development Report and associated plans and reports.

Our cheque in the amount of \$10,200.00 being application fees is also enclosed.

Yours faithfully

CTPI 49-Sch4

CTPI 49-Sch4

L.S. M.S.S.I.

Enc

Form 1 Development Application

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Common details

PART A

The completion of **all applicable questions** on Part A is **mandatory** for all applications. Part A must be accompanied by the completed IDAS Assessment Checklist if required, and by one (1) or more other completed parts of the Form as required. For more information on the parts of the Form refer to www.ipa.qld.gov.au. Any information requested in the form may be provided in an attachment to the application. For further information about completing the following details, refer to **Guide 1**.

Description of land

All land the subject of the application, must be identified. However, a description of the land is not required in relation to a mobile or temporary Environmentally Relevant Activity (ERA).

Advice for completing Q2 - Q2 applies if development is proposed within a water body or watercourse.

Advice for completing Q3 - Most land can be identified by a lot on plan description. These details can be obtained from title documents or through the local government.

However, if the land on which the development is proposed does **not** have a lot on plan description (i.e. the development is proposed in a water body or watercourse) provide -

- (i) the lot on plan description for the adjoining/adjacent land; or
- (ii) GPS coordinates where there is no adjoining/adjacent land (eg. in Moreton Bay).

Advice for completing Q7 - Q7 does **not** apply if the development is within a water body or watercourse.

Advice for completing Q8 - Q8 applies if development is within a local government area.

Note: Areas below high water mark are **not** within a local government's area unless provided for under the Local Government Act 1993.

Advice for completing Q9 - Q9 applies if development is on strategic port land or a strategic port land tidal area. For more details refer to **Guide 11**.

1. Street address: (including house number, street name, suburb/locality name & postcode) (if applicable)
Drury Lane - Dundowran 4655
2. Name of water body or watercourse, within which the development is proposed: (if applicable)
N/A
3. Lot on plan description (eg. Lot 123 on RP 4567) / GPS coordinates:
Lot 2 on SP136512
4. The above description is for: (tick applicable box)
☒ (i) the land on which the development is proposed; or
☐ (ii) the land adjoining the water body or watercourse, within which the development is proposed; or
☐ (iii) the water body or watercourse.
5. Shop / tenancy number: 6. Storey / level: 7. Total area of land: (m² or ha):
9.17ha
8. Local government area in which the land is situated: (eg. Esk, Hervey Bay, Woocoo etc.) (if applicable)
Hervey Bay City Council
9. Port authority for the strategic port land or strategic port land tidal area on which the development is proposed: (eg. Port of Brisbane, Port of Townsville) (if applicable)
N/A

Proposal details

If there is insufficient room available, details may be provided in an attachment to the application.

10. Existing use of the land: (eg. vacant, single house, shop etc.)
Vacant
11. Proposed use of the land: (eg. 6 unit apartment building, 30 lot residential subdivision, ERA for aquaculture in ponds with a total area of 7 ha for which wastes are released into waters etc.)
Industrial Subdivision

Other applicable parts of Form 1

Part A must **always** be accompanied by other completed parts of Form 1. For information about when a part of Form 1 may apply refer to **Guide 1**.

12. Other parts of Form 1 completed as part of this application: (eg. Part D, Part I, etc)
F

Applicant details

Clearly identify who is making the application. The applicant need **not** be the owner of the land.

When signing and lodging this application

The applicant is responsible for ensuring the information provided is correct. The assessment manager, any referral agency & the Chief Executive (where applicable) will rely on this information when assessing and deciding the application.

If the applicant is a company - a contact person must be shown.

13. Applicant's name:
Bay Survey Consultants obo Radway P/L
14. Contact number:
07 4128 4941
15. Contact person:
CTPI 49-Sch4
16. Facsimile number/e-mail address:
bsurveys@bigpond.net.au
17. Postal address:
PO Box 5129, Torquay, QLD 4655
18. Signature:
CTPI 49-Sch4
19. Date:
30-10-07

Land owner's consent (if applicable)

Section 3.2.1(3) of the IPA prescribes that an application must contain, or be supported by, the written consent of the land owner/s, if the application involves:

- (i) a material change of use;
- (ii) reconfiguration of a lot;
- (iii) work on land below high-water mark & not within a canal as defined under the Coastal Protection and Management Act 1995; or
- (iv) work on rail corridor land defined under the Transport Infrastructure Act 1994.

Section 3.8.1(2)(a) of the IPA provides that landowner's consent is not required for a mobile or temporary ERA.

For more information refer to Guide 1.

20. Land owner's consent to the making of this application:

18. Signature: CTPI 49-Sch4		19. Date: 30/10/07	
CTPI 49-Sch4		ACN 125 664 771	
(iii)	CTPI 49-Sch4		30/10/07
(iv)	Director - Radway P/L	ACN 125 664 771	
(v)			

Resource entitlement (if applicable)

Section 3.2.1(5) of the IPA requires evidence of resource entitlement be given for applications that involve a prescribed State resource.

Section 3.2.1(10)(a)(ii) of the IPA prescribes that an application cannot be taken to be properly made without evidence of the resource entitlement.

Advice for completing Q21 & 22

Refer to schedule 10 of the Integrated Planning Regulation 1998 that prescribes the nature of evidence required by the State in support of the lodging of this development application.

Advice for completing Q23

The information in (i) – (v) is mandatory if evidence is required under Q22 (ii) or (iii) above.

The official stamp of the Department of Natural Resources, Mines and Water is mandatory where the application involves any water or riverine quarry material under the Water Act 2000.

Section 3.2.1(5A) allows the resource manager to limit the time the evidence may be used. Q23 (vi) must be completed if the evidence is time limited.

21. Does this application involve a State resource prescribed under a regulation (other than involving quarry material on State coastal land under the Coastal Protection and Management Act 1995)?

☒ NO – go to Q24

☐ YES – go to Q22

22. This application is accompanied by evidence: (tick applicable box)

☐ (i) of the allocation of, or entitlement to, the resource – attach evidence and go to Q23(vi)

☐ (ii) the chief executive of the department administering the resource is satisfied the development is consistent with an allocation of, or entitlement to, the resource – go to Q23

☐ (iii) the chief executive of the department administering the resource is satisfied the development application may proceed in the absence of an allocation of, or entitlement to, the resource – go to Q23

23. Evidence of the resource entitlement:

(i) Resource entitlement / authority details

(ii) Name of delegated officer

(iii) Position of delegated officer

(iv) Signature of delegated officer

(v) Date

(vi) Expiry date of evidence (if applicable)

(vii) Official stamp of the department administering the resource (if applicable)

Assessment triggers

This checklist does not apply if the application requires the completion of Parts A and B of the Form only. It must be completed for all other applications.

24. Is the IDAS Assessment Checklist completed and attached to this application?

☒ YES

☐ NO – the assessment manager may refuse to accept this application on the grounds that the application has not been properly made

Plans / drawings / reports

An application should be accompanied by details to support the proposal & enable the assessment manager, referral agencies and any person viewing the application during public scrutiny or public notification to understand the scope of the proposal and any potential impact.

25. Plans/drawings/reports accompanying this application:

Plan / Drawing / Report Number	Title	Date
(i) Reports	See attachments	
(ii)		
(iii)		
(iv)		

PLEASE NOTE: The assessment manager may refuse to accept an application that, at the time of lodgement, fails to provide all applicable information required by Part A and any other relevant part of Form 1.

OFFICE USE ONLY (applicable to assessment manager's)

FEE (\$)	DATE RECEIVED	RECEIVING OFFICER'S NAME/S	REFERENCE NUMBER/S
----------	---------------	----------------------------	--------------------

Notification of Engagement of Private Certifier (Optional format)

To _____ Council, I have been engaged as the private certifier for the building work referred to in this application.

Date of engagement: / /

Accreditation Number: _____

Name: _____

Signature: _____

Form 1 Development Application

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Reconfiguring a lot

PART F

Completion of all applicable questions on Part F is mandatory for all applications involving the reconfiguring of a lot (including freehold subdivision, community title subdivision, subdivision by lease, etc.).

Nature of the application

A development permit authorises development to occur, while a preliminary approval is a step in the approval process and does not authorise development to occur.

1. This application is for: (tick one (1) or both if applicable)

☒ **Development permit** - provide details below eg. stage 1: freehold subdivision of 25 lots, realignment of a boundary, creation of an access easement)

Lot 2 on SP136512

AND / OR

☐ **Preliminary approval** - provide details below eg. stages 2, 3 and 4: freehold subdivision of 75 lots, realignment of a boundary, creation of an access easement)

The subject land

The information requested in Q2 & 3 is necessary for statistical and planning purposes.

2. Number of existing lots:

1

3. Total area of land in application: (if staged, total area of the land in this stage)

9.17ha

4. How the subject land is identified in the planning scheme: (name the zone, precinct etc.)

Industrial

5. Current use of the land: (if vacant, also identify the previous use)

Vacant

6. Are there buildings or structures existing on the land?

☒ NO

☐ YES - complete Q 7

7. Indicate which one of the following circumstances applies:

☐ **All** existing buildings and structures on the land will be **demolished** as part of the development / redevelopment of the site; or

☐ **Some** existing buildings and structures on the land are proposed to be **retained** as part of the development / redevelopment of the site - indicate on the plans prepared in response to Question 6 above, those buildings or structures proposed to be retained

8. Existing services on the land: (eg. water & sewerage) - attach plan identifying location if appropriate)

Available by extension to Council existing infrastructure

9. Are there any existing easements over the land?

☒ NO

☐ YES - attach plan identifying easement location & purpose

The proposal

The information requested in Q10-13 is necessary for statistical and planning purposes.

10. Total area of land in the development permit minus any balance area

9.17ha

11. Number of proposed lots:

20 + Balance lot

12. Number of additional **residential** lots proposed in development permit: (if applicable)

N/A

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13. Estate name & stage number: (applicable if the application is for a stage or stages of an overall subdivision proposal)
Stage 1
14. Area of land to be contributed for community purposes: (if applicable)
N/A
15. Length of new road to be constructed: (if applicable)
N/A

PLEASE NOTE

This application **cannot** be accepted unless accompanied by Part A of Form 1.

The assessment manager may refuse to accept an application that, at the time of lodgement, fails to provide all applicable information requested by Part A and any other relevant part of Form 1.

OFFICE USE ONLY (applicable to assessment manager)

DATE RECEIVED	REFERENCE NUMBER/S

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IDAS Assessment Checklist

(Formerly the "Referrals Checklist")

IMPORTANT NOTE FOR ALL APPLICANTS:

1. This checklist was formerly referred to as the "Referrals Checklist". Some of the 'Guides' to using the IDAS Application Forms continue to refer to this document as the "Referrals Checklist". The name of this checklist was changed from 25 July 2005 to more accurately describe its function.
2. Under the IPA and IDAS framework, an application may require assessment by the local Council and/or certain Queensland State entities (e.g. Environmental Protection Agency, Dept. of Natural Resources and Water, Queensland Heritage Council etc.).
3. This checklist is provided to assist applicants to determine when an application requires assessment by a Queensland State entity and may also assist the applicant to determine the assessment manager¹ for the application.
4. Therefore, the completion of **all questions** in section 1 of this checklist is **mandatory** for all applications (other than those requiring the completion of Parts A & B only).
5. It is the responsibility of the applicant to accurately complete this checklist.
6. Section 2 is mandatory only if the proposed development is located in any part of a wild river area declared under the *Wild Rivers Act 2005*.
7. Depending on the nature of the application, an applicable State entity may be either the assessment manager or an IDAS referral agency for the application.
8. The assessment manager for the application will rely on the information provided in this checklist (as well as any material lodged in support of the application) to identify any applicable referral agencies for the application in the Acknowledgement Notice. The assessment manager will also rely on this information when identifying if the application triggers referral coordination².
9. To assist you in answering the following questions a series of guides are available free from the IPA website www.ipa.qld.gov.au. Guide 25 explains the role of the IDAS Assessment Checklist in the IDAS application process, and its relationship to the Form 1 development application.
10. Any other parts of Form 1 that this checklist requires to be completed are available from the Council or the applicable State entity, or can be downloaded free from www.ipa.qld.gov.au.
11. Section 3 provides advice about the referrals that can be required for applications for building work assessable against the *Building Regulation 2006*.

SECTION 1 - STATE ASSESSMENT (completion mandatory)

Note: The following state assessment triggers apply to development other than for building work assessable against the *Building Regulation 2006*.

Environmentally relevant activity

For more information refer to [Guide 4](#).

Unless you answered "none of the above" to Q1, the application requires assessment by the administering authority³.

If an entity, other than the administering authority, is the assessment manager for the application, the administering authority is a concurrence agency for the application in relation to this matter.

Note: An application involving ERA 19 and/or 20 will also require completion of Part K₁ of Form 1 for approval where an allocation under the *Water Act 2000* is required.

1. The application involves: (tick applicable box/es)

- ☐ (i) an environmentally relevant activity (ERA) for which a code for environmental compliance has **not** been made - complete Part G of Form 1
- ☐ (ii) a mobile or temporary ERA for which a code of environmental compliance has **not** been made - complete Part G of Form 1
- ☒ (iii) none of the above

Continued overleaf

PLEASE NOTE: The assessment manager may refuse to accept an application, which, at the time of lodgement, fails to provide the completed IDAS Assessment Checklist (if applicable).

OFFICE USE ONLY (applicable to assessment manager)

DATE RECEIVED	REFERENCE NUMBER/S
---------------	--------------------

¹ The assessment manager is responsible for assessing and deciding an IDAS application. The assessment manager for an application is prescribed in schedule 8A of the IPA.

² For additional information refer to Guide 6 'Does my application trigger the referral coordination process?'

³ The 'administering authority' may be either the Environmental Protection Agency, the relevant local government (for a devolved ERA) or the Queensland Department of Primary Industries and Fisheries (for a delegated ERA).

Release

State-controlled road matters

For more information refer to [Guide 3](#).

Unless you answered "none of the above" to Q2, the application triggers referral to the [Department of Main Roads \(DMR\)](#) as a referral agency.

In certain circumstances DMR will be an advice agency, while in other circumstances DMR will be a concurrence agency.

Schedule 2 of the [IP Regulation](#) will assist you to determine where DMR is an advice or concurrence agency for the application.

2. The application involves: (tick applicable box/es)

- ☐ (i) development on land **contiguous**⁴ to a State controlled road and for -
- ☐ (a) **material change of use** assessable against the planning scheme;
- ☐ (b) **reconfiguring a lot** unless -
- the total number of lots is not increased; and
 - the total number of lots abutting the State-controlled road is not increased;
- ☐ (c) **operational work** (not associated with a material change of use assessable against the planning scheme or reconfiguring a lot mentioned in (b) above)-
- associated with access to a State-controlled road; or
 - for filling or excavation; or
 - involving the redirection or intensification of site stormwater from the land, through a pipe with a cross-sectional area greater than 625 cm² that directs stormwater to a State-controlled road.
- ☐ (ii) development on land **not contiguous** to a State-controlled road and -
- ☐ (a) **material change of use** -
- assessable against the local government's planning scheme; and
 - mentioned in schedule 5 of the IP Regulation and exceeding the thresholds set by that schedule;
- ☐ (b) **reconfiguring a lot** for a purpose mentioned in schedule 5 of the IP regulation and exceeding the thresholds set by that schedule;
- ☐ (c) **operational work** (not associated with a material change of use assessable against the planning scheme or reconfiguring a lot mentioned in (b) above)-
- assessable against the local government's planning scheme; and
 - mentioned in schedule 5 of the IP Regulation and exceeding the thresholds set by that schedule.
- ☒ (iii) none of the above

Clearing vegetation

For more information refer to [Guide 12](#).

Unless you answered "none of the above" to Q3, the application requires assessment by the [Department of Natural Resources and Water \(NRW\)](#).

If an agency other than NRW is the assessment manager for the application, NRW is a concurrence agency for the application in relation to this matter.

If you ticked Q3(i) or (ii), your application requires referral to NRW for assessment regardless of whether vegetation clearing is proposed or not.

3. The application involves: (tick applicable box/es)

- ☐ (i) **material change of use** -
- (a) assessable against the planning scheme;
- (b) on a lot containing -
- a category 1, 2 or 3 area shown on a property map of assessable vegetation; or
 - if there is no property map of assessable vegetation for the lot - remnant vegetation;
- (c) where the existing use of the land is a rural or environmental use; and
- (d) where the size of the land is 2 hectares or larger - complete Part J of Form 1
- ☐ (ii) **reconfiguring a lot** -
- (a) on a lot containing a category 1, 2 or 3 area shown on a property map of assessable vegetation or, if there is no property map of assessable vegetation for the lot, remnant vegetation;
- (b) where the size of the lot before the reconfiguration is 2 hectares or larger;
- (c) where 2 or more lots are created; and
- (d) where the size of any lot created is 25 hectares or smaller - complete Part J of Form 1
- ☐ (iii) **operational work** -
- (a) for the clearing of native vegetation where the vegetation clearing is made assessable under Schedule 8 of the IPA; and
- (b) not associated with a material change of use assessable against the planning scheme mentioned in (i) or reconfiguring a lot mentioned in (ii) - complete Part J of Form 1
- ☒ (iv) none of the above.

Strategic port land

For more information refer to [Guide 11](#).

If you ticked (i) - the relevant Port Authority is the assessment manager for the application.

If you ticked (ii) Queensland Transport is a concurrence agency for the application.

4. The application involves:

- ☐ (i) development on strategic port land as defined in the *Transport Infrastructure Act 1994* (TI Act) - complete Part I of Form 1
- ☐ (ii) a **material change of use** that is **inconsistent** with the land use plan approved under the TI Act for the strategic port land - complete Part I of Form 1
- ☒ (iii) none of the above

⁴ Land contiguous to a State-controlled road is defined in schedule 14 of the IP Regulation to mean land - if part of the land is within 100m of the State-controlled road; or that is part of a future State-controlled road.

<p>Acid sulfate soils For more information refer to Guide 10. Unless you answered "none of the above" to Q5, the application requires assessment by the Department of Natural Resources and Water (NRW). If an agency other than NRW is the assessment manager for the application, NRW is an advice agency for the application in relation to this matter.</p>	<p>5. The application involves development on land situated in an identified⁵ local government area and where the surface of the land is: (tick applicable box)</p> <p>☐ (i) below 20m AHD⁶ and the development will involve the excavation of 1000m³ or more of soil or sediment at or below 5m AHD, or</p> <p>☐ (ii) at or below 5m AHD and the development will involve filling the site with 1000m³ or more of material</p> <p>☒ (iii) none of the above</p>
<p>Major hazard facilities or possible major hazard facilities For more information refer to Guide 17. If you answered "YES" to Q6, the application requires assessment by the Department of Emergency Services (DES). If an agency other than DES is the assessment manager for the application, DES is a concurrence agency for the application in relation to this matter.</p>	<p>6. Does the application involve a material change of use for a major hazard facility or possible major hazard facility as defined under the <i>Dangerous Goods Safety Management Act 2001</i>?</p> <p>☒ NO</p> <p>☐ YES - complete Part L of Form 1</p>
<p>Water related development under the Water Act 2000 For more information about items (a) – (f), refer to Guide 15. For more information about item (g), refer to Guide 14 Does my application involve assessment of a referable dam? Unless you answered "none of the above" to Q7, the application requires assessment by the Department of Natural Resources and Water (NRW). If an agency other than NRW is the assessment manager for the application, NRW is a concurrence agency for the application in relation to this matter.</p>	<p>7. The application involves:</p> <p>☐ (i) operational work, for taking or interfering with water under the <i>Water Act 2000</i>, that is: (tick applicable box/es)</p> <p>☐ (a) in a watercourse, lake or spring, (eg. a pump, gravity diversion, stream re-direction, weir or dam) - complete Part K₂, K₃, K₄, K₅, or K₆ of Form 1 whichever is applicable;</p> <p>☐ (b) for an artesian bore anywhere in the State, no matter what the use - complete Part K₁ of Form 1;</p> <p>☐ (c) for a subartesian bore, in declared subartesian area⁷, or in a certain area covered by a water resource plan, for use for purposes other than stock and/or domestic use - complete Part K₁ of Form 1;</p> <p>☐ (d) for a subartesian bore, in certain declared subartesian areas, for use for stock and/or domestic purposes - complete Part K₁ of Form 1;</p> <p>☐ (e) for taking overland flow water in certain areas covered by a water resource plan - complete Part K₅ of Form 1;</p> <p>☐ (f) for interfering with overland flow water in a drainage and embankment area - complete Part K₁₀ of Form 1</p> <p>☐ (g) for constructing a referable dam⁸ or works that will increase the storage capacity of a referable dam by more than 10% - complete Part K₅ of Form 1; or</p> <p>☒ (ii) none of the above.</p>
<p>Removal of quarry material from a watercourse For more information refer to Guide 16. If you answered "YES" to Q8, the application requires assessment by the Department of Natural Resources and Water (NRW). If an agency other than NRW is the assessment manager for the application, NRW is a concurrence agency for the application in relation to this matter. Note: Part G of Form 1 is required to be completed as the activity of removing quarry material from a watercourse is also an Environmentally Relevant Activity (ERA).</p>	<p>8. Does the application involve development for the removal of quarry material from a watercourse⁹ requiring an allocation notice under the <i>Water Act 2000</i>?</p> <p>☒ NO</p> <p>☐ YES - complete Parts K₇ and G of Form 1</p>

5 The identified local government areas are: Ayrakun, Bowen, Brisbane, Broadsound, Bundaberg, Burdekin, Burke, Burnett, Caboolture, Cairns, Calliope, Caloundra, Cardwell, Carpentaria, Cook, Coobool, Douglas, Fitzroy, Gladstone, Gold Coast, Hervey Bay, Hinchinbrooke, Isis, Johnstone, Livingstone, Logan, Mackay, Maroochy, Maryborough, Miriam Vale, Mornington, Noosa, Pine Rivers, Redcliffe, Redland, Rockhampton, Sarina, Thuringowa, Tiaro, Torres, Townsville, Whitsunday.

6 Australian Height Datum (AHD).

7 The declared ground water areas are listed in [Guide 13 Development in a declared catchment area](#).

8 Referable dam is defined under the *Water Act 2000*.

9 Watercourse is defined in sch 10 of the IPA.

Operational work that is tidal work or work in coastal management district

For more information refer to [Guide 18](#). For more information about prescribed tidal work in local government tidal areas refer to [Guide 24](#).

Unless you answered "none of the above" to Q9, the application requires assessment by the Environmental Protection Agency (EPA).

If an agency other than EPA is the assessment manager for the application, EPA is a concurrence agency for the application in relation to this matter.

Local government is the assessment manager for all prescribed tidal work.

9. The application involves **operational work** that is: (tick the applicable box/es)

- ☐ (i) **tidal work**¹⁰ as defined under the *Coastal Protection and Management Act 1995* (the Coastal Act) that is not prescribed tidal work – complete Part M of Form 1; or
- ☐ (ii) tidal work that is **prescribed tidal work**¹¹ other than in a canal¹² – complete Part P of Form 1; or
- ☐ (iii) carried out within a **coastal management district** under the Coastal Act and for – complete Part M of Form 1 if any box/es (a) to (i) below are ticked.
- ☐ (a) constructing or installing works in a watercourse between MHWS and HAT (i.e. other than those works in tidal water) where the development has been determined not to be assessable against the *Water Act 2000*;
- ☐ (b) constructing a canal¹² intended to be connected to tidal waters;
- ☐ (c) constructing an artificial waterway;
- ☐ (d) reclaiming land under tidal water;
- ☐ (e) disposing of dredge spoil or other solid waste material in tidal water;
- ☐ (f) interfering with quarry material on State coastal land above high-water mark;
- ☐ (g) draining or allowing drainage or flow of water or other matter across State coastal land above high-water mark;
- ☐ (h) removing or interfering with coastal dunes on land, other than State coastal land, that is in an erosion prone area and above high-water mark;
- ☐ (i) constructing a bank or bund wall to establish a ponded pasture on land, other than State coastal land, above high-water mark; or
- ☒ (iv) none of the above.

Operational work below high water mark

For more information refer to [Guide 18](#). For more information about prescribed tidal work in local government tidal areas refer to [Guide 24](#).

Unless you answered "none of the above" to Q10, the application triggers referral to Queensland Transport (QT) (Maritime Safety Qld) as a concurrence agency.

Local government is the assessment manager for all prescribed tidal work.

10. The application involves **operational work** that is: (tick the applicable box/es)

- ☐ (i) **tidal work**¹³ as defined under the *Coastal Protection and Management Act 1995* (the Coastal Act) that is not prescribed tidal work – complete Part M of Form 1; or
- ☐ (ii) tidal work that is **prescribed tidal work**¹⁴ – complete Part P of Form 1; or
- ☐ (iii) carried out within a coastal management district¹⁵ under the Coastal Act and for –
- ☐ (a) disposing of dredge spoil or other solid waste material in tidal water – complete Part M of Form 1;
- ☐ (b) reclaiming land under tidal water – complete Part M of Form 1; or
- ☐ (c) constructing a canal¹², if the canal is associated with reconfiguring a lot – complete Part M of Form 1;
- ☒ (iv) none of the above.

Coastal management

For more information refer to [Guide 18](#).

Unless you answered "none of the above" to Q11, the application requires assessment by the Environmental Protection Agency (EPA).

If an agency other than EPA is the assessment manager for the application, EPA is a concurrence agency for the application in relation to this matter.

11. The application involves: (tick the applicable box/es)

- ☐ (i) a **material change of use** assessable under a planning scheme **involving operational work** carried out completely or partly in a coastal management district¹⁵
- ☐ (ii) a **material change of use** assessable under a planning scheme **involving building work**, carried out completely or partly in a coastal management district that is –
- the construction of a new premises with a GFA¹⁶ of at least 1000m²
 - the enlargement of the GFA of existing premises by more than 1000m²
- ☐ (iii) **reconfiguring a lot** assessable under schedule 8 of the IPA where the land is situated completely or partly in a coastal management district
- ☐ (iv) **reconfiguring a lot**¹⁷ assessable under schedule 8 of the IPA and in connection with the construction of a canal¹² – complete Part M of Form 1
- ☒ (v) none of the above

¹⁰ Tidal work is defined in sch 10 of the IPA.

¹¹ Prescribed tidal work is defined in the *Coastal Protection and Management Regulation 2003* and includes certain tidal works completely or partly within a local government tidal area.

¹² Canal means canal as defined under the *Coastal Protection and Management Act 1995*

¹³ Tidal work is defined in sch 10 of the IPA.

¹⁴ Prescribed tidal work is defined in the *Coastal Protection and Management Regulation 2003* and includes certain tidal works completely or partly within a local government tidal area.

¹⁵ Coastal management district is defined in sch 10 of the IPA and means a coastal management district under the *Coastal Protection and Management Act 1995*, other than an area declared as a coastal management district under section 47(2) of that Act.

¹⁶ GFA is defined in sch 14 of the IPA to mean the gross floor area. For a definition of how to calculate GFA, go to the planning scheme against which the application is being assessed.

¹⁷ Under s117 of the *Coastal Protection and Management Act 1995*, an application for reconfiguration, where the reconfiguration is associated with the construction of an artificial waterway, must be accompanied by the application for the operational works to construct the artificial waterway.

Development within the limits of a port

For more information refer to [Guide 18](#). For information about prescribed tidal work refer to [Guide 24](#).

If you answered "YES" to Q12, the application triggers referral to the Port Authority.

The Port Authority is a concurrence agency if the development is –

- within 200m of a shipping channel or an entry and exit shipping corridor for the port
- within 1000m of a swing basin, a commercial shipping wharf, a mooring, anchorage or spoil grounds;
- within 1000m of a planned port facility identified in a land use plan approved under the *Transport Infrastructure Act 1994*.

In all other situation the Port Authority is an advice agency.

12. Does the application involve development below high water mark¹⁸ and within the limits of a port under the *Transport Infrastructure Act 1994*?

☒ NO

☐ YES – complete Part M of Form 1, or Part P of Form 1 if the work is prescribed tidal work

Marinas

For more information refer to [Guide 18](#). For information about whether a marina is prescribed tidal work refer to [Guide 24](#). The local government is the assessment manager for all prescribed tidal work.

If you answered "YES" to Q13, the application triggers referral to [Queensland Fire and Rescue Service](#) as an advice agency.

13. Does the application involve **operational work** that is tidal work for a marina¹⁹ with more than 6 vessel berths?

☒ NO

☐ YES – complete Part M of Form 1, or Part P of Form 1 if the tidal work is prescribed tidal work

Tidal works in strategic port land tidal areas

For more information refer to [Guide 18](#).

Unless you answered "NO" to Q14, the relevant Port Authority is the assessment manager for the application and the [Environmental Protection Agency](#) (EPA) and [Queensland Transport](#) (QT) are concurrence agencies for the application.

14. Does the application involve tidal works within a strategic port land tidal area²⁰?

☒ NO

☐ YES – complete Part M of Form 1

Heritage

For further information refer to [Guide 19](#).

If you answered "YES" to Q15, the application triggers referral to the [Queensland Heritage Council](#) as concurrence agency for the application.

Unless you answered "none of the above" to Q15(b), the application involves referral to the [Environmental Protection Agency](#) as an advice agency for the application

15. Does the application involve development in a heritage registered place as defined under the *Queensland Heritage Act 1992*?

☒ NO

☐ YES – complete Part C of Form 1

15(b) The application involves: (tick applicable boxes)

- ☐ (i) a material change of use assessable against the planning scheme and the lot shares a common boundary with a protected area or registered place under the *Queensland Heritage Act 1992*;
- ☐ (ii) reconfiguring a lot if the lot shares a common boundary with a protected area or registered place under the *Queensland Heritage Act 1992*;
- ☐ (iii) none of the above.

Declared catchment areas

For more information, including a list of the declared catchment areas within Queensland, refer to [Guide 13](#).

Unless you answered "none of the above" to Q16, the application requires assessment by the [Department of Natural Resources and Water](#) (NRW).

If an agency other than NRW is the assessment manager for the application, NRW is a concurrence agency for the application in relation to this matter.

16. The application is in an area declared to be a catchment area under the *Water Act 2000* and involves: (tick the applicable box/es)

- ☐ (i) **reconfiguring a lot** if any lot resulting from the reconfiguration is less than 16 hectares;
- ☐ (ii) development assessable against the planning scheme involving the establishment or expansion of a waste water disposal system, other than a disposal system for carrying out an environmentally relevant activity under the *Environmental Protection Act 1994*;
- ☒ (iii) none of the above

¹⁸ High water mark is defined in the *Coastal Protection and Management Act 1995* and means the ordinary high water mark at spring tide.

¹⁹ Marina is defined in the *Transport Operations (Maritime Pollution) Regulation 1995*.

²⁰ Strategic port land tidal areas are the areas generally 50 metres seaward of high water mark adjacent to strategic port land.

Contaminated land

Applications involving material change of use and/or reconfiguring a lot may trigger this referral.

For more information refer to [Guide 5](#).

Unless you answered "none of the above" to Q17, the application requires assessment by the [Environmental Protection Agency \(EPA\)](#). If an agency other than EPA is the assessment manager for the application, EPA will be a concurrence agency for the application in relation to this matter.

17. The application involves: (tick the applicable box/es)

- ☐ (i) **reconfiguring a lot** for which all of part of the premises are –
- (a) premises mentioned in the IPA, schedule 8, part 1, table 2 –
 - item 5, including the exemption otherwise provided for by paragraph (d);
 - item 6, including the exemption otherwise provided for by paragraph (e); or
 - item 7, including the exemption otherwise provided for a mining activity or petroleum activity; or
 - (b) in an area for which an area management advice has been given for unexploded ordnance – complete Part N of Form 1
- ☐ (ii) a **material change of use** –
- (a) made assessable under the IPA, schedule 8, part 1, table 2, items 5 to 7; or
 - (b) assessable against the planning scheme and if all or part of the premises is in an area for which an area management advice has been given for unexploded ordnance – complete Part N of Form 1
- ☒ (iii) none of the above

Electricity infrastructure

For more information refer to schedule 2 of the [IP Regulation](#).

Unless you answered "none of the above" to Q18, the application triggers referral to the agency to which the easement is granted in favour of as advice agency.

18. The application involves: (tick the applicable box/es)

- ☐ (i) **reconfiguring a lot** where any part of the lot is –
- subject to an easement in favour of a distribution entity or transmission entity under the *Electricity Act 1994* and the easement is for a transmission grid or supply network under that Act; or
 - situated within 100m of a substation site;
- ☐ (ii) a **material change of use**, assessable against a planning scheme and not associated with reconfiguring a lot if –
- any part of the premises is subject to an easement in favour of a distribution entity or transmission entity under the *Electricity Act 1994* and the easement is for a transmission grid or supply network under that Act; and
 - any structure or work that is the natural and ordinary consequence of the use is, or will be, located wholly or partly in the easement;
- ☐ (iii) a **material change of use**, assessable against a planning scheme and not associated with reconfiguring a lot if any part of the premises is situated within 100m of a substation site;
- ☐ (iv) **operational work** that is filling or excavation assessable against the planning scheme, not associated with reconfiguring a lot, if –
- any part of the premises is subject to an easement in favour of a distribution entity or transmission entity under the *Electricity Act 1994* and the work is located wholly or partly in the easement;
 - the work is located wholly or partly within 10m of a substation site;
- ☒ (v) none of the above.

Land designated for community infrastructure

Applications involving development on land designated for community infrastructure may trigger this referral.

For more information refer to schedule 2 of the [IP Regulation](#).

If you answered "YES" to Q19, the application requires assessment by the chief executive of the department administering the Act authorising the development for the designated purpose.

If an agency other than the designator is the assessing manager for the application, the designating agency will be a concurrence agency for the application in relation to this matter.

19. Does the application involve development assessable against the planning scheme and on land designated for community infrastructure?

- (i) intended to be supplied by a public sector entity; and
 - (ii) on land not owned by or on behalf of the State; and
 - (iii) other than development –
 - (a) for the designated purpose; or
 - (b) carried out by, or on behalf of, the designator.
- ☒ NO
- ☐ YES

SEQ Regional Plan

For more information refer to schedule 2 of the IP Regulation.

Refer to Chapter 2, part 5A and schedule 10 of the Integrated Planning Act 1997, and schedule 2 of the Regulatory Provisions for relevant definitions.

Unless you answered "none of the above" to Q20, the application requires assessment by the Office of Urban Management (OUM).

20. The application involves (tick applicable box/es) -

- ☐ (i) a **material change of use** of premises -
- (a) in a **Major Development Area** in the Urban Footprint for -
- ☐ (i) an **urban activity** -
- ☐ in an area included in a structure plan where the IPA, section 3.1.6 applies;
- ☐ in an area not included in a structure plan where -
- the IPA, section 3.1.6 applies to the application for the material change of use; or
 - the premises exceeds 10,000m²; or
 - the gross floor area (GFA) on the premises will exceed 10,000m²; or
 - impact assessment is required under the relevant planning scheme
- ☐ (ii) **intensive animal husbandry**; or
- ☐ (iii) residential development involving a **rural residential purpose**
- (b) in the **Regional Landscape and Rural Production Area** for -
- ☐ (i) an **urban activity** and not specified in section 2.4(2); or
- ☐ (ii) residential development involving a **rural residential purpose** and not specified in section 2.6(2)
- (c) in the **Rural Living Area** for an urban activity and not specified in section 2.8(2);
- (d) in the **Investigation Area** for -
- ☐ (i) an **urban activity** and not specified in section 2.10(2);
- ☐ (ii) residential development involving a **rural residential purpose** and not specified in section 2.12(2); or
- ☐ (iii) **intensive animal husbandry**
- ☐ (ii) **reconfiguring a lot**-
- On land in a **Major Development Area** in the Urban Footprint that is:
- (a) not included in a structure plan; and
- (b) not specified in section 3.1(2).
- ☒ (iii) none of the above

Fisheries matters

For more information refer to schedule 2 of the IP Regulation.

Unless you answered "none of the above" to Q21, the application requires assessment by the Department of Primary Industries and Fisheries (DPI&F).

If an agency other than DPI&F is the assessment manager for the application, DPI&F is a concurrence agency for the application in relation to items (i) - (iv) and an advice agency in relation to item (v).

21. The application involves; (tick the applicable box/es)

- ☐ (i) an assessable **material change of use** for aquaculture - complete Part O₁ of Form 1;
- ☐ (ii) assessable **operational work** that is the construction or raising of a waterway barrier - complete Part O₃ of Form 1;
- ☐ (iii) assessable **operational work** completely or partly within a declared fish habitat area - complete Part O₂ of Form 1;
- ☐ (iv) assessable **operational work** that is the removal, destruction or damage of a marine plant - complete Part O₂ of Form 1;
- ☐ (v) development assessable under the IPA, schedule 8, part 1, on land that adjoins a declared fish habitat area;
- ☒ (vi) none of the above.

Integration of land use and public transport

For more information refer to [Guide 23](#), schedule 8A of the IPA, & schedule 2 of the IP Regulation.

Unless you answered "none of the above", the application triggers referral to QT as a concurrence agency.

22. The application involves: (tick the applicable box/es)–

- ☐ (i) a **material change of use** assessable against the planning scheme for a purpose mentioned in schedule 13C of the IP Regulation and exceeding the thresholds set by that schedule.
- ☐ (ii) **reconfiguring a lot**–
- ☐ (a) on land that is completely or partly within a public transport corridor, and the total number of lots increases;
 - ☐ (b) on land that is completely or partly within a future public transport corridor or an airport's public safety area;
 - ☐ (c) on land that is within 400m of a public passenger transport facility or a future public passenger transport facility, and the total site area is 5000m² or greater;
 - ☐ (d) for a residential purpose within the 25 ANEF contour for an airport;
 - ☐ (e) for a residential purpose resulting in 100 or more allotments.
- ☐ (iii) **operational work** assessable against the planning scheme, but not associated with a material change of use mentioned in (i) above or reconfiguring a lot mentioned in (ii) above, on land that–
- ☐ (a) is completely or partly within a public transport corridor or a future public transport corridor;
 - ☐ (b) will result in work that encroaches into an airport's operational airspace.
- ☒ (iv) none of the above.

Railway safety and efficiency

For more information refer to [Guide 23](#), schedule 8A of the IPA & schedule 2 of the IP Regulation.

Unless you answered "none of the above", the application triggers referral to QT as a concurrence agency.

23. The application involves: (tick the applicable box/es)–

- ☐ (i) a **material change of use** assessable against the planning scheme for a purpose mentioned in schedule 13D of the IP Regulation and exceeding the thresholds set by that schedule.
- ☐ (ii) **reconfiguring a lot**–
- ☐ (a) on land that is completely or partly within a future public transport corridor, future railway land or a railway tunnel easement;
 - ☐ (b) on land that is within 400m of a Citytrain passenger railway station or a future Citytrain passenger railway station, and the total site area is 5000m² or greater;
 - ☐ (c) on land that abuts rail corridor land, commercial corridor land or future railway land, and the total number of lots increases;
 - ☐ (d) on land that abuts rail corridor land, commercial corridor land or future railway land and an easement abutting the corridor or future railway land is created;
 - ☐ (e) on land that is completely or partly within 100m of, and abutting an approach to, a railway level crossing, and the total number of lots increases;
 - ☐ (f) for a residential purpose resulting in 100 or more allotments.
- ☐ (iii) **operational work** assessable against the planning scheme, but not associated with a material change of use mentioned in (i) above or reconfiguring a lot mentioned in (ii) above, involving extracting, excavating or filling greater than 50m³, on land that–
- ☐ (a) is completely or partly within rail corridor land or commercial corridor land, and the work is not for rail transport infrastructure or other rail infrastructure;
 - ☐ (b) is completely or partly within future railway land, or a railway tunnel easement;
 - ☐ (c) abuts rail corridor land, commercial corridor land or future railway land, and the work is within 25m of the railway boundary.
- ☒ (iv) none of the above.

Moonie to Brisbane pipeline

For more information refer to schedule 2 of the IP Regulation.

Unless you answered "none of the above", the application triggers referral to the holder of pipeline licence No 1 issued under the *Petroleum Act 1923*, currently Santos QNT Pty Ltd, for advice.

24. The application involves the easement for the construction or operation of the Moonie to Brisbane strategic pipeline, and involves: (tick the applicable box/es)–

- ☐ (i) a **material change of use** assessable against the planning scheme and not associated with reconfiguring a lot, and any structure or work will be located wholly or partly in the easement.
- ☐ (ii) **reconfiguring a lot**
- ☐ (iii) **operational work** assessable against the planning scheme, that is filling, excavation, compaction, drilling, boring or piling not associated with a reconfiguring a lot, and the work is located wholly or partly in the easement.
- ☒ (iv) none of the above.

Koala habitat area

For more information, refer to [Guide 26](#) and schedule 2 of the [IP Regulation](#).

Unless you answered "none of the above", the application requires referral to the [Environmental Protection Agency](#) as a concurrence agency.

25. The application involves: (tick the applicable box/es)–

- ☐ (i) a **material change of use** of premises in a koala conservation area or koala sustainability area made assessable under a planning scheme, that is not for a domestic activity and will result in –
- ☐ (a) clearing of native vegetation over an area greater than 2500m²;
 - ☐ (b) a new building and any reasonably associated structure with a total footprint greater than 1000m²;
 - ☐ (c) an extension to an existing building and any reasonably associated structure if the extension has a total footprint greater than 1000m²;
 - ☐ (d) extracting gravel, rock or sand from an area greater than 5000m²;
 - ☐ (e) excavating or filling an area greater than 5000m²;
 - ☐ (f) additional traffic in a koala conservation area or koala sustainability area, between 6p.m. on a day and 6a.m. on the following day.
- ☐ (ii) **reconfiguring a lot** in a koala conservation area or koala sustainability area that will result in –
- ☐ (a) an increased number of lots;
 - ☐ (b) clearing of native vegetation over an area greater than 2500m².
- ☐ (iii) **operational work** in a koala conservation area or koala sustainability area made assessable under Schedule 8, Part 1, Table 4, items 1A to 1G (*not associated with reconfiguring a lot mentioned in (ii) above*) that will result in the clearing of native vegetation over an area greater than 2500m².
- ☐ (iv) **operational work** in a koala conservation area or koala sustainability area made assessable under a planning scheme (*not associated with a material change of use mentioned in (i) or reconfiguring a lot mentioned in (ii) above*) that is not for a domestic activity and will result in –
- ☐ (a) clearing of native vegetation over an area greater than 2500m²;
 - ☐ (b) extracting gravel, rock or sand from an area greater than 5000m²;
 - ☐ (c) excavating or filling an area greater than 5000m².
- ☒ (v) none of the above.

Wild river area

For more information, refer to [Guide 27](#).

If you answered YES to Q26, you must also complete section 2 of this checklist. This will enable you to determine if your application can proceed in a wild river area and which referral agency will assess your application against the Wild Rivers Code, or if the proposed development is "prohibited" in a wild river area.

Note: Development can be "prohibited" in a wild river area because the application cannot be accepted by the assessment manager.

26. Does the application involve development in a wild river area declared under the *Wild Rivers Act 2005*?

- ☒ NO
☐ YES

Preliminary Approval

If you answered YES to Q27, the application triggers referral to the [Department of Local Government, Planning, Sport and Recreation](#) as an advice agency.

27. Does the application involve a development for which preliminary approval is sought under Section 3.1.6 of the *Integrated Planning Act 1997*?

- ☒ NO
☐ YES

Wetlands

Domestic activity means the construction or use of a single residence on a lot and any reasonably associated building or structure. Examples of a building or structure that could be reasonably associated with a single residence include: caretaker's residence, granny flat, building or structure used for a home business.

Note: Wetland is defined in the *Integrated Planning Regulation 1998*.

Unless you answered "none of the above" to Q28, the application involves referral to the [Environmental Protection Agency](#) as an advice agency for the application.

28. The application involves: (tick the applicable boxes) –

- ☐ (i) a material change of use, other than for a domestic activity, assessable against the planning scheme that is in or within 100m of a wetland;
- ☐ (ii) reconfiguring a lot –
In or within 100m of a wetland that will result in
- ☐ (a) more than 10 lots being created; or
 - ☐ (b) lots less than 5 hectares;
- ☒ (iii) none of the above

Conservation Estate

Urban purposes is defined in the Integrated Planning Act 1997 as "purposes for which land is used in cities or towns, including residential, industrial, sporting, recreation and commercial purposes, but not including environmental, conservation, rural, natural or wilderness area purposes".

Unless you answered "none of the above" to Q29, the application involves referral to the Environmental Protection Agency as an advice agency for the application.

29. The application involves: (tick the applicable box/es)–

- ☐ (i) a material change of use for urban purposes that is in or within 100m of any of the following –
- ☐ (a) a protected area, forest reserve, critical habitat or area of major interest under the Nature Conservation Act 1992;;
 - ☐ (b) a State forest or timber reserve under the Forestry Act 1959;
 - ☐ (c) a marine park under the Marine Parks Act 2004;
 - ☐ (d) a recreation area under the Recreation Area Management Act 1988;
 - ☐ (e) a world heritage area listed under the World Heritage Convention;
 - ☐ (f) Brisbane forest park under the Brisbane Forest Park Act 1977.
- ☐ (ii) reconfiguring a lot if –
- ☐ (a) any part of the lot is situated in, or within 100m of, any of the following –
 - ☐ (i) a protected area, forest reserve, critical habitat or area of major interest under the Nature Conservation Act 1992;
 - ☐ (ii) a State forest or timber reserve under the Forestry Act 1959;
 - ☐ (iii) a marine park under the Marine Parks Act 2004;
 - ☐ (iv) a recreation area under the Recreation Area Management Act 1988;
 - ☐ (v) a world heritage area listed under the World Heritage Convention; Brisbane forest park under the Brisbane Forest Park Act 1977; and
 - ☐ (b) the reconfiguration involves more than 10 lots being created, or any lot resulting from the reconfiguring is less than 5ha;
- ☒ (iii) none of the above.

PLANNING SCHEME CODES:

The subject land parcel is included in the Industry Zone under the HBCC Planning Scheme 2006 and as such assessment of a Reconfiguration of a Lot Application is Code Assessable.

The Planning Scheme provides for development requirements which are included in specific codes applicable to development.

It is submitted that the applicable codes for this application are:

- Industrial Uses Code
- Acid Sulphate Soils Overlay Code
- Landscape Code
- Reconfiguration of a Lot Code
- Structure Planning Code
- Works Services & Infrastructure Code

3.8.2 INDUSTRIAL USES CODE:

<u>Pertinent Performance Criteria</u>	<u>Compliance Solution</u>
<p>PC1: The use is developed on a site included in an industrial area, or where in another area, in a suitable location considering topography, accessibility, natural environment, surrounding land uses, and the desired character of the area.</p>	<p>The subject land is included in the Industrial Zone HBCC 2006 Plan.</p>
<p>PC2: Development is designed appropriately for the intended use of site.</p>	<p>The proposed estate plan has been specifically designed following discussion and input by Council's Development Services Staff.</p>
<p>PC3: Industrial development is not located in areas identified as Environmentally Sensitive Areas, waterways and wetlands or areas subject to natural hazards.</p>	<p>The site is not located within an area identified on the Planning Scheme maps as being -</p> <ul style="list-style-type: none"> • Natural area • Medium - high risk bushfire or potential mined properties. <p>NOTE: Natural area overlay does indicate a small segment in the south-west of Lot 2. It is submitted that this area is not of significance.</p>

Release

<p>PC9: Development provides the necessary services and infrastructure on site.</p>	<p>Reinforced industrial rated crossovers to be a condition of each site MCU.</p> <p>Kerb and channelling will be an aspect of the operational works design/application.</p> <p>The estate design provides ready vehicle movements throughout the estate and access to each lot.</p> <p>Each allotment is of size and shape to accommodate on-site refuse storage - the location and style of these to be an aspect of each subsequent site MCU.</p>
--	--

4.1 ACID SULPHATE SOILS OVERLAY CODE

Overall Outcomes for the Acid Sulphate Soils Overlay Code:

The overall outcomes are the purpose of the Acid Sulphate Soils.
The overall outcomes are as follows:

- a) Developments containing Acid Sulphate Soils do not have significant adverse effects on the built environments or human health.

Golder Associates in conjunction with Wide Bay Geotechnical Services have provided an extensive report following soil testing for presence of Acid Sulphate Soils.

This report is presented as Attachment E.

4.6.2 LANDSCAPING CODE

Overall Outcomes for the Landscaping Code:

The overall outcomes are the purpose of the Landscaping Code. The overall outcomes are as follows -

- a) Provide attractive streetscapes and public places that are functional and enhance the amenity of the area.
- b) Ensure landscaping is a functional part of development design.
- c) Ensure landscaping treatments complement the scale and appearance of the development.
- d) Provide buffers between differing land uses.
- e) Landscaping is integrated with existing and proposed development.

- f) Landscaping minimises the risk of damage to buildings and infrastructure.
- g) Landscaping is low maintenance.
- h) Landscaping assists in microclimate management.
- i) Landscaping maximises water sensitive urban design principles.
- j) Landscaping incorporates and enhances natural features and significant vegetation.
- k) Landscaping incorporates a majority of endemic plant species.
- l) Landscaping does not use a plant which has the potential to become an environmental weed.
- m) Landscaping provides visual interest through the use of form, texture and colour variations.
- n) Landscaping protects and enhances personal safety and discourages vandalism.
- o) Landscaping ensures adequate sight lines for vehicular and pedestrian traffic.
- p) Landscaping incorporates lighting where necessary to maintain pedestrian and vehicular safety.
- q) Landscaping is protected from pedestrian and vehicular traffic.

<u>Pertinent Performance Criteria</u>	<u>Compliance Solution</u>
<p>PC2: New development provides attractive streetscapes that reinforce the functions of the street and enhance the amenity of buildings. New development provides a landscape contextual link to existing development landscape outcomes.</p>	<p>Street trees will be provided by the Developer throughout the estate.</p>
<p>PC3: New development provides a landscape contextual link to existing development landscape outcomes.</p>	<p>More appropriately to provide solutions at the time of individual site MCU applications and the issue of Approval Conditions.</p>

4.10.2 RECONFIGURATION OF A LOT CODE

Overall Outcomes for the Reconfiguration of a Lot Code:

The overall outcomes for the Reconfiguration of a Lot Code. The overall outcomes are as follows:

- a) Provide good neighbourhood design, consistent with the character and environmental values of the zone and locality in which the site is situated.
- b) Provide an economical, efficient and functional lot layout.
- c) Provide a lot layout that is responsive to the environmental constraints and site characteristics of each allotment.
- d) Provides equitable access to basic services and utilities.
- e) Lot reconfiguration on and in the vicinity of GQAL supports its ongoing soil based production.

<u>Pertinent Performance Criteria</u>	<u>Compliance Solution</u>
<p>PC1: Lot sizes are appropriate for the proposed use and are consistent with the intent and desired character for the locality.</p> <p>Lots have sufficient area and dimensions to accommodate buildings, open space, landscaping, access and car parking.</p>	<p>Lot sizes generally comply with the minimum lot size and dimension prescribed - minimum lot frontage 40 metres minimum area 2000m² Maximum depth to frontage ratio 4:1.</p> <p>A small number of lots in the balance stages have frontages less than 40m.</p> <p>These minimal reductions have little impact on the intentions of the frontage requirement and have occurred to accommodate the constraints placed on the estate design to accord with an acceptable structure plan developed for the adjacent land parcels.</p>
<p>PC2: Lots are of suitable size and dimension to :</p> <ul style="list-style-type: none"> - protect natural and cultural features; - address site constraints such as steep slopes, soil erosion, flooding, overland flow, storm surge, bushfire risk etc; - retain special features such as trees and views; - provide adequate buffers to risks and hazards; and - ensure that adequate buffers are provided between incompatible land uses. 	<p>The subject site has no constraints due to steep gradients or the like - the land is gently sloping to flat in grade.</p> <p>The subject land parcel does not occur within an area identified on the Overlay Planning Scheme.</p> <p>Maps being:</p> <ul style="list-style-type: none"> - Natural area - other than small area in the south-west corner of Lot 2 - an area of low significance, and able to be value added by planned landscaping throughout the estate;

PC4:

Lot design does not prejudice the development of adjoining land.

PC9:

The lot layout design ensures that future development in the locality is able to occur in an orderly, efficient and cohesive manner in accordance with good planning practice.

PC10:

The lot design and layout provides a mix of lot sizes consistent with the intent of the applicable zone and precinct and enables a variety of:

- housing types (in the case of residential lot reconfigurations); and
- commercial and industrial establishments and other compatible uses (in the case of commercial and industrial lot reconfigurations).

PC11:

The lot design and layout for commercial and industrial subdivisions takes account of the general on-site requirements specified in any application zone and Locality Code that applies to the land (eg. Buffer zones to adjacent residential allotments).

PC12:

The street layout provides a high level of internal and external accessibility with traffic management to restrain vehicle speed in neighbourhood areas.

- Medium high risk bushfire area;
- Of cultural heritage significance;
- Potentially mined properties; or
- Key resource area.

This estate design has been undertaken giving due consideration to fitting well with a structure plan that provides further industrial estate development of adjacent land parcels.

This estate design does provide for future development of the area and is in accordance with a structure plan developed during preliminary discussion with Council's Planning Department.

The subject estate design has a valued mix of lot areas, furthermore if marketing demands so indicates, select adjoining lots will be created as one title.

There are no adjoining land parcels other than land zoned for industrial development. Existing large allotments to the north are virtual rural residential lots with separation / buffering provided by existing large yards.

The estate street layout has been planned with wide street reserves to provide for trunk movements and manoeuvring throughout the estate.

PC17:

Development is located in areas where adequate services may be provided for wastewater treatment, water (domestic/commercial use and fire fighting), power supply, telecommunications, drainage and street lighting.

PC20:

The road network has clear physical distinctions between the levels of roads in the Road Hierarchy and incorporate design features to ensure driver behaviour is appropriate for the function of the road.

PC 24:

In industrial areas, the street widths and geometry of the road network accommodates the movement and access of heavy vehicles.

PC 27:

An open public space network must be provided which:

- Contributes to the legibility and character of the development and neighbourhood;
- Provides safe, attractive places and convenient access to recreation, sport and open space infrastructure;
- Provides parks with a diverse range of recreation and sport activity opportunities and landscape settings;
- Contributes to a connected public open space, pedestrian and cycle network across the whole city;
- Conserves and takes advantage of significant landmarks and natural features;

Enables the retention of significant vegetation and other habitat areas, their associated buffers and linkages/ corridors and natural and cultural features.

All services are available to the proposed estate by connection to and extension of Council's Infrastructure, and connection to electricity supply and telecommunication services.

The proposed estate will interact with the district road network at the intersection of Drury Lane and the Burrum Heads/Pialba Road.

Cardno have undertaken a traffic study and developed a strategy for the upgrading construction of this intersection - see Attachment B.

The estate streets are designed with reserve widths of 21 metres and wider.

Pavement widths will be designed to appropriate width to accommodate movement and access of heavy vehicles.

The Developer has been in discussions with Council's Recreation - Parks and Open Space Division and the Developer is submitting to Council under separate cover for consideration a proposal to Council for consideration to dedicate 1.6 hectares at the north entrance to the estate for the use as a Netball Court Complex.

STRUCTURE PLANNING CODE

Overall outcomes for the Structure Planning Code 4.12.2:

- a) To ensure land in the Emerging Community Zone is well planned and developed in an orderly fashion.
- b) To ensure infrastructure and services are provided in an efficient and timely fashion that meets the Council's Desired Standard of Service;
- c) To prevent premature and unintegrated development, particularly on small sites and those isolated or remote to existing infrastructure.
- d) To support and promote development that:
 - i) retains the natural values of the City's landscape, environment and biodiversity;
 - ii) creates communities that provide a choice of housing types;
 - iii) provides a range of access and mobility options;
 - iv) delivers a high standard of residential amenity;
 - v) supplies convenient and well placed facilities and services;
 - vi) allows for economic growth and prosperity; and
 - vii) provides the necessary infrastructure and designed urban form to create inclusive communities that support and interact with each other on a daily basis.

<u>Pertinent Performance Criteria</u>	<u>Compliance Solution</u>
PC2: Development uses and density outcomes are developed in accordance with sound planning principles.	The estate proposed is for an industrial estate in accordance with the designated land use under the HBCC Planning Scheme 2006 and the estate design has been undertaken in accordance with an overall structure plan developed by Council's Planning Staff.
PC4: Buffering is provided for separation of residential and commercial areas from existing and proposed industrial areas including adequate buffering to address likely impacts from industry.	The proposed estate is situated in the midst of land designated or zoned for industrial development. The eastern side of the estate is buffered to adjoining residential land by a wide stormwater drainage reserve.

Release

PC13:

The road network is developed in accordance with a defined road hierarchy complying with adopted design standards.

The estate road layout provides road reserve widths adequate to provide ready access and movement by large vehicles as expected to attend industrial areas.

PC15:

Access to development sites is provided in coordinated manner.

The Cardno traffic strategy provides for an upgrade and construction of a seagull intersection which it is submitted is sufficient to provide for traffic generated for 25% of the land area of the combined industrial estate (Lot 2 and Lot 11).

Once occupation / development of the created lots reaches this threshold, this intersection will be upgraded to a signalised seagull intersection.

PC16:

Layout plans incorporate an effective and efficient stormwater drainage system that does not adversely affect the natural state of watercourses and their drainage characteristics.

A drainage scheme will be designed by the Developer's Engineering Consultant, Cardno and the estate design provides drainage reserves at strategic locations allowing stormwater flow paths through to Council's trunk drainage system on the eastern boundary of Lot 2.

The Developer is entering into an agreement with Council to construct the open earth drain designed as part of Council's trunk drainage scheme.

This will formalise the remaining section requiring construction linking the constructed main drain to the south with the constructed main drain adjacent to the Yarrilee Residential Estate to the north-east.

PC17:

Layout plans accommodate water quality devices and solutions.

Stormwater quality devices will be designed and incorporated in the estates stormwater discharge lines.

PC18:

Water supply and sewerage infrastructure is delivered efficiently and in a coordinated manner.

Water and sewerage reticulation will be designed to provide for the estate's needs with sizing providing for the future development demand.

WORKS, SERVICES & INFRASTRUCTURE CODE**4.14.2 of the HBCC Planning Scheme 2006 includes:**

The overall outcomes are the purpose of the Works, Services & Infrastructure Code. The overall outcomes are as follows:

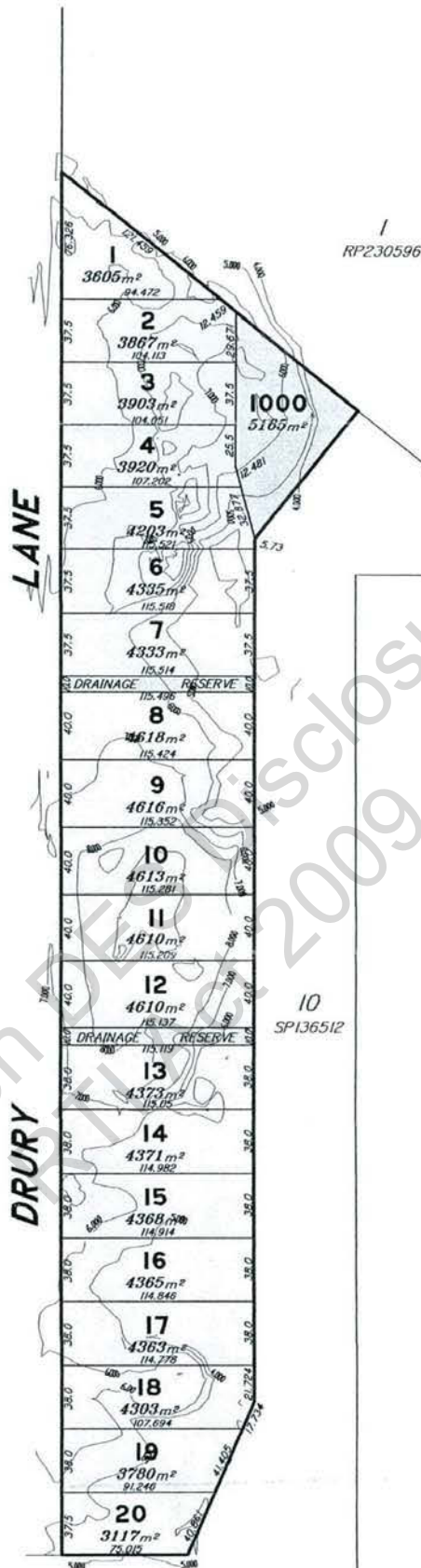
- a) Ensure that the development is provided with the levels of services expected by the community and that unacceptable off-site impacts are prevented.

Works, Services & Infrastructure Code Acceptable Solutions:

All performance criteria tabulated in the Works, Services & Infrastructure Code will be addressed in the Operational Works Application to be lodged with Council following the engineering design by Cardno Consulting Engineers.

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All dimensions are subject to final survey
 Heights are to AHD
 Contours at 1m intervals

ENDORSED: Accredited
 EXAMINED: L.M. Ratten C.S.
 PASSED:

Release

DRAWN BY: MICHAEL STEWART

BAY SURVEY CONSULTANTS
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SUNSHINE COAST
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 Fax: 07 5494 1400

19/295 Esurveys@bigpond.net.au

PROPOSED RECONFIGURATION

Lot 2 on SP136512
 1 Lot into 20 plus Drainage Reserve
 DUNDOWRAN - HERVEY BAY

Client: RADWAY P/L

File A

PROPOSED SUBDIVISION

PARISH	VERNON	ISSUE
COUNTY	MARCH	A
LOCAL GOVERNMENT	Hervey Bay C.C.	

Scale: 1:3000 Date: 25/10/07

Job No: HB/06/2444 Dwg No: DWG2444C

Page 274 of 397



ENDORSED: Accredited
 EXAMINED: L.M.Ratten C.S.
 PASSED:

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STRUCTURE PLAN

Lot 11 on RP909375

Lot 2 on SP136512

DUNDOWRAN - HERVEY BAY

Client: RADWAY P/L

Client: A.H.C. LTD

File A

Release

DRAWN BY: MICHAEL STEWART

LOCALITY PLAN

PARISH VERNON
 COUNTY MARCH
 LOCAL GOVERNMENT HERVEY BAY C.C.

Scale: 1:5000 Date: 25/10/07

Job No: HB/06/2444 Page 275 of 297

ecomaps

05/02/2008

Queensland Environmental Protection Agency

ecomaps Screen Plot

Page 1 of 2



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ecomaps Layers

- ☐ Cadastre Selection ☐ Other States
☒ Grouped Cadastre
☐ Queensland

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EMR

Lot 11 Plan RP147143 Category NOTIFIABLE ACTIVITY Record Type BP ID 9435
Hist ID 24-6668

LGA HERVEY BAY CITY COUNCIL Region S AMA
Site Name SANITARY LANDFILL - CRAIGNISH Notified By DATACONV Notif Rec'd
Street CRAIGNISH ROAD Entry Date 27/06/1998 Last Altered Date 07/04/2000
Suburb CRAIGNISH Post code 4655
Owner CTPI 49-Sch4
Owner MS 763
Address PIALBA
QLD
Parcel Status D Area 280909 m² File Officer NIL
Post code 4655

Notifiable Activities

LANDFILL

Offsite Disposal Date

Comments

Registered Site ID 9435

Date	User ID	Corr N	Officer Name	Finalised	How Finalised
------	---------	--------	--------------	-----------	---------------

Lot 11 RP 909 375
↓
BASE PARCEL:
Lot 11 RP 147 143
NA-20- LANDFILL

Queensland Environmental Protection Agency

Page 1 of 2

maps Screen Plot

Lot 2 SP136512
 ↑
 2 RP 230 596
 EHR 9437
 NA 20



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29/01/2008

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ecomaps Screen Plot

ecomaps Layers

- ☐ Cadastre Selection ☐ Other States
☒ Grouped Cadastre
☐ Queensland

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Base Parcel Site ID 9437

Lot	Plan	Prev Lot	Prev Plan	Pel Status	LGA	Site ID	Rec Type	Level	Cat
2	RP230596			D	504	9437	BP	1	N
2	DP136512	2	RP230596	C	504	33068	NP	2	
10	DP136512	2	RP230596	C	504	33069	NP	2	
2	SP136512	2	RP230596	C	504	34287	NP	2	
2	DP200633	2	SP136512	C	504	68160	NP	3	
3	DP200633	2	SP136512	C	504	68161	NP	3	
10	SP136512	2	RP230596	C	504	34288	NP	2	D

↑ This deleted parcel was deleted on 24/01/2003 because it was not affected by landfill activity

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DRAFT SITE MANAGEMENT PLAN (SMP)

DATE: 12 November, 2007

EPA File:???

RPD: Lot 2 on SP136512

1.0 SUMMARY OF CONTAMINATION

The site (Lot 2 on SP136512) was originally a sand extraction operation. The majority of the extraction area was subsequently filled in a relatively uncontrolled manner. The placement of uncontrolled fill over the site has resulted in the listing of the site on the Environmental Management Register for the Notifiable Activity – Landfilling.

The filled areas of Lot 2 contain materials including:

Building rubble (including large pieces of concrete greater than 300mm diameter, steel, bitumen, timber, bricks, and iron); and
A small amount of plastic and other non-putrescible wastes
Metals impacted soils (above HILA) – Max. concentrations Chromium 182mg/kg and Arsenic 111mg/kg.

Sufficient information is considered to be available to confirm that the risk to the human health of future industrial land users is low. The strategy by which these materials will be managed is by not disturbing the material.

2.0 OBJECTIVES OF THE SMP

The purpose of this SMP is to manage identified contamination on the site in a manner that protects human health and the environment.

3.0 ACHIEVEMENT AND MAINTENANCE OF OBJECTIVES

3.1 Responsibility. The owner of the land (as defined in the *Environmental Protection Act 1994*) is to ensure that this SMP and any variations approved or required by the administering authority are complied with. The obligations and conditions set out in this SMP bind the owner, from time to time, of the land.

3.2 Site Use. The site is currently suitable for the existing land and other commercial/industrial land uses.

3.3 Provision of SMP to appropriate persons. The owner must provide all persons involved in building design and planning and all contractors and lessees conducting building and/or excavation works with a copy of the SMP prior to commencement of site works. All persons occupying or working on the site must comply with the requirements of the SMP.

3.4 Surface capping and protective barriers. Surface capping or protective barrier layers are not required to protect the health of future commercial/industrial site users.

3.5 Soil Excavation & Removal. Uncontrolled fills must not be removed from site without suitable characterisation sampling and analysis. Representative characterisation sampling and analysis of any uncontrolled fill materials excavated



from this site must be managed by a suitably qualified and experienced person in accordance with Section 381 of the *Environmental Protection Act 1994* (EP Act). Contaminated soil must not be removed off-site without a disposal permit in accordance with Section 424 of the EP Act.

3.6 Unexpected Contamination. If during any site earthworks or excavation, offensive or noxious odours and/or evidence of gross contamination not previously detected are observed, site works are to cease in that area and action taken to immediately abate the environmental harm. The administering authority is to be notified in writing within 2 business days of detection and advised of appropriate remedial action.

Any remedial action is to be developed by an appropriately qualified and experienced person in accordance with Section 381 of the EP Act.

3.7 General Environmental Protection. All earthworks are to be undertaken in accordance with general environmental protection measures to avoid unwanted migration and deposition of soil. These measures include the control of dust, noise, stormwater runoff, sediment, erosion, spillage from haulage trucks and odour releases involving the handling or movement of contaminated material.

3.8 Workplace Health and Safety. A Workplace Health and Safety Plan (WH&S plan), which conforms to the requirements of the *Workplace Health and Safety Act 1995* is to be developed for any site excavation works in contaminated areas. The WH&S plan must specifically address contaminants of concern.

3.9 Underground Services. All underground services must be constructed in either uncontaminated material or in trenches in which the services are surrounded by a minimum of 0.3 m of uncontaminated fill for minor services (< 100 mm in diameter), and 0.5 m of uncontaminated fill for services greater than 100 mm in diameter.

4.0 MONITORING AND REPORTING

A biennial inspection of the site is to be undertaken by the owner to ensure compliances with provisions of this plan. The biennial period is to commence from the effective date of this plan.

A report shall be submitted to the administering authority within 45 days from the completion of any characterisation sampling undertaken during excavation works or following site inspections for compliance with the Site Management Plan. The report is to be prepared by a suitably qualified and experienced person in accordance with Section 381 of the *Environmental Protection Act 1994* (EP Act).

This Site Management Plan (SMP) has been developed to manage site contamination risks present at the issue date. Subsequent uses of the site may result in the need to review the plan.

LOT 2 SP136512

NOTES RNE 34771

More information required?	Yes / No	If yes, what is required?
----------------------------	----------	---------------------------

Date received all required information _____

a. Details on file cover are correct	
b. All required information has been provided	
c. Details on Access trackers are correct	
d. Lots in report, on CoT, RP & application form all match	

9

9

9

4. FILE SENT ON ROUNDS Date: _____ Details updated on Access Tracker ☐

9

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Golder Associates Pty Ltd

A.B.N. 64 006 107 857

Unit 1, Dalton Centre, Newspaper Place
Maroochydore, Qld 4558 Australia
(PO Box 5569, Maroochydore BC, Qld 4558 Australia)
Telephone +61-7 5443 3511
Fax +61-7 5443 6645
www.golder.com



19 November 2007

077683504(AK)

Radway Pty Ltd
PO Box 634
OXENFORD QLD 4210

Attention: CTPI 49-Sch4

Dear Sir

**STAGE 1 PRELIMINARY SITE INVESTIGATION,
STAGE 2 DETAILED SITE INVESTIGATION &
SITE MANAGEMENT PLAN
LOT 2 ON SP136512, DRURY LANE, DUNDOWRAN**

We are pleased to present a copy (one bound) of our report on the above project. Should you have any questions regarding the report, please do not hesitate to contact this office.

We also enclose our invoice for the work herein and we would appreciate you processing this for prompt payment.

Yours faithfully
GOLDER ASSOCIATES PTY LTD

CTPI 49-Sch4

CTPI 49-Sch4 BSc(EnvScience) MEIANZ
Environmental Scientist

Attachments : Reports x 1 Copy (1 bound)
Invoice

J:\2007\Environmental\077683504\00_CORRESPONDENCE\OUT\AK077683504cl.doc
JM/mf





ENVIRONMENTAL PROTECTION AGENCY
160 ANN ST, BRISBANE
PO Box 15155
CITY EAST, QLD, 4002
ABN: 87221158786

Tax Invoice/ Receipt

Tax Invoice Number: 1400005280

Receipt Number: 1400005280

Tax Invoice Date: 29/11/2007

Date Printed: 29/11/2007

Purchaser:

RADWAY PTY LTD
UNKNOWN
UNKNOWN QLD 9999

Contact Details

Contact: Marianna Tarros
Phone: 32276162
Fax: 32245300
Email: Marianna.Tarros@csq.qld.gov.au



Payment Information		
Additional Identifier:	Head Office - CSQ	BSB Number: 084004
Payment Mode:	Cheque	
Cheque/Money Order Number:	000007	
Drawer/Card Name/Money Order No.:	RADWAY PTY LTD	

Details

Supply Date	Account	Item	Company	Total amount Payable excluding GST	GST Amount Payable	Total Amount Payable including GST
29/11/2007	433019	433019 9091050 CONTAMINATED SITE	1401	\$1,000.00	\$0.00	\$1,000.00
TOTAL				\$1,000.00	\$0.00	\$1,000.00

Total Amount Payable excluding GST \$ 1,000.00

GST Amount Payable \$ 0.00

Total Amount Payable including GST \$ 1,000.00

Payment Received

TOTAL PAID includes GST	\$ 1,000.00
Net Amount Due	\$ 0.00

If you require any further information regarding this tax invoice/receipt, please refer to the contact details above.

PRIVACY STATEMENT

The Queensland Government is committed to protecting your privacy. Your personal details will be securely stored on a Queensland Government database which will only be accessible by authorised persons of government agencies where the disclosure is necessary to fulfil statutory, administrative or other public responsibilities. The personal information will only be used for the purpose for which you provide it and will not be given to another person or body without your consent, or unless required by law. Details of the Queensland Government Privacy Scheme can be accessed through <http://www.justice.qld.gov.au/dept/privacy.htm>.

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STATUTORY DECLARATION - Applicant

Address of Site Investigated: Lot 2 on SP136512, Drury Lane, Dundowran, Queensland

Real Property Description: Lot 2 on SP136512

Title of Report: **Stage 1 Preliminary Site Investigation, Lot 2 on SP136512, Drury Lane, Dundowran, Queensland**
Golder Associates Report 077683504(AI), November 2007.

Stage 2 Detailed Site Investigation, Lot 2 on SP136512, Drury Lane, Dundowran, Queensland
Golder Associates Report 077683504(AG), November 2007.

I, CTPI 49-Sch4 Associates Pty Ltd, in the State of Queensland, do

solemnly and sincerely declare that;

- I have not knowingly given any false or misleading information to the investigator and validation report preparer of the report described above;
- I have given all relevant information to the investigator and validation report preparer.

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1867*

Signature

Name

Taken and Declared before me at 3:00 on this 23 day of January 2008.

Witness (~~Justice of the Peace~~/Commissioner for Declarations)

Signature

Name (&JP number if applicable) Barbara Ammins



STATUTORY DECLARATION - Applicant

Address of Site Investigated: Lot 11 on RP909375, Drury Lane, Dundowran, Queensland

Real Property Description: Lot 11 on RP909375

Title of Report: Stage 1 Preliminary Site Investigation, Lot 11 on RP909375,
Drury Lane, Dundowran, Queensland
Golder Associates Report 077683505(AA), August 2007.

Stage 2 Detailed Site Investigation, Lot 11 on RP909375,
Drury Lane, Dundowran, Queensland
Golder Associates Report 077683505(AG), November 2007.

I, CTPI 49-Sch4 Associates Pty Ltd, in the State of Queensland, do

solemnly and sincerely declare that;

- I have not knowingly given any false or misleading information to the investigator and validation report preparer of the report described above;
- I have given all relevant information to the investigator and validation report preparer.

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1867*

Signature

Name

Taken and Declared before me at 3:00pm this 23 day of January, 2008...

Witness (Justice of the Peace/Commissioner for Declarations)

Signature

Name (&JP number if applicable) Barbara Cummins



**STATUTORY DECLARATION
(INVESTIGATOR)**

Address of Site Investigated: Lot 2 on SP136512, Drury Lane, Dundowran, Queensland

Real Property Description: Lot 2 on SP136512

Title of Report: *Stage 1 Preliminary Site Investigation, Lot 2 on SP136512, Drury Lane, Dundowran, Queensland*
Golder Associates Report 077683504(AI), November 2007.

Stage 2 Detailed Site Investigation, Lot 2 on SP136512, Drury Lane, Dundowran, Queensland
Golder Associates Report 077683504(AG), November 2007.

I [CTPI 49-Sch4] of Golder Associates, 216 Draper Street, Cairns, in the State of Queensland, do solemnly and sincerely declare that;

- I was the investigator and preparer of the report described above;
- I am a chartered member of Institute of Engineers Australia and my qualifications and experience have previously been submitted to the Department of Environment in a submission dated 31 July 1998, reference P983299;
- I have not knowingly included any false, misleading or incomplete information in the report;
- I have not knowingly failed to reveal any relevant information or document to the administering authority; and

I certify that:

- The report addressed the relevant matters for the investigation and is factually correct; and
- The opinions expressed in it are honestly and reasonably held.

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1867*

Signature [CTPI 49-Sch4]

Name [CTPI 49-Sch4]

Taken and Declared before me at CAIRNS this 19th day of NOVEMBER 2007

Witness (Justice of the Peace/Commissioner for Declarations)

Name [CTPI 49-Sch4]
[CTPI 49-Sch4] MICHAEL RAE MANKIELD





**Queensland
Government**
Environmental
Protection Agency

Contaminated Sites Section
Environmental Protection Agency
GPO Box 2771
BRISBANE
QLD 4001

PO Box 34
Glenford
Q 4210

Application for Assessment of a Site Investigation Report

Please note: Failure to lodge all required information can result in your application being rejected and returned to you for completion and resubmission.

Complete both sides of this document (attach a separate sheet if more space required)

1. Applicant details

(This is the person to whom the suitability statement will be sent and to whom all enquiries will be directed)

Contact Name CTPI 49-Sch4

Telephone 5443 3511

Company Name (if applicable) Golder Associates

Postal Address PO Box 5569
Maroochydore Qld Postcode 4558

2. Lodgement details

(Complete this section only if form not lodged by applicant)

Contact Name CTPI 49-Sch4

Telephone 4128 4941

Company Name (if applicable) Bay Survey Consultants

Postal Address PO Box 5129
Torquay Qld Postcode 4655

3. Site owner's details

(Agent's address not acceptable)

Full Name Roadway Pty Ltd

Address 4 Helensvale Road
Helensvale Qld Postcode 4212

4. Site details

Name of local government Hervey Bay City Council

Suburb / Town / City Dundoon, Hervey Bay

Postcode 4655

Notifiable activity / possible contaminating activity

Notifiable Activity No 20
Landfilling - Disposing of Waste

Intended use of the site

Industrial Subdivision

5. Location and landuse details of each parcel covered by the site investigation report

Street No.	Street name	Lot on Plan description	Current landuse	Proposed landuse
	<u>Drury Lane</u>	<u>lot 2 on SP136512</u>	<u>Vacant</u>	<u>Industrial</u>

Application for Assessment of Site Investigation Report

Your application for a suitability statement for the property at

was accepted by the Queensland Environmental Protection Agency / /.

Your file number is and should be quoted on all further correspondence regarding this site.

Your cheque for \$ has been received and processed under receipt number

PO Box 5569
Maroochydore Qld 4558

Mailing address to be inserted
here by applicant.

6. Details of report

Is a development application pending under the *Integrated Planning Act 1997*?

☐ Yes ☒ No

The attached report contains (as per *Guidelines for the Assessment and Management of Contaminated Land in Queensland*)-

☒ Stage 1 investigation
☒ Stage 2 investigation
☐ Stage 3 investigation

If previous submissions have been made quote:

EPA File No.

Is a response required from EPA at this time or is further information following?

☒ Response required
☐ Further information following

Checklist — tick each box when complete

- ☒ Completed items 1-6 and written name and address in return slip (you must answer each item).
- ☒ Enclosed statutory fee.
- ☒ Enclosed signed consultant's report (as per *Guidelines for the Assessment and Management of Contaminated Land in Queensland*).
- ☒ Enclosed legible copy/copies of proof of ownership of site/s clearly showing the full name/s of the registered proprietor/s e.g. current Certificates of Title or Title Search/es. (Order in Council (Crown Land) and Form 100 (Change of Ownership Notification) may be accepted if the above are not available).
- ☒ Enclosed legible copy/copies of all relevant registered plans (available from the Titles Section, Department of Natural Resources) clearly showing location of the site/s and current registered plan details.
- ☒ Enclosed copy of a street map/area map clearly showing location of property.

TOTAL P.05

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**Queensland
Government**
Environmental
Protection Agency

Contaminated Sites Section
Environmental Protection Agency
GPO Box 2771
BRISBANE
QLD 4001

Application for Assessment of a Site Investigation Report

Please note: Failure to lodge all required information can result in your application being rejected and returned to you for completion and resubmission.

Complete both sides of this document (attach a separate sheet if more space required)

1. Applicant details

(This is the person to whom the suitability statement will be sent and to whom all enquiries will be directed)

Contact Name CTPI 49-Sch4

Telephone 5443 3511

Company Name (if applicable) Goldier Associates

Postal Address Po Box 5569

Maroochydore Qld Postcode 4558

2. Lodgement details

(Complete this section only if form not lodged by applicant)

Contact Name CTPI 49-Sch4

Telephone 4128 4941

Company Name Bay Survey Consultants

(if applicable) Po Box 5129

Postal Address Torquay Qld Postcode 4655

3. Site owner's details

(Agent's address not acceptable)

Full Name AHC Limited Radway

Address 4 Helensvale Rd

Helensvale Qld Postcode 4212

4. Site details

Name of local government Hervey Bay City Council

Suburb / Town / City Dundowran, Hervey Bay

Postcode 4655

Notifiable activity / possible contaminating activity

Notifiable Activity No 20
landfilling - disposing of waste

Intended use of the site

Industrial Subdivision

5. Location and landuse details of each parcel covered by the site investigation report

Street No.	Street name	Lot on Plan description	Current landuse	Proposed landuse
	<u>Drury Lane</u>	<u>Lot 2 on SP136512</u>	<u>Vacant</u>	<u>Industrial</u>

CONTAMINATED
LAND SECTION

11 DEC 2007

Application for Assessment of Site Investigation Report

Your application for a suitability statement for the property at

was accepted by the Queensland Environmental Protection Agency / / .

Your file number is and should be quoted on all further correspondence regarding this site.

Your cheque for \$ has been received and processed under receipt number

Po Box 5569
Maroochydore Qld 4558

Mailing address to be inserted
here by applicant.

6. Details of report

Is a development application pending under the *Integrated Planning Act 1997*?

☐ Yes ☒ No

The attached report contains (as per *Guidelines for the Assessment and Management of Contaminated Land in Queensland*)-

☒ Stage 1 investigation

☒ Stage 2 investigation

☐ Stage 3 investigation

If previous submissions have been made quote:

EPA File No.

Is a response required from EPA at this time or is further information following?

☒ Response required

☐ Further information following

Checklist — tick each box when complete

☒ Completed items 1-6 and written name and address in return slip (*you must answer each item*).

☒ Enclosed statutory fee.

☒ Enclosed signed consultant's report (as per *Guidelines for the Assessment and Management of Contaminated Land in Queensland*).

☒ Enclosed legible copy/copies of proof of ownership of site/s clearly showing the full name/s of the registered proprietor/s e.g. current Certificates of Title or Title Search/es. (Order in Council (Crown Land) and Form 100 (Change of Ownership Notification) may be accepted if the above are not available).

☒ Enclosed legible copy/copies of all relevant registered plans (available from the Titles Section, Department of Natural Resources) clearly showing location of the site/s and current registered plan details.

☒ Enclosed copy of a street map/area map clearly showing location of property.

Released

Golder Associates Pty Ltd

A.B.N. 64 006 107 857

Unit 1, Dalton Centre, Newspaper Place
Maroochydore, Qld 4558 Australia
(PO Box 5569, Maroochydore BC, Qld 4558 Australia)
Telephone +61-7 5443 3511
Fax +61-7 5443 6645
www.golder.com



REPORT ON

STAGE 2 DETAILED SITE INVESTIGATION

LOT 2 SP136512

DRURY LANE

DUNDOWRAN, QUEENSLAND

Submitted to:

Radway Pty Ltd
C/- Cardno (Qld) Pty Ltd
PO Box 359
HERVEY BAY QLD 4655

DISTRIBUTION:

- 3 Copies - Cardno (Qld) Pty Ltd (2 bound, 1 CD)
- 1 Copy - Golder Associates Pty Ltd

November 2007



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EXECUTIVE SUMMARY

In July 2007, Radway Pty Ltd commissioned Golder Associates Pty Ltd (Golder) to carry out a Stage 2 Detailed Site Investigation (contamination) of Lot 2 on SP136512 Drury Lane (the site), Dundowran, Queensland (refer Figure 1). It is understood that Radway Pty Ltd have submitted a Development Application to redevelop this site as an industrial subdivision.

Based upon the findings of the Stage 2 Detailed Site Investigation, the following conclusions are provided:

- Demolition wastes including concrete, steel, bitumen, bricks, wire, gravel and plastic were observed within the uncontrolled fill. It should be noted that concrete pieces were greater than 300 mm and as a result do not meet the EPA "Inert Waste" Criteria. There was no evidence of sheeting fragments within the areas of fill. Limited testing of the uncontrolled fill confirmed the presence of some metals (arsenic, chromium, nickel, and zinc) impacted soils at concentrations exceeding environmental assessment criteria. Whilst no metals concentrations exceeded health based assessment criteria for commercial/industrial land use, concentrations of arsenic and chromium were detected exceeding the health based assessment criteria for more sensitive land use (residential). The arsenic and chromium impacted areas encountered within the uncontrolled fill area constitute a hazardous contaminant which would either need to be disposed to landfill (under an appropriate permit) or managed under an approved Site Management Plan to enable future commercial or industrial use on this site.
- Analysis of groundwater samples from across the site did not detect concentrations of potential contaminants that would represent an environmental risk. These results suggest a relatively low risk of major contamination within the groundwater below the uncontrolled fill area and disturbed natural ground area.

On the basis of the Stage 1 and Stage 2 findings, the site is considered to be suitable for future commercial/industrial land use providing that a Site Management Plan is prepared for the management of the uncontrolled fill across the site. Management measures need to be considered for concrete pieces greater than 300 mm (i.e. waste materials other than those defined by the EPA "Inert Waste" Criteria) and to prevent removal of uncontrolled fill with contaminant concentrations exceeding HIL-A criteria.

The following actions are recommended to support the development application for future commercial/industrial use of this site:

- A Draft Site Management Plan (SMP) be developed outlining requirements to manage identified contaminants under future industrial land use.
- Submit the investigation reports and draft SMP to the EPA with the request to approve the SMP/RAP and issue a suitability statement for the site.

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1.0 INTRODUCTION

In July 2007, Radway Pty Ltd commissioned Golder Associates Pty Ltd (Golder) to carry out a Stage 2 Detailed Site Investigation (contamination) of Lot 2 on SP136512 Drury Lane (the site), Dundowran, Queensland (refer Figure 1). It is understood that Radway Pty Ltd have submitted a Development Application to redevelop this site as an industrial subdivision.

The Stage 2 Detailed Investigation was undertaken on the basis of the findings of an initial Stage 1 Preliminary Site Investigation (PSI) prepared by Golder Associates Pty Ltd (REF: 077683504AI, dated November 2007). The Stage 1 PSI report should be read in conjunction with this report. The Stage 1 PSI identified the need for further investigation of the following issues to confirm the suitability of the site for the intended use and to allow development of a Site Management Plan to support the Development Application:

- Undertaking additional investigation to assess the extents of uncontrolled fill across Lot 2.
- Undertaking a laboratory testing program on collected soil samples to assess the presence or absence of contamination within the uncontrolled fill across Lot 2.
- Undertaking a groundwater investigation to evaluate the groundwater regime and water quality underlying Lot 2.
- Production of a technical report outlining the findings of the above investigations together with conclusions and recommendations regarding options for the remediation and/or management of any identified contaminants.

This Detailed Stage 2 Site Investigation Report was prepared in general accordance with the *Draft Guidelines for Assessment and Management of Contaminated Land in Queensland*, EPA, May 1998 (Reference 1).

2.0 FIELD INVESTIGATION

2.1 General

Fieldwork was undertaken on 17 July 2007 and 18 July 2007 by an appropriately experienced environmental scientist under the direction of an EPA approved environmental land practitioner (Paul Scells). The fieldwork comprised:

- Uncontrolled Fill Investigation – Excavating 60 investigation locations (S1 to S60) within the uncontrolled fill across the site using a 20t excavator to depths of up to 6 m.
- Collection of representative soil samples at surface (0.0-0.1 m), 1.0 m, 2.0 m, and every metre thereafter to the depth of each test pit.

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- Installation of three groundwater monitoring wells BH1 to BH3 to a depth of 6 m on 2 August 2007. These groundwater wells were installed for the geotechnical investigation, however they were later sampled as part of the Stage 2 Investigation. The monitoring wells were developed by Golder Associates prior to collection and sampling. A copy of the well construction details are provided in Appendix A. Purging and collection of groundwater samples from BH1 to BH3 on 2 August 2007.
- The monitoring wells were located within the uncontrolled fill area to target the shallow aquifer. The wells were constructed using Class 18 machine threaded, 50 mm ID UPVC standpipe casing fitted with factory-slotted, 0.4 mm aperture, screened sections. The bore annulus surrounding the screened interval was filled with a washed, graded sand filter pack. The annulus above this filter pack was sealed with a 500 mm bentonite pellet/powder layer and grouted to surface.

Table 1 summarises the soil and water samples collected during the Stage 2 Investigation. The investigation locations are shown on Figure 2. Records of subsurface conditions intersected in each test pit are presented in Appendix A.

During the field investigation a number of duplicate samples were taken. (Separate samples being labelled with the same designation). Table 13 identifies the duplicate samples, with samples taken given a prefix of Q to distinguish these from original samples (i.e., Sample S10 0.1 became S14 Q). All duplicates sampled were taken from the surface (0.1 m).

2.2 Sampling and Handling Procedures

Soil samples were collected by experienced personnel in accordance with standard procedures documented in Golder Associates Technical Procedures. These procedures generally include decontamination, sample handling, sample storage and chain of custody documentation. A brief outline of key procedures is provided below:

- All equipment used in the sampling process was decontaminated on arrival at site and prior to collection of each sample. Decontamination included the scrubbing and washing of equipment with a biodegradable phosphate free detergent, followed by washing in potable water and then rinsing with de-ionised water.
- Sample containers appropriate for the analysis proposed were supplied by the testing laboratories. Where required, appropriate preservatives were placed in containers by the laboratory prior to shipment to Golder Associates. Sample containers were marked with a unique sample number, the sample location, the sample depth, date and Golder Associates' project number.
- Monitoring wells were purged using disposable plastic bailers to remove a minimum of 3 well volumes or until clear discharge and stable field readings were obtained. Groundwater samples were collected following purging of the bore using a plastic disposable bailer.

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- All samples were placed on ice in an esky and transported to the laboratory.
- Chain of custody and analysis request forms were completed and sent with soil samples to the testing laboratory.
- Nitrite gloves were worn at all times and sampling procedures used were aimed at preventing cross-contamination of samples.

3.0 LABORATORY ANALYSIS

All samples were forwarded to Australian Laboratory Services (ALS), a National Association of Testing Authority (NATA) accredited laboratory. All 216 soil samples were selected for analysis. All samples were extracted and analysed within the relevant maximum sample handling times (REF: Australian Standard AS 4482.1-2005).

Analysis of parameters within the uncontrolled fill area included heavy metals (arsenic, cadmium, chromium, copper, nickel, lead, zinc, and mercury), total petroleum hydrocarbons (TPH), benzene toluene ethylbenzene, and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAH), and organochlorine and organophosphorus pesticides testing. Fourteen soil samples were also examined for asbestos due to the presence of building rubble.

All groundwater samples were submitted for analysis of heavy metals (arsenic, cadmium, chromium, copper, nickel, lead, zinc, and mercury) total petroleum hydrocarbons (TPH), benzene toluene ethylbenzene, and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAH), and organochlorine and organophosphorus pesticides.

The selected samples, analysis program and extraction times are summarised in Tables 1.

Copies of the Chain of Custody forms and laboratory analysis certificates are presented in Appendix D. Laboratory results obtained for each analysed soil sample and groundwater sample are summarised in Tables 2 to 12. Blind duplicate soil sample results are summarised in Table 13.

3.1 QA/QC results

The results of blind duplicate samples and testing have been assessed in terms of Relative Percent Difference (RPD). Seven of the ^{eight} duplicate set RPD's were within the acceptable range of 0% and 50%. The duplicate sets exceeding an RPD of 50% comprised:

- S10 RPD value of 86%. This type of variation is not uncommon at the low concentrations detected and is considered to be associated with sample heterogeneity rather than sampling error.
- S29 RPD value of 153%. This type of variation is not uncommon at the low concentrations detected and is considered to be associated with sample heterogeneity rather than sampling error.

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- S45 RPD value of 113%. This type of variation is not uncommon at the low concentrations detected and is considered to be associated with sample heterogeneity rather than sampling error.
- S48 RPD value of 129%. This type of variation is not uncommon at the low concentrations detected and is considered to be associated with sample heterogeneity rather than sampling error.
- S56 RPD value of 120%. This type of variation is not uncommon at the low concentrations detected and is considered to be associated with sample heterogeneity rather than sampling error.
- S60 RPD value of 158%. This type of variation is not uncommon at the low concentrations detected and is considered to be associated with sample heterogeneity rather than sampling error.

Internal QA/QC RPD assessment by the laboratory was acceptable.

Given the above, the laboratory testing results are considered to be representative and acceptable.

4.0 ADOPTED ASSESSMENT CRITERIA

4.1 Soil Assessment Criteria

Contaminated land in Queensland is managed on a risk based approach assessed on suitability for a specified end land-use. Under this risk-based process, the potential risk to the environment and human health need to be assessed.

To evaluate the level of risk, the results of chemical analyses on soil samples collected during the field investigation were compared with published criteria. The criteria used in this report are presented in the *Draft Guidelines for Assessment and Management of Contaminated Land in Queensland*, May 1998.

Contaminant concentrations below Queensland Environmental Investigation Threshold Levels (EIL) are generally accepted as indicating negligible potential of environmental impact. Contaminant concentrations above these EIL indicate that impacted soils may need to be removed or a site specific assessment of their environmental impact is required.

Contaminant concentrations that exceed Health Based Investigation Threshold Levels (HIL) may represent a threat to human health and require specific assessment of risk. For this site the "HIL-A" ("Standard" Residential land use) and the "HIL-F" "Industrial/Commercial" land use exposure setting has been selected for comparison purposes. Where contaminant concentrations are below HIL guidelines the risk to human health is considered to be negligible. Where contaminant concentrations exceed the HIL, they may represent a risk to human health and soil removal, management or a more specific assessment of risk may be required.

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The adopted soil assessment guidelines are summarised along with results in Tables 2 to 7.

4.2 Groundwater Assessment Criteria

Field tests on groundwater has identified that it is slightly acidic and is of very low yield (all wells were bailed dry during purging). Due to the low yield the groundwater is not considered a viable source of drinking or irrigation water (assessment against human health criteria is not warranted). Its potential beneficial use is considered to be restricted to environmental /ecosystem protection.

No specific criteria or guidelines have been published in Queensland or Australia for the assessment of TPH contamination in groundwater. In the absence of State or National guidelines, criteria and intervention values for hydrocarbons contained in Dutch Guidelines have been adopted for an initial assessment of environmental risk from TPH. TPH concentrations exceeding these guideline criteria may represent a threat to the environment and require specific assessment of risk.

For initial environmental assessment of remaining contaminants of concern, the Trigger Values for 95% level of protection for Freshwater Ecosystems presented in Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (Reference 5) have been adopted for this site. Comparison of groundwater quality against these surface water criteria requires some caution as factors such as advection, absorption and dilution may need to be considered before the groundwater discharges into the environment.

The adopted groundwater assessment guidelines are summarised along with results in Tables 8 to 12.

5.0 DISCUSSION OF RESULTS

5.1 UNCONTROLLED FILL

The subsurface conditions encountered within the uncontrolled fill comprised sandy clay fill containing approximately 40% concrete, steel, wood, bitumen, bricks, gravel, wire, and plastic to depths of approximately 6.0 m (the maximum depth of investigation within the uncontrolled fill). It should be noted that concrete pieces were greater than 300 mm in diameter. There was no evidence of sheeting fragments within the areas of fill.

The location of soils samples from the Stage 2 Investigation along with depths of uncontrolled fill are shown on Figures 2 and 3.

Soil samples S23 0.1m, S36 2m, S47 5m, and S55 2m revealed concentrations of arsenic (26mg/kg, 26mg/kg, 35mg/kg, and 25mg/kg respectively) exceeding the environmental assessment criterion but well below the health based assessment criterion. The concentrations detected were well below the NEPM hotspot criterion of 2.5 times the (environmental)

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assessment criterion and therefore these soil samples are not considered to represent a significant environmental risk.

An arsenic concentration of 111 mg/kg was detected in soil sample S57 0.1m. This concentration exceeds the environmental assessment criteria and the HIL-A criterion but well below HIL-F criterion. The arsenic concentration was greater than the NEPM hotspot criterion (2.5 times the environmental assessment criterion). However, tests on samples from below this sample location revealed arsenic concentrations below environmental assessment criteria. Statistical analyses was also undertaken on the arsenic concentrations detected in the uncontrolled fill. This indicates that the volume of soil represented by S30 2m is small. The 95% upper confidence limit (Refer Table 3) for arsenic in the uncontrolled fill was below the environmental assessment criterion indicating low environmental risk. This concentration indicates the presence of contamination within the uncontrolled fill which would need to be managed but represents a low level of risk for future commercial/industrial site users.

Soil sample S57 0.1m revealed a concentration of chromium (86mg/kg) exceeding the environmental assessment criterion but well below the health based assessment criteria. The concentration detected was well below the NEPM hotspot criterion of 2.5 times the (environmental) assessment criterion and therefore this soil sample is not considered to represent a significant environmental risk.

A Chromium concentration of 182 mg/kg was detected in soil sample S30 2m. This concentration exceeds the environmental assessment criteria and the HIL-A criterion but well below HIL-F criterion. The concentration was greater than the NEPM hotspot criterion. However, tests on samples from above and below this sample location have revealed chromium concentrations below environmental assessment criteria. This indicates that the volume of soil represented by S30 2m is small. Statistical analyses was also undertaken on the chromium concentrations detected in the uncontrolled fill. The 95% upper confidence limit (Refer Table 3) was below the environmental assessment criterion indicating low environmental risk. This concentration indicates the presence of contamination within the uncontrolled fill which would need to be managed but represents a low level of risk for future commercial/industrial site users.

Soil samples S32 2m and S46 0.1m revealed concentrations of nickel (83mg/kg and 60mg/kg respectively) exceeding the environmental assessment criterion but well below the health based assessment criteria. The concentrations detected were well below the NEPM hotspot criterion of 2.5 times the (environmental) assessment criterion and therefore these soil samples are not considered to represent a significant environmental risk.

Soil samples S57 1m and S57 2m revealed concentrations of zinc (876mg/kg and 771mg/kg respectively) exceeding the environmental assessment criterion but well below the health based assessment criteria. The concentrations detected were well below the NEPM hotspot criterion of 2.5 times the (environmental) assessment criterion and therefore these soil samples are not considered to represent a significant environmental risk.

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A zinc concentration of 1060 mg/kg was detected in soil sample S58 0.1m. This concentration exceeds the environmental assessment criteria but is below the health assessment criteria. The concentration was greater than the NEPM hotspot criterion. However, tests on samples from below this sample location have revealed zinc concentrations below environmental assessment criteria. This indicates that the volume of soil represented by S58 0.1m is small. Statistical analyses was also undertaken on the zinc concentrations detected in the uncontrolled fill. The 95% upper confidence limit (Refer Table 3) was below the environmental assessment criterion indicating low environmental risk.

Metals concentrations in remaining soil samples were below the environmental assessment criteria

TPH, BTEX, PAH, and organochlorine and organophosphorus pesticides concentrations in all soil samples analysed for these parameters were generally below the laboratory limits of reporting and all were below the adopted human health and environmental assessment criteria.

No asbestos was detected in the soil samples.

5.2 GROUNDWATER

Groundwater was encountered within monitoring wells BH1 to BH3 at depths of between 0.7 m and 3.7 m below ground surface. Measured relative levels between the monitoring wells indicate the direction of groundwater flow to be predominately to the east following the gradient of the land.

Field results indicated moderately acidic waters at all borehole locations ranging from pH 5.2 to pH 5.6). Electrical Conductivity ranged between 0.56 mS/cm and 0.77 mS/cm, which indicate freshwater conditions. No free phase product, sheens, discolouration or odours (that may indicate the presence of possible contamination) were observed within the groundwater. Groundwater field sheets are presented in Appendix A.

Groundwater samples collected from BH1, BH2, and BH3 on 2 August 2007 were analysed for arsenic, cadmium, chromium, copper, nickel, lead, zinc, mercury, TPH, BTEX, PAH, and organochlorine and organophosphorus pesticides. Additional groundwater samples were collected on 7 November 2007 and were analysed for TPH and BTEX.

Water sample collected from BH1 on 2 August 2007 revealed concentrations of TPH (C₁₀-C₁₄ 0.250mg/L, C₁₅-C₂₈ 0.6 mg/L, and C₂₉-C₃₆ 0.39mg/L respectively) exceeding the environmental assessment criterion. Water sample collected from BH3 on 2 August 2007 revealed concentrations of TPH (C₁₀-C₁₄ 0.50mg/L, C₁₅-C₂₈ 1.0 mg/L, and C₂₉-C₃₆ 0.5mg/L respectively) exceeding the environmental assessment criterion.

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The presence of hydrocarbons in the groundwater was unexpected given the absence of detection in the soil samples analysed and the absence of sheens or odours. As the wells were originally constructed as part of a geotechnical investigation, it is possible that they were not fully developed at the time of installation and that residues of grease and oils from the drilling equipment were causing the TPH detections. To provide additional information, the wells were redeveloped on 7 November 2007 and later re-sampled. The concentrations of TPH detected in BH1 and BH3 in this second round of samples were below the environmental assessment criterion. These results confirm that the initial sample results are erroneous and that there is low environmental risk associated with TPH in the groundwater.

Water samples collected from BH1 and BH2 revealed concentrations of copper (0.003mg/L and 0.002mg/L respectively) exceeding the environmental assessment criterion. Given the absence of copper impact detected in soil samples of uncontrolled fills, these concentrations in groundwater are not considered to represent a risk to the environment.

Water samples collected from BH1, BH2 and BH3 revealed concentrations of Zinc (0.02mg/L, 0.01mg/L and 0.019mg/L respectively) exceeding the environmental assessment criterion. Given the absence of significant zinc impact detected in soil samples of uncontrolled fills, these concentrations in groundwater are not considered to represent a risk to the environment.

Water samples collected from BH1, BH2, and BH3 revealed concentrations of organochlorine and organophosphorus pesticides below the laboratory limit of reporting. However, these concentrations were above all adopted environmental assessment criteria. Given the lack of organochlorine and organophosphorus pesticides detection in the soil samples, the risk of organochlorine or organophosphorus pesticides impact to groundwater is considered to be low.

Arsenic, cadmium, chromium, nickel, lead, mercury, BTEX, and PAH concentrations in all samples analysed for these parameters were generally below the laboratory limits of reporting and all were below the adopted environmental assessment criteria.

6.0 CONCLUSIONS

Based upon the findings of the Stage 2 Detailed Site Investigation, the following conclusions are provided:

- Demolition wastes including concrete, steel, bitumen, bricks, wire, gravel and plastic were observed within the uncontrolled fill. It should be noted that concrete pieces were greater than 300 mm and as a result do not meet the EPA "Inert Waste" Criteria. There was no evidence of sheeting fragments within the areas of fill. Limited testing of the uncontrolled fill confirmed the presence of some metals (arsenic, chromium, nickel, and zinc) impacted soils at concentrations exceeding environmental assessment criteria. Whilst no metals concentrations exceeded health based assessment criteria for commercial/industrial land use, concentrations of arsenic and chromium were detected

exceeding the health based assessment criteria for more sensitive land use (residential).

The arsenic and chromium impacted areas encountered within the uncontrolled fill area constitute a hazardous contaminant which would either need to be disposed to landfill (under an appropriate permit) or managed under an approved Site Management Plan to enable future commercial or industrial use on this site.

- Analysis of groundwater samples from across the site did not detect concentrations of potential contaminants that would represent an environmental risk. These results suggest a relatively low risk of major contamination within the groundwater below the uncontrolled fill area and disturbed natural ground area.

On the basis of the Stage 1 and Stage 2 findings, the site is considered to be suitable for future commercial/industrial land use providing that a Site Management Plan is prepared for the management of the uncontrolled fill across the site. Management measures need to be considered for concrete pieces greater than 300 mm (ie. waste materials other than those defined by the EPA "Inert Waste" Criteria) and to prevent removal of uncontrolled fill with contaminant concentrations exceeding HIL-A criteria.

7.0 RECOMMENDATIONS

The following actions are recommended to support the development application for future commercial/industrial use of this site:

- A Draft Site Management Plan (SMP) be developed outlining requirements to manage identified contaminants under future industrial land use.
- Submit the investigation reports and draft SMP to the EPA with the request to approve the SMP/RAP and issue a suitability statement for the site.

8.0 LIMITATIONS OF THIS REPORT

This report has been prepared in accordance with the agreement between Radway Pty Ltd, and Golder Associates Pty Ltd (Golder Associates). The services performed by Golder Associates have been conducted in a manner consistent with the level of quality and skill generally exercised by members of its profession and consulting practice. No warranty or guarantee of site conditions is intended.

This report is solely for the use of Radway Pty Ltd, Cardno (Qld) Pty Ltd and the EPA. Any reliance of this report by third parties shall be at such party's sole risk and may not contain sufficient information for purposes of other parties or for other uses. This report shall only be presented in full and may not be used to support any other objective than those set out in the report, except where written approval with comments are provided by Golder Associates.

The information in this report is considered to be accurate at the date of issue in accordance to the current conditions of the site. Subsurface conditions can vary across a particular site

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which cannot be explicitly defined by investigation. Therefore, it is unlikely that the results and estimations expressed in this report will represent the extremes of conditions within the site. Subsurface conditions including contaminant concentrations can change in a limited period of time. This should be considered if the report is used after a significant delay in time.

Attached as Appendix D is a document entitled "Important Information About Your Environmental Site Assessment" which should be read in conjunction with this report. We would be pleased to answer any questions about this important information.

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9.0 REFERENCES

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Published on DES Disclosure Log
RTI Act 2009

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TABLE 1
ANALYSIS PROGRAM AND TIME FRAME
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Media	Sample Number	Sample Depth (m)	Sampling Date (1)	Laboratory Submission Date	Date of Laboratory Extraction (2)	Analysis	Approx. Holding Time (2)-(1) days	Lowest "Maximum Sample Holding Time" (days)
Uncontrolled Fill	Soil	S1	0.1	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, Asbestos	10	14
	Soil	S1	1	17/07/2007	20/07/2007	23/08/2007	Metals, Asbestos	37	180
	Soil	S1	2	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S2	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S2	1	17/07/2007	20/07/2007	23/08/2007	Metals, Asbestos	37	180
	Soil	S2	2	17/07/2007	20/07/2007	23/08/2007	Metals, Asbestos	37	180
	Soil	S2	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S3	0.1	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S3	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S3	2	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S4	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S4	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S4	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S4	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S5	0.1	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S5	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S5	2	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S5	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S6	0.1	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S6	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S7	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S7	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S7	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S7	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S8	0.1	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S8	1	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S8	2	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S9	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S9	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S9	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S10	0.1	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S10	1	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S10	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S11	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S11	1	17/07/2007	20/07/2007	23/08/2007	Metals, Asbestos	37	180
	Soil	S11	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S12	0.1	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S12	1	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S13	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S13	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S13	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S13	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S15	0.1	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S15	1	17/07/2007	24/07/2007	27/07/2007	Metals, Asbestos	10	14
	Soil	S15	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S16	0.1	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S16	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S16	2	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S16	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S17	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S17	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S17	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S18	0.1	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S18	1	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S19	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S19	1	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S20	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S20	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S20	2	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S20	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S21	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S21	1	17/07/2007	20/07/2007	23/08/2007	Metals, Asbestos	37	180
	Soil	S21	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S22	0.1	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S22	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S22	2	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S22	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S23	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S23	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S24	0.1	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S24	1	17/07/2007	24/07/2007	27/07/2007	Metals	10	14
	Soil	S25	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S25	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S25	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S25	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180

Note:

OP = Organophosphorus Pesticides

OC = Organochlorine Pesticides

Metals = Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Zinc, and Mercury

TPH = Total Petroleum Hydrocarbons

BTEX = Benzene, Toluene, Ethylbenzene, and p-xylene

PAH = Polynuclear Aromatic Hydrocarbons

Client

Job Title

Address

Radway Pty Ltd

Stage 2 Investigation

Lot 2, Drury Lane, Dundowan



Release

TABLE 1 con.
ANALYSIS PROGRAM AND TIME FRAME
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Media	Sample Number	Sample Depth (m)	Sampling Date (1)	Laboratory Submission Date	Date of Laboratory Extraction (2)	Analysis	Approx. Holding Time (2)-(1) days	Lowest "Maximum Sample Holding Time" (days)
Uncontrolled Fill	Soil	S26	1	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S26	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S27	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S27	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S27	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S27	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S28	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S28	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S28	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S29	0.1	17/07/2007	24/07/2007	27/07/2007	Metals	10	180
	Soil	S29	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S29	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S29	3	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S29	Q	17/07/2007	24/07/2007	27/07/2007	Metals	10	180
	Soil	S30	0.1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S30	1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S30	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S31	0.1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S31	1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S31	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S32	0.1	18/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS	9	14
	Soil	S32	1	18/07/2007	24/07/2007	27/07/2007	Metals	9	180
	Soil	S32	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S33	0.1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S33	1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S33	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S33	3	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S35	0.1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S35	1	18/07/2007	24/07/2007	27/07/2007	Metals	9	180
	Soil	S35	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S35	3	18/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	9	14
	Soil	S35	4	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S36	0.1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S36	1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S36	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S36	3	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S36	4	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S37	0.1	18/07/2007	24/07/2007	27/07/2007	Metals	9	180
	Soil	S37	1	18/07/2007	20/07/2007	23/08/2007	Metals, Asbestos	36	180
	Soil	S37	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S37	3	18/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	9	14
	Soil	S37	4	18/07/2007	24/07/2007	27/07/2007	Metals	9	180
	Soil	S38	0.1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S38	1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S38	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S38	3	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S38	4	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S39	0.1	18/07/2007	24/07/2007	27/07/2007	Metals	9	180
	Soil	S39	1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S39	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S39	3	18/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	9	14
	Soil	S39	4	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S40	0.1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S40	1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S40	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S40	3	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S41	0.1	18/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	9	14
	Soil	S41	1	18/07/2007	24/07/2007	27/07/2007	Metals	9	180
	Soil	S41	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S42	0.1	18/07/2007	24/07/2007	27/07/2007	Metals	9	180
	Soil	S42	1	18/07/2007	20/07/2007	23/08/2007	Metals, Asbestos	36	180
	Soil	S42	2	18/07/2007	20/07/2007	23/08/2007	Metals, Asbestos	36	180
	Soil	S42	3	18/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	9	14
	Soil	S42	4	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S43	0.1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S43	1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S43	2	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S43	3	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S43	4	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S43	5	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S44	0.1	18/07/2007	24/07/2007	27/07/2007	Metals	9	180
	Soil	S44	1	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S44	2	18/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	9	14
	Soil	S44	3	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S44	4	18/07/2007	24/07/2007	27/07/2007	Metals	9	180
	Soil	S44	5	18/07/2007	20/07/2007	23/08/2007	Metals	36	180

Note:
 OP = Organophosphorus Pesticides
 OC = Organochlorine Pesticides
 Metals = Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Zinc, and Mercury
 TPH = Total Petroleum Hydrocarbons
 BTEX = Benzene, Toluene, Ethylbenzene, meta- & para-Xylene
 PAH = Polynuclear Aromatic Hydrocarbons

Client: Radway Pty Ltd
 Job Title: Stage 2 Investigation
 Address: Lot 2, Drury Lane, Dundowan



Release

TABLE 1 con.
ANALYSIS PROGRAM AND TIME FRAME
Lot 2 SP136512, Drury Lane Stage 2 Investigation

Test Location	Media	Sample Number	Sample Depth (m)	Sampling Date (1)	Laboratory Submission Date	Date of Laboratory Extraction (2)	Analysis	Approx. Holding Time (2)-(1) days	Lowest "Maximum Sample Holding Time" (days)
Uncontrolled Fill	Soil	S45	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S45	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S45	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S45	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S45	4	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S46	0.1	17/07/2007	24/07/2007	23/08/2007	Metals	37	180
	Soil	S46	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S46	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S46	3	17/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	10	14
	Soil	S46	4	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S46	5	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S47	0.1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S47	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S47	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S47	3	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S47	4	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S47	5	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S47	6	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S48	0.1	17/07/2007	24/07/2007	27/07/2007	Metals	10	180
	Soil	S48	1	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S48	2	17/07/2007	20/07/2007	23/08/2007	Metals	37	180
	Soil	S48	3	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S48	4	18/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	9	14
	Soil	S48	5	18/07/2007	20/07/2007	23/08/2007	Metals	36	180
	Soil	S49	0.1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S49	1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S49	2	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S49	3	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S49	4	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S50	0.1	20/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	7	14
	Soil	S50	1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S50	2	20/07/2007	24/07/2007	27/07/2007	Metals	7	180
	Soil	S50	3	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S51	0.1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S51	1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S51	2	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S51	3	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S51	4	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S52	0.1	20/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	7	14
	Soil	S52	1	20/07/2007	24/07/2007	27/07/2007	Metals	7	180
	Soil	S52	2	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S53	0.1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S53	1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S53	2	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S54	0.1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S54	1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S55	0.1	20/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS	7	14
	Soil	S55	1	20/07/2007	24/07/2007	27/07/2007	Metals	7	180
	Soil	S55	2	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S56	0.1	20/07/2007	24/07/2007	27/07/2007	Metals	7	180
	Soil	S56	2	20/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	7	14
	Soil	S56	3	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S57	0.1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S57	1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S57	2	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S57	3	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S58	0.1	20/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	7	14
	Soil	S58	1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S58	2	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S58	3	20/07/2007	24/07/2007	27/07/2007	Metals, OC/OPS, PAH, TPH/BTEX	7	14
	Soil	S58	4	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S59	0.1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S59	1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S59	2	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S60	0.1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S60	1	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S60	2	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
	Soil	S60	3	20/07/2007	20/07/2007	23/08/2007	Metals	34	180
Monitoring Well BH1	Water	BH1	-	2/08/2007	3/08/2007	6/08/2007	Metals, OC/OPS, PAH, TPH/BTEX	4	7
Monitoring Well BH2	Water	BH2	-	2/08/2007	3/08/2007	6/08/2007	Metals, OC/OPS, PAH, TPH/BTEX	4	7
Monitoring Well BH3	Water	BH3	-	2/08/2007	3/08/2007	6/08/2007	Metals, OC/OPS, PAH, TPH/BTEX	4	7
Monitoring Well BH1	Water	BH1	-	7/11/2007	8/11/2007	9/11/2007	TPH/BTEX	2	14
Monitoring Well BH2	Water	BH2	-	7/11/2007	8/11/2007	9/11/2007	TPH/BTEX	2	14
Monitoring Well BH3	Water	BH3	-	7/11/2007	8/11/2007	9/11/2007	TPH/BTEX	2	14

Note:

OP = Organophosphorus Pesticides

OC = Organochlorine Pesticides

Metals = Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Zinc, and Mercury

TPH = Total Petroleum Hydrocarbons

BTEX = Benzene, Toluene, Ethylbenzene, meta- & para-Xylene

PAH = Polynuclear Aromatic Hydrocarbons

Client

Radway Pty Ltd

Job Title

Stage 2 Investigation

Address

Lot 2, Drury Lane, Dundowan



Release

Table 2
SUMMARY OF ANALYTICAL RESULTS INORGANICS
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Location	Sample	Depth (m)	METALS							
			Arsenic mg/kg	Cadmium mg/kg	Chromium mg/kg	Copper mg/kg	Lead mg/kg	Nickel mg/kg	Zinc mg/kg	Mercury mg/kg
Uncontrolled Fill	S1	0.1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S1	1	<5	<1	<2	<5	<5	<2	9	<0.1
	S1	2	<5	<1	<2	<5	<5	<2	<5	<0.1
	S2	0.1	<5	<1	<2	<5	<5	<2	8	<0.1
	S2	1	6	<1	13	9	12	22	29	<0.1
	S2	2	<5	<1	<2	<5	<5	<2	<5	<0.1
	S2	3	<5	<1	<2	<5	<5	<2	<5	<0.1
	S3	0.1	<5	<1	6	11	18	6	60	<0.1
	S3	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S3	2	<5	<1	<2	<5	<5	<2	<5	<0.1
	S4	0.1	<5	<1	4	<5	12	3	13	<0.1
	S4	1	<5	<1	<2	<5	20	<2	283	<0.1
	S4	2	<5	<1	4	6	37	3	165	<0.1
	S4	3	<5	<1	<2	<5	<5	<2	<5	<0.1
	S5	0.1	9	<1	8	<5	6	7	11	<0.1
	S5	1	7	<1	10	7	7	9	18	<0.1
	S5	2	7	<1	9	8	11	16	22	<0.1
	S5	3	<5	<1	6	<5	<5	<2	<5	<0.1
	S6	0.1	<5	<1	3	<5	<5	3	6	<0.1
	S6	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S7	0.1	13	<1	11	<5	9	5	10	<0.1
	S7	1	13	<1	14	<5	7	11	10	<0.1
	S7	2	14	<1	18	<5	7	3	12	<0.1
	S7	3	<5	<1	6	<5	<5	3	<5	<0.1
	S8	0.1	6	<1	5	<5	12	4	11	<0.1
	S8	1	6	<1	5	<5	10	3	7	<0.1
	S8	2	<5	<1	11	<5	<5	<2	<5	<0.1
	S9	0.1	5	<1	11	6	10	17	19	<0.1
	S9	1	6	<1	9	<5	9	8	16	<0.1
	S9	2	<5	<1	14	<5	6	<2	<5	0.2
	S10	0.1	5	<1	6	<5	7	<2	19	<0.1
	S10	1	<5	<1	<2	<5	6	2	<5	<0.1
	S10	2	<5	<1	11	<5	<5	4	<5	0.2
	S11	0.1	13	<1	16	10	10	27	16	<0.1
	S11	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S11	2	9	<1	8	9	10	18	24	<0.1
	S12	0.1	<5	<1	10	8	16	15	24	<0.1
	S12	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S13	0.1	5	<1	9	8	<5	25	18	<0.1
	S13	1	<5	<1	4	<5	6	3	<5	<0.1
	S13	2	<5	<1	13	13	23	29	36	<0.1
	S13	3	<5	<1	14	<5	6	5	<5	0.1
	S15	0.1	<5	<1	6	8	56	8	58	<0.1
	S15	1	<5	<1	5	<5	8	2	16	<0.1
	S15	2	<5	<1	<2	<5	<5	<2	<5	<0.1
	S16	0.1	<5	<1	5	<5	12	3	18	<0.1
	S16	1	<5	<1	4	<5	<5	<2	<5	<0.1
	S16	2	13	<1	4	14	7	7	97	<0.1
	S16	3	<5	<1	7	<5	<5	3	<5	<0.1
	S17	0.1	<5	<1	13	10	9	29	28	<0.1
S17	1	<5	<1	10	<5	<5	7	<5	0.3	
S17	2	<5	<1	19	<5	<5	<2	<5	<0.1	
S18	0.1	6	<1	3	<5	6	<2	18	<0.1	
S18	1	<5	<1	3	<5	<5	<2	<5	<0.1	
S19	0.1	6	<1	3	<5	7	<2	15	<0.1	
S19	1	<5	<1	5	<5	<5	<2	<5	<0.1	
S20	0.1	16	<1	11	<5	16	5	14	<0.1	
S20	1	<5	<1	3	<5	5	2	<5	<0.1	
S20	2	<5	<1	2	<5	6	6	73	<0.1	
S20	3	<5	<1	4	<5	<5	2	<5	<0.1	
S21	0.1	8	<1	12	5	11	14	13	<0.1	
S21	1	<5	<1	<2	<5	<5	<2	6	<0.1	
S21	2	19	<1	8	<5	12	5	8	<0.1	
S22	0.1	<5	<1	13	24	5	76	36	<0.1	
S22	1	<5	<1	4	<5	<5	4	6	<0.1	
S22	2	<5	<1	<2	<5	<5	<2	16	0.2	
S22	3	<5	<1	7	<5	<5	3	<5	0.1	
S23	0.1	26	<1	16	8	24	20	25	0.1	
S23	1	<5	<1	<2	<5	<5	<2	<5	<0.1	
S24	0.1	7	<1	6	<5	6	10	6	<0.1	
S24	1	<5	<1	<2	<5	<5	<2	<5	<0.1	
S25	0.1	5	<1	11	12	7	34	28	<0.1	
S25	1	14	<1	15	<5	13	6	9	<0.1	
S25	2	6	<1	5	<5	10	3	11	<0.1	
S25	3	<5	<1	<2	<5	<5	<2	<5	<0.1	
Environmental Investigation Levels ⁽¹⁾			20	3	50	60	300	60	400	1
Health-based Investigation Levels - Level A (Standard Residential) ⁽¹⁾			100	20	100	1000	300	600	7000	15
Industrial/Commercial based Investigation Levels - Level F (Industrial/Commercial) ⁽¹⁾			500	100	500	5000	1500	3000	35000	75

Notes:

All results are expressed as mg/kg

(1) Environmental and Industrial/Commercial Investigation Levels from Draft Guidelines for Assessment and Management of Contaminated Land in Queensland, May 1998

Except where indicated, chromium expected as Cr(III)

< Value represents the Laboratory LOR

Figures that are bold indicate exceedance of relevant adopted DoE ELI criteria¹

Figures in bold underlined indicates exceedance of DoE HIL A¹ (Standard residential) or DoE 1999²

Figures in bold underlined and shaded indicates exceedance of DoE HIL F¹ (Industrial) or DoE 1999²

Client
Job Title

Radway Pty Ltd
Stage 2 Investigation



Release

Table 2 con.
SUMMARY OF ANALYTICAL RESULTS INORGANICS
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Location	Sample	Depth (m)	METALS							
			Arsenic mg/kg	Cadmium mg/kg	Chromium mg/kg	Copper mg/kg	Lead mg/kg	Nickel mg/kg	Zinc mg/kg	Mercury mg/kg
	S26	1	<5	<1	3	<5	5	<2	<5	<0.1
	S29	2	12	<1	14	8	10	16	19	<0.1
	S27	0.1	<5	<1	3	<5	<5	5	18	<0.1
	S27	1	<5	<1	<2	<5	<5	2	<5	<0.1
	S27	2	<5	<1	<2	<5	<5	<2	<5	<0.1
	S27	3	<5	<1	3	<5	6	8	7	0.1
	S28	0.1	<5	<1	3	<5	10	2	28	<0.1
	S28	1	<5	<1	3	<5	<5	<2	<5	<0.1
	S28	2	7	<1	9	19	112	15	99	<0.1
	S29	0.1	6	<1	11	11	62	15	62	<0.1
	S29	1	9	<1	4	<5	6	<2	15	<0.1
	S29	2	<5	<1	6	<5	<5	<2	<5	0.2
	S29	3	<5	<1	4	<5	<5	<2	<5	<0.1
	S30	0.1	<5	<1	47	<5	<5	18	8	<0.1
	S30	1	<5	<1	8	<5	<5	3	<5	0.2
	S30	2	<5	<1	182	<5	10	9	<5	0.1
	S31	0.1	<5	<1	8	<5	<5	3	<5	0.1
	S31	1	<5	<1	4	<5	16	6	25	<0.1
	S31	2	<5	<1	7	9	12	18	20	<0.1
	S32	0.1	<5	<1	9	8	10	18	26	<0.1
	S32	1	<5	<1	9	16	21	29	56	<0.1
	S32	2	7	<1	21	27	6	83	38	<0.1
	S33	0.1	7	<1	13	9	8	23	21	<0.1
	S33	1	6	<1	6	9	33	2	82	0.2
	S33	2	<5	<1	4	<5	<5	<2	<5	0.1
	S33	3	9	<1	6	<5	6	3	9	<0.1
	S35	0.1	<5	<1	4	<5	<5	<2	<5	<0.1
	S35	1	<5	<1	4	<5	<5	<2	<5	<0.1
	S35	2	7	<1	6	<5	7	2	<5	<0.1
	S35	3	<5	<1	4	<5	7	<2	<5	<0.1
	S35	4	<5	<1	30	16	16	24	49	<0.1
	S36	0.1	15	<1	11	<5	11	6	15	<0.1
	S36	1	8	<1	10	8	11	16	22	<0.1
	S36	2	26	<1	10	7	11	12	22	<0.1
	S36	3	<5	<1	4	<5	<5	2	<5	<0.1
	S36	4	12	<1	10	<5	11	5	10	<0.1
	S37	0.1	11	<1	8	<5	10	4	9	<0.1
	S37	1	11	<1	8	5	11	11	24	<0.1
	S37	2	<5	<1	7	6	10	10	18	<0.1
	S37	3	16	<1	12	6	28	4	93	<0.1
	S37	4	<5	<1	7	<5	<5	5	<5	0.1
	S38	0.1	<5	<1	10	8	7	23	18	<0.1
	S38	1	5	<1	7	9	11	19	26	<0.1
	S38	2	18	1	9	5	13	6	11	<0.1
S38	3	<5	<1	5	<5	<5	3	<5	<0.1	
S38	4	<5	<1	8	16	8	30	23	<0.1	
S39	0.1	<5	<1	8	12	6	21	17	<0.1	
S39	1	<5	<1	3	5	9	<2	<5	<0.1	
S39	2	7	<1	6	14	31	4	45	<0.1	
S39	3	7	<1	8	25	60	9	72	<0.1	
S39	4	7	<1	3	<5	<5	<2	5	<0.1	
S40	0.1	<5	<1	2	<5	<5	2	43	0.1	
S40	1	7	<1	13	6	16	16	18	<0.1	
S40	2	<5	<1	2	<5	<5	<2	<5	<0.1	
S40	3	<5	<1	6	<5	7	<2	18	<0.1	
S41	0.1	9	<1	11	<5	12	3	20	<0.1	
S41	1	6	<1	2	<5	8	<2	14	<0.1	
S41	2	10	<1	7	9	10	5	12	<0.1	
S42	0.1	<5	<1	5	10	8	4	11	<0.1	
S42	1	<5	<1	10	<5	<5	3	31	<0.1	
S42	2	<5	<1	3	<5	14	6	89	<0.1	
S42	3	7	<1	7	6	25	7	17	<0.1	
S42	4	7	<1	8	6	10	10	22	<0.1	
S43	0.1	<5	<1	10	11	6	28	34	<0.1	
S43	1	6	<1	4	6	7	6	34	<0.1	
S43	2	6	<1	5	<5	7	3	87	<0.1	
S43	3	<5	<1	<2	<5	<5	<2	9	<0.1	
S43	4	<5	<1	6	<5	<5	4	<5	<0.1	
S43	5	18	<1	8	11	6	5	23	<0.1	
S44	0.1	<5	<1	4	<5	<5	<2	8	<0.1	
S44	1	5	<1	22	<5	10	8	7	<0.1	
S44	2	<5	<1	16	<5	7	3	<5	<0.1	
S44	3	7	<1	16	5	11	3	18	<0.1	
S44	4	9	<1	9	9	15	5	32	<0.1	
S44	5	<5	<1	4	<5	<5	<2	10	<0.1	
Environmental Investigation Levels ⁽¹⁾			20	3	80	80	300	80	400	1
Health-based Investigation Levels - Level A (Standard Residential) ⁽¹⁾			100	20	100	1000	300	600	7000	15
Industrial/Commercial based Investigation Levels - Level F (Industrial/Commercial) ⁽¹⁾			500	100	500	5000	1500	3000	35000	75

Notes:

All results are expressed as mg/kg

(1) Environmental and Industrial/Commercial Investigation Levels from Draft Guidelines for Assessment and Management of Contaminated Land in Queensland, May 1998

Except where indicated, chromium expected as Cr(III)

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Figures that are bold indicate exceedance of relevant adopted DoE EIL criteria¹

Figures in bold underlined indicate exceedance of DoE HIL A¹ (Standard residential) or DoE 1999²

Figures in bold underlined and shaded indicate exceedance of DoE HIL F¹ (Industrial) or DoE 1999²

Client
Job Title
Address

Roadway Pty Ltd
Stage 2 Investigation
Lot 2, Drury Lane, Dundowran



Release

Table 2 con.
SUMMARY OF ANALYTICAL RESULTS INORGANICS
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Location	Sample	Depth (m)	METALS							
			Arsenic mg/kg	Cadmium mg/kg	Chromium mg/kg	Copper mg/kg	Lead mg/kg	Nickel mg/kg	Zinc mg/kg	Mercury mg/kg
	S45	2	7	<1	5	<5	8	4	6	<0.1
	S45	3	<5	<1	3	11	9	10	150	<0.1
	S45	4	10	1	24	20	10	58	41	<0.1
	S46	0.1	7	<1	23	20	6	60	38	<0.1
	S46	1	6	<1	16	13	14	32	36	<0.1
	S46	2	13	<1	22	20	23	16	68	<0.1
	S46	3	15	<1	21	31	28	21	101	<0.1
	S46	4	<5	<1	10	<5	<5	4	<5	<0.1
	S46	5	<5	<1	10	15	54	44	23	<0.1
	S47	0.1	5	<1	10	7	9	15	18	<0.1
	S47	1	<5	<1	4	9	8	6	205	<0.1
	S47	2	<5	<1	5	<5	6	6	25	<0.1
	S47	3	<5	<1	11	10	8	27	95	<0.1
	S47	4	<5	<1	5	<5	<5	2	<5	0.1
	S47	5	35	<1	7	21	20	22	29	<0.1
	S47	6	12	<1	6	8	15	7	17	<0.1
	S48	0.1	37	<1	7	16	12	12	19	<0.1
	S48	1	<5	<1	26	21	49	71	43	<0.1
	S48	2	<5	<1	46	20	14	44	48	<0.1
	S48	3	<5	<1	4	<5	<5	<2	<5	<0.1
	S48	4	<5	<1	33	12	13	29	34	<0.1
	S48	5	7	<1	4	8	10	3	54	<0.1
	S49	0.1	8	<1	6	<5	8	<2	12	<0.1
	S49	1	<5	<1	12	<5	6	11	14	<0.1
	S49	2	<5	<1	2	<5	<5	<2	<5	<0.1
	S49	3	<5	<1	10	14	9	30	57	<0.1
	S49	4	17	<1	10	<5	8	4	8	<0.1
	S50	0.1	6	<1	9	10	11	29	55	<0.1
	S50	1	<5	<1	<2	<5	<5	<2	21	<0.1
	S50	2	<5	<1	3	<5	7	6	6	<0.1
	S50	3	8	<1	17	7	11	17	24	<0.1
	S51	0.1	5	<1	4	<5	13	4	12	<0.1
	S51	1	<5	<1	<2	<5	<5	<2	19	<0.1
	S51	2	<5	<1	4	<5	5	2	19	<0.1
	S51	3	8	<1	7	<5	8	6	28	<0.1
	S51	4	<5	<1	7	6	7	14	17	<0.1
	S52	0.1	8	<1	6	<5	8	5	30	<0.1
	S52	1	<5	<1	4	<5	10	12	22	<0.1
	S52	2	<5	<1	6	<5	19	<2	<5	<0.1
	S53	0.1	11	<1	7	6	11	12	22	<0.1
	S53	1	<5	<1	6	<5	<5	3	<5	0.2
	S53	2	10	<1	4	<5	60	<2	77	<0.1
	S54	0.1	6	<1	5	<5	8	9	12	<0.1
	S54	1	<5	<1	10	<5	7	<2	<5	0.1
	S55	0.1	<5	<1	2	<5	48	<2	55	<0.1
	S55	1	8	<1	5	<5	6	6	10	<0.1
	S55	2	25	<1	9	<5	<5	<2	<5	0.1
	S56	0.1	7	<1	4	<5	<5	2	<5	<0.1
	S56	2	11	<1	13	<5	<5	<2	<5	0.1
	S56	3	5	<1	5	<5	10	7	42	<0.1
	S57	0.1	111	<1	86	<5	15	<2	<5	<0.1
	S57	1	<5	<1	6	<5	9	4	876	<0.1
	S57	2	<5	<1	4	<5	10	<2	771	<0.1
	S57	3	<5	<1	4	<5	11	4	14	<0.1
	S58	0.1	<5	<1	4	<5	9	<2	1060	<0.1
	S58	1	<5	<1	<2	<5	<5	<2	<5	<0.1
	S58	2	14	<1	7	<5	6	9	6	<0.1
	S58	3	<5	<1	4	<5	<5	<2	<5	<0.1
	S58	4	<5	<1	<2	<5	<5	<2	<5	<0.1
	S59	0.1	6	<1	7	7	6	24	36	<0.1
	S59	1	14	<1	5	<5	6	10	24	<0.1
	S59	2	7	<1	4	<5	<5	2	11	<0.1
	S60	0.1	16	<1	17	10	15	16	45	0.1
	S60	1	<5	<1	5	11	10	13	66	<0.1
	S60	2	<5	<1	14	<5	<5	5	<5	<0.1
	S60	3	6	<1	5	<5	6	3	7	<0.1
STATISTICAL ANALYSIS*			Count	216	216	216	216	216	216	216
			Minimum	2.5	0.5	1	2.5	2.5	1	2.5
			Maximum	111	1	182	31	112	83	1060
			St Dev	9.0	0.0	14.6	5.3	12.5	12.9	109.3
			Average	6.2	0.5	8.8	5.5	10.0	9.0	35.3
			95%UCL on the mean	6.6	0.5	9.5	5.8	10.6	9.6	40.3
Environmental Investigation Levels ⁽¹⁾				20	3	50	60	300	60	400
Health-based Investigation Levels - Level A (Standard Residential) ⁽¹⁾				100	20	100	1000	300	600	7000
Industrial/Commercial based Investigation Levels - Level F (Industrial/Commercial) ⁽¹⁾				500	100	500	5000	1500	3000	35000

Notes:

All results are expressed as mg/kg.

(1) Environmental and Industrial/Commercial Investigation Levels from Draft Guidelines for Assessment and Management of Contaminated Land in Queensland, May 1998.

Except where indicated, chromium expected as Cr(III).

< Value represents the Laboratory LOR.

* Results less than laboratory detection level converted to half the detection value for statistical analysis.

Figures that are bold indicate exceedance of relevant adopted DoE EIL criteria¹.

Figures in bold underlined indicates exceedance of DoE HIL A¹ (Standard residential) or DoE 1999².

Figures in bold underlined and shaded indicates exceedance of DoE HIL F¹ (Industrial) or DoE 1999².

Client
Job Title
Address

Radway Pty Ltd
Stage 2 Investigation
Lot 2, Drury Lane, Dundowan



Releas

TABLE 3
SUMMARY OF ANALYTICAL RESULTS ORGANOPHOSPHORUS PESTICIDES
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Lot Number	Sample Number	Sample Depth (m)	Individual Organophosphorus Pesticides*							
				Dichlorvos	Chlorpyrifos	Fenthion	Demeton-S-methyl	Diazinon	Dimethoate	Malathion	Parathion
Uncontrolled Fill	Lot 2 SP136512	S1	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S1	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S3	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S5	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S5	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S8	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S10	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S12	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S15	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S16	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S18	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S20	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S24	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S26	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S29	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S32	0.1	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.2
	Lot 2 SP136512	S35	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S37	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S39	3	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.2
	Lot 2 SP136512	S41	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S42	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S44	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S46	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S48	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S50	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S52	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S55	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S56	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S58	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S58	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
Environmental Investigation Levels ⁽¹⁾				-	-	-	-	-	-	-	-

Notes

All results are expressed as mg/kg unless otherwise specified

(1) Draft Guidelines for the Assessment & Management of Contaminated Land in Queensland, May 1998

* Table shows only common analytes a total of 19 individual organophosphorus pesticides were reported. All individual pesticides not shown in table were below laboratory detection levels.

< Value represents the Laboratory LOR

Client
Job Title
Address

Radway Pty Ltd
Stage 2 Investigation
Lot 2, Drury Lane, Dundowran



Released

TABLE 4
SUMMARY OF ANALYTICAL RESULTS ORGANOCHLORINE PESTICIDES
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Lot Number	Sample Number	Sample Depth (m)	Individual Organochlorine Pesticides*														
				alpha-BHC	beta-BHC	delta-BHC	gamma-Chlordane	alpha-Chlordane	Heptachlor	alpha-Endosulfan	beta-Endosulfan	Heptachlor epoxide	Aldrin	Dieldrin	Endrin	DDD	DDE	DDT
Uncontrolled Fill	Lot 2 SP136512	S1	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S1	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S3	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S5	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S5	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S8	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S10	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S12	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S15	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S16	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S18	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S20	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S24	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S28	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S29	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S32	0.1	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.2
	Lot 2 SP136512	S35	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S37	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S39	3	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.2
	Lot 2 SP136512	S41	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S42	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S44	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S46	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S48	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S50	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S52	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S55	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S56	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S58	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	Lot 2 SP136512	S58	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
Environmental Investigation Levels ⁽¹⁾				-	-	-	-	-	-	-	-	-	0.2		-	0.2		
Health Based Investigation Thresholds - Exposure Setting A (Standard Residential) ⁽¹⁾				-	-	-	50		10	-	-	-	10		-	200		
Industrial/Commercial based Investigation Levels - Level F (Industrial/Commercial)(1)				-	-	-	250		50	-	-	-	50		-	1000		

Notes

All results are expressed as mg/kg unless otherwise specified

(1) Environmental and Industrial/Commercial Based Investigation Levels from Draft Guidelines for Assessment and Management of Contaminated Land in Queensland, May 1998

* Table shows only common analytes, a total of 21 individual organochlorine pesticides were reported. All individual pesticides not shown in table were below laboratory detection levels.

< Value represents the Laboratory LOR

Client Radway Pty Ltd
 Job Title Stage 2 Investigation
 Address Lot 2, Drury Lane, Dundowan



Release

TABLE 5
SUMMARY OF ANALYTICAL RESULTS TOTAL PETROLEUM HYDROCARBONS, MONOCYCLIC AROMATIC
HYDROCARBONS

Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Sample Number	Sample Depth (m)	C ₈ -C ₉	C ₁₀ -C ₁₄	C ₁₅ -C ₂₈	C ₂₉ -C ₃₃	Benzene	Toluene	Ethyl Benzene	meta- & para-Xylene	ortho-Xylene
Uncontrolled Fill	S1	2	<10	<50	<100	120	<0.2	<0.5	<0.5	<0.5	<0.5
	S3	2	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S5	0.1	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S5	2	<10	<50	<100	150	<0.2	<0.5	<0.5	<0.5	<0.5
	S8	2	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S10	1	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S12	0.1	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S15	0.1	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S16	2	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S20	2	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S24	0.1	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S26	1	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S29	3	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S35	3	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S37	3	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S39	3	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S41	0.1	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S42	3	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S44	2	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S46	3	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S48	4	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S50	0.1	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S52	0.1	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S56	2	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S58	0.1	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
	S58	3	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
Environmental Investigation Thresholds ⁽¹⁾			100	100	1000	1000	1	7 (total BTEX)			

Notes

All results are expressed as mg/kg unless otherwise specified

(1) Draft Internal Guideline - QLD EPA Contaminated Land Unit, January 1999

< value represents the laboratory LCR

Client Radway Pty Ltd
 Job Title Stage 2 Investigation
 Address Lot 2, Drury Lane, Dundowran



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TABLE 6
SUMMARY OF ANALYTICAL RESULTS POLYNUCLEAR AROMATIC HYDROCARBONS
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Sample Number	Sample Depth (m)	*1 Individual Polynuclear Aromatic Hydrocarbons																Total PAH
			Benzo-a pyrene	Naphthalene	Acenaphthylene	Phenanthrene	Benz(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	Fluorene	Pyrene	Chrysene	Fluoranthene	Acenaphthene	Anthracene	
Uncontrolled Fill	S1	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S3	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S5	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S5	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S8	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S10	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S12	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S15	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S16	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S20	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S24	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S26	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S29	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S35	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S37	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S39	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S41	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S42	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S44	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S46	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S48	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S50	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S52	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S56	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S58	0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
	S58	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
Standard Residential based Investigation Levels - Level A (Residential)(1)			1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
Industrial/Commercial based Investigation Levels - Level F (Industrial/Commercial)(1)			5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100

Notes

All results are expressed as mg/kg unless otherwise specified

(1) Environmental and Commercial/Industrial Based Investigation Levels from Draft Guidelines for Assessment and Management of Contaminated Land in Queensland, May 1998

*1 Table shows only common analytes a total of 16 Individual Polynuclear Aromatic Hydrocarbons were reported. All individual hydrocarbons not shown in table were below laboratory detection levels.

< Value represents the Laboratory LOR

Client: Radway Pty Ltd
 Job Title: Stage 2 Investigation
 Address: Lot 2, Drury Lane, Dundowran



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TABLE 7
SUMMARY OF ANALYTICAL RESULTS ASBESTOS
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Sample Number	Sample Type	Sample Depth (m)	Asbestos ID	Asbestos in Soil
Uncontrolled Fill Area	S1	Fill	0.1	N/A	No Asbestos Detected
	S1	Fill	1	N/A	No Asbestos Detected
	S2	Fill	1	N/A	No Asbestos Detected
	S2	Fill	2	N/A	No Asbestos Detected
	S5	Fill	1	N/A	No Asbestos Detected
	S11	Fill	1	N/A	No Asbestos Detected
	S15	Fill	1	N/A	No Asbestos Detected
	S21	Fill	1	N/A	No Asbestos Detected
	S37	Fill	1	N/A	No Asbestos Detected
	S42	Fill	1	N/A	No Asbestos Detected
	S42	Fill	2	N/A	No Asbestos Detected
	S46	Fill	1	N/A	No Asbestos Detected
	S48	Fill	1	N/A	No Asbestos Detected
	S48	Fill	3	N/A	No Asbestos Detected

N/A - Indicates Not Applicable

Client
Job Title
Address

Radway Pty Ltd
Stage 2 Investigation
Lot 2, Drury Lane, Dundowran



Release

TABLE 8
SUMMARY OF ANALYTICAL RESULTS - GROUNDWATER INORGANICS

Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Sample Number	Sample Date	pH *(pH Units)	EC* (mS/cm)	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Mercury	Zinc
BH1	BH1	2/08/2007	5.6	0.7	0.003	<0.0001	0.001	<u>0.003</u>	0.002	0.002	<0.0001	<u>0.02</u>
BH2	BH2	2/08/2007	5.2	0.7	<0.001	<0.0001	<0.001	<u>0.002</u>	<0.001	<0.001	<0.0001	<u>0.01</u>
BH3	BH3	2/08/2007	5.4	0.6	<0.001	<0.0001	<0.001	0.001	<0.001	<0.001	<0.0001	<u>0.012</u>
ANZECC Water Quality Guidelines 2000, Trigger Values for Fresh Waters 95% Level of Protection ⁽¹⁾			-	-	0.013	0.2	ID	0.0014	0.0034	0.011	0.0006	0.008

Notes

All results are expressed as mg/L unless otherwise specified

(1) National Water Quality Management Strategy, Australian and New Zealand Guidelines for Fresh & Marine Water Quality, October 2000

* Field Measurement

** Aesthetic based concentration - no health guideline value

Figures in bold italics that have been underlined exceed the ANZECC Water Quality Guideline - Trigger Values for Marine Water (95%)

Client Radway Pty Ltd
Job Title Stage 2 Investigation
Address Lot 2, Drury Lane, Dundowran



Release

TABLE 9
SUMMARY OF ANALYTICAL RESULTS (GROUNDWATER)
TOTAL RECOVERABLE HYDROCARBONS &
MONOCYCLIC AROMATIC HYDROCARBONS

Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Sampling Date	C ₆ -C ₉	C ₁₀ -C ₁₄	C ₁₅ -C ₂₈	C ₂₉ -C ₃₆	Benzene	Toluene	Ethyl Benzene	Xylene
Uncontrolled Fill									
BH1	2/08/2007	<0.02	<u><0.250</u>	<u>0.6</u>	<u>0.39</u>	<0.001	<0.002	<0.002	<0.002
BH1	7/11/2007	<0.02	<0.050	0.1	0.11	<0.001	<0.002	<0.002	<0.002
BH2	2/08/2007	<0.02	<0.100	0.3	0.2	<0.001	<0.002	<0.002	<0.002
BH2	7/11/2007	<0.02	<0.050	<0.1	0.07	<0.001	<0.002	<0.002	<0.002
BH3	2/08/2007	<0.02	<u><0.500</u>	<u><1</u>	<u><0.5</u>	<0.001	<0.002	<0.002	<0.002
BH3	7/11/2007	<0.02	<0.050	0.2	0.1	<0.001	<0.002	<0.002	<0.002
ANZECC Water Quality Guidelines 2000, Trigger Values for Fresh Waters 95% Level of Protection		ID	ID	ID	ID	0.95	ID	ID	-
Dutch Guideline Levels (1) Dutch C - Netherlands Soil Clean-up Guideline, 1983. (2) Dutch Intervention Value - Environmental Quality Objectives in the Netherlands, 1994		0.150 ⁽¹⁾	0.600 ⁽²⁾			-	-	-	-

Notes

All results are expressed as mg/L unless otherwise specified

ID = Insufficient data to derive reliable trigger level

* Trigger Value for M&P Xylene.

Results in Bold, Italics and Underlined exceed the Dutch Guideline Levels

Client
Job Title
Address

Radway Pty Ltd
Stage 2 Investigation
Lot 2, Drury Lane, Dundowran



Release

TABLE 10
SUMMARY OF ANALYTICAL RESULTS - GROUNDWATER
POLYCYCLIC AROMATIC HYDROCARBONS

Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Sample Number	Napthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b) & (k) fluoranthene	Benzo(a) pyrene	Indeno(1,2,3-cd) pyrene	Dibenz(a,h) anthracene	Benzo(g,h,i) perylene	Total +ve PAH
Uncontrolled Fill																	
BH1	BH1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<15.5
BH2	BH2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<15.5
BH3	BH3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<15.5
ANZECC Water Quality Guidelines 2000, Trigger Values for Fresh Waters 95% Level of Protection		16	-	-	-	ID	ID	ID	-	-	-	-	ID	-	-	-	-

Notes

All results are expressed as ug/l unless otherwise specified

ID = Insufficient Data

Results in Bold, Italics and Underlined exceed the ANZECC Water Quality Guidelines for Marine Waters 95%

Client Radway Pty Ltd
Job Title Stage 2 Investigation
Address Lot 2, Drury Lane, Dundowran



Released

TABLE 11
SUMMARY OF ANALYTICAL RESULTS ORGANOPHOSPHORUS PESTICIDES - GROUNDWATER
Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Test Location	Lot Number	Sample Number	Individual Organophosphorus Pesticides*													
			Dichlorvos	Chlorpyrifos	Fenamiphos	Monocrotophos	Chlorfenvinphos	Dimethoate	Azinphos Methyl	Carbonphenothion	Malathion	Diazinon	Ethion	Bromophos-ethyl	Pirimphos-ethyl	Parathion
Area Of Uncontrolled Fill	Lot 2 SP136512	BH1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2
	Lot 2 SP136512	BH2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2
	Lot 2 SP136512	BH3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2
ANZECC Water Quality Guidelines 2000, Trigger Values for Fresh Waters 95% Level of Protection ⁽¹⁾			-	0.01	-	-	-	0.15	0.02	-	0.05	0.01	-	-	-	0.004

Notes

All results are expressed as µg/L unless otherwise specified

(1) National Water Quality Management Strategy, Australian and New Zealand Guidelines for Fresh & Marine Water Quality, October 2000

* Table shows only common analytes a total of 19 individual organophosphorus pesticides were reported. All individual pesticides not shown in table were below laboratory detection levels.

(3) - Indicates samples not tested

ID - Insufficient data to derive a reliable trigger value

Client: WBGS
 Job Title: Stage 2 Investigation
 Address: Lot 2, Drury Lane, Dundowran



Released

TABLE 12
SUMMARY OF ANALYTICAL RESULTS ORGANOCHLORINE PESTICIDES - GROUNDWATER

Lot 2 SP136512, Drury Lane, Stage 2 Investigation																		
Test Location	Lot Number	Sample Number	Individual Organochlorine Pesticides*															
			alpha-BHC	beta-BHC	delta-BHC	gamma-BHC	Hexachloro benzene (HCB)	cis / trans Chlordane	Heptachlor	alpha-Endosulfan	beta-Endosulfan	Methoxychlor	Aldrin	Dieldrin	Endrin	4,4' - DDD	4,4' - DDE	4,4' - DDT
Area Of Uncontrolled Fill	Lot 2 SP136512	BH1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
	Lot 2 SP136512	BH2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
	Lot 2 SP136512	BH3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
ANZECC Water Quality Guidelines 2000, Trigger Values for FRESH Waters 95% Level of Protection ⁽¹⁾			-	-	-	-	-	0.08	0.09	ID	ID	ID	← ID →		0.02	-	ID	0.01

Notes

All results are expressed as µg/L, unless otherwise specified

(1) National Water Quality Management Strategy, Australian and New Zealand Guidelines for Fresh & Marine Water Quality, October 2000

* Table shows only common analytes, a total of 21 individual organochlorine pesticides were reported. All individual pesticides not shown in table were below laboratory detection levels.

0.58 - Bold and underlined figure indicates exceedance of adopted Environmental Investigation Level

ID = Insufficient data to derive a reliable trigger value

Client WBGS
 Job Title Stage 2 Investigation



Release

TABLE 13
SUMMARY OF QA/QC ANALYTICAL RESULTS - DETAILED INVESTIGATION

Lot 2 SP136512, Drury Lane, Stage 2 Investigation

Sample	Depth (m)	Collect Date	Sample Type	METALS							
				Lead mg/kg	Nickel mg/kg	Arsenic mg/kg	Cadmium mg/kg	Chromium mg/kg	Copper mg/Kg	Zinc mg/kg	Mercury mg/kg
S6	0.1	17/07/2007	soil	<5	3	<5	<1	3	<5	6	<0.1
S6Q	0.1	17/07/2007	soil	<5	2	<5	<1	3	<5	6	<0.1
Relative Percentage Difference Values %				0	40	0	0	0	0	0	0
S10	0.1	17/07/2007	soil	7	<2	5	<1	6	<5	19	<0.1
S10Q	0.1	17/07/2007	soil	7	5	<5	<1	4	5	21	<0.1
Relative Percentage Difference Values %				0	85.7	0	0	40	0	10	0
S29	0.1	17/07/2007	soil	62	15	6	<1	11	11	62	<0.1
S29Q	0.1	17/07/2007	soil	16	2	6	<1	8	5	18	<0.1
Relative Percentage Difference Values %				117.9	152.9	0	0	31.6	75	110	0
S37	0.1	17/07/2007	soil	10	4	11	<1	8	<5	9	<0.1
S37Q	0.1	17/07/2007	soil	11	5	16	<1	9	<5	12	<0.1
Relative Percentage Difference Values %				9.5	22.2	37	0	11.8	0	28.6	0
S45	0.1	17/07/2007	soil	<5	<2	<5	1	4	<5	7	<0.1
S45Q	0.1	17/07/2007	soil	<5	<2	<5	<1	2	<5	25	<0.1
Relative Percentage Difference Values %				0	0	0	0	66.7	0	112.5	0
S48	0.1	17/07/2007	soil	12	12	37	<1	7	16	19	<0.1
S48Q	0.1	17/07/2007	soil	10	7	8	<1	4	5	15	<0.1
Relative Percentage Difference Values %				18.2	52.6	128.9	0	54.5	104.8	23.5	0
S56	0.1	20/07/2007	soil	<5	2	7	<1	4	<5	<5	0.1
S56Q	0.1	20/07/2007	soil	<5	8	9	<1	8	<5	6	0.1
Relative Percentage Difference Values %				0	120	25	0	66.7	0	18.2	0
S60	0.1	17/07/2007	soil	15	16	16	<1	17	10	45	0.1
S60Q	0.1	17/07/2007	soil	10	<2	136	<1	61	<5	7	0.1
Relative Percentage Difference Values %				40	155.6	157.9	0	112.8	66.7	146.2	0

Notes

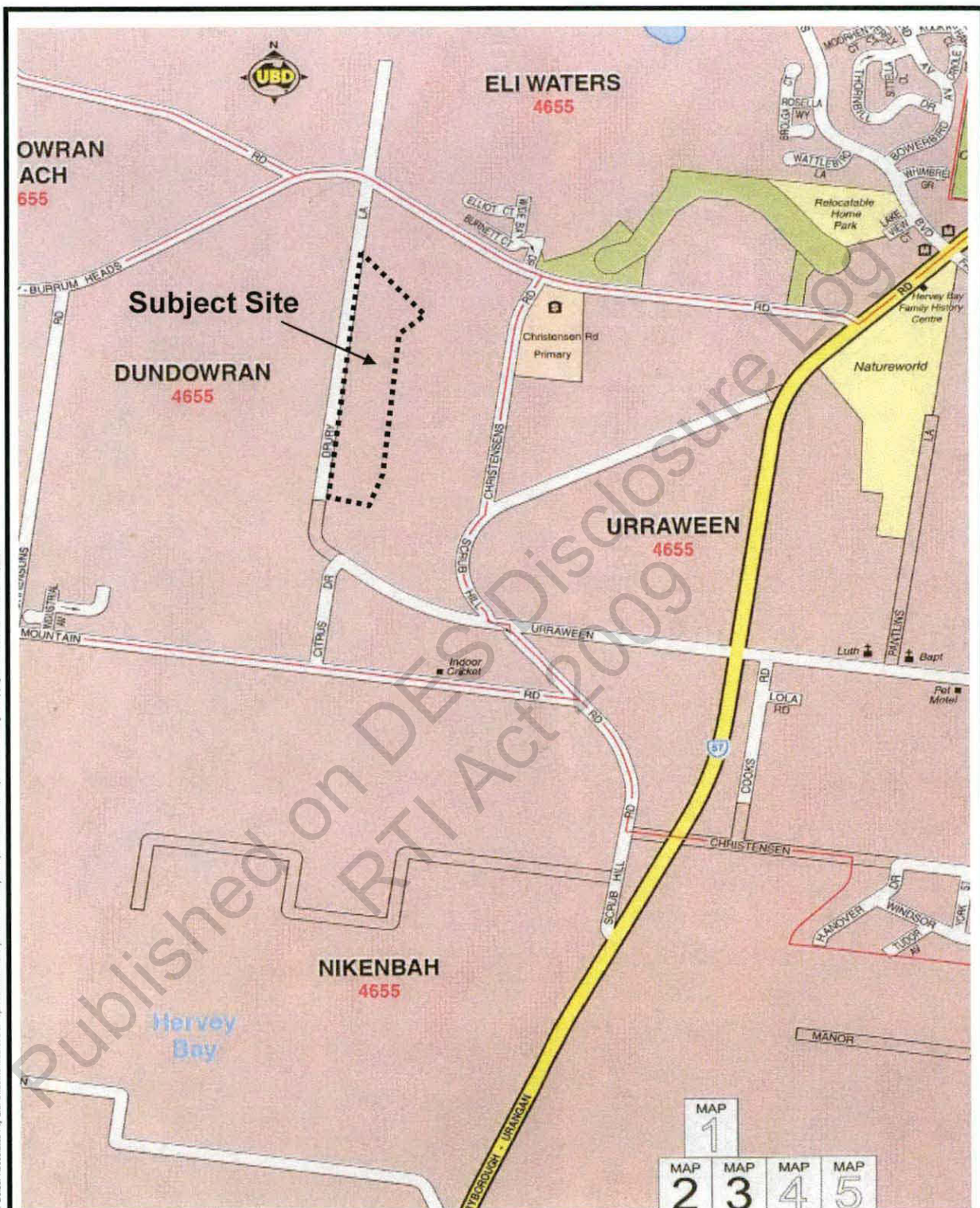
a All results are expressed as mg/kg

b <LOR = Less than detection limit

c Except where indicated, chromium expected as Cr(III)



Release



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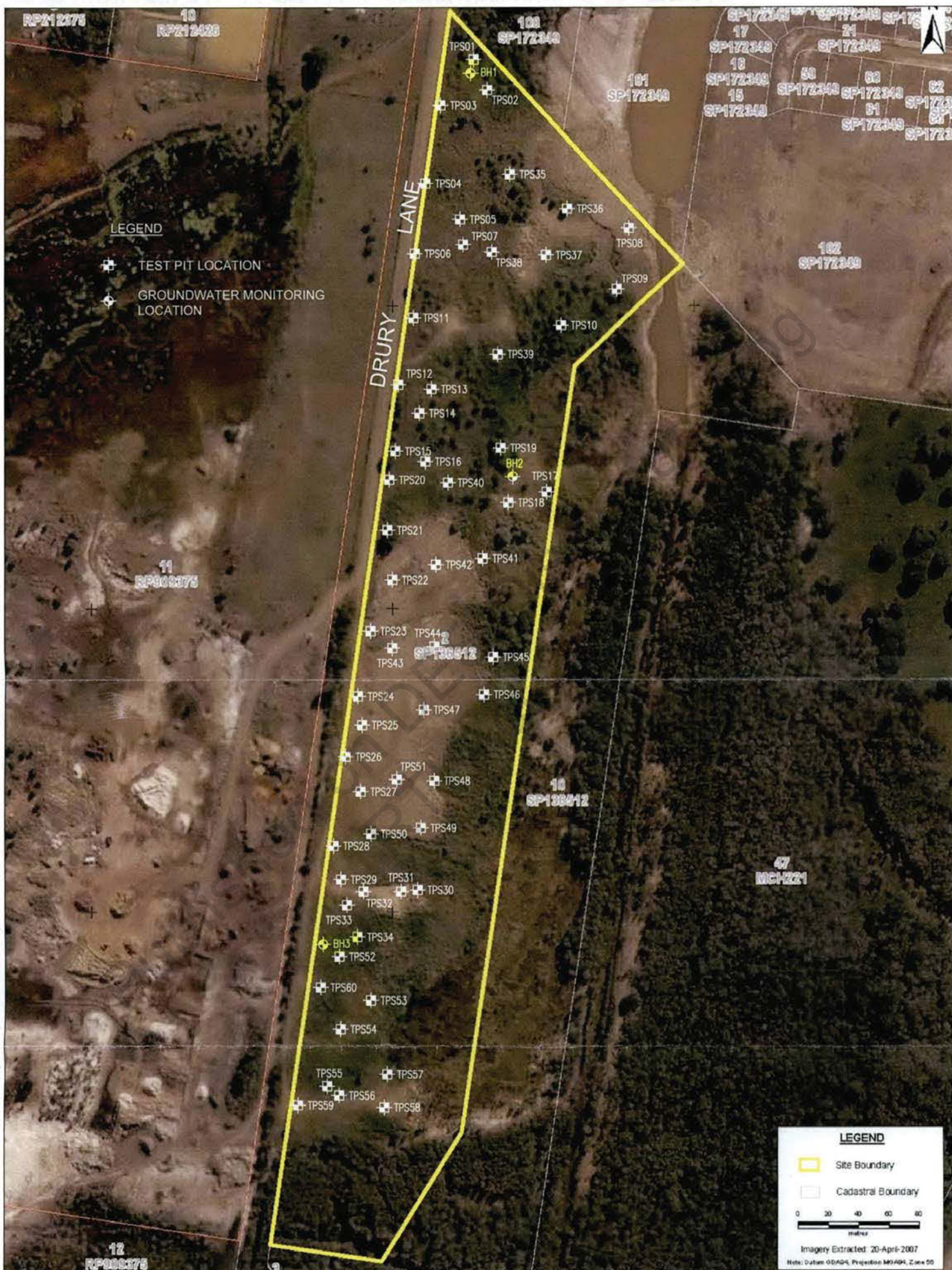
NOTE: THE * BESIDE THE TYPED INITIAL DENOTES THAT THE ORIGINAL DRAWING WAS SIGNED OR INITIALED BY THAT RESPECTIVE PERSON.



CLIENT Radway Pty Ltd		PROJECT Industrial, Lot 2 Drury Lane, Dundowran	
DRAWN JM	DATE 3/08/07	TITLE SITE LOCATION	
CHECKED PKS*	DATE 8/08/07		
SCALE 1:20,000	A4	PROJECT No 077683504	FIGURE No 1

J:\2006\Environmental\06683021\Tasks 1000-2000-3000\03_FIGURES_DRAWINGS\Fig01.ppt

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DRAWN JM	DATE 25-07-07	TITLE SAMPLING LOCATIONS	Release
CHECKED PKS*	DATE 27-07-07	PROJECT No 077683504	Page 327 of 397
SCALE File A Shown			REV No A3

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DRAWN JM	DATE 10-10-07	TITLE APPROXIMATE DEPTHS OF UNCONTROLLED FILL	Release
CHECKED PKS*	DATE 10-10-07	PROJECT NO 077683504	
SCALE As Shown		Page 328 of 393	REV No A3

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Appendix A

Field Work Data

**Borehole Reports, Explanation Notes, Abbreviations & Terms
Used on Borehole and Test Pit Reports**

**Method of Soil Description Used on Borehole and Test Pit
Reports**

Release

REPORT OF TEST PIT: S02

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowan
JOB NO: 077683504

COORDS: 479863 m E 7203143 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.00 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				STRUCTURE AND ADDITIONAL OBSERVATIONS	
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-3.00m R = 0A				SAND (FILL) fine to medium grained, pale grey, some bitumen 10%		
			0.5	0.50					Sandy CLAY (FILL) medium plasticity, brown		
			1.0	1.00					some metal 5%, bricks 5% and plastic 2%		
			1.5								
			1.80								
			2.0						SAND (FILL) fine to medium grained, pale grey, some bricks 5%, steel 5% and plastic pipes 5%		
			2.5								
			2.90								
			3.0	3.00				SP	Indurated SAND fine to medium grained, dark brown TEST PIT DISCONTINUED @ 3.00 m		
			3.5								
			4.0								
			4.5								
			5.0								
			5.5								
			6.0								
			6.5								

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S03

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479832 m E 7203133 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.00 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 17/7/07
CHECKED: DATE: 22/7/07

Excavation			Sampling			Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-2.00m R = 0A			SAND (FILL) fine to medium grained, brown, some clay and root matter		
			0.5							
			1.0	1.00				becoming pale grey		
			1.5	1.50				SP Indurated SAND fine to medium grained, dark brown		
			2.0	2.00				TEST PIT DISCONTINUED @ 2.00 m		
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S04

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479822 m E 7203082 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.00 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI 49 DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-3.00m R = 0A			SAND (FILL) fine to medium grained, brown, some clay and medium gravel		
			1.0	1.00				becoming pale grey, contains plastic pipe 5%, steel bar 15% and tree stumps 10%		
			2.0	2.00				Sandy CLAY (FILL) high plasticity, brown, concrete 20%, some gravel		
			2.5	2.50				SP SAND fine to medium grained, pale grey		
			3.0	3.00				TEST PIT DISCONTINUED @ 3.00 m		
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S05

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479845 m E 7203058 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1

MACHINE: Excavator

CONTRACTOR: Pearsons

LOGGED: CTPI DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description							
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		STRONG WATER INFLOW OBSERVED AT 1.5m	0.0		DS 0.00-3.10m R = 0A				Sandy CLAY (FILL) low plasticity, brown, some gravel				
			0.5										
			1.0	1.00					contains bricks 10%, concrete 15% and timber debris 5%				
			1.5	1.50					contains concrete 30% and plastic sheets 5%				
			2.0	2.10									
			2.5					SC	Clayey SAND fine to medium grained, pale brown and grey		M		
			3.0	3.10					TEST PIT DISCONTINUED @ 3.10 m				
			3.5										
			4.0										
			4.5										
			5.0										
			5.5										
			6.0										
			6.5										

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S06

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479815 m E 7203035 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 1.80 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1

MACHINE: Excavator

CONTRACTOR: Pearsons

LOGGED: CTPI DATE: 17/7/07

CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description			
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-1.80m R = 0A			Sandy CLAY (FILL) medium plasticity, dark grey and red brown, some gravel and root matter	
			0.40						
			0.5					SP SAND fine to medium grained, pale grey	
			1.5	1.50				SP Indurated SAND fine to medium grained, dark brown	
			1.80					TEST PIT DISCONTINUED @ 1.80 m	
			2.0						
			2.5						
			3.0						
			3.5						
			4.0						
			4.5						
			5.0						
			5.5						
			6.0						
			6.5						

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S07

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479847 m E 7203041 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: (CTPI) DATE: 17/7/07
CHECKED: DATE: 24/8/07

Excavation				Sampling		Field Material Description				STRUCTURE AND ADDITIONAL OBSERVATIONS	
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY	DENSITY	
EX		WATER SEEPAGE OBSERVED AT 2.8m	0.0		DS 0.00-3.20m R = 0A			Sandy CLAY (FILL) medium plasticity, pale brown and dark grey, some gravel			
			0.5								
			1.0								
			1.5								
			2.0								
			2.5								
			2.80								
			3.00								
			3.0								
			3.20								

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S08

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479957 m E 7203052 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-2.10m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and red brown contains concrete 10%, gravel 10% and some root matter	M	
			0.20							
			0.5							
			1.0							
			1.20					contains pipe 5%, wire 3% and steel 5%		
			1.5							
			1.80							
			2.0				CH	Silty CLAY high plasticity, grey, some sand		
			2.10					TEST PIT DISCONTINUED @ 2.10 m		
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S09

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479949 m E 7203011 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 17/7/07
CHECKED: DATE: 29/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-2.20m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and red brown, some root matter	D	
			0.5							
			1.0							
			1.5	1.50				contains concrete 35%		
			2.0	2.00				Silty Sandy CLAY high plasticity, grey	M	
			2.20	2.20				TEST PIT DISCONTINUED @ 2.20 m		
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S10

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479912 m E 7202987 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.50 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1

MACHINE: Excavator

CONTRACTOR: Pearsons

LOGGED: CTP DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-2.50m R = 0A			Sandy CLAY (FILL) medium plasticity, red brown, some gravel		
			1.5	1.50				contains concrete slabs (60%)		
			2.0	2.00			SC	Clayey SAND fine to medium grained, pale brown	M	
			2.5	2.50				TEST PIT DISCONTINUED @ 2.50 m		
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S11

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479814 m E 7202992 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1

MACHINE: Excavator

CONTRACTOR: Pearsons

LOGGED: CTP DATE: 17/7/07

CHECKED: DATE: 25/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-2.20m R = 0A			Gravelly SAND (FILL) fine to medium grained, pale brown	D	
			0.20	Sandy CLAY (FILL) medium plasticity, brown and red brown						
			0.50	contains bricks 15%						
			1.0							
			1.20							
			1.5	SP SAND fine to medium grained, grey						
			1.90							
			2.0	SP Indurated SAND fine to medium grained, dark brown						
			2.20							
								TEST PIT DISCONTINUED @ 2.20 m		
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S12

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479804 m E 7202948 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 1.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1

MACHINE: Excavator

CONTRACTOR: Pearsons

LOGGED: CTPI 4 DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description							
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-1.20m R = 0A				Sandy CLAY (FILL) medium plasticity, brown and red brown				
			0.80										
			1.0					SP	SAND fine to medium grained, grey				
			1.20						TEST PIT DISCONTINUED @ 1.20 m				
			1.5										
			2.0										
			2.5										
			3.0										
			3.5										
			4.0										
			4.5										
			5.0										
			5.5										
			6.0										
			6.5										

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S13

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479826 m E 7202945 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: OCTI DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-3.20m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and red brown, some gravel		
			0.5							
			0.90							
			1.0					contains concrete slab and tree stump		
			1.40					becoming pale grey, dark grey and red brown		
			1.5							
			2.0							
			2.5	2.50				contains concrete 50%		
			3.0	3.00						
			3.20					SC Clayey SAND fine to medium grained, pale brown TEST PIT DISCONTINUED @ 3.20 m		

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S14

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479818 m E 7202929 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 0.80 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTP1 DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description							
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-0.80m R = 0A				Sandy CLAY (FILL) medium plasticity, brown and red brown	M			
			0.5	0.60									
			0.80						contains tree stumps 15%				
			1.0						TEST PIT DISCONTINUED @ 0.80 m REFUSAL				
			1.5										
			2.0										
			2.5										
			3.0										
			3.5										
			4.0										
			4.5										
			5.0										
			5.5										
			6.0										
			6.5										

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S15

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479802 m E 7202904 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTP1 DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-2.20m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and red brown, some gravel	M	
			0.5				some bricks (33%)			
			1.0							
			1.5	1.50			SP	SAND fine to medium grained, grey		
			2.0	2.00				becoming dark brown		
			2.20	2.20				TEST PIT DISCONTINUED @ 2.20 m		
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

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REPORT OF TEST PIT: S16

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479822 m E 7202897 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: C CTP DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-3.20m R = 0A			Sandy CLAY (FILL) low plasticity, brown and red brown		
			0.80					contains concrete 50%, tree stumps 10% and plastic 5%		
			1.0							
			1.5							
			2.0	2.00				becoming grey and orange		
			2.5							
			2.90							
			3.0					SC Clayey SAND fine to medium grained, pale brown		
			3.20					TEST PIT DISCONTINUED @ 3.20 m		
			3.5							

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REPORT OF TEST PIT: S17

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479902 m E 7202876 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1

MACHINE: Excavator

CONTRACTOR: Pearsons

LOGGED: CTPI 4 DATE: 17/7/07

CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-2.20m R = 0A			Sandy CLAY (FILL) low plasticity, brown and red brown, some gravel	M	
			0.5							
			1.0	1.00			SP	SAND fine to medium grained, pale brown		
			1.5				CH	Sandy CLAY high plasticity, grey and red brown		
			1.70							
			2.0							
			2.20					TEST PIT DISCONTINUED @ 2.20 m		
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S18

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479877 m E 7202870 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 1.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI
CHECKED:  DATE: 17/7/07
DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-1.10m R = 0A			Sandy CLAY (FILL) high plasticity, brown, red brown and grey		
			0.90							
			1.0	1.10			SP	SAND fine to medium grained, pale brown, trace of clay		
								TEST PIT DISCONTINUED @ 1.10 m		

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S19

CLIENT: Radway Pty Ltd
 PROJECT: Industrial
 LOCATION: Lot 2 Drury Lane, Dundowran
 JOB NO: 077683504

COORDS: 479872 m E 7202906 m N MGA94
 SURFACE RL: m DATUM: AHD71
 PIT DEPTH: 1.20 m
 BUCKET TYPE: 300 mm

SHEET: 1 OF 1
 MACHINE: Excavator
 CONTRACTOR: Pearsons
 LOGGED: CTP1 DATE: 17/7/07
 CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-1.20m R = 0A			Sandy CLAY (FILL) high plasticity, red brown, brown and grey		
			0.5	0.60				SC Clayey SAND fine to medium grained, pale brown		
			1.0	1.20				TEST PIT DISCONTINUED @ 1.20 m		
			1.5							
			2.0							
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S20

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479798 m E 7202885 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.30 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-3.30m R = 0A			Sandy CLAY (FILL) low plasticity, brown and red brown, some gravel		
			0.5							
			1.0	1.00				contains concrete 60%		
			1.5							
			2.0							
			2.5	2.50				contains concrete 30% and tree stumps 15%, becoming dark grey and grey		
			2.70							
			3.0				SC	Clayey SAND fine to medium grained, pale brown		
			3.30					TEST PIT DISCONTINUED @ 3.30 m		
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S21

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479796 m E 7202851 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI 4 DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-2.10m R = 0A			Gravelly Sandy CLAY (FILL) low plasticity, brown, red brown and pale brown	D	
			0.5							
			1.0	1.00				contains concrete 20%, tin roofing 15% and tree stumps 5%	D-M	
			1.5						M	
			1.90							
			2.0	2.10			SP	SAND fine to medium grained, grey TEST PIT DISCONTINUED @ 2.10 m		
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

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REPORT OF TEST PIT: S22

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479800 m E 7202819 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: C CTP DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-3.30m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown, brown and red brown, some gravel	M	
			0.5							
			1.0	1.00				becoming high plasticity, grey and red brown		
			1.5							
			2.0	2.00				becoming grey and pale grey		
			2.5							
			2.90							
			3.0					SC Clayey SAND fine to medium grained, pale brown		
			3.20					TEST PIT DISCONTINUED @ 3.20 m		
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S23

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479785 m E 7202785 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 1.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTP DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-1.10m R = 0A		SP	Gravelly Silty SAND (FILL) fine to medium grained, dark grey	D	
			0.30							
			0.5					Sandy CLAY (FILL) medium plasticity, grey, pale brown and red brown	M	
			0.90							
			1.0					SAND fine to medium grained, grey		
			1.10					TEST PIT DISCONTINUED @ 1.10 m		
			1.5							
			2.0							
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S24

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479777 m E 7202742 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 1.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTP1 DATE: 17/7/07
CHECKED: DATE: 28/7/07

Excavation				Sampling		Field Material Description							
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-1.20m R = 0A			SP	Sandy CLAY (FILL) medium plasticity, brown and dark grey	D	M	L	
			0.30										
			0.5										
			0.80										
			1.0						becoming grey				
			1.20						TEST PIT DISCONTINUED @ 1.20 m				
			1.5										
			2.0										
			2.5										
			3.0										
			3.5										
			4.0										
			4.5										
			5.0										
			5.5										
			6.0										
			6.5										

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REPORT OF TEST PIT: S25

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479780 m E 7202723 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-3.10m R = 0A			Gravelly Sandy CLAY (FILL) medium plasticity, brown, and dark grey, some gravel	D	
			1.00	1.00				contains bitumen 5%, glass 2% and plastic 2%		
			1.30	1.30				becoming grey and red brown		
			2.90	2.90					M	
			3.10	3.10			SC	Clayey SAND fine to medium grained, pale brown		
					TEST PIT DISCONTINUED @ 3.10 m					

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REPORT OF TEST PIT: S26

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479769 m E 7202702 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: C CTF DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-2.10m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and dark grey, some gravel	D	
			0.5							
			1.0							
			1.5							
			1.80							
			2.0	2.10		SP	SAND fine to medium grained, grey		M	
					TEST PIT DISCONTINUED @ 2.10 m					
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

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REPORT OF TEST PIT: S27

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479779 m E 7202679 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI4 DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-3.10m R = 0A			Gravelly Sandy CLAY (FILL) medium plasticity, brown, grey and red brown	D	
			0.30							
			0.5					Sandy CLAY (FILL) high plasticity, brown		
			1.0					becoming red brown		
			1.20							
			1.5							
			1.80					contains concrete 60%	M	
			2.0							
			2.80					SP SAND fine to medium grained, dark grey, some root matter		
			3.0					becoming grey		
			3.10					TEST PIT DISCONTINUED @ 3.10 m		
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S28

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479761 m E 7202643 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description			
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-2.20m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown, brown and red brown, some gravel	
			0.5						
			1.0	1.00				becoming grey and red brown	M
			1.5						
			1.80						
			2.00	2.00				contains some red orange sandstone	
			2.20	2.20			SP	Indurated SAND fine to medium grained, dark brown	
								TEST PIT DISCONTINUED @ 2.20 m	
			2.5						
			3.0						
			3.5						
			4.0						
			4.5						
			5.0						
			5.5						
			6.0						
			6.5						

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REPORT OF TEST PIT: S29

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479766 m E 7202621 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.00 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTP DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation			Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-3.00m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and pale brown, plastic pipe 10%	D-M	
			0.5							
			0.80							
			1.00					SAND (FILL) fine to medium grained, dark grey becoming grey and dark brown		
			1.20					Sandy CLAY (FILL) high plasticity, brown, pale grey and red brown		
			1.5							
			2.0							
			2.5							
			2.80							
			3.00					SC Clayey SAND fine to medium grained, pale brown TEST PIT DISCONTINUED @ 3.00 m		
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S30

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479817 m E 7202614 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description			
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-2.10m R = 0A			Sandy CLAY (FILL) high plasticity, dark brown and grey, contains concrete 20%	
			1.20				SC	Clayey SAND fine to medium grained, pale brown	
			2.10					TEST PIT DISCONTINUED @ 2.10 m	
			2.5						
			3.0						
			3.5						
			4.0						
			4.5						
			5.0						
			5.5						
			6.0						
			6.5						



REPORT OF TEST PIT: S31

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479806 m E 7202613 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTP DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-2.20m R = 0A			Sandy CLAY (FILL) high plasticity, brown and dark grey	M	
			0.5	0.60					W	
			1.0					Silty CLAY (FILL) high plasticity, grey, some sand and concrete 50%		
			1.5	1.80					M	
			2.0	2.20			SC	Clayey SAND fine to medium grained, pale brown		
								TEST PIT DISCONTINUED @ 2.20 m		
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S32

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479781 m E 7202613 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.00 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-2.00m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and dark grey, tree stumps and roots (80%)		
			0.5							
			1.0							
			1.5							
			1.70							
			2.00				SC	Clayey SAND fine to medium grained, pale brown		
			2.0					TEST PIT DISCONTINUED @ 2.00 m		
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S33

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479770 m E 7202604 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.00 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 17/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-3.00m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and red brown becoming dark grey		
			0.20							
			0.5							
			1.0	1.00			contains bitumen 10%			
			1.5	1.50			contains tree stump 15%			
			2.0	2.00						
			2.5							
			3.0	3.00			TEST PIT DISCONTINUED @ 3.00 m			
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S34

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479777 m E 7202583 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 1.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTR DATE: 17/7/07
CHECKED: DATE: 2/10/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0 0.50 1.0 1.20		DS 0.00-1.20m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown, grey and pale brown contains concrete 25%		
								TEST PIT DISCONTINUED @ 1.20 m REFUSAL		

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S35

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479878 m E 7203088 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 4.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI 4 DATE: 18/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-4.10m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and dark grey, some gravel	D	
			0.80							
			0.90					contains concrete 30% becoming red brown		
			1.0							
			1.5	1.60				becoming dark grey		
			2.0							
			2.5							
			3.0							
			3.5	3.50				SC Clayey SAND fine to medium grained, pale brown		M
			4.0	4.10				TEST PIT DISCONTINUED @ 4.10 m		
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S36

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479916 m E 7203065 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 4.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI2 DATE: 18/7/07
CHECKED: DATE: 22/1/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-4.10m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and dark grey, some gravel and root matter	D	
			0.30					contains concrete 35%		
			0.5							
			1.0	1.00				contains steel pipe 5%		
			1.5	1.50				becoming red brown and pale brown		
			2.0	2.10				becoming dark grey		
			2.30	2.30				contains concrete 15% and steel 5%		
			2.5							
			3.0							
			3.5	3.50						
			4.0	4.10			SC	Clayey SAND fine to medium grained, pale brown	M	
								TEST PIT DISCONTINUED @ 4.10 m		
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S37

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479902 m E 7203034 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 4.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 18/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-4.10m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and dark grey, some gravel	D	
			0.70					contains concrete 15% and tin 5%		
			1.0							
			1.5					becoming dark grey		
			2.0							
			2.5	2.50				becoming blue grey and dark grey		
			3.0	3.00				contains concrete 20%		
			3.30					becoming dark grey		
			3.5							
			3.90							
			4.0	4.10		SC		Clayey SAND fine to medium grained, pale brown	M	
					TEST PIT DISCONTINUED @ 4.10 m					
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S38

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479866 m E 7203036 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 4.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 18/7/07
CHECKED: DATE: 20/1/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		WATER SEEPAGE OBSERVED AT 3.0m	0.0 0.40 0.50 1.00 1.20 1.5 2.0 2.5 3.0 3.5 3.80 4.0 4.10 4.5 5.0 5.5 6.0 6.5		DS 0.00-4.10m R = 0A			Sandy CLAY (FILL) medium plasticity, dark grey and brown, some gravel contains concrete 10% and steel 5% contains pipe 5% and some clay becoming high plasticity becoming pale grey and dark grey contains plastic pipe 5% SC Clayey SAND fine to medium grained, pale brown TEST PIT DISCONTINUED @ 4.10 m	D W	



REPORT OF TEST PIT: S39

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479870 m E 7202968 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 4.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 18/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-4.10m R = 0A			Sandy CLAY (FILL) medium plasticity, dark grey and brown, some gravel		
			0.5							
			1.0							
			1.5							
			2.0	2.00				becoming high plasticity, dark grey and grey	D-M	
			2.5							
			3.0	2.80				contains concrete 40%		
			3.5	3.50						
			4.0	4.10			SC	Clayey SAND fine to medium grained, pale brown	M	
			4.5					TEST PIT DISCONTINUED @ 4.10 m		
			5.0							
			5.5							
			6.0							
			6.5							

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REPORT OF TEST PIT: S40

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479837 m E 7202883 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.50 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI
CHECKED: 
DATE: 18/7/07
DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-3.50m R = 0A			Sandy CLAY (FILL) medium plasticity, brown, red brown and dark grey		
			0.5							
			1.0							
			1.5	1.50				becoming pale grey and red brown		
			2.0							
			2.5	2.40				becoming dark grey		
			3.0	3.00						
			3.30				SC	Clayey SAND fine to medium grained, pale brown		
			3.50	3.50			CH	Silty CLAY high plasticity, grey		
								TEST PIT DISCONTINUED @ 3.50 m		



REPORT OF TEST PIT: S41

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479860 m E 7202833 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.50 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI 49 DATE: 18/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-2.50m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and dark grey, some gravel	M	
			0.40					contains concrete 10% and steel 5%		
			0.5							
			1.0							
			1.5							
			2.0	2.00						
			2.5	2.50			SC	Clayey SAND fine to medium grained, pale brown		
								TEST PIT DISCONTINUED @ 2.50 m		
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

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REPORT OF TEST PIT: S42

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479829 m E 7202829 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 4.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI 4 DATE: 18/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0 0.20 0.5 1.0 1.5 1.80 2.0 2.5 3.0 3.00 3.5 3.50 4.0 4.10		DS 0.00-4.10m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown and dark grey contains bricks 25% and concrete 35% becoming pale grey and red brown contains bitumen 5% SC Clayey SAND fine to medium grained, pale brown TEST PIT DISCONTINUED @ 4.10 m		

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S43

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479800 m E 7202774 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 5.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI 4 DATE: 18/7/07
CHECKED: DATE: 26/7/07

Excavation				Sampling		Field Material Description				STRUCTURE AND ADDITIONAL OBSERVATIONS	
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-5.20m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown and grey			
			0.70					contains concrete 10%			
			1.0								
			1.5								
			2.0								
			2.5								
			3.0	3.00				becoming pale grey and red brown			
			3.30					becoming dark brown and dark grey			
			4.5	4.50				SC Clayey SAND fine to medium grained, pale brown			
			5.20					TEST PIT DISCONTINUED @ 5.20 m			
			5.5								
			6.0								
			6.5								

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S44

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479828 m E 7202775 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 5.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 18/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX			0.0		DS 0.00-5.10m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown and dark grey, some gravel		
			0.5							
			1.0							
			1.5							
			2.0							
			2.5							
			3.0							
			3.5	3.50				contains concrete 20%		
			4.0							
			4.30					becoming dark grey and red brown, some concrete 5% and bitumen 5%		
			4.5							
			4.80							
			5.0	5.10			SC	Clayey SAND fine to medium grained, pale brown		
								TEST PIT DISCONTINUED @ 5.10 m		
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S45

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479867 m E 7202768 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 5.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 18/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-5.20m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown, dark grey and red brown, some gravel		
			0.5							
			1.0							
			1.5							
			2.0							
			2.5							
			3.0							
			3.5	3.50						
				3.60				contains logs becoming pale grey and red brown		
			4.0							
				4.20				contains debris 10%		
			4.5							
				4.90						
			5.0				SC	Clayey SAND fine to medium grained, pale brown		
				5.20				TEST PIT DISCONTINUED @ 5.20 m		
			5.5							
			6.0							
			6.5							

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REPORT OF TEST PIT: S46

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479861 m E 7202743 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 5.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 18/7/07
CHECKED: DATE: 20/1/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX			0.0		DS 0.00-5.10m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown and dark grey		
			0.5							
			1.0	1.00				contains bricks 15%		
			1.5	1.50				contains concrete 10%		
			2.0							
			2.5							
			3.0							
			3.5							
			4.0							
			4.5	4.50						
			5.0	5.10			SC	Clayey SAND fine to medium grained, pale brown		
			5.5					TEST PIT DISCONTINUED @ 5.10 m		
			6.0							
			6.5							

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S47

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479821 m E 7202733 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 6.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 18/7/07
CHECKED: DATE: 29/7/07

Excavation				Sampling		Field Material Description						
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-6.10m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown and dark grey, some gravel	D-M			
			0.5									
			1.0									
			1.5									
			2.0									
			2.5									
			3.0									
			3.5	3.50								contains concrete 10% and wood 5%
			3.80									becoming pale grey and red, some wire 2%
			4.0									
			4.5					M				
			5.0									
			5.5	5.50			SC Clayey SAND fine to medium grained, pale brown					
			6.0	6.10			TEST PIT DISCONTINUED @ 6.10 m					
			6.5									

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

REPORT OF TEST PIT: S49

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479819 m E 7202655 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 4.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1

MACHINE: Excavator

CONTRACTOR: Pearsons

LOGGED: CTPI DATE: 18/7/07
CHECKED: DATE: 20/7/07

CHECKED

DATE: 18/7/07
DATE: 20/7/07

Excavation				Sampling		Field Material Description			
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		WATER SEEPAGE OBSERVED AT 3.5m	0.0	DS 0.00-4.20m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and dark grey, some gravel	D	
			0.80				becoming pale grey, red and dark brown		
			1.0						
			1.5						
			2.0					M-W	
			2.5						
			3.0				becoming high plasticity, grey and dark grey	M	
			3.50				contains tree stumps 15%	M-W	
			4.0					W	
			4.20			SC	Clayey SAND fine to medium grained, pale brown		
							TEST PIT DISCONTINUED @ 4.20 m		
			4.5						
			5.0						
			5.5						
			6.0						
			6.5						

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should be relied upon for geotechnical purposes.



REPORT OF TEST PIT: S50

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479786 m E 7202651 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 4.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 18/7/07
CHECKED: DATE: 21/1/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-4.10m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown and brown, some gravel	D	
			0.70					becoming red brown and pale grey		
			1.0							
			1.5							
			1.80					contains concrete 30% and plastic 5%		
			2.0							
			2.5	2.50				becoming high plasticity, pale grey	M	
			3.0	3.00						
			3.5							
			4.0	4.10			SC	Clayey SAND fine to medium grained, pale brown		
			4.5					TEST PIT DISCONTINUED @ 4.10 m		
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S51

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479803 m E 7202687 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 4.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTP1 DATE: 18/7/07
CHECKED: DATE: 21/07

Excavation				Sampling		Field Material Description						
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-4.20m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown and brown, some gravel	D			
			0.5									
			1.0									
			1.20									
			1.30					becoming red brown, concrete 30% becoming high plasticity				
			1.5									
			2.0	2.00				becoming dark grey				
			2.5	2.50				becoming pale grey and red brown				M
			3.0	3.00				becoming pale grey				
			4.0	4.00								
			4.20					SC Clayey SAND fine to medium grained, pale brown				
								TEST PIT DISCONTINUED @ 4.20 m				
			4.5									
			5.0									
			5.5									
			6.0									
			6.5									

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REPORT OF TEST PIT: S52

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479765 m E 7202570 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 20/7/07
CHECKED: DATE: 21/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-2.20m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown and brown, some gravel		
			0.5							
			1.0							
			1.20							
			1.5							
			2.0	2.00				contains concrete 30% and timber 5%		
			2.20	2.20						
					SC			Clayey SAND fine to medium grained, pale brown		
								TEST PIT DISCONTINUED @ 2.20 m		
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S53

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479786 m E 7202541 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 4.20 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTP1 DATE: 20/7/07
CHECKED: DATE: 24/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-4.20m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown and brown contains hessian cloth 2%, concrete 10% and steel pipe 5%, some gravel		
			0.20							
			0.5							
			1.0							
			1.20				SP	SAND fine to medium grained, grey		
			1.50				CI	Silty CLAY high plasticity, pale grey, some sand becoming pale grey and dark green		
			1.70							
			2.0							
			2.5							
			3.0							
			3.5							
			4.0							
			4.20					TEST PIT DISCONTINUED @ 4.20 m		
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S54

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479766 m E 7202522 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 1.50 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1

MACHINE: Excavator

CONTRACTOR: Pearsons

LOGGED: CTP1

DATE: 20/7/07

CHECKED:

DATE: 18/7/07

Excavation				Sampling		Field Material Description							
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-1.50m R = 0A				Sandy CLAY (FILL) medium plasticity, dark brown and brown, some gravel contains concrete 30% and tree stumps 15%	M			
			0.20										
			0.5										
			1.0	1.00					Clayey SAND (FILL) fine to medium grained, pale brown				
			1.5	1.50					TEST PIT DISCONTINUED @ 1.50 m				
			2.0										
			2.5										
			3.0										
			3.5										
			4.0										
			4.5										
			5.0										
			5.5										
			6.0										
			6.5										



REPORT OF TEST PIT: S55

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479757 m E 7202494 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.30 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTP DATE: 20/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description			
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-2.30m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown and brown, some gravel	D
			0.30					contains concrete 15%	
			0.5						
			1.0						
			1.5						
			1.70						
			2.0					Silty CLAY high plasticity, grey and red brown, some sand	M
			2.30						
			2.5					TEST PIT DISCONTINUED @ 2.30 m	
			3.0						
			3.5						
			4.0						
			4.5						
			5.0						
			5.5						
			6.0						
			6.5						



REPORT OF TEST PIT: S56

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479765 m E 7202478 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTP DATE: 20/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX	GROUNDWATER NOT ENCOUNTERED		0.0		DS 0.00-3.10m R = 0A			Sandy CLAY (FILL) medium plasticity, dark brown and brown contains concrete 15%	D	
			0.20							
			0.5					becoming brown and red brown		
			0.70							
			1.0							
			1.30					some tree stumps 10%		
			1.5							
			2.0					becoming sandy		
			2.10							
			2.50							
			2.5					CH Silty CLAY high plasticity, grey and red brown	M	
			3.0					TEST PIT DISCONTINUED @ 3.10 m		
			3.10							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

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REPORT OF TEST PIT: S57

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479797 m E 7202492 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 3.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTP DATE: 20/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-3.10m R = 0A			SAND (FILL) fine to medium grained, grey, some root matter contains concrete pieces 10% and sewer pipe 10%	D	
			0.20							
			0.30							
			0.5					Sandy CLAY (FILL) medium plasticity, dark brown and brown		
			0.80					contains plastic 2% and concrete 10%		
			1.0							
			1.40					contains clay pipe 5%, tin 5%, plastic 2% and steel bucket 2%		
			1.5							
			2.0	2.00				contains tree stumps 10%, clay pipe 5% and concrete 10%		
			2.5	2.50						
			3.0	3.10				CH Silty CLAY high plasticity, pale grey and dark green, some organic matter	M	
								TEST PIT DISCONTINUED @ 3.10 m		
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							



REPORT OF TEST PIT: S58

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479795 m E 7202470 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 4.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1
MACHINE: Excavator
CONTRACTOR: Pearsons
LOGGED: CTPI DATE: 20/7/07
CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description							
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-4.10m R = 0A				Sandy CLAY (FILL) medium plasticity, dark brown and brown, some gravel				
			0.30	contains concrete 15%, tin 5%, pipes 5% and timber 5%									
			0.5										
			1.0	1.00					contains concrete 10%				
			1.5										
			2.0	2.00					becoming low plasticity		M		
			2.5										
			3.0	3.10									
			3.5					SC	Clayey SAND fine to medium grained, pale brown				
			4.0	4.10									
									TEST PIT DISCONTINUED @ 4.10 m				
			4.5										
			5.0										
			5.5										
			6.0										
			6.5										



REPORT OF TEST PIT: S59

CLIENT: Radway Pty Ltd
PROJECT: Industrial
LOCATION: Lot 2 Drury Lane, Dundowran
JOB NO: 077683504

COORDS: 479737 m E 7202471 m N MGA94
SURFACE RL: m DATUM: AHD71
PIT DEPTH: 2.10 m
BUCKET TYPE: 300 mm

SHEET: 1 OF 1

MACHINE: Excavator

CONTRACTOR: Pearsons

LOGGED: CTP DATE: 20/7/07

CHECKED: DATE: 20/7/07

Excavation				Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
EX		GROUNDWATER NOT ENCOUNTERED	0.0		DS 0.00-2.10m R = 0A			Sandy CLAY (FILL) medium plasticity, brown and dark brown, some gravel and debris	D-M	
			0.5	0.50					SAND fine to medium grained, dark brown	
			1.0	1.00				becoming grey	M	
			2.0	2.10				TEST PIT DISCONTINUED @ 2.10 m		
			2.5							
			3.0							
			3.5							
			4.0							
			4.5							
			5.0							
			5.5							
			6.0							
			6.5							

Page ____ of ____



PROJECT

Stage 2, Proxy bank

PROJ. NUMBER

077683504 ✓

GOLDER STAFF

✓

DATE _____

2/8/07

MON. WELL NAME

567 BH

WEATHER (Temp/Cloud Cover/Precip.) fine

CALCULATION OF MINIMUM PURGE VOLUME

All depths measured below top of casing (TOC) unless specified otherwise

Time/Date	Initial Water Levl, (m) A	Well Depth (m) B	Well Depth from TOC (m) C	Standing Water (m) D	1 Well Volume (L) 50 mm = D*2 100 mm = D*8 150 mm = D*18 E	Min. Total Vol to be Purged (L) E*3
	2.2	2.7		0.5	1	3

Purged using:

1. Grundfos Pump
2. Tube and Foot Valve
Other:
3. Air Displacement Pump
4. Bailer = (Stainless) - (Teflon) - (Disposable)

SAMPLING DETAILS

Field Measurements

Water level prior to commencement of low flow purging

[illegible]

WATER LEVEL AT COMPLETION OF LOW FLOW PURGING

Day

FLOW-RATE DURING PURGING

TOTAL ACTUAL VOLUME PURGED (L)

3.56

TIME OF SAMPLE COLLECTION

100

SAMPLES FILTERED FOR METAL ANALYSIS

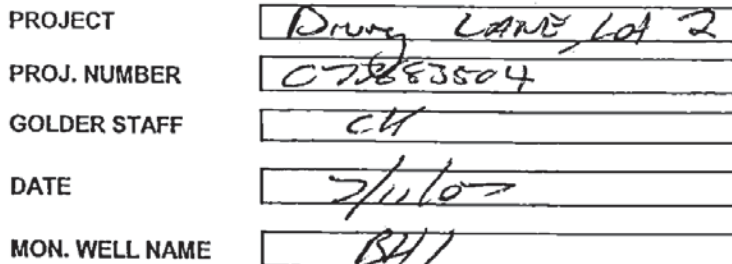
☒ YES / NO

SAMPLE RECORD

Sample ID:		QA Sample ID:	
Container Types	Preservative	Container Types	Preservative
9-295			File A

Releas

Page ____ of ____



WEATHER (Temp/Cloud Cover/Precip.) *Fine*

All depths measured below top of casing (TOC) unless specified otherwise

Time/Date	Initial Water Levl, (m) A	Well Depth (m) B	Well Depth from TOC (m) C	Standing Water (m) D	1 Well Volume (L) 50 mm = D*2 100 mm = D*8 150 mm = D*18 E	Min. Total Vol to be Purged (L) E*3 E*3
Jul 07	0.7	2.7	—	2	4	12

1. Grundfos Pump
2. Tube and Foot Valve
Other: _____

3. Air Displacement Pump
4. Bailer = (Stainless) - (Teflon) - (Disposable)

Water level prior to commencement of low flow purging

[illegible]

Dry

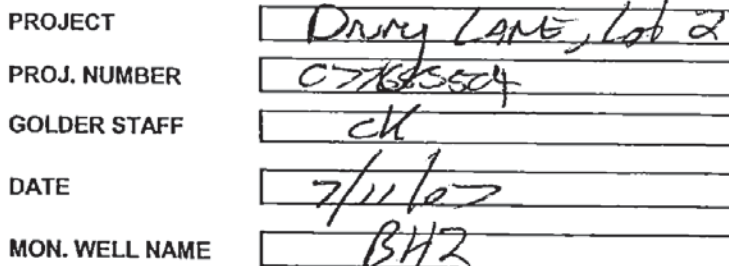
5(c)

YES ☒ NO ☐

Sample ID :		QA Sample ID :	
Container Types	Preservative	Container Types	Preservative
19-295			File A

Releas

Page ____ of ____



WEATHER (Temp/Cloud Cover/Precip.) Five

All depths measured below top of casing (TOC) unless specified otherwise

Time/Date	Initial Water Levl, (m) A	Well Depth (m) B	Well Depth from TOC (m) C	Standing Water (m) D	1 Well Volume (L) 50 mm = D*2 100 mm = D*8 150 mm = D*18 E	Min. Total Vol to be Purged (L) E*3 E*3
7/12/07	1.5	5.8	6.0	4.3	8	24

1. Grundfos Pump
2. Tube and Foot Valve
Other:.....

3. Air Displacement Pump
4. Bailer = (Stainless) - (Teflon) - (Disposable)

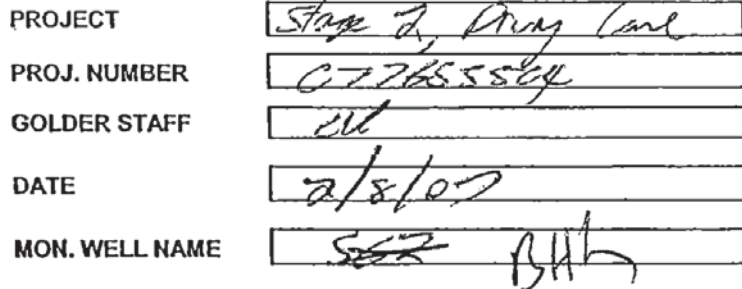
Water level prior to commencement of low flow purging

[illegible]YES / ☒ NO

Sample ID :		QA Sample ID :	
Container Types	Preservative	Container Types	Preservative
19-295			File A

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Page ____ of ____



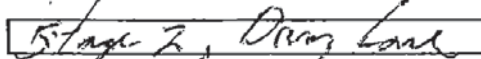
Time/Date	Initial Water Levl. (m) A	Well Depth (m) B	Well Depth from TOC (m) C	Standing Water (m) D	1 Well Volume (L) 50 mm = D*2 100 mm = D*8 150 mm = D*18 E	Min. Total Vol to be Purged (L) E*3
	3.7	5.85		2	4	12

[illegible]

Sample ID :		QA Sample ID :	
Container Types	Preservative	Container Types	Preservative
9-295		File A	

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Page ____ of ____



077683504

24

2/8/07

~~180~~ ~~563~~ 513

Fine

All depths measured below top of casing (TOC) unless specified otherwise

Time/Date	Initial Water Lvl, (m) A	Well Depth (m) B	Well Depth from TOC (m) C	Standing Water (m) D	1 Well Volume (L) 50 mm = D*2 100 mm = D*8 150 mm = D*18 E	Min. Total Vol to be Purged (L) E*3
5/8/07	2.2	3.9		3.5	7	21

Purged using:

1. Grundfos Pump
2. Tube and Foot Valve
Other:.....

3. Air Displacement Pump
4. Bailer = (Stainless) - (Teflon) - (Disposable)

SAMPLING DETAILS

Field Measurements

Water level prior to commencement of low flow purging

[illegible]

WATER LEVEL AT COMPLETION OF LOW FLOW PURGING

5.2

FLOW RATE DURING PURGING

TOTAL ACTUAL VOLUME PURGED (L) ~

137

TIME OF SAMPLE COLLECTION

SAMPLES FILTERED FOR METAL ANALYSIS

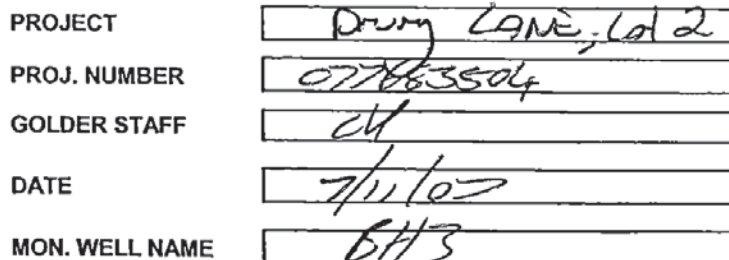
YES / NO

SAMPLE RECORD

Sample ID :		QA Sample ID :	
Container Types	Preservative	Container Types	Preservative
9-295			File A

Rele

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WEATHER (Temp/Cloud Cover/Precip.) *Fine*

All depths measured below top of casing (TOC) unless specified otherwise

Time/Date	Initial Water Levl, (m) A	Well Depth (m) B	Well Depth from TOC (m) C	Standing Water (m) D	1 Well Volume (L) 50 mm = D*2 100 mm = D*8 150 mm = D*18 E	Min. Total Vol to be Purged (L) E*3 E*3
7/11/07	0.8	5.9	6.0	3.1	10	30

1. Grundfos Pump
2. Tube and Foot Valve
Other:
3. Air Displacement Pump
4. Bailer = (Stainless) - (Teflon) (Disposable)

Field Measurements

Water level prior to commencement of low flow purging

[illegible]

WATER LEVEL AT COMPLETION OF LOW FLOW PURGING

FLOW RATE DURING PURGING

TOTAL ACTUAL VOLUME PURGED (L)

TIME OF SAMPLE COLLECTION

SAMPLES FILTERED FOR METAL ANALYSIS

YES ☒ NO ☐

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EXPLANATION OF NOTES, ABBREVIATIONS & TERMS USED ON BOREHOLE AND TEST PIT REPORTS

DRILLING/EXCAVATION METHOD

AS*	Auger Screwing	RD	Rotary blade or drag bit	HQ	Diamond Core - 63 mm
AD*	Auger Drilling	RT	Rotary Tricone bit	NMLC	Diamond Core - 52 mm
*V	V-Bit	RAB	Rotary Air Blast	NQ	Diamond Core - 47 mm
*T	TC-Bit, e.g. ADT	RC	Reverse Circulation	BH	Tractor Mounted Backhoe
HA	Hand Auger	PT	Push Tube	EX	Tracked Hydraulic Excavator
DTC	Diatube Coring	CT	Cable Tool Rig	EE	Existing Excavation
WB	Washbore or Bailer	JET	Jetting	HAND	Excavated by Hand Methods

PENETRATION/EXCAVATION RESISTANCE

- L** **Low resistance.** Rapid penetration possible with little effort from the equipment used.
- M** **Medium resistance.** Excavation/possible at an acceptable rate with moderate effort from the equipment used.
- H** **High resistance** to penetration/excavation. Further penetration is possible at a slow rate and requires significant effort from the equipment.
- R** **Refusal or Practical Refusal.** No further progress possible without the risk of damage or unacceptable wear to the digging implement or machine.

These assessments are subjective and are dependent on many factors including the equipment power, weight, condition of excavation or drilling tools, and the experience of the operator.

WATER



Water level at date shown



Partial water loss



Water inflow



Complete water loss

GROUNDWATER NOT OBSERVED

The observation of groundwater, whether present or not, was not possible due to drilling water, surface seepage or cave in of the borehole/test pit.

GROUNDWATER NOT ENCOUNTERED

The borehole/test pit was dry soon after excavation. However, groundwater could be present in less permeable strata. Inflow may have been observed had the borehole/test pit been left open for a longer period.

SAMPLING AND TESTING

SPT	Standard Penetration Test to AS1289.6.3.1-1993
4,7,11 N=18	4,7,11 = Blows per 150mm. N = Blows per 300mm penetration following 150mm seating
30/80mm	Where practical refusal occurs, the blows and penetration for that interval are reported
RW	Penetration occurred under the rod weight only
HW	Penetration occurred under the hammer and rod weight only
HB	Hammer double bouncing on anvil
DS	Disturbed sample
BDS	Bulk disturbed sample
G	Gas Sample
W	Water Sample
FP	Field permeability test over section noted
FV	Field vane shear test expressed as uncorrected shear strength (s_v = peak value, s_r = residual value)
PID	Photoionisation Detector reading in ppm
PM	Pressuremeter test over section noted
PP	Pocket penetrometer test expressed as instrument reading in kPa
U63	Thin walled tube sample - number indicates nominal sample diameter in millimetres

Ranking of Visually Observable Contamination and Odour (for specific soil contamination assessment projects)

R = 0	No visible evidence of contamination	R = A	No non-natural odours identified
R = 1	Slight evidence of visible contamination	R = B	Slight non-natural odours identified
R = 2	Visible contamination	R = C	Moderate non-natural odours identified
R = 3	Significant visible contamination	R = D	Strong non-natural odours identified

ROCK CORE RECOVERY

TCR = Total Core Recovery (%)

SCR = Solid Core Recovery (%)

RQD = Rock Quality Designation (%)

$$= \frac{\text{Length of core recovered}}{\text{Length of core run}} \times 100$$

$$= \frac{\sum \text{Length of cylindrical core recovered}}{\text{Length of core run}} \times 100$$

$$= \frac{\sum \text{Axial lengths of core} > 100 \text{ mm}}{\text{Length of core run}} \times 100$$

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METHOD OF SOIL DESCRIPTION USED ON BOREHOLE AND TEST PIT REPORTS



FILL



GRAVEL (GP or GW)



SAND (SP or SW)



SILT (ML or MH)



CLAY (CL, CI or CH)



ORGANIC SOILS (OL or OH or Pt)



COBBLES or BOULDERS

Combinations of these basic symbols may be used to indicate mixed materials such as sandy clay.

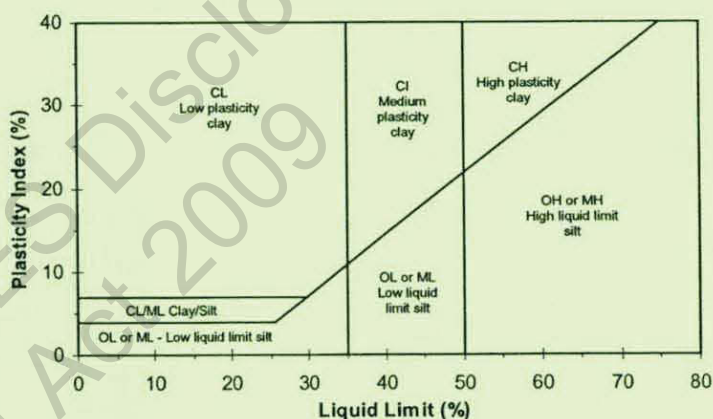
CLASSIFICATION AND INFERRED STRATIGRAPHY

Soil and Rock is classified and described in Reports of Boreholes and Test Pits using the preferred method given in AS1726 – 1993, Appendix A. The material properties are assessed in the field by visual/tactile methods.

Particle Size

Major Division	Sub Division	Particle Size
BOULDERS		> 200 mm
COBBLES		63 to 200 mm
GRAVEL	Coarse	20 to 63 mm
	Medium	6.0 to 20 mm
	Fine	2.0 to 6.0 mm
SAND	Coarse	0.6 to 2.0 mm
	Medium	0.2 to 0.6 mm
	Fine	0.075 to 0.2 mm
SILT		0.002 to 0.075 mm
CLAY		< 0.002 mm

Plasticity Properties



MOISTURE CONDITION

AS1726 - 1993

Symbol	Term	Description
D	Dry	Sands and gravels are free flowing. Clays & Silts may be brittle or friable and powdery.
M	Moist	Soils are darker than in the dry condition & may feel cool. Sands and gravels tend to cohere.
W	Wet	Soils exude free water. Sands and gravels tend to cohere.

CONSISTENCY AND DENSITY

AS1726 - 1993

Symbol	Term	Undrained Shear Strength	Symbol	Term	Density Index %	SPT "N" #
VS	Very Soft	0 to 12 kPa	VL	Very Loose	Less than 15	0 to 4
S	Soft	12 to 25 kPa	L	Loose	15 to 35	4 to 10
F	Firm	25 to 50 kPa	MD	Medium Dense	35 to 65	10 to 30
St	Stiff	50 to 100 kPa	D	Dense	65 to 85	30 to 50
VSt	Very Stiff	100 to 200 kPa	VD	Very Dense	Above 85	Above 50
H	Hard	Above 200 kPa				

In the absence of test results, consistency and density may be assessed from correlations with the observed behaviour of the material.

SPT correlations are not stated in AS1726 – 1993, and may be subject to corrections for overburden pressure and equipment type.