Department of Environment and Heritage Protection (EHP)
ABN 46 640 294 485
400 George St Brisbane, Queensland 4000
GPO Box 2454 Brisbane QLD 4001 AUSTRALIA
www.ehp.qld.gov.au

Queensland Government

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

Transaction ID: 50365241 EMR Site Id: 100426 22 March 2017
This response relates to a search request received for the site:
Lot: 57 Plan: RP151968

EMR RESULT

The above site IS included on the Environmental Management Register.
Lot: 57 Plan: RP151968
Address: 214 OLD CLEVELAND RD
COORPAROO 4151

The site has been subject to the following Notifiable Activity or Hazardous Contaminant.
HAZARDOUS CONTAMINANT - This site has been subject to a hazardous contaminant. Refer to the summary given below.
Elevated levels of benzo-a-pyrene.

A site management plan has been prepared for this site and is included with this search response as Annexure 1. It has been determined that this site is suitable for the following uses, providing the site is used and managed according to the site management plan:

Providing the conditions of this approved SMP are complied with, the subject land (as defined by the allotment boundaries) is suitable for the current commercial/industrial land use.

The new use of the site (as defined by the allotment boundaries) must not commence until the attached remediation action plan (RAP) has been completed for the site, and the DEHP has received a Validation Report under Chapter 7 Part 8 Division 4 of the Environmental Protection Act 1994. Following implementation of the RAP, and submission to the DEHP of the above certified report, a Suitability Statement will be issued to enable the new use as unrestricted commercial land.

Following the date of effect of the site management plan, 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.

CLR RESULT

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

ADDITIONAL ADVICE

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All search responses include particulars of land listed in the EMR/CLR when the search was generated. The EMR/CLR does NOT include:-

1. land which is contaminated land (or a complete list of contamination) if EHP has not been notified
2. land on which a notifiable activity is being or has been undertaken (or a complete list of activities) if EHP has not been notified

If you have any queries in relation to this search please phone 13QGOV (13 74 68)

Administering Authority

Queensland Government

Department of Environment and Heritage Protection (EHP)
ABN 46 640 294 485
400 George St Brisbane, Queensland 4000
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ANNEXURE 1 - SITE MANAGEMENT PLAN

LOT : 57 PLAN : RP151968 FILE REF : 101/11851 PRINTED: 22/03/2017

DATE OF EFFECT : 11/10/2012
Please find attached Site Management Plan and associated Figure.

If Site Management Plan does not generate from this search, please contact:

Department of Environment & Heritage Protection (EHP)
Contaminated Land Unit
Email: contaminated.land@ehp.qld.gov.au

Release

Queensland Government

Department of Environment and Heritage Protection (EHP)
ABN 46 640 294 485
Contaminated Land Unit Level 7 400 George St Brisbane, Queensland 4001
GPO Box 2454 Brisbane QLD 4001 AUSTRALIA
Telephone (07) 3330 5685 Facsimile (07) 3330 5634
http://www.ehp.qld.gov.au/land/contaminated-land/

ANNEXURE 1 - SITE MANAGEMENT PLAN

LOT: 1 PLAN: RP72461
LOT: 57 PLAN: RP151968
FILE REF: BNE45756 Vols 2 & 3

DATE OF EFFECT: 10/10/2012

1.0 BACKGROUND AND SUMMARY OF CONTAMINATION

This SMP specifically addresses Lot 1 on RP72461 and Lot 57 on RP151968, Parish of Bulimba, County of Stanley, and situated respectively at 100 Holdsworth Street 214 Old Cleveland Road, Cooparoo, Queensland. The allotments are shown in Figure 1.

Lot 1 on RP72461 and Lot 57 on RP151968 are listed on the Environmental Management Register (EMR) for Hazardous Contaminant (Total Petroleum Hydrocarbons [TPHs] and benzo(a)pyrene respectively) as of July 2012 following submission of contaminated land assessment results to the Department of Environment and Heritage Protection (DEHP). None of the remaining three allotments are listed on the EMR or Contaminated Land Register (CLR).

The site is currently occupied by warehouse style buildings and commercial buildings containing a tile retailer and carpet retailer, as well as an open storage yard area. The majority of the external site area is covered in concrete/hard stand. Historically the site has been occupied by a car sales yard with potential workshop, as well as a storage area for the dry cleaning business that is located adjacent to the southern site boundary; the storage area was damaged by fire. A service station is located on the southern side of Old Cleveland Road. A polyethylene underground storage tank is present within the southern site boundary, adjacent to the northwest corner of the dry cleaners; anecdotal information suggests it was associated with the former dry cleaners and was used for wastewater storage/recycling. The tank is now empty and has been backfilled.

The maximum soil concentrations for targeted contaminants above the standard residential criteria are summarised as follows:

Copper	1400 mg/kg
Lead	350 mg/kg
Benzo(a)pyrene	1.6 mg/kg
TPHs $C_{15} - C_{28}$	2,300 mg/kg
TPHs $C_{29} - C_{36}$	3,800 mg/kg.

No groundwater investigation has been undertaken to date.

2.0 OBJECTIVES

The objective of this SMP is to manage existing and potential contamination at the site in a manner that protects human health and the environment.

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3.0 ACHIEVEMENT AND MAINTENANCE OF OBJECTIVES

3.1 Responsibility

The owner/occupier 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

Providing the conditions of this approved SMP are complied with, the subject land (as defined by the allotment boundaries) is suitable for the current commercial/industrial land use.

The new use of the site (as defined by the allotment boundaries) must not commence until the attached remediation action plan (RAP) has been completed for the site, and the DEHP has received a Validation Report under Chapter 7 Part 8 Division 4 of the *Environmental Protection Act 1994*. Following implementation of the RAP, and submission to the DEHP of the above certified report, a Suitability Statement will be issued to enable the new use as unrestricted commercial land.

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 works. All persons occupying or working on the site as defined by metes and bounds must comply with the requirements of the SMP.

3.4 Surface Cover

Current surface cover is concrete building slabs and surrounding concrete and asphalt pavements; limited gravel covered areas are also present towards the centre of the site.
Until remediation works commence, the the existing surface covers are to remain over the entire site to maintain a barrier between the potential contamination and site users. The surface cover is to be maintained in a sound condition at all times.

3.5 Underground Services

New underground services within the site allotment boundaries must only 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.

3.6 Soil Excavation and Removal

Prior to redevelopment and enacting the RAP, any soil excavated from the site must be assessed for contaminants of concern to determine if the material is contaminated and to identify appropriate management and disposal/re-use options. Representative sampling and analysis of soil from excavations within 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.

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3.7 Unexpected Contamination

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 environmental harm. The administering authority is to be notified in writing within 24 hours 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.

3.8 General Environmental Protection

All earthworks undertaken on the site are to be conducted 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 potentially contaminated material.

3.9 Workplace Health and Safety

The obligations in this SMP are in addition to, and do not override, any workplace health and safety requirements under law that relate to the disturbance works to be conducted at the site.

3.10 Imported Fill Material

Any fill material that may be imported to the site in the future must be certified as free f contamination or should be sampled and submitted for analysis by a suitably qualified and experienced person prior to delivery to the site. The frequency of the sampling and analysis required, and the acceptance criteria adopted for potential contaminants will depend on the source of the fill.

4.0 MONITORING AND REPORTING

Should the remediation works which are described in the attached RAP not be completed within six months, a biannual inspection of the site is to be undertaken by the owner to ensure the sealed areas and capping of the site (See Section 3.4) remain in good condition. The biannual period is to begin from the effective date of this plan.

Records are to be kept of all inspections, any soil excavation within the site, disposal permits and SMP compliance for review by the administering authority from time to time.

This 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.

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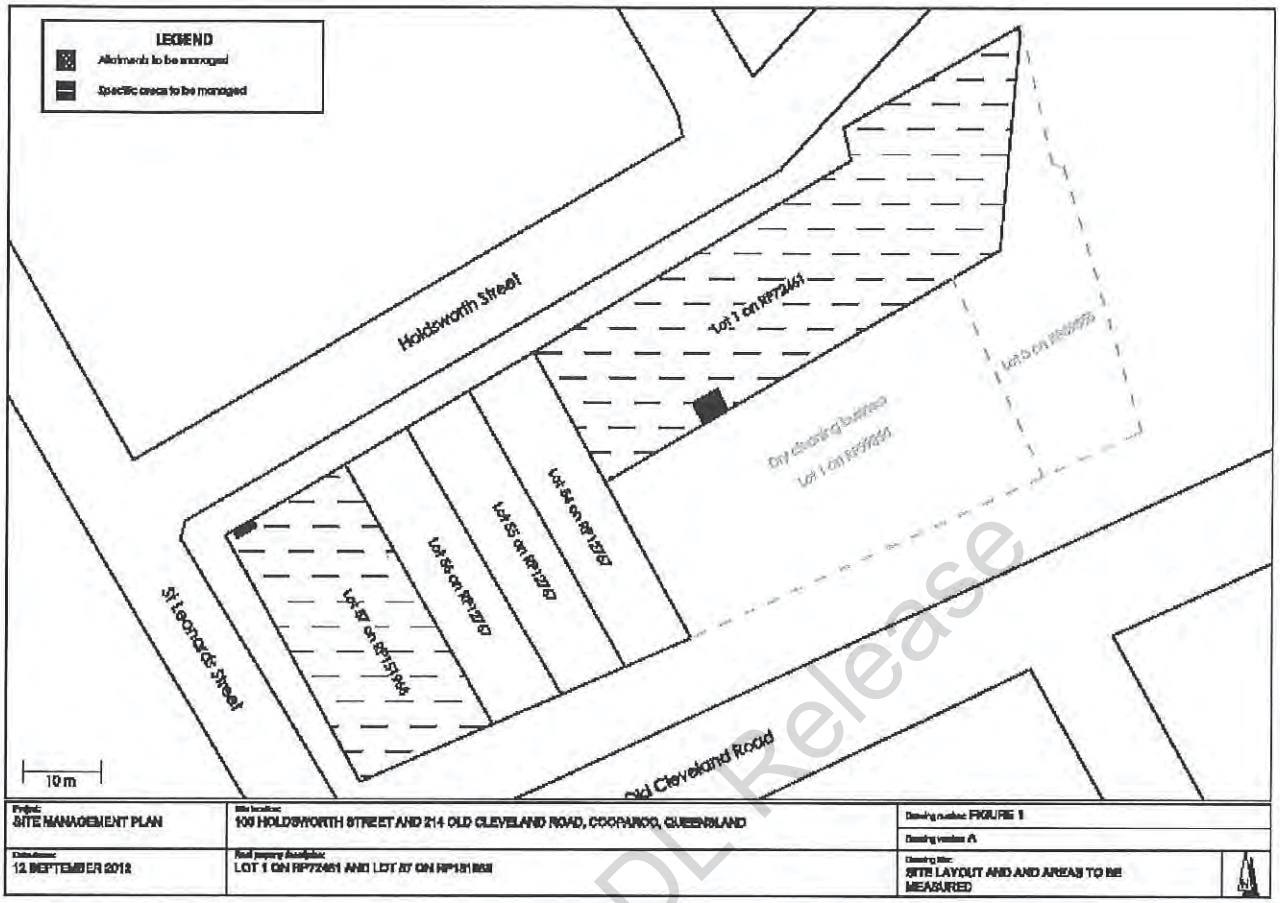

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APPENDIX 1
Draft REMEDIATION ACTION PLAN

Date: 5 September 2012

Lot 1 on RP72461
Lot 57 on RP151968 **DEHP File Reference Number: BNE45756 Vol 2 & 3**

1.0 INTRODUCTION

This remediation action plan (RAP) was prepared for the site as shown on Figure 1 and defined by the area of land described as Lot 1 on RP72461, Lot 54, 55 and 56 on RP12767 and Lot 57 on RP151968, Parish of Bulimba, County of Stanley, and situated respectively at 100 Holdsworth Street and 222, 220, 218 and 214 Old Cleveland Road, Queensland.

Lot 1 on RP72461 and Lot 57 on RP151968 are listed on the Environmental Management Register (EMR) for Hazardous Contaminant (Total Petroleum Hydrocarbons [TPHs] and benzo(a)pyrene respectively) as of July 2012 following submission of contaminated land assessment results to the Department of Environment and Heritage Protection (DEHP). None of the remaining three allotments are listed on the EMR or Contaminated Land Register (CLR).

The site is currently occupied by warehouse style buildings and commercial buildings containing a tile retailer and carpet retailer, as well as an open storage yard area. The majority of the external site area is covered in concrete/hard stand. Historically the site has been occupied by a car sales yard with potential workshop, as well as a storage area for the dry cleaning business that is located adjacent to the southern site boundary; the storage area was damaged by fire. A service station is located on the southern side of Old Cleveland Road. A polyethylene underground storage tank is present within the southern site boundary, adjacent to the northwest corner of the dry cleaners; anecdotal information suggests it was associated with the former dry cleaners and was used for wastewater storage/recycling. The tank is now empty and has been backfilled.

A Stage 1 and Stage 2 Environmental Site Assessment (ESA) was undertake across the site and completed in April 2012. The ESA targeted the following potential contaminants of concern:

- Metals – arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc
- Total petroleum hydrocarbons (TPHs)
- Benzene, toluene, ethylbenzene, xylenes (BTEX)
- Polycyclic aromatic hydrocarbons (PAHs)
- Organochlorine pesticides (OCPs) and organophosphorus pesticides (OPPs)
- Polychlorinated biphenyls (PCBs)
- Volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs).

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The soil assessment undertaken identified concentrations of targeted contaminants above standard residential land use criteria in two of the ten sampling locations, adjacent to the underground storage tank and in the northwest corner of the site – limited to copper, lead, benzo(a)pyrene and semi-volatile TPHs. No groundwater assessment was undertaken as part of the ESA.

Minimal soil investigation/analysis has been undertaken within site buildings and along the southern boundary adjacent to the dry cleaning business (one sample within buildings and one along boundary). Further soil assessment for targeted contaminants will be required during the redevelopment process to adequately assess the extent of contamination within key risk areas of the site and to broadly assess fill and natural soils beneath buildings, as detailed in the later sections of this RAP.

The assessment during redevelopment will determine the requirements for spoil remediation, re-use and or disposal, and identify the suitability of remaining material for the proposed residential/commercial land use. Additional classification/ validation will specifically be required in sub-slab fill and natural soils once the buildings and concrete/hardstand have been removed from site, and in targeted remediation areas where contamination has been previously identified above the adopted remediation criteria. Until remediation and validation works have been satisfactorily completed, building is not to proceed and Lot 1 on RP72461 and Lot 57 on RP151968 are to remain on the EMR.

Installation of groundwater monitoring wells in key risk areas of the site, particularly along the southern boundary, and analysis of groundwater samples for potential contaminants of concern will also be required to classify potential risks for the proposed land use, and subsequently determine groundwater remedial requirements (if required).

1.1 Purpose of the RAP

The purpose of the RAP is to provide a detailed plan of activities, procedures and objectives to ensure the effective and controlled remediation of the site during the redevelopment process. It describes the procedures and standards to be followed throughout the project to facilitate successful remediation/ management and ensure protection of human health and the environment.

1.2 Objectives

The primary objectives of the remediation program at the site as defined by the allotment boundaries are:

- To make the site safe for planned future residential, parks and open space, and commercial use
- Removal of the polyethylene underground storage tank
- Remediation of impacts to minimise potential ecological and human health risk associated with potential soil and groundwater contamination at the site
- The reduction of potential pathways of exposure to chemicals of concern for human health and ecological receptors where validation results dictate that contamination is present above acceptable levels and further excavation is not possible (due to site/development constraints)
- To ensure the protection of the community and local environment.

2.0 BACKGROUND

2.1 Site Description

The site history review indicates the subject allotments were semi-cleared in 1946 with some low density residential development in Lot 56 and Lot 57. A 1978 aerial photograph of the area details commercial development across the site and areas to the east and north, with subsequent photos to the current period confirming similar buildings and site layout to the present configuration.

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Presently, the site is occupied by two warehouse style buildings in Lots 54 – 57 and one warehouse building in the eastern portion of Lot 1; the buildings are separated by an open storage yard area. Concrete /hardstand cover is present across the majority of outdoor areas.

The site layout is shown in Figure 2.

2.2 Description of Proposed Development

The site is to be redeveloped for mixed residential and commercial use. This will include an area dedicated as park and open space. A multi-storey mix use building will be constructed over a two-three storey basement car park; excavation for the car park will extend to a maximum depth of 9.3 m below the existing ground level.

2.3 Previous Investigations

The following contamination investigations have been conducted at the site:

- E3 Consulting Australia, 2012. Karem Group Limited, Stage 1 and Stage 2 Environmental Site Assessment, 214 – 222 Old Cleveland Road and 100 Holdsworth Street, Cooparoo, QLD 4151, dated 30 April 2012

The April 2012 E3 report superseded an earlier version dated 5 March 2012.

2.4 Local Topography

The site is level to gentle sloping with a surface elevation of 5 m AHD across Lot 57 sloping gently northeast across the site to 4 m AHD in the eastern portion of Lot 1.

2.5 Geology

The geology at the site is mapped at 1:100,000 by the Geological Survey of Queensland (Brisbane Geological Map) as Palaeozoic aged rock of the Neranleigh–Fernvale Beds comprising cleaved shale, siltstone and labile arenite (greywacke).

The soil profiles across the site generally comprised gravelly sand fill to a maximum depth of 1.5 m, underlain by natural clays and silty clays - investigation limited to 3 m below existing ground level. Concrete thickness is generally between 130 mm and 300 mm and the maximum depth of investigation was 3 m.

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2.6 Surface Hydrology and Hydrogeology

No groundwater monitoring wells were installed as part of the ESA (2012). The ESA provides regional groundwater information (1:250,000 Groundwater Resources of Queensland Map) suggesting groundwater generally flows from south to north in the subject area, with low yields (<5 L/s) and low salinity (500 – 1,500 mg/L total dissolved solids). Groundwater is described as generally suitable for most uses, though marginal for human consumption.

A geotechnical investigation conducted by Douglas Partners in May 2011 (*Report on Geotechnical Investigation – Proposed Mixed Use Development 214-222 Old Cleveland Road and 100 Holdsworth Street, Cooparoo, Project 74690.00*) identified groundwater at the site between depths of 1.3 m to 3.5 m.

Runoff from the site is expected to be directed to the kerb and channel that borders the surrounding streets. The site lies approximately 650 m southeast of Norman Creek, a tributary of the Brisbane River – groundwater at the site is not expected to be have discernible influence from Norman Creek as groundwater flow direction has been detailed as generally to the north.

3.0 EXTENT OF CONTAMINATION

3.1 Soil

Sampling locations for soils as derived from the ESA are shown in Figure 2. The maximum soil concentrations for targeted contaminants above the standard residential criteria are summarised as follows:

Copper	1400 mg/kg	(DoE 1998 HIL A criterion of 1000 mg/kg)
Lead	350 mg/kg	(DoE 1998 HIL A criterion of 300 mg/kg)
Benzo(a)pyrene	1.6 mg/kg	(DoE 1998 HIL A criterion of 1 mg/kg)
TPHs $C_{15} - C_{28}$	2300 mg/kg	(EPA 1999 criterion of 1000 mg/kg)
TPHs $C_{29} - C_{36}$	3800 mg/kg	(EPA 1999 criterion of 1000 mg/kg).

Volatile organic compounds (VOCs) concentrations in soil sample headspace for the ESAs ranged from 0 ppm to 1.8 ppm.

3.2 Groundwater

No groundwater investigations have been undertaken.

4.0 ENVIRONMENTAL GUIDELINES

As the intention is to remediate the site to a level suitable for unrestricted use, the remediation criteria from the below sources, and shown in Table 1, shall be adopted.

- Department of the Environment (1998) Draft Guidelines for the Assessment and Management of Contaminated Sites in Queensland
- Investigation Guidelines For Sites On Which Fuel Has Been Stored, draft (EPA 1999).

Due to the high-density residential, open space and commercial nature of the development, i.e. not agricultural or within an ecologically sensitive area, the environmental investigation levels (EILs) are not considered to be relevant.

Table 1: Soil Remediation Criteria

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Analyte	Soil Remediation Thresholds (mg/kg)
Copper	1,000
Lead	300
Benzene	1
Total BTEX	7
TPH (C_6-C_9)	100
TPH (C_{10}-C_{14})	100
TPH (C_{15}-C_{28})	1,000
TPH (C_{29}-C_{36})	1,000
Benzo(a)pyrene	1
Total PAHs	20.

These criteria may be modified, as necessary, based on appropriate risk assessment and modelling if contamination remains at depth. Should other chemicals of potential concern be identified, or risk assessment and modelling be warranted, remediation thresholds will be agreed in consultation with a Suitably Qualified Person (SQP) and DEHP.

Groundwater remediation criteria are described in Table 2. These criteria will ensure that the remediation of groundwater (where required) does not pose a risk to human health or the environment.

Aquatic ecosystem criteria have been sourced from Australian New Zealand Environment and Conservation Council (ANZECC) / Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) (2000) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, including Table 3.4.1 and Section 8.3.7. These specify that the 95% species protection levels are to be applied for slightly to moderately-disturbed ecosystems (most urban catchments) and the 99% species protection levels for pristine or vulnerable ecosystems or where the contaminants are intractable (e.g. bioaccumulative). Freshwater criteria are considered relevant in the first instance.

Table 2: Groundwater Remediation Criteria

Analyte	Groundwater Remediation Thresholds (ug/L) *
Benzene	950
Toluene	180
Ethyl benzene	80
Xylenes	75 (meta) 350 (ortho) 200 (para)
TPHs	TPHs in waters used as screening analysis. If > LORs, analysis for specific toxicants required, e.g. BTEX, PAHs, etc.
Anthracene	0.01
Benzo(a)pyrene	0.1
Fluoranthene	1
Phenanthrene	0.6
Naphthalene	16
Arsenic	24 / 13
Cadmium	0.2

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Chromium	3.3 / 1.0
Copper	1.4
Lead	3.4
Mercury	0.06
Nickel	11
Zinc	8

* Groundwater criteria are freshwater or x/y valence state dependant.

These criteria may be modified, as necessary, based on appropriate risk assessment and modelling if contamination remains at depth. Should other chemicals of potential concern be identified, or risk assessment and modelling be warranted, remediation thresholds will be agreed in consultation with the SQP and DEHP.

5.0 REMEDIAL STRATEGIES

The following sections describe the main components of the overall remediation strategy.

5.1 Remediation Goals

The primary remediation goal is to make the site suitable for standard residential use and facilitate removal of Lot 1 on RP72461 and Lot 57 on RP151968 from the EMR. Primarily this shall be conducted via removal of non-suitable soils for remediation and/or disposal at an appropriately licensed off-site facility. Spoil material that meets the standard residential land use criteria shall be re-used or relocated off-site as necessary.

5.2 Extent of Impact

Sources of potential contamination currently remain at or adjacent to the site. With the exception of one sample from the northwest corner of the site, soil criteria exceedances were limited to the samples collected adjacent to the underground storage tank. However, no investigation of soils has been undertaken within the building footprints nor has groundwater assessment been undertaken in key risk areas of the site. Subsequently, areas of known impact are defined in the attached Figure 2, however, additional remedial areas may be defined following additional soil characterisation and analysis.

The remedial strategy for any contaminated materials identified during the characterisation /validation assessments will involve removal from site and remediation and/or disposal at an appropriately licensed facility.

EHP PTY DL Release

Release

5.3 Contingency

If contaminated and/or leachable contaminants above the standard residential guidelines are identified in soil during the post-demolition assessment and/or validation of the two remediated areas (as shown in Figure 2), the subject material will be removed from site and remediated and/or disposed at an appropriately licensed facility in accordance with the conditions of a DEHP issued disposal permit.

If contaminated water is identified during the remedial works it will be removed via a licensed liquid waste contractor to a DEHP approved facility. A copy of the disposal records will be obtained for inclusion in the final validation report.

The site management plan (SMP) may require amendment following completion of the remedial works to ensure that the contamination is appropriately managed for the future use of the site. If the site is remediated to a level suitable for standard residential use, the SMP shall no longer be required, and the subject allotments can be removed from the EMR.

6.0 REMEDIATION PROGRAM

6.1 General

The works will generally be conducted as follows:

- Establishment, including environmental and workplace health and safety controls. In regard to contamination, the Safety, Health and Environment (SHE) Plan is to be agreed to by the suitably qualified and experienced professional prior to other site works commencing
- Demolition of the existing buildings, concrete slabs and pavements, and removal of these materials to appropriate facilities for disposal or recycling
- Installation of groundwater monitoring wells in key risk areas of the site, particularly along southern boundary and in close proximity to the polyethylene underground storage tank – groundwater analysis to be conducted for potential contaminates of concern (refer Table 2)
- Intrusive soil investigation to be conducted within current building footprint areas to further characterise sub-slab surface soils, fill material and the underlying natural soils – results to determine suitability of site for proposed land use and disposal requirements for bulk fill and natural soil to be excavated, notwithstanding the previously identified contaminated areas
- Underground polyethylene storage tank (UST) to be pumped-out by a licensed liquid waste contractor
- UST to be removed from site and disposed of at an appropriately licensed facility
- Excavation of the UST area to depth and a width specified by the supervising SQP; surface scraping to 0.2 m at BH09 location over an area specified by the SQP
- Waste classification of stockpiled soil from the above contaminated areas to determine disposal requirements – where results are above the standard residential land use criteria for contaminants of concern, an application will be submitted to DEHP for a contaminated soil disposal permit
- Soil classified as above the residential criteria to be transported to a licensed facility in accordance with the conditions of a contaminated soil disposal permit issued by DEHP
- A soil validation program, as described in Section 8, with soil analysis conducted at a NATA accredited laboratory will then be undertaken to validate the UST excavation side walls and base, and the area within and around BH09, against the site specific remediation criteria

EHP RTT DL Release

Release

- Should validation samples exceed the remediation criteria, further excavation and subsequent validation shall be carried out until remaining material is verified as suitable for standard residential land use
- Remediation of groundwater to occur during construction phase dewatering where groundwater monitoring results detail unsuitable risks to site users and/or surrounding environment
- Amendment of the SMP and reporting to the DEHP as required.

Excavation of any impacted soil and dewatering of groundwater will be carried out under the supervision of an appropriately qualified and experienced person in accordance with Section 381 of the EP Act . If offensive and/or noxious odours and/or evidence of gross contamination are observed during remedial works, site works will stop and the environmental supervisor will be contacted to evaluate.

6.2 Imported Fill

Where necessary for construction (though not expected), all fill imported to the site must be obtained from an uncontaminated source. It must comply with the remediation criteria shown in Table 1 of this RAP. If the source of the fill is not a certified quarry source, then a sampling and validation program for the fill must be undertaken. The rate of sampling of the fill material shall be dependent on the source and samples may be collected and analysed for contaminants of potential concern (metals, organochlorine pesticides and organophosphorous pesticides) as well as any other potential contaminants which may be identified from the source site history, prior to transportation to site.

Depending on the volume of soil to be brought on to the site and the nature of the source, the sampling density may be either increased or reduced with approval of the DEHP.

6.3 Off-site Contaminated Soil Disposal

Off-site disposal of contaminated soil must be carried out in accordance with a contaminated soil Disposal Permit issued under section 424 of the *Environmental Protection Act 1994*.

Contaminated soil must not be removed off-site without a Disposal Permit. An application for a Disposal Permit must be accompanied by a sampling plan and associated results (including bore logs) clearly indicating the material and depth intended for removal. The application must be approved by the DEHP.

6.4 Unexpected Contamination

If during any site earthworks or excavation, evidence of gross contamination not previously detected is observed, site works are to cease in that area and action taken to appropriately delineate the contamination. This material must be validated and remediated in accordance with provisions of this RAP, under the supervision of a person suitably qualified in accordance with section 6.1.

The administering authority are to be notified immediately by telephone as well as by written notification within 24 hours of detection, and advised of appropriate remedial action. Amendment to the proposed actions may be required based on these notifications.

7.0 OPERATIONAL CONTROL

The remediation program must be conducted with due regard to the environment and statutory obligations. Management and monitoring of operational controls during site works will include practices and procedures during the excavation and removal from site phase of works.
The site is level to gently sloping and the soils are predominately compacted gravelly sand fill overlying natural clays and arenite bedrock, minimising migration potential.

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7.1 Control of Stormwater

Remediation works must comply with requirements for stormwater management to minimise direct or indirect unauthorised release of contaminants via surface water during the excavation and minimise impacts to surface water quality.

Surface water onsite must be controlled as follows:

- control drainage on the site by interception and redirection of clean stormwater in a controlled manner
- stormwater collected on-site in trenches, sumps and/or the primary excavation will be appropriately managed
- silt fences/controls will be erected at locations where stormwater may flow away from excavations and into nearby stormwater drains, and
- inlet protection to be provided for any potentially impacted locations.

Controls will be implemented to minimise the potential impacts associated with surface water generated by storm events or heavy rainfall to prevent the release of contaminants that may adversely affect the surrounding surface water quality.

7.2 Control of Soil and Sediment

Sediment released to surface waters must be minimised by the use of sediment and erosion controls such as diversion drains, straw bales, silt fencing and inlet protection.

Where temporarily required, soil must be stockpiled in a manner and location to minimise adverse affects on the receiving environment from wind and/or rainfall. In particular, silt controls must be adequately placed around the perimeter of stockpiled material. Stockpiles must be clearly marked and records maintained to track the disposal or reuse of soil from the site.

Any plant or equipment that handles contaminated soils must be inspected prior to leaving the site and cleaned as required.

EHP RTI DL Release

Release

7.3 Control of Groundwater

Remediation works will be conducted in a manner which minimises impact to groundwater No groundwater will be discharged offsite or to a waterway or stormwater drain unless in accordance with a Brisbane City Council and DEHP approved Dewatering Management Plan.

7.4 Noise Control

Noise levels must comply with council and DEHP requirements. Remedial works will be conducted in a manner that minimises noise impacts on the surrounding environment. Site works will be conducted from 0700 to 1800, Monday to Friday, with work on Saturdays (between 0700 and 1400), if required. Work outside these hours will be in accordance with local council regulations and approvals.

7.5 Dust and Odour Control

To maintain acceptable limits of odour and dust emissions during site works, no release of odour or dust is expected to occur beyond the boundaries of the site. Visual observation of site activities and applicable procedures from the SHE plan will be followed, with dampening down of dusty conditions utilising water, and cleaning of roads as required, including regular sweeping. Water used for dust suppression will not be permitted to escape off-site or into any stormwater system.

A low risk for nuisance odours exists from potentially contaminated soil and water. Controls to be applied, where nuisance is encountered, include:

- using hydrocarbon surfactant sprays to reduce odours, and
- covering odorous material as practical.

7.6 Public Complaints System

A public complaints system must be established prior to the commencement of remedial works to address any issues that may arise in the community as a result of the works on the site. Any complaints received during site work activities will be recorded in the site daily activity sheet maintained by the site supervisor. Records must be kept of the name, date, time, reason, investigation person, responsible site person and outcome of the complaints. All complaints will be responded to within 2 business days. In addition, the site approved SQP must be notified of any complaints.

8.0 VALIDATION PROGRAM

The objective of the validation program is to identify whether contaminated soils (above the remedial criteria) exist following removal of concrete slabs, particularly beneath buildings and in fill soils where limited investigation has previously occurred, and soils around the UST and BH09 location. Where contaminants are quantified as being above the remediation criteria, further excavation and validation will occur until the remediation criteria are met.

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8.1 Validation Sampling

Soils within building footprints

Soil validations will be recovered as follows:

- Surface soils, fill soils and natural soil from the fill/natural interface will be systematically collected from locations within the footprints of demolished buildings

UST area

Soil validation samples will be recovered as follows:

- Two samples below the UST
- Two samples in each side wall of the excavation, in upper half of the walls to target potential surface seepage and in the lower half of the excavation to target potential UST leaks
- All areas which show staining of soil.

Area around BH09

Soil validation samples will be recovered as follows:

- Two samples within area of surface scrapping to 0.2 m
- Four samples within one metre of surface scrape area to target potential migration of contaminants
- All areas which show staining of soil.

General validation methods

Field screening using a PID to direct excavations, visual and olfactory monitoring will also be undertaken.

The proposed analytes for validation are TPHs, BTEX, PAHs, volatile organic compounds (VOC) and metals for all samples.

Samples will be collected in accordance with standard operating procedures, based on the NEPM, Australian Standard AS4482.1-2005 and AS4482.2-1999 and DEHP requirements. This will include use of appropriate sample containers and preservation, filling containers quickly to minimise the loss of volatiles and ensuring containers are filled to minimise headspace. Samples will be placed in chilled containers, and refrigerated if not dispatched to the laboratory on the day of sampling. All samples will be analysed within holding times.

8.2 Sample Dispatch and Field Documentation

Samples will be managed in accordance with standard operating procedures, based on the NEPM, Australian Standard AS4482.1-2005 and DEHP requirements. This will include appropriate sample logs to describe the media collected, use of chain of custody procedures, and dispatching samples with appropriate preservation.

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8.3 Quality Assurance (QA) / Quality Control (QC) Program

A field QA/QC program must be conducted in accordance with the NEPM, Australian Standard AS4482.1-2005 and DEHP requirements to measure the precision of the field and laboratory analyses and to determine the accuracy of the analytical results. All samples will be analysed by NATA accredited laboratories. Field QA will include compliance with appropriate standard operating procedures. QC samples will be undertaken at the frequencies shown below:

Precision	
Field duplicates	≥ 5%
Inter-laboratory duplicates	≥ 5%
Laboratory duplicates	≥ 10%
Accuracy	
Surrogate spikes	All organics by GC
Matrix spikes	≥ 1/media type
Laboratory control samples	≥ 1/lab batch
Representativeness	
Rinseate samples	≥ 1/field batch
Trip blanks	≥ 1/field batch (volatiles)
Trip spikes	≥ 1/field batch (volatiles)
Laboratory blanks	≥ 1/lab batch.

9.0 DECONTAMINATION PROCEDURES

Decontamination procedures for sampling equipment, personnel and the general site must be in accordance with the Australian Standard AS4482.1 – 2005 and the NEPM guidelines (Schedule B (9)). Prior to the commencement of work and at the completion of site work the excavator(s) will be cleaned. A portable high pressure water cleaner will be used for decontamination. All soil shall be removed from truck wheels via brushing at the site exit to ensure that potentially impacted material is not tracked off site by disposal trucks.

10.0 HEALTH AND SAFETY

A site specific SHE plan is to be developed and approved prior to commencement of works to meet applicable regulatory requirements, including, but not limited to, the *Workplace Health & Safety Act 1995* and *Environment Protection Act 1994*.

The purpose of the SHE plan is to define health and safety requirements and designate protocols to be followed during site activities. The SHE plan is to specifically address the contaminants of concern, address anticipated potential hazards, and define protective measures for the planned site activities. All site personnel must read and understand the SHE plan and must be inducted and sign relevant forms stating induction has been completed. All staff will be expected to comply with the SHE plan.

The SHE plan will be provided to all onsite personnel, including the environmental and contractors and site any visitors within the area of works.

EHP FINAL Release

Release

11.0 REPORTING REQUIREMENTS

A validation report must be prepared by a person qualified in accordance with section 6.1 at the completion of remediation works, and submitted to the DEHP. The report must be prepared and submitted in accordance with the *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland May 1998*, the NEPM and the *Environmental Protection Act 1994*.

The report must document remediation and validation program activities including the results of any further excavation and/or validation required by the results of the initial validation analysis, an evaluation of the results against the remedial goals and an investigation demonstrating compliance with the conditions of this RAP.

The report must also include the results of the QA/QC program, and copies of documentation validating the appropriate handling, disposal and treatment of contaminated soil and water in accordance with DEHP requirements. The validation report must be submitted to the DEHP for review in accordance with the *Environmental Protection Act 1994* and the *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland May 1998.*

The Site Management Plan (SMP) shall be updated should contamination remain on site above the levels specified in Section 4 of this RAP.

Attached:

Figure 1 Site location and allotment boundaries

Figure 2 Site layout, soil sampling locations and remediation areas

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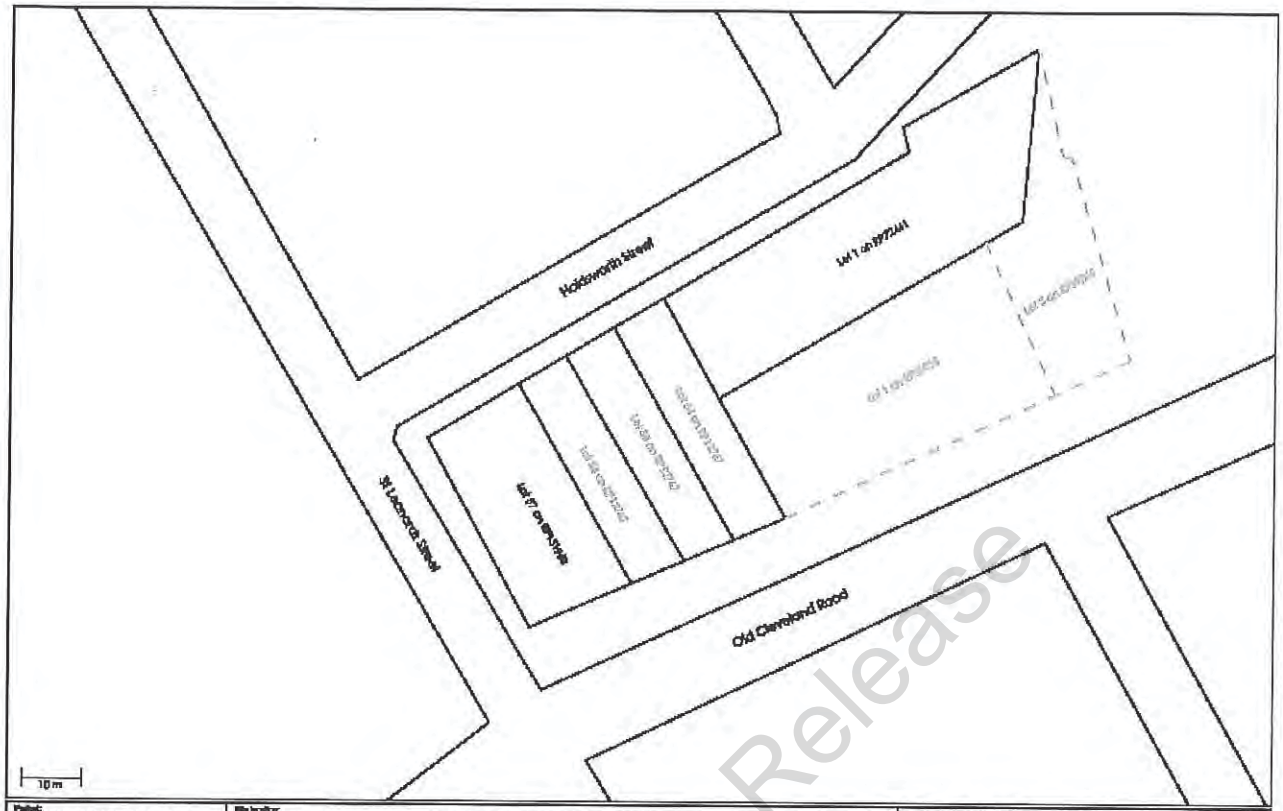
Release



EHP RTI DL Release

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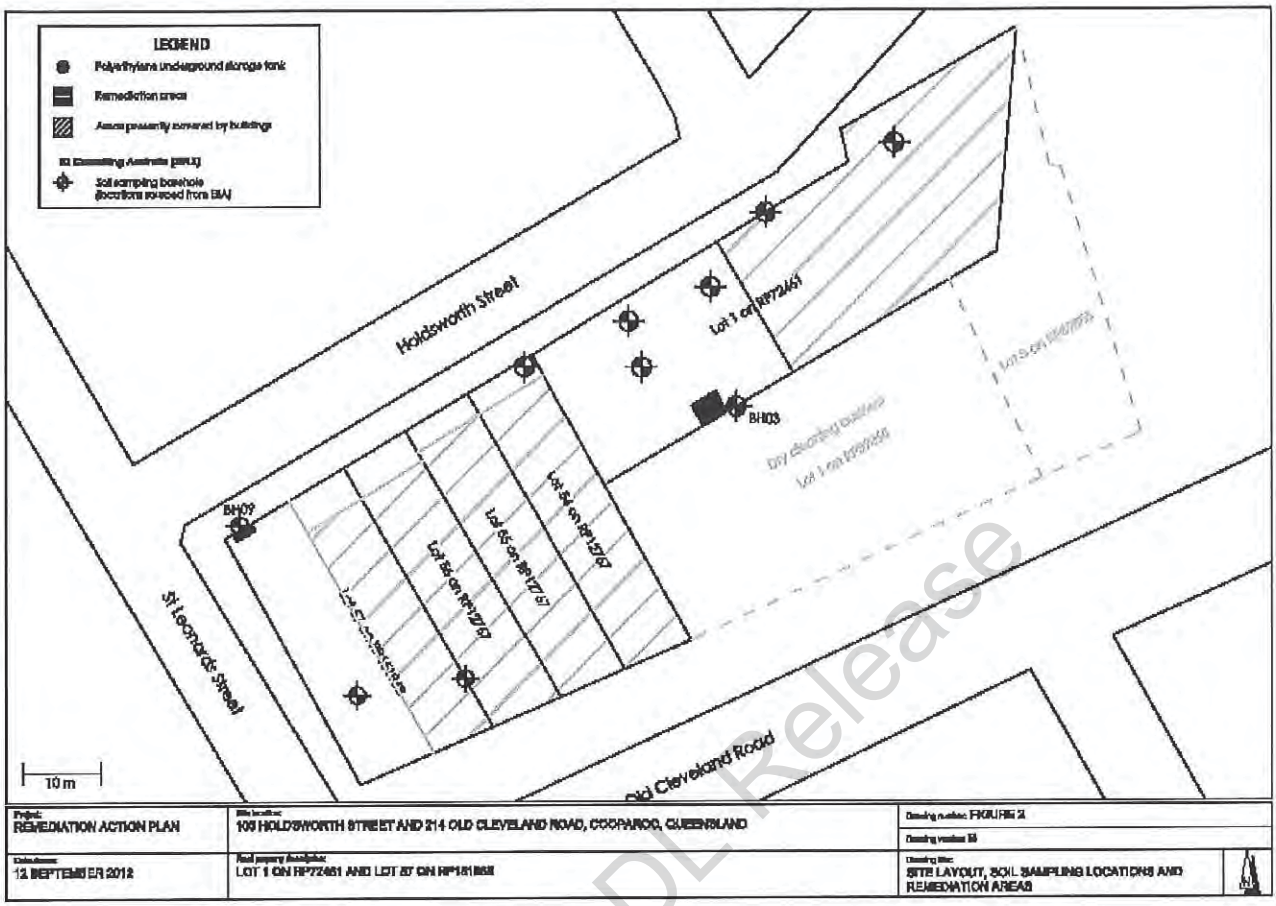

EHP RTI DL Release

Release

Queensland Government

Department of Environment and Heritage Protection (EHP)
ABN 46 640 294 485
400 George St Brisbane, Queensland 4000
GPO Box 2454 Brisbane QLD 4001 AUSTRALIA
www.ehp.qld.gov.au

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

Transaction ID: 50365242 EMR Site Id: 22 March 2017
This response relates to a search request received for the site:
Lot: 56 Plan: RP12767

EMR RESULT

The above site is NOT included on the Environmental Management Register.

CLR RESULT

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

ADDITIONAL ADVICE

All search responses include particulars of land listed in the EMR/CLR when the search was generated.
The EMR/CLR does NOT include:-

1. land which is contaminated land (or a complete list of contamination) if EHP has not been notified
2. land on which a notifiable activity is being or has been undertaken (or a complete list of activities) if EHP has not been notified

If you have any queries in relation to this search please phone 13QGOV (13 74 68)

Administering Authority

EHP RTI DL Release

Release

Queensland Government

Department of Environment and Heritage Protection (EHP)
ABN 46 640 294 485
400 George St Brisbane, Queensland 4000
GPO Box 2454 Brisbane QLD 4001 AUSTRALIA
www.ehp.qld.gov.au

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

Transaction ID: 50365243 EMR Site Id: 22 March 2017
This response relates to a search request received for the site:
Lot: 55 Plan: RP12767

EMR RESULT

The above site is NOT included on the Environmental Management Register.

CLR RESULT

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

ADDITIONAL ADVICE

All search responses include particulars of land listed in the EMR/CLR when the search was generated.
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If you have any queries in relation to this search please phone 13QGOV (13 74 68)

Administering Authority

EHP RTI DL Release

Release

Queensland Government

Department of Environment and Heritage Protection (EHP)
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400 George St Brisbane, Queensland 4000
GPO Box 2454 Brisbane QLD 4001 AUSTRALIA
www.ehp.qld.gov.au

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

Transaction ID: 50365244 EMR Site Id: 22 March 2017
This response relates to a search request received for the site:
Lot: 54 Plan: RP12767

EMR RESULT

The above site is NOT included on the Environmental Management Register.

CLR RESULT

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

ADDITIONAL ADVICE

All search responses include particulars of land listed in the EMR/CLR when the search was generated.
The EMR/CLR does NOT include:-

1. land which is contaminated land (or a complete list of contamination) if EHP has not been notified
2. land on which a notifiable activity is being or has been undertaken (or a complete list of activities) if EHP has not been notified

If you have any queries in relation to this search please phone 13QGOV (13 74 68)

Administering Authority

EHP RTI DL Release

Release

Department of Environment and Heritage Protection (EHP)
ABN 46 640 294 485
400 George St Brisbane, Queensland 4000
GPO Box 2454 Brisbane QLD 4001 AUSTRALIA
www.ehp.qld.gov.au

Queensland Government

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

Transaction ID: 50365246 EMR Site Id: 892 22 March 2017
This response relates to a search request received for the site:
Lot: 1 Plan: RP89855

EMR RESULT

The above site IS included on the Environmental Management Register.
Lot: 1 Plan: RP89855
Address: 224 OLD CLEVELAND RD
COORPAROO 4151

The site has been subject to the following Notifiable Activity or Hazardous Contaminant.
DRY CLEANING - operating a dry cleaning business where -
(a) solvents are stored in underground tanks; or
(b) more than 500 L of halogenated hydrocarbon are stored.

CLR RESULT

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

ADDITIONAL ADVICE

All search responses include particulars of land listed in the EMR/CLR when the search was generated.
The EMR/CLR does NOT include:-

1. land which is contaminated land (or a complete list of contamination) if EHP has not been notified
2. land on which a notifiable activity is being or has been undertaken (or a complete list of activities) if EHP has not been notified

If you have any queries in relation to this search please phone 13QGOV (13 74 68)

Administering Authority

EHP RTI DL Release

Release

Department of Environment and Heritage Protection (EHP)
ABN 46 640 294 485
400 George St Brisbane, Queensland 4000
GPO Box 2454 Brisbane QLD 4001 AUSTRALIA
www.ehp.qld.gov.au

Queensland Government

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

Transaction ID: 50365247 EMR Site Id: 100387 22 March 2017
This response relates to a search request received for the site:
Lot: 1 Plan: RP72461

EMR RESULT

The above site IS included on the Environmental Management Register.
Lot: 1 Plan: RP72461
Address: 92-100 HOLDSWORTH STREET
COORPAROO 4151

The site has been subject to the following Notifiable Activity or Hazardous Contaminant.
HAZARDOUS CONTAMINANT - This site has been subject to a hazardous contaminant. Refer to the summary given below.
Total Petroleum Hydrocarbons (TPH)

A site management plan has been prepared for this site and is included with this search response as Annexure 1. It has been determined that this site is suitable for the following uses, providing the site is used and managed according to the site management plan:

Providing the conditions of this approved SMP are complied with, the subject land (as defined by the allotment boundaries) is suitable for the current commercial/industrial land use.

The new use of the site (as defined by the allotment boundaries) must not commence until the attached remediation action plan (RAP) has been completed for the site, and the DEHP has received a Validation Report under Chapter 7 Part 8 Division 4 of the Environmental Protection Act 1994. Following implementation of the RAP, and submission to the DEHP of the above certified report, a Suitability Statement will be issued to enable the new use as unrestricted commercial land.

Following the date of effect of the site management plan, 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.

CLR RESULT

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

ADDITIONAL ADVICE

EHP RTI Dr Release
Release

All search responses include particulars of land listed in the EMR/CLR when the search was generated.
The EMR/CLR does NOT include:-

1. land which is contaminated land (or a complete list of contamination) if EHP has not been notified
2. land on which a notifiable activity is being or has been undertaken (or a complete list of activities) if EHP has not been notified

If you have any queries in relation to this search please phone 13QGOV (13 74 68)

Administering Authority

Queensland Government

Department of Environment and Heritage Protection (EHP)
ABN 46 640 294 485
400 George St Brisbane, Queensland 4000
GPO Box 2454 Brisbane QLD 4001 AUSTRALIA
www.ehp.qld.gov.au

ANNEXURE 1 - SITE MANAGEMENT PLAN

LOT : 1 PLAN : RP72461 FILE REF : 101/11851 PRINTED: 22/03/2017

DATE OF EFFECT : 10/10/2012
Please find attached Site Management Plan and associated Figure.

If Site Management Plan does not generate from this search, please contact:

Department of Environment & Heritage Protection (EHP)
Contaminated Land Unit
Email: contaminated.land@ehp.qld.gov.au

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Queensland Government

Department of Environment and Heritage Protection (EHP)
ABN 46 640 294 485
400 George St Brisbane, Queensland 4000
GPO Box 2454 Brisbane QLD 4001 AUSTRALIA
www.ehp.qld.gov.au

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

Transaction ID: 50365248 EMR Site Id: 38646 22 March 2017
This response relates to a search request received for the site:
Lot: 3 Plan: RP89855

EMR RESULT

The above site IS included on the Environmental Management Register.
Lot: 3 Plan: RP89855
Address: 228 OLD CLEVELAND ROAD
COORPAROO 4151

The site has been subject to the following Notifiable Activity or Hazardous Contaminant.
PETROLEUM PRODUCT OR OIL STORAGE - storing petroleum products or oil -
(a) in underground tanks with more than 200L capacity; or
(b) in above ground tanks with -
(i) for petroleum products or oil in class 3 in packaging groups 1 and 2 of the dangerous goods code - more than 2, 500L capacity; or
(ii) for petroleum products or oil in class 3 in packaging groups 3 of the dangerous goods code - more than 5, 000L capacity; or
(iii) for petroleum products that are combustible liquids in class C1 or C2 in Australian Standard AS1940, 'The storage and handling of flammable and combustible liquids' published by Standards Australia - more than 25, 000L capacity.
HAZARDOUS CONTAMINANT - This site has been subject to a hazardous contaminant. Refer to the summary given below.
1.1-Dichloroethene, cis-1,2 dichloroethene, trans-1,2di-chloroethene, trichloroethene(TCE), vinyl chloride(chloro-ethene), tetrachloro-ethene(PCE), and benzene. Contaminant source comprising dry cleaning fluids. Volatile Organic Compounds (VOCs).
Chlorinated Solvent Investigation Groundwater Well and Soil Vapour Well Locations July 2015.
Prepared by City Projects Office, Contaminated Land Services Coorparoo.

CLR RESULT

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

ADDITIONAL ADVICE

All search responses include particulars of land listed in the EMR/CLR when the search was generated.
The EMR/CLR does NOT include:-
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2. land on which a notifiable activity is being or has been undertaken (or a complete list of activities) if EHP has not been notified

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If you have any queries in relation to this search please phone 13QGOV (13 74 68)

Administering Authority

EHP RTI DL Release

Release

Form

Notifiable Activity/Contaminated Land

Notification of Land

This column contains guidance for using this form and important information about inclusion of land on the Environmental Management Register.

This is the approved form for giving notice to the administering authority that a notifiable activity has been, or is being, carried out on land that has or is being contaminated by a hazardous contaminant, in accordance with section 371 or 372 of the *Environmental Protection Act 1994* (the EP Act).

Note: You must complete all questions below. You can use this form to provide notification of contamination of multiple land parcels and/or multiple instances of a notifiable activity/hazardous contaminant. Where this is the case, please clearly identify which land parcel or notifiable activity the information relates to.

1. Applicant details

1.1 Person making notification

I am the **owner** of the land giving notice under s.371 of the EP Act ☒

I am the **occupier** (e.g. lessor or tenant) of the land giving notice under s.371 of the EP Act ☐

I am a representative of a **local government** giving notice under s.372 of the EP Act ☐

1.2 Please ensure that all information is current and correct.

1.2 Details of person making this notification

NAME Erik Dekker
COMPANY/ORGANISATION/LOCAL GOVERNMENT Brisbane City Council
POSTAL ADDRESS GPO Box 1434, Brisbane, Qld Green Square Level 1 505 St Pauls Terrace, Fortitude Valley QLD 4006
EMAIL Erik.dekker@brisbane.qld.gov.au

PHONE	FAX

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07 3027 4725	07 3334 0220

2. Site location

2.1 Lot on Plan

Department of Environment and Heritage Protection (EHP) records the notification of land on the Environmental Management Register (EMR) and the Contaminated Land Register (CLR). These registers both use the Lot on Plan system.

The Lot and Plan can be obtained from the land title certificate, rates notice or your local government

If you do not know the Lot and Plan, please provide sufficient information for EHP to locate the property.

The local government is your local council.

2.1 Please provide the address and Lot on Plan of the land parcel to which the notification applies

FULL STREET ADDRESS OF THE LAND PARCEL	
226 Old Cleveland Road Coorparoo, 28 Primmer Street, 30 Primmer Street, 32 Primmer Street, portion of Holdsworth Street Coorparoo between Primmer Street and L1 on RP172267	
LOT NUMBER	PLAN REFERENCE
L3 RP89855, L12 RP 152616, L13 RP 152617, L1 RP152618, L44 RP12769, L42 RP12769, portion of Holdsworth Street Coorparoo between Primmer Street and L1 on RP172267	L3 RP89855, L12 RP 152616, L13 RP 152617 , L44 RP12769, L42 RP12769, portion of Holdsworth Street Coorparoo between Primmer Street and L1 on RP172267
LOCAL GOVERNMENT	
Brisbane City Council	

2.2 Does the land parcel have a local name?

This information will help the administering authority locate the land parcel e.g. properties located along un-named roads.

2.2 Does the land parcel have a local name e.g. property name?

If yes, please provide.

226 Old Cleveland Road Coorparoo, 60 Holdsworth Street, 28 Primmer Street, 30 Primmer Street, 32 Primmer Street, portion of Holdsworth Street Coorparoo between Primmer Street and L1 on RP172267

2.3 An estimate of the area in square metres can be calculated by multiplying the length by the width of the land.

This information is used to verify the Lot on Plan details.

2.3 Please provide an estimate of the area of the land parcel in square metres

L3 RP89855 & L12 RP 152616 & L13 RP 152617 - 3252sqm, L1 RP152618 - 496sqm, L44 RP12769 - 607sqm, L42 RP12769 - 607sqm, portion of Holdsworth Street Coorparoo between Primmer Street and L1 on RP172267 approx. 744m^2

2.4 Map, locality plan or map reference?

This could be a map or figure showing the actual location of the activity or potential contamination on the property, or a map reference can be provided (e.g. MGA-Easting/Northing

2.4 Map, locality plan or map reference

Please provide a map or locality plan, showing the location of the notifiable activity or contamination.

Map or locality plan has been attached

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or GDA-Latitude/Longitude). This information assists EHP to provide location details of potential contaminated sites for future site management.

☒ Yes
☐ No

Please list any maps or map references attached to this form:
Figure 1 - site location and sampling locations 20 July 2015

3. Notification details

A notifiable activity **has been** carried out on the land ☐
Complete **Part 4** of this form

A notifiable activity **is** being carried out on the land ☐
Complete **Part 4** of this form

The land is **contaminated** with a hazardous contaminant ☒
Complete **Part 5** of this form

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4. Notifiable activities

Notifiable activities are defined in Schedule 3 of the EP Act. More information about notifiable activities can be found on the EHP website www.qld.gov.au/environment.

4 Notifiable activity details

If providing notification of multiple notifiable activities, provide answers to each of the questions below for each notifiable activity. Additional information can be included as attachments.

Multiple notifiable activities, attachment/s provided ☐

4.1 Example

Environmental Protection Act 1994
Schedule 3
14 Engine reconditioning works—carrying out engine reconditioning work at a place where more than 500 litre (L) of any of the following are stored—
(a) halogenated and non-halogenated hydrocarbon solvents
(b) dangerous goods in class 6.1 under the dangerous goods code
(c) industrial degreasing solutions.

4.1 Which notifiable activity is being or has been carried out?
State the number and, where relevant, subtype of activity listed in Schedule 3 of the EP Act.

4.2 When was the notifiable activity carried out?
If a notifiable activity is currently being carried out when did the activity commence? (month, year)

If the activity has ceased, during which period did the activity occur? (month, year) to (month, year)

4.3 Example

An example is provided below for

4.3 Activity details, including threshold amounts

Release

engine reconditioning works where 600l of a dangerous good is being stored.

Actual volume/s: 600l is being stored

Other details: dangerous good being stored is halogenated hydrocarbon solvents.

Provide details of the notifiable activity being undertaken and where relevant state the subtype(s), the actual volume being stored/used/manufactured/disposed etc and other specifics that make the activity a notifiable activity under Schedule 3 of the EP Act.

Actual volume(s):

Other details: state type(s) of chemicals of dangerous goods being stored.

5. Contamination

5.1 Hazardous contaminants

Hazardous contaminant is defined in Schedule 4 of the EP Act and is a contaminant likely to cause serious or material environmental harm. More information about what this means can be found on the EHP website www.qld.gov.au/environment.

5.1 What is the name or type of hazardous contaminant/s that has caused contamination of the land?

chlorinated solvents in groundwater and soil vapour

5.2 Contamination incident.

How did the contamination occur?

It is suspected that the chlorinated solvents within groundwater and soil vapour may have migrated from the adjacent property at 224 Old Cleveland Road (Lot 1 on RP89855) which was formerly a dry cleaning operation.

When did the contamination occur, on what date or over what period?

unknown

5.4 Example

Potential risks to human health or the environment, investigations undertaken, current land use, site characteristics (e.g. presence of groundwater or environmental features).

5.3 What was the estimated quantity of the hazardous contaminant(s) involved?

unknown

5.4 Provide any other information relevant to the contamination. see attachments - laboratory results and email reports

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6. Evidence and supporting information

Please provide as much information as possible to support the notification. Provide attachments where necessary. Examples of the types of evidence that could be provided include (but are not limited to):

- If any investigation of the nature and extent of contamination has been undertaken on the site, provide details of the method used, sampling results and any recommendations about future management of the contamination. If a written report about the contamination is available, please provide a copy of the report.
- Any licences or approvals issued relevant to the activity being notified, for example licence or approvals under the EP Act or the Flammable and Combustible Liquids Regulation 1994.
- Evidence of relevant notifiable activities that are being or have been carried out on the land, e.g. business documentation outlining the activities being undertaken on the site or photographs of industrial activities.
- The results of any compliance monitoring done in relation to notifiable activities or possible contamination of the site.

Please list any attachments provided.

Figure 1- site location and sampling locations July 2015

Table 1 - Laboratory Results, Groundwater: Volatile Organic Compounds (VOCs), Coorparoo

Table 2 - Soil vapour results 226 Old Cleveland Road

email from BCC to EHP dated 6 March 2015

email from BCC to EHP dated 17 April 2015

email from BCC to EHP dated 6 May 2015

email from BCC to EHP dated 3 August

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7. Details of land owner

7. Land owner details

Please provide the details of the owner of the property if known, ensuring this information is current and correct. This will help the administering authority with contacting the land owner in relation to the notification.

NAME

Brisbane City Council

COMPANY/ORGANISATION/LOCAL GOVERNMENT

Brisbane City Council

POSTAL ADDRESS

Release

GPO Box 1434 Brisbane, Qld, 4001	
EMAIL david.angell@brisbane.qld.gov.au	
PHONE 07 3407 1470	FAX 07 3407 1590

8. Declaration

Please read the certification below before signing.

- I understand that all Information on or in this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

NOTIFYING PERSONS SIGNATURE sch4p4(6) Personal information	DATE 28 August 2015

9. Applicant's checklist

☒ Details of person giving notice are correct

☒ All relevant sections of notification form completed

☒ Certification is signed

☒ Evidence and supporting information attached

Forward this form to:

The Registrar
EMR/CLR Registry
Department of Environment and Heritage Protection
GPO Box 2454
Brisbane Queensland 4001
Phone 13 QGOV (13 74 68)

Email: emr.clr.registry@ehp.qld.gov.au

EHP RTI DL Release

Sally Dodds

From: Sally Dodds
Sent: Friday, 17 April 2015 5:26 PM
To: 'KARLE Matt'; PUSCHMANN Cate; MCKENZIE Ben
Cc: Erik Dekker
Subject: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater
Attachments: 20121126_Statement of Facts.pdf

Hi Matt,

Council provides the following information for your review:

a) I have discovered that Council charged Hilda's Dry Cleaners Pty Ltd with two (2) offences against section 440ZG(a) of the *Environmental Protection Act* 1994 for depositing prescribed water contaminants in water in 2011.

I have attached a 'Statement of facts' relating to these charges. This document was tendered in court so it is in the public domain.

Council will provide other documents and photos which were also tendered in court in the near future.

b) EHP notified Council on 11 October 2012 that properties at 214-222 Old Cleveland Rd and 100 old Cleveland Rd had been investigated and are now subject to a Site Management Plan (SMP) - EHP file ref BNE45756). The SMP included statements suggesting that these properties may be impacted by contamination from the former dry cleaner's located at 224 Old Cleveland Rd.

c) Review of news media revealed that two large fires occurred at the former dry cleaner's located at 224 Old Cleveland Rd – one in March 2008 and one in July 2012.

I hope this information assists EHP to progress its investigations and actions in relation to the potential risk associated with chlorinated solvent contamination in shallow groundwater in this area, most notably potential health risks to occupants of buildings from possible vapour intrusion into buildings.

Please keep Council informed in relation to this issue that impacts Council-owned property.

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

Green Square | Level 1 505 St Pauls Terrace, Fortitude Valley QLD 4006
Phone: + 61 7 3178 8858 | Fax: + 61 7 3334 0220
Email: sally.dodds@brisbane.qld.gov.au

SECURITY LABEL: FOR OFFICIAL USE ONLY

Release

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From: KARLE Matt [mailto:Matt.Karle@ehp.qld.gov.au]
Sent: Tuesday, 14 April 2015 9:50 AM
To: EVERETT David; Sally Dodds; PUSCHMANN Cate; MCKENZIE Ben
Subject: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater

Hi Sally

Thanks for your information regarding this site, and the recent monitoring undertaken. I confirm David Everett from EHP's Pollution Hotline forwarded the matter to the Brisbane Moreton Compliance team, which has since been allocated to Senior Environmental Officer Ben Mckenzie. Ben is currently [sch4p4(6) Personal information] but the matter will be scheduled on his return I'm sure.

I note the site was previously regulated as an ERA by Brisbane City Council, and that Brisbane City Council may have issued a formal compliance notice under the EPAct (Env Evaluation or TEP?) to the site owner / operator to investigate the source cause and extent of harm, or to address the contamination problem?

It would be of considerable use to EHP to understand that history and to be aware of the position Council arrived at regarding those dealings. Did Council receive an Environmental Report or Draft TEP and was it approved?; Was the client compliant with that Notice?

Any detail about Councils dealings with the site would be appreciated, and would assist to inform Ben on his return to work.

Regards

Matt Karle
A / Manager, South Queensland Compliance – Brisbane Moreton Bay
Environmental Services and Regulation
Department of Environment and Heritage Protection
33 King Street, Caboolture QLD 4510
Ph: (07) 5316 8403
Email: matt.karle@ehp.qld.gov.au
www.ehp.qld.gov.au

Queensland Government

EHP RTI DL Release

From: EVERETT David
Sent: Tuesday, 14 April 2015 8:57 AM
To: Sally Dodds
Subject: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater

Hi Sally,

This matter was forwarded to the appropriate compliance centre after our discussions on 6 March. I have now forwarded this additional information to the compliance centre too.

Thanks.

David Everett
Principal Project Officer, Community Response | Regulatory Capability & Customer Service
Environmental Services and Regulation
Department of Environment and Heritage Protection

Level 9 | 400 George Street| Brisbane
Pollution Hotline 1300 130 372 (option 2)
Email pollutionhotline@ehp.qld.gov.au
www.ehp.qld.gov.au

Queensland Government

Please consider the environment before printing this email

From: Sally Dodds [mailto:Sally.Dodds@brisbane.qld.gov.au]
Sent: Monday, 13 April 2015 5:13 PM
To: EVERETT David
Cc: JOHNS Allen; Erik Dekker; COOK David
Subject: FW: Coorparoo site alert - chlorinated solvents in shallow groundwater
Importance: High

Hi David,

Further to our discussions of Friday 6 March 2015 relating to volatile organic compounds in shallow groundwater in Coorparoo, Brisbane City Council (BCC) now has further information which is provided below.

BCC environmental staff conducted sampling and analysis of a groundwater monitoring well (B3) located on Council-owned property at 226 old Cleveland Rd Coorparoo on 1 April 2015. The location of the monitoring well is shown in Figure 1, attached. The borelog for the monitoring well and a photo of the monitoring well are also attached to this email.

Groundwater collected from B3 was sent to a NATA-accredited laboratory for analysis of a variety of potential contaminants. The laboratory certificates are attached to this email.

Chlorinated solvents were detected in the groundwater. The contaminants identified were: cis–1,2 dichloroethene, trans-1,2-di-chloroethene, trichloroethene (TCE), vinyl chloride (chloro-ethene) and tetrachloro-ethene (PCE). These contaminants are consistent with a contaminant source comprising dry cleaning fluids.

The level of the groundwater was gauged prior to sampling and was 2.66 metres below ground level. Groundwater sampling was conducted using a disposable PVC bailer and the well was purged to dry and allowed to return to its pre-purging groundwater level prior to sampling.

CLS assumes that this groundwater contamination has migrated from the adjacent property at 224 Old Cleveland Road (Lot 1 on RP89855) which was formerly a dry cleaning operation.

Council is aware that these chlorinated solvent concentrations may have the potential to present a risk to human health from vapour intrusion in confined spaces. However, buildings on the Council-owned property at 226 old Cleveland Rd are not occupied and are currently vacant awaiting demolition to facilitate future development.

Council notes that it appears that buildings located on 224 Old Cleveland Road are occupied by a variety of businesses.

Can EHP please advise what actions it proposes to take in relation to this contamination issue so that Council can be informed in relation to the development of the adjoining Council land.

Kind regards

EHP RTI DL Release

Release

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

Green Square | Level 1 505 St Pauls Terrace, Fortitude Valley QLD 4006
Phone: + 61 7 3178 8858 | Fax: + 61 7 3334 0220
Email: sally.dodds@brisbane.qld.gov.au

SECURITY LABEL: FOR OFFICIAL USE ONLY

From: Sally Dodds
Sent: Monday, 9 March 2015 11:59 AM
To: 'david.everett@ehp.qld.gov.au'
Subject: FW: Coorparoo site alert

Hi Dave,

Thanks for taking the time to discuss this issue on Friday 6 March 2015.

Could you please keep Council in the communication loop once you are able to ascertain any information and/or course of action on this issue.

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

Green Square | Level 1 505 St Pauls Terrace, Fortitude Valley QLD 4006
Phone: + 61 7 3178 8858 | Fax: + 61 7 3334 0220
Email: sally.dodds@brisbane.qld.gov.au

SECURITY LABEL: FOR OFFICIAL USE ONLY

From: Sally Dodds
Sent: Friday, 6 March 2015 12:17 PM
To: allen.johns@ehp.qld.gov.au
Cc: Erik Dekker
Subject: FW: Coorparoo site alert

Allen

Thanks for your time today. As per our telephone discussions this morning, Council has been made aware of the presence volatile organic compounds in shallow groundwater beneath a road reserve in Coorparoo. I have included the information that Council received as attachments to this email.

EHP RTI DL Release

Release

The volatile organic compounds include cis–1,2 dichloroethene, trichloroethene and tetrachloro-ethene and are consistent with a contaminant source comprising dry cleaning fluids.

The road reserve is a portion of Old Cleveland Road in Coorparoo adjacent to 224 Old Cleveland Road (Lot 1 on RP89855)

This contamination was reported to EHP (then DERM) on 4 December 2009 (Notification letter attached to this email).

Could you please advise what, if any, action was taken relating to this report of groundwater contamination.

Council suspects that this groundwater contamination plume may have migrated to impact Council owned property as well. The Council owned property in question, is 226 Old Cleveland Road Coorparoo (L3 RP89855, L12 RP 152616, L13 RP 152617) and is already listed on the EMR.

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

Green Square | Level 1 505 St Pauls Terrace, Fortitude Valley QLD 4006
Phone: + 61 7 3178 8858 | Fax: + 61 7 3334 0220
Email: sally.dodds@brisbane.qld.gov.au

SECURITY LABEL: FOR OFFICIAL USE ONLY

From: Astbury, Tanya [mailto:Tanya.Astbury@vivaenergy.com.au]
Sent: Wednesday, 4 March 2015 5:00 PM
To: Sally Dodds
Cc: Zillman, Alicia J
Subject: Coorparoo site alert

Hi Sally,
Thank you for contacting me over the query relating to C6-C10 detections north of our Coorparoo Coles Express site. I received your emails.

As per our discussion, I have found some information that supports that the groundwater impact north of our site has been identified as solvents, like those associated with dry cleaners.

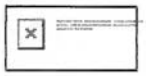
I attach for your reference a copy of the letter to DERM Notification of Land Dec 2009.
I also spoke with our environmental focal point in Queensland, Alicia Zillman (ph. 3364 5480), who confirmed that the report detailing the tank replacement works in 2009 was sent to Brisbane City Council in Aug 2009, copy of the cover letter attached.
If the report is difficult to locate, we can provide you with another copy, preferably electronically, upon request. That report indicated that offsite well MW08 (location shown in DERM letter) has been sampled twice and both times returned significant detections in the C6-9 range with negligible BTEX (13ppm in June 2008 and 21ppm in June 2009). MGT laboratory conducted some further analysis and confirmed that the sample contained TCE and similar (extract attached below).
I understand that there have been substantial roadworks and we suspect that the well has likely been destroyed, or may even have been abandoned as we were only given temporary consent for the well in the median strip.

EHP PTI DL Release
Release

I hope this has been helpful for you. As previously stated, it appears that the offsite impacts are unrelated to Shell Coles Express Coorparoo site.
If you have any further questions, I suggest you contact Alicia who has more direct knowledge of the investigations conducted on and near our site.

Otherwise, good luck with your plans.

kind regards,



Tanya Astbury / Environmental Risk and Assurance Lead
T +61 8 9432 1410 M +61 (0) sch4p4(1.6) Personal information
E tanya.astbury@vivaenergy.com.au

Viva Energy Australia Ltd (ABN 46 004 610 459)
22 Bracks Street, North Fremantle, WA 6159
www.vivaenergy.com.au

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EHP RTI DL Release

Release

Subject: Coorparoo site alert
Attachments: Coorparoo SS 091207 DERM Notificatin.pdf; J283 Coorparoo Council Letter AZ 090827 final issued.pdf; 20150304131358839.pdf

From: Sally Dodds
Sent: Friday, 6 March 2015 12:17 PM
To: allen.johns@ehp.qld.gov.au
Cc: Erik Dekker
Subject: FW: Coorparoo site alert

Allen

Thanks for your time today. As per our telephone discussions this morning, Council has been made aware of the presence volatile organic compounds in shallow groundwater beneath a road reserve in Coorparoo. I have included the information that Council received as attachments to this email.

The volatile organic compounds include cis–1,2 dichloroethene, trichloroethene and tetrachloro-ethene and are consistent with a contaminant source comprising dry cleaning fluids.

The road reserve is a portion of Old Cleveland Road in Coorparoo adjacent to 224 Old Cleveland Road (Lot 1 on RP89855)

This contamination was reported to EHP (then DERM) on 4 December 2009 (Notification letter attached to this email).

Could you please advise what, if any, action was taken relating to this report of groundwater contamination.

Council suspects that this groundwater contamination plume may have migrated to impact Council owned property as well. The Council owned property in question, is 226 Old Cleveland Road Coorparoo (L3 RP89855, L12 RP 152616, L13 RP 152617) and is already listed on the EMR.

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

Green Square | Level 1 505 St Pauls Terrace, Fortitude Valley QLD 4006
Phone: + 61 7 3178 8858 | Fax: + 61 7 3334 0220
Email: sally.dodds@brisbane.qld.gov.au

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From: Astbury, Tanya [mailto:Tanya.Astbury@vivaenergy.com.au]
Sent: Wednesday, 4 March 2015 5:00 PM
To: Sally Dodds

EHP RTI DL Release

Cc: Zillman, Alicia J
Subject: Coorparoo site alert

Hi Sally,
Thank you for contacting me over the query relating to C6-C10 detections north of our Coorparoo Coles Express site. I received your emails.

As per our discussion, I have found some information that supports that the groundwater impact north of our site has been identified as solvents, like those associated with dry cleaners.

I attach for your reference a copy of the letter to DERM Notification of Land Dec 2009.
I also spoke with our environmental focal point in Queensland, Alicia Zillman (ph. 3364 5480), who confirmed that the report detailing the tank replacement works in 2009 was sent to Brisbane City Council in Aug 2009, copy of the cover letter attached.
If the report is difficult to locate, we can provide you with another copy, preferably electronically, upon request. That report indicated that offsite well MW08 (location shown in DERM letter) has been sampled twice and both times returned significant detections in the C6-9 range with negligible BTEX (13ppm in June 2008 and 21ppm in June 2009). MGT laboratory conducted some further analysis and confirmed that the sample contained TCE and similar (extract attached below).
I understand that there have been substantial roadworks and we suspect that the well has likely been destroyed, or may even have been abandoned as we were only given temporary consent for the well in the median strip.

I hope this has been helpful for you. As previously stated, it appears that the offsite impacts are unrelated to Shell Coles Express Coorparoo site.
If you have any further questions, I suggest you contact Alicia who has more direct knowledge of the investigations conducted on and near our site.

Otherwise, good luck with your plans.

kind regards,

Tanya Astbury / Environmental Risk and Assurance Lead
T +61 8 9432 1410 M sch4p4(6) Personal information
E tanya.astbury@vivaenergy.com.au

Viva Energy Australia Ltd (ABN 46 004 610 459)
22 Bracks Street, North Fremantle, WA 6159
www.vivaenergy.com.au

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EHP RTI DL Release

Release

Environmental
Resources Management
Australia

Level 1
60 Leichhardt Street
Spring Hill QLD 4000
Telephone (07) 3839 8393
Facsimile (07) 3839 8381
PO Box 1400
Spring Hill QLD 4004
www.erm.com

4 December, 2009

Contaminated Land Unit
Department of Environment and Resource Management
GPO Box 2771
Brisbane QLD 4001

Our Reference: *0097563_COORPAROO LETTER TO DERM.DOC*

Attention: **Contaminated Land Unit**

Dear Case Manager,

RE: NOTIFICATION OF CONTAMINATED GROUNDWATER BENEATH ROADWAY IMMEDIATELY NORTH OF COLES EXPRESS SERVICE STATION, 227 OLD CLEVELAND ROAD, COORPAROO, QUEENSLAND 4151

EHP PTI DL Release

Environmental Resources Management Australia Pty Ltd (ERM) was commissioned by The Shell Company of Australia Limited (Shell) to notify the Department of Environment and Resource Management (DERM) of a recent detection of contaminated groundwater beneath Old Cleveland Road immediately to the north of the Coles Express Service Station, 227 Old Cleveland Road, Coorparoo, Queensland 4151 (the site). A figure illustrating the location and site features is provided as *Attachment A*.

The detection of the contaminated land beneath Old Cleveland Road (MW7 and MW8) and the northeastern corner of the site (MW4) was discovered during routine Ground Water Monitoring Event (GME) completed in June 2009. Routine GME's are completed at the site to monitor the petroleum in groundwater beneath the site. Total Petroleum Hydrocarbon (TPH) impact was reported in two monitoring wells (MW7 and MW8) located in the centre of Old Cleveland Road and one monitoring well (MW4) in the northeastern corner of the site *(Attachment A)*.

A review of chromatograms supplied by the laboratory indicate that the main constituents of the TPH impact are chlorinated solvents. As such, the impact is not considered to be from the site. The chlorinated solvents are most likely associated to Hilda's Dry Cleaners located opposite the site on the northern side of Old Cleveland Road. A large fire was reported to have destroyed part of the dry cleaners in March 2008.

Release

Quality Endorsed Company
ISO 9001 LIC 5127
Standards Australia

Environmental Resources
Management Australia Pty Ltd
A.C.N. 002 773 248
A.B.N. 12 002 773 248

Offices worldwide

The purpose of this notification is to meet the DERM requirement of notification when contaminated land has been discovered. The formal notification to DERM of the contaminated land beneath Old Cleveland Road and the northeastern corner of the site is provided as *Attachment B*.

Should you have any queries regarding this letter, please do not hesitate to contact the undersigned at (07) 3839 8393 or Alicia Zillman (with Shell) at (07) 3364 5100.

Yours sincerely,
for Environmental Resources Management Australia Pty Ltd

sch4p4(6) Personal information

Nicole Anderson
Environmental Scientist

sch4p4(6) Personal information

Gregory J Wheeler
Partner

EHP RTI DL Release

ATTACHMENTS

EHP RTI DL Release

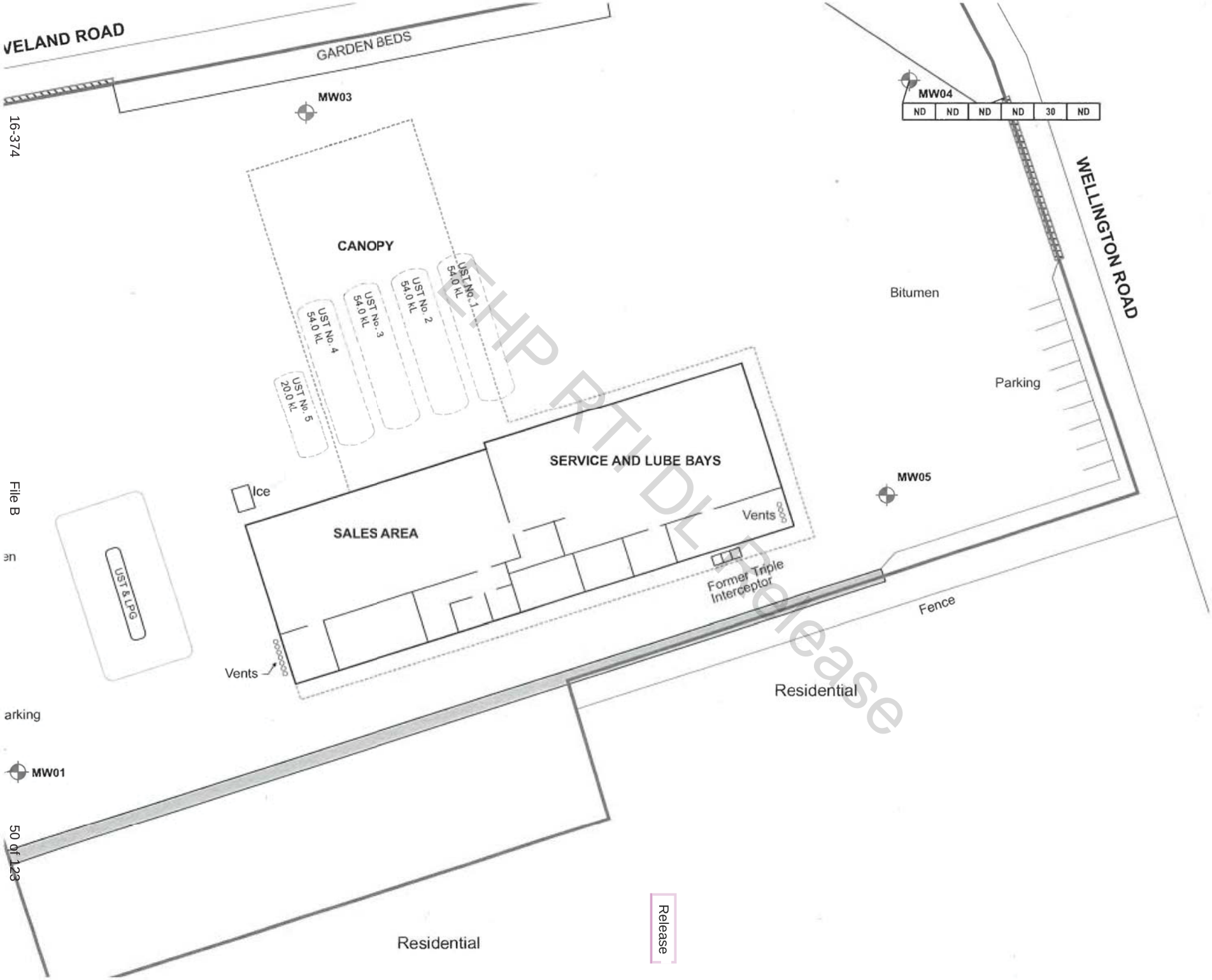
Release

Attachment A

FIGURE

EHP RTI DL Release

Release



EHP RTI DL Release

16-374
File B
en
50 of 123
Release

Attachment B

NOTIFICATION OF LAND

EHP RTI DL Release

Release

ecoaccess
environmental licences and permits

Contaminated Land

Notification of Land

This form should be used by people providing notification to the Environmental Protection Agency of contaminated land or land use for a notifiable activity in accordance with Schedule 2 of the *Environmental Protection Act 1994*. This form relates specifically to Sections 371 and 372 of the *Environmental Protection Act 1994*.

NOTE: You must complete all questions below and use a separate form for each lot.

1. Person making notification

NAME	TELEPHONE
Alicia Zillman	(07) 3364 5100
COMPANY/ORGANISATION: The Shell Company of Australia Limited	
POSTAL ADDRESS: PO Box 1456, Brisbane, Queensland, 4001	
EMAIL: a.zillman@shell.com	FACSIMILE: (07) 3364 5185

EHP RTI DL Release

2. Site details

2.1. Name by which the property is known locally?

Old Cleveland Road

2.2. Please provide details of the Lot on Plan to which the notification applies

Please note that a separate notification form must be used for each Lot on Plan.

FULL STREET ADDRESS OF THE SITE: Old Cleveland Road directly to the north of the Coles Express Service Station, 227 Old Cleveland Road, Coorparoo.	
LOT(S)	PLAN(S)
LOCAL GOVERNMENT AUTHORITY: Brisbane City Council	

2.3. Area of land parcel in square metres? approx 1100 m2

Release

Environmental Protection Agency
www.epa.qld.gov.au ABN 87 221 158 786

2.4. Describe the notifiable activity/ies for which the land is or has been used and the source/s of the suspected contamination. List all notifiable activities that the land has been used for and provide details.

If you require additional space attach the information on a separate sheet and make reference to that sheet here.

Please refer to covering letter

2.5. Has a map or locality plan been attached to this notification?

The processing of this information is greatly assisted by the inclusion of a map or locality plan that shows the respective Lot.

☐ NO ☒ YES

3. Details of land owner

NAME Brisbane City Council	TELEPHONE
POSTAL ADDRESS 35 Evans Road, Rocklea, QLD 4106	
EMAIL	FACSIMILE

4. Declaration

Please read the certification below before signing.

- 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 all 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*.

NOTIFYING PERSON'S SIGNATURE	DATE

You may apply for exemption from disclosing information contained in a document submitted, or proposed to be submitted with this notification (see Section 564 of the *Environment Protection Act 1994*)

5. Applicant checklist

☐ Notifying person's details correct.

☐ Notification form completed and signed.

☐ Supporting information attached.

Please return the completed notification to:

Contaminated Land Unit
Environmental Protection Agency

GPO Box 2771
Brisbane
Queensland 4001

Enquiries: **(07) 3227 7370**
Facsimile: (07) 3247 3278

EHP RTI DL Release

Release

From: Sarah Gould [sarahg@mgtenv.com.au]
Sent: Friday, 24 July 2009 12:34 PM
To: Nicole Anderson
Cc: Michael Wright
Subject: COORPAROO MONITORING 0097565 - MW8

Attachments: ERM - MW8.pdf
Hi Nicole,

As discussed, we repeated the analysis of MW8 to confirm the detection of 21ppm of TPH C6-C9.

The repeated analysis detected the same compounds present, and at similar levels, to those found when the sample was analysed initially.

The three compounds that are the main contributors to the positive TPH C6-C9 result are:

cis-1,2-dichloroethene
trichloroethene
tetrachloroethene

I have attached two chromatograms (original run and repeated analysis), each with the three compounds listed above labelled.

If you require any more information, please let me know.

Regards

Sarah Gould

mgt Environmental
3-5 Kingston Town Close,
Oakleigh, Vic 3166
T:(+61) (3) 9564 7055 - F:(+61) (3) 9564 7190

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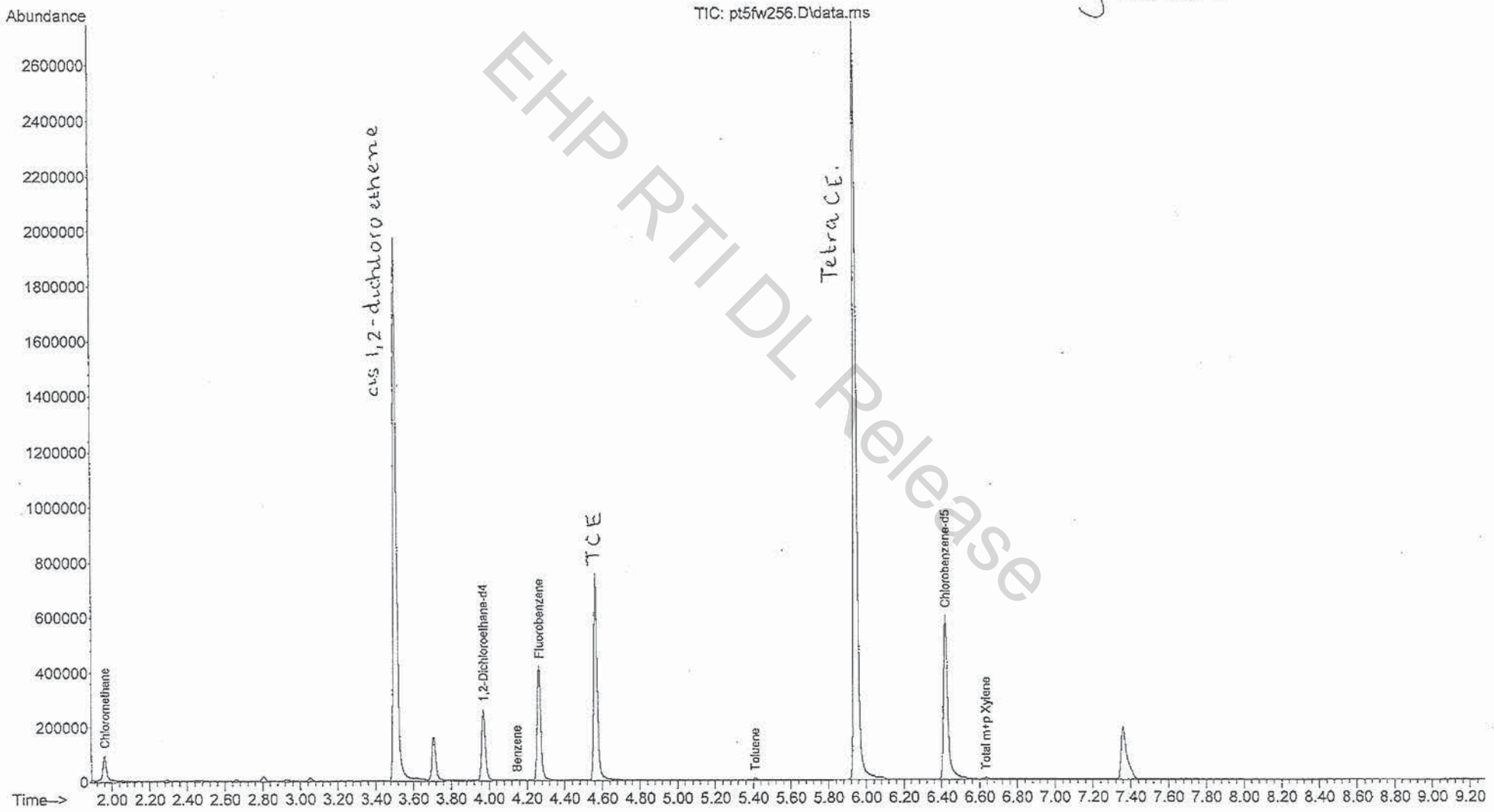
For more information please visit http://www.messagelabs.com/email

EHP RTI DL Release

Release

```
File       :C:\msdchem\1\DATA\old seq\pt5fw\pt5fw256.D
Operator   : KC
Acquired   :  3 Jul 2009    9:40      using AcqMethod MGTBTEX.M
Instrument :   A5PTGCMS
Sample Name: jn09697w 1/50
Misc Info  :
Vial Number: 13
```

MW8
09-JN09697
Original Run.



EHP RTI DL Release

Release

```
File       :\\A5ptgcms\C\msdchem\1\DATA\pt5gc\pt5gc158.D
Operator   : KC
Acquired   : 23 Jul 2009    9:22      using AcqMethod MGTBTEX.M
Instrument :   A5PTGCMS
Sample Name: jn09697w 1/50
Misc Info  :
Vial Number: 6
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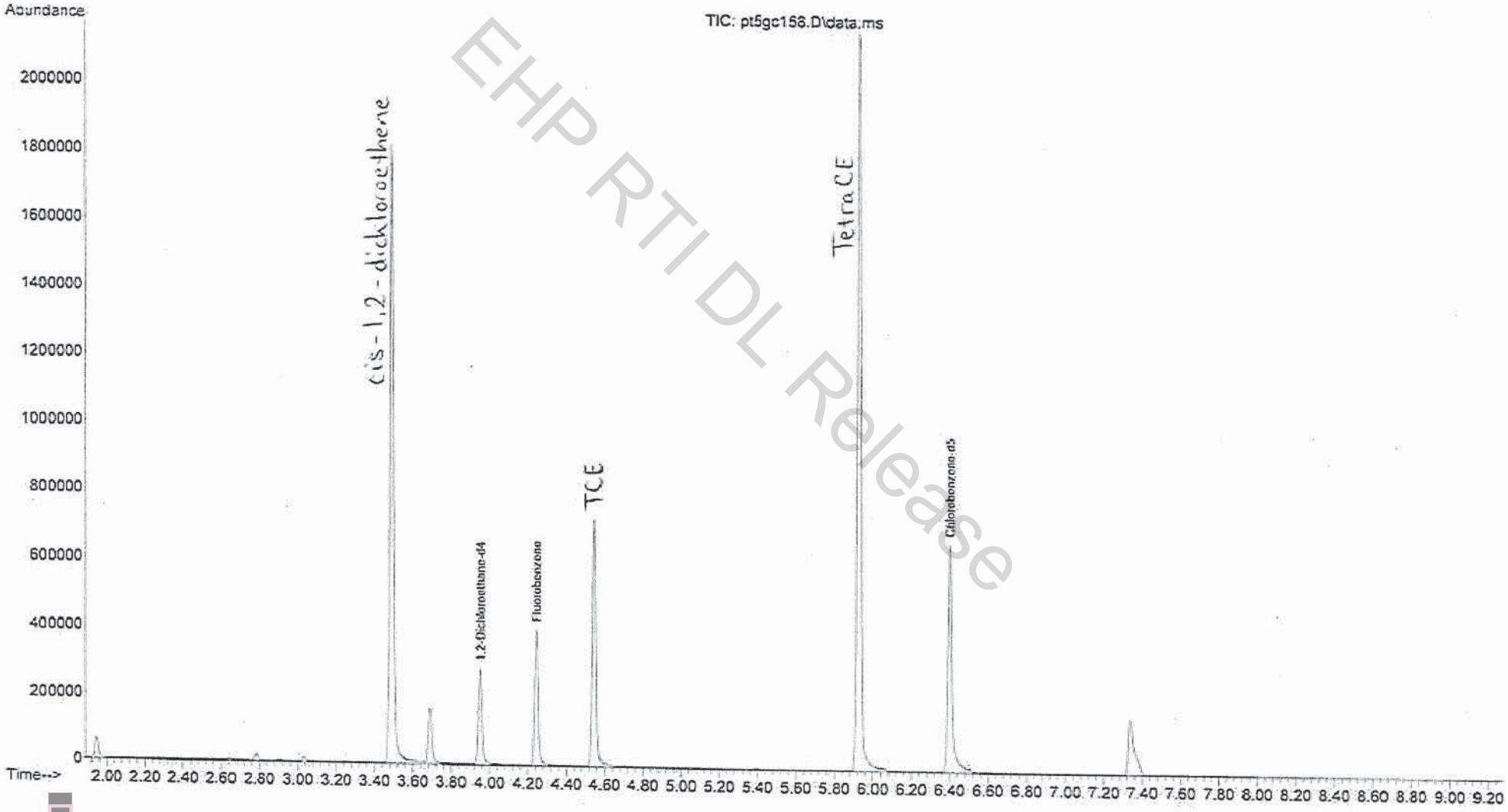
MW8
09-JN09697
Repeat Analysis



EHP RTI DL Release

Release

Sally Dodds

From: Sally Dodds
Sent: Wednesday, 6 May 2015 11:10 AM
To: 'KARLE Matt'; 'MCKENZIE Ben'; 'PUSCHMANN Cate'
Cc: Erik Dekker; Matthew Pomeroy
Subject: FW: Coorparoo site alert - chlorinated solvents in shallow groundwater
Attachments: hildas dry cleaning photos_9 mar 2011.pdf; Fig 1_sample locations_Coorparoo_dry cleaners_ 22 Apr 2015.pdf; Fig 2_All water sample locations_Coorparoo Creek Park_ 22 Apr 2015.pdf; EB1517242 AU_COA_1_A4_ENV_NATA (en-AU).pdf; EB1517242 AU_QC_1_A4_ENV_NATA (en-AU).pdf; EB1517242 AU_QCI_1_A4_ENV (en-AU).pdf; 454980_summary.pdf; 454980-W_report.pdf; Appendix D_All Borelogs.pdf

Hi Matt

Further to our discussions relating to volatile organic compounds in shallow groundwater in Coorparoo, Contaminated Land Services (CLS) now has further information which is provided below. The results suggests that the chlorinated solvent plume emanating from 224 Old Cleveland Rd is larger than previously known.

EHP RTI DL Release

Latest water quality monitoring results – 22 April 2015

BCC environmental staff conducted sampling and analysis of a 12 groundwater monitoring wells, 1 creek sample and 4 storm water pipe samples, located on Council-owned property in the vicinity of 224 old Cleveland Rd Coorparoo on 22 April 2015. The location of the sampling points are shown in Figures 1 and 2, attached.

All samples were sent to a NATA-accredited laboratory for analysis of a variety of potential contaminants. The laboratory certificates are attached to this email.

Chlorinated solvents were detected in water within groundwater monitoring wells B2, B3 and B5 and within the stormwater pipe at SWP1.

The contaminants identified were: 1.1-Dichloroethene, cis–1,2 dichloroethene, trans-1,2-di-chloroethene, trichloroethene (TCE), vinyl chloride (chloro-ethene) and tetrachloro-ethene (PCE) as well as benzene. These contaminants are consistent with a contaminant source comprising dry cleaning fluids.

The level of the groundwater was gauged prior to sampling and was found to be shallow – B2: 1.40 metres below ground level (mBGL); B3: 3.03 mBGL; and B5: 1.20 mBGL.

Groundwater sampling was conducted using a disposable PVC bailer and the wells were purged to dry and allowed to recharge to their pre-purging groundwater levels prior to sampling.

I have attached all of the bore logs to this email

CLS assumes that this groundwater contamination has migrated from the nearby property at 224 Old Cleveland Road (Lot 1 on RP89855) which was formerly a dry cleaning operation.

Council is aware that these chlorinated solvent concentrations may have the potential to present a risk to human health from vapour intrusion in confined spaces. However, buildings on the Council-owned property at 226 old Cleveland Rd are not occupied and are currently vacant awaiting demolition to facilitate future development. Council now owns the properties at 28, 30 and 32 Primmer Street and buildings on these properties have been demolished and the land has been turfed and turned into a vacant public open space.

Release

It is important to note that B5 is located on 28 Primmer Street which is a distance of approximately 100m due north of the former dry cleaning facility. This suggests that the chlorinated solvent plume emanating from 224 Old Cleveland Rd is larger than previously known.

I hope this helps with EHP's investigations of this issue.

I will send through the results of any further investigations that we undertake on our property.

Please let me know if you require any further information.

Can Council please be kept informed of progress on this issue to inform Council's re-development works in the area?

Kind regards

Sally Dodds

P.S. Please note that sample QC2 is a duplicate of B3 for the purposes of cross comparison of results for QA/QC.
Additionally, another laboratory was also asked to analyse a water sample from B3 for the purposes of cross comparison of results for QA/QC. These results are also attached to this email.
The results from both QC2 and QC3 confirm that significant concentrations of chlorinated solvents are present in B3.

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

Green Square | Level 1 505 St Pauls Terrace, Fortitude Valley QLD 4006
Phone: + 61 7 3178 8858 Fax: + 61 7 3334 0220
Email: sally.dodds@brisbane.qld.gov.au

SECURITY LABEL: FOR OFFICIAL USE ONLY

From: Sally Dodds
Sent: Friday, 1 May 2015 11:07 AM
To: 'KARLE Matt'; 'PUSCHMANN Cate'; 'MCKENZIE Ben'
Cc: Erik Dekker
Subject: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater

HI Matt,

Further to our previous discussions, I have attached a Direction Notice under the EPA Act 1994 Section 363B from Council to Hilda's Dry Cleaning dated 14 march 2011. This direction notice specified actions the company was to carry out to cease discharging contaminants.

I have also attached some photos of the Hilda's Dry Cleaning which show blue drums containing concentrated PCE (dry-cleaning fluid) stored on the bare ground surface with no bunding or cover.

Unfortunately, because of the limitations on Council's jurisdiction under the EP Act, the reason given for the requirement to store chemicals in a covered and bunded area was to prevent the potential for stormwater contamination. As Council does not have jurisdiction for material or serious environmental harm or for

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contaminated land, it was not possible to make the prevention of environmental harm or contamination of soil or groundwater a reason for the direction – it would then have been beyond power.

As I mentioned on to you Wednesday (29 Apr 2015), the chlorinated solvents within this shallow groundwater contamination plume have the potential to pose a serious health risk to occupants of buildings located over the groundwater plume. I would strongly urge EHP to escalate this investigation to a higher priority. It may be beneficial to seek technical advice from someone like EHP's Tony Bradshaw as chlorinated solvent plumes are quite complex contamination issues.

I hope this helps with EHP's investigations of this issue.

I will send through the results of any further investigations that we undertake on our property.

Please let me know if you require any further information.

Can Council please be kept informed of progress on this issue to inform Council's re-development works in the area?

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

Green Square | Level 1 505 St Pauls Terrace, Fortitude Valley QLD 4006
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Email: sally.dodds@brisbane.qld.gov.au

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From: Sally Dodds
Sent: Friday, 17 April 2015 5:26 PM
To: 'KARLE Matt'; PUSCHMANN Cate; MCKENZIE Ben
Cc: Erik Dekker
Subject: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater

Hi Matt,

Council provides the following information for your review:

a) I have discovered that Council charged Hilda's Dry Cleaners Pty Ltd with two (2) offences against section 440ZG(a) of the *Environmental Protection Act* 1994 for depositing prescribed water contaminants in water in 2011.

I have attached a 'Statement of facts' relating to these charges. This document was tendered in court so it is in the public domain.

Council will provide other documents and photos which were also tendered in court in the near future.

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b) EHP notified Council on 11 October 2012 that properties at 214-222 Old Cleveland Rd and 100 old Cleveland Rd had been investigated and are now subject to a Site Management Plan (SMP) - EHP file ref BNE45756). The SMP included statements suggesting that these properties may be impacted by contamination from the former dry cleaner's located at 224 Old Cleveland Rd.

c) Review of news media revealed that two large fires occurred at the former dry cleaner's located at 224 Old Cleveland Rd – one in March 2008 and one in July 2012.

I hope this information assists EHP to progress its investigations and actions in relation to the potential risk associated with chlorinated solvent contamination in shallow groundwater in this area, most notably potential health risks to occupants of buildings from possible vapour intrusion into buildings.

Please keep Council informed in relation to this issue that impacts Council-owned property.

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

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From: KARLE Matt [mailto:Matt.Karle@ehp.qld.gov.au]
Sent: Tuesday, 14 April 2015 9:50 AM
To: EVERETT David; Sally Dodds; PUSCHMANN Cate; MCKENZIE Ben
Subject: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater

Hi Sally

Thanks for your information regarding this site, and the recent monitoring undertaken. I confirm David Everett from EHP's Pollution Hotline forwarded the matter to the Brisbane Moreton Compliance team, which has since been allocated to Senior Environmental Officer Ben Mckenzie. Ben is currently [sch4p4(6) Personal information] but the matter will be scheduled on his return I'm sure.

I note the site was previously regulated as an ERA by Brisbane City Council, and that Brisbane City Council may have issued a formal compliance notice under the EPAct (Env Evaluation or TEP?) to the site owner / operator to investigate the source cause and extent of harm, or to address the contamination problem?

It would be of considerable use to EHP to understand that history and to be aware of the position Council arrived at regarding those dealings. Did Council receive an Environmental Report or Draft TEP and was it approved?; Was the client compliant with that Notice?

Any detail about Councils dealings with the site would be appreciated, and would assist to inform Ben on his return to work.

Regards

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Matt Karle
A / Manager, South Queensland Compliance – Brisbane Moreton Bay
Environmental Services and Regulation
Department of Environment and Heritage Protection
33 King Street, Caboolture QLD 4510
Ph: (07) 5316 8403
Email: matt.karle@ehp.qld.gov.au
www.ehp.qld.gov.au

From: EVERETT David
Sent: Tuesday, 14 April 2015 8:57 AM
To: Sally Dodds
Subject: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater

Hi Sally,

This matter was forwarded to the appropriate compliance centre after our discussions on 6 March. I have now forwarded this additional information to the compliance centre too.

Thanks.

David Everett
Principal Project Officer, Community Response | Regulatory Capability & Customer Service
Environmental Services and Regulation
Department of Environment and Heritage Protection
Level 9 | 400 George Street| Brisbane
Pollution Hotline 1300 130 372 (option 2)
Email pollutionhotline@ehp.qld.gov.au
www.ehp.qld.gov.au

Please consider the environment before printing this email

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From: Sally Dodds [mailto:Sally.Dodds@brisbane.qld.gov.au]
Sent: Monday, 13 April 2015 5:13 PM
To: EVERETT David
Cc: JOHNS Allen; Erik Dekker; COOK David
Subject: FW: Coorparoo site alert - chlorinated solvents in shallow groundwater
Importance: High

Hi David,

Further to our discussions of Friday 6 March 2015 relating to volatile organic compounds in shallow groundwater in Coorparoo, Brisbane City Council (BCC) now has further information which is provided below.

Release

BCC environmental staff conducted sampling and analysis of a groundwater monitoring well (B3) located on Council-owned property at 226 old Cleveland Rd Coorparoo on 1 April 2015. The location of the monitoring well is shown in Figure 1, attached. The borelog for the monitoring well and a photo of the monitoring well are also attached to this email.

Groundwater collected from B3 was sent to a NATA-accredited laboratory for analysis of a variety of potential contaminants. The laboratory certificates are attached to this email.

Chlorinated solvents were detected in the groundwater. The contaminants identified were: cis–1,2 dichloroethene, trans-1,2-di-chloroethene, trichloroethene (TCE), vinyl chloride (chloro-ethene) and tetrachloro-ethene (PCE). These contaminants are consistent with a contaminant source comprising dry cleaning fluids.

The level of the groundwater was gauged prior to sampling and was 2.66 metres below ground level. Groundwater sampling was conducted using a disposable PVC bailer and the well was purged to dry and allowed to return to its pre-purging groundwater level prior to sampling.

CLS assumes that this groundwater contamination has migrated from the adjacent property at 224 Old Cleveland Road (Lot 1 on RP89855) which was formerly a dry cleaning operation.

Council is aware that these chlorinated solvent concentrations may have the potential to present a risk to human health from vapour intrusion in confined spaces. However, buildings on the Council-owned property at 226 old Cleveland Rd are not occupied and are currently vacant awaiting demolition to facilitate future development.

Council notes that it appears that buildings located on 224 Old Cleveland Road are occupied by a variety of businesses.

Can EHP please advise what actions it proposes to take in relation to this contamination issue so that Council can be informed in relation to the development of the adjoining Council land.

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

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From: Sally Dodds
Sent: Monday, 9 March 2015 11:59 AM
To: 'david.everett@ehp.qld.gov.au'
Subject: FW: Coorparoo site alert

Hi Dave,

Thanks for taking the time to discuss this issue on Friday 6 March 2015.

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Could you please keep Council in the communication loop once you are able to ascertain any information and/or course of action on this issue.

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

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From: Sally Dodds
Sent: Friday, 6 March 2015 12:17 PM
To: allen.johns@ehp.qld.gov.au
Cc: Erik Dekker
Subject: FW: Coorparoo site alert

Allen

Thanks for your time today. As per our telephone discussions this morning, Council has been made aware of the presence volatile organic compounds in shallow groundwater beneath a road reserve in Coorparoo. I have included the information that Council received as attachments to this email.

The volatile organic compounds include cis–1,2 dichloroethene, trichloroethene and tetrachloro-ethene and are consistent with a contaminant source comprising dry cleaning fluids.

The road reserve is a portion of Old Cleveland Road in Coorparoo adjacent to 224 Old Cleveland Road (Lot 1 on RP89855)

This contamination was reported to EHP (then DERM) on 4 December 2009 (Notification letter attached to this email).

Could you please advise what, if any, action was taken relating to this report of groundwater contamination.

Council suspects that this groundwater contamination plume may have migrated to impact Council owned property as well. The Council owned property in question, is 226 Old Cleveland Road Coorparoo (L3 RP89855, L12 RP 152616, L13 RP 152617) and is already listed on the EMR.

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

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From: Astbury, Tanya [mailto:Tanya.Astbury@vivaenergy.com.au]
Sent: Wednesday, 4 March 2015 5:00 PM
To: Sally Dodds
Cc: Zillman, Alicia J
Subject: Coorparoo site alert

Hi Sally,
Thank you for contacting me over the query relating to C6-C10 detections north of our Coorparoo Coles Express site. I received your emails.

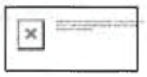
As per our discussion, I have found some information that supports that the groundwater impact north of our site has been identified as solvents, like those associated with dry cleaners.

I attach for your reference a copy of the letter to DERM Notification of Land Dec 2009.
I also spoke with our environmental focal point in Queensland, Alicia Zillman (ph. 3364 5480), who confirmed that the report detailing the tank replacement works in 2009 was sent to Brisbane City Council in Aug 2009, copy of the cover letter attached.
If the report is difficult to locate, we can provide you with another copy, preferably electronically, upon request. That report indicated that offsite well MW08 (location shown in DERM letter) has been sampled twice and both times returned significant detections in the C6-9 range with negligible BTEX (13ppm in June 2008 and 21ppm in June 2009). MGT laboratory conducted some further analysis and confirmed that the sample contained TCE and similar (extract attached below).
I understand that there have been substantial roadworks and we suspect that the well has likely been destroyed, or may even have been abandoned as we were only given temporary consent for the well in the median strip.

I hope this has been helpful for you. As previously stated, it appears that the offsite impacts are unrelated to Shell Coles Express Coorparoo site.
If you have any further questions, I suggest you contact Alicia who has more direct knowledge of the investigations conducted on and near our site.

Otherwise, good luck with your plans.

kind regards,



Tanya Astbury / Environmental Risk and Assurance Lead
T +61 8 9432 1410 **M** +61 sch4p4(6) Personal information
E tanya.astbury@vivaenergy.com.au

Viva Energy Australia Ltd (ABN 46 004 610 459)
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www.vivaenergy.com.au

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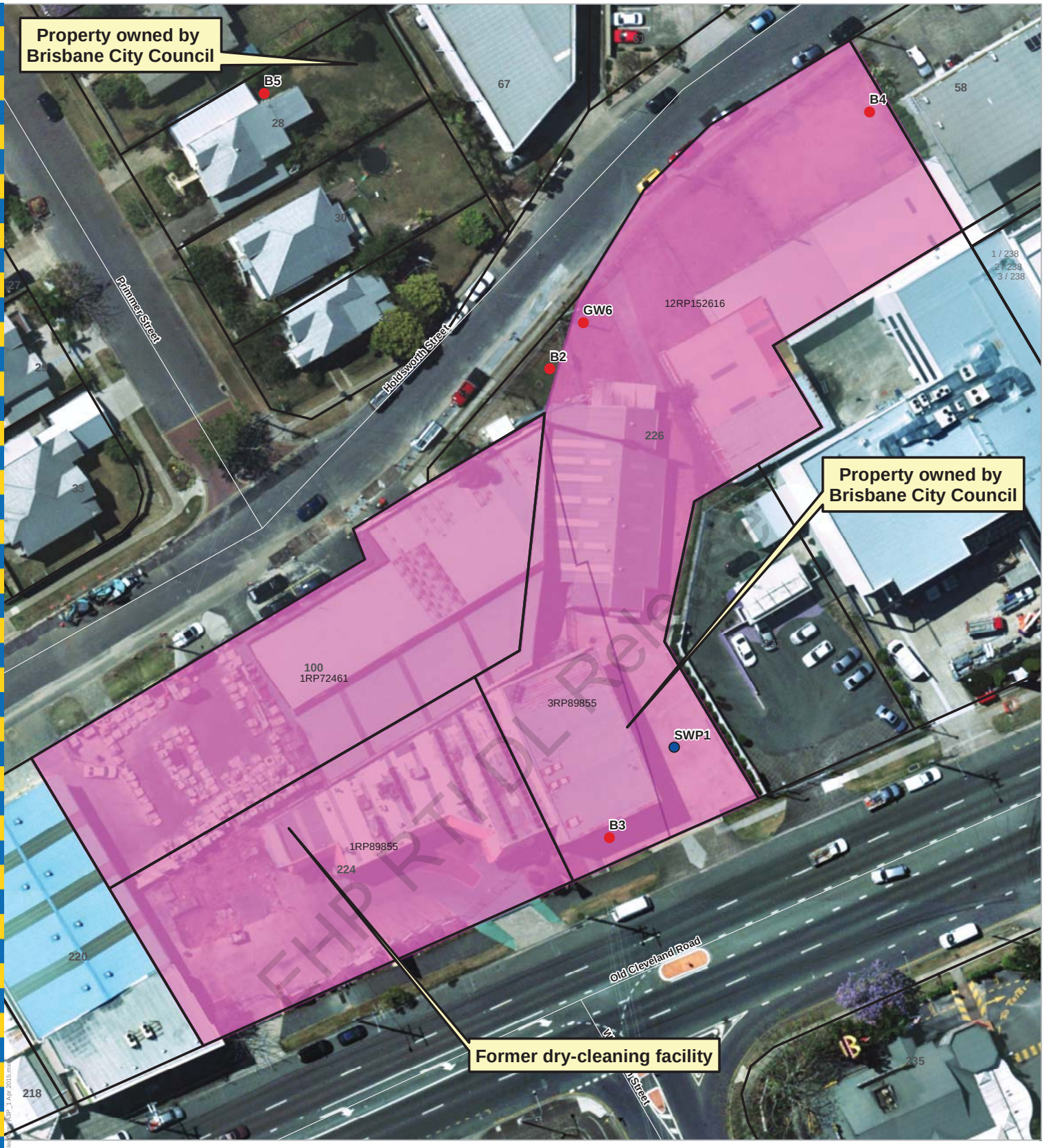

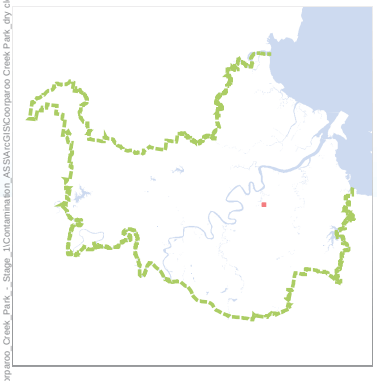

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Prepared : 7/04/2014
Checked : NC
Revision : 0
Publication Date : 06 May 2015
Project Number : 100001

Figure 1
Water quality monitoring locations in vicinity of 224 old Cleveland Rd, Coorparoo 22 April 2015

Legend

- Stormwater pipe sample locations
- Groundwater wells
- EMR-listed sites
- 227 Street address number

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City Projects Office
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Aerial photograph dated 2012

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Contaminated Land Services
Coorparoo

66 of 123

16-374

File B

CLS - 100001 - 001

File : G:\BICDP\tg\141\0413_Coorparoo_Creek_Park_-_Stage_1\Contamination_ASS\ArcGIS\Coorparoo Creek Park_dry cleaner_SP_1 Apr 2015.mxd

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NATA # 1261 Site # 20794

Company Name: Brisbane City Council City Design (BI)
Address: GPO Box 2567
Brisbane
QLD 4001

Project Name: COORPAROO CREEK PARK
Project ID: 140413

Order No.:
Report #: 454980
Phone: 07 3027 4725
Fax: 07 3334 0071

Received: Apr 23, 2015 9:00 AM
Due: Apr 30, 2015
Priority: 5 Day
Contact Name: Erik Dekker

Eurofins | mgt Client Manager: Mary Makarios

Sample Detail					Aluminium	Aluminium (filtered)	Ammonium Ion (as N)	Iron	Iron (filtered)	Nitrate & Nitrite (as N)	Phosphorus	Selenium (filtered)	Sulphide (as S)	Polycyclic Aromatic Hydrocarbons	BTEX	Total Recoverable Hydrocarbons	NEPM 1999 Metals : Metals M15 filtered	Volatile Organics
Laboratory where analysis is conducted																		
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																		
Brisbane Laboratory - NATA Site # 20794																		
External Laboratory																		
Sample ID	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**														
QC3	Apr 22, 2015		Water	B15-Ap17116	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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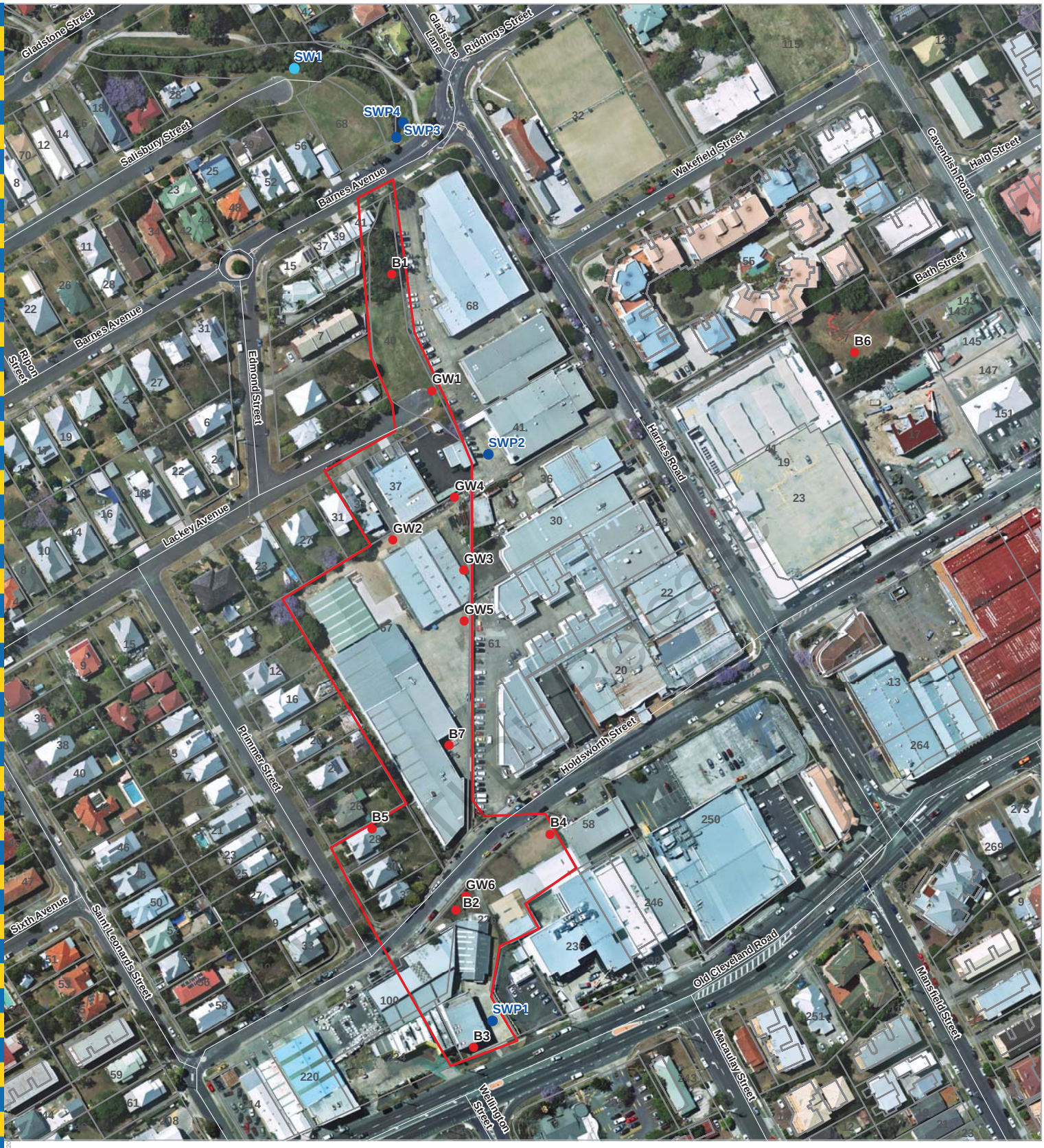

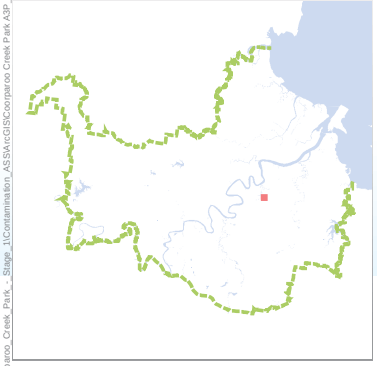

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Prepared : 7/4/2014
Checked : NC
Revision : 0
Publication Date : 01 May 2015
Project Number : 100001

Figure 2
Water quality monitoring locations
April 2015

Legend

- Surface water sample location
- Stormwater sample locations
- Groundwater wells
- Site boundary

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File B

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File : G:\BICDP\ng\141\0413_Coorparoo_Creek_Park_-_Stage_1\Geomatics_ASSArcGIS\Coorparoo Creek Park.ASP_2015

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Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Brisbane City Council- City Project Office
GPO Box 2567
Brisbane
QLD 4001

Attention: **Erik Dekker**

Report **454980-W**
Project name COORPAROO CREEK PARK
Project ID 140413
Received Date Apr 23, 2015

Client Sample ID			**QC3**
Sample Matrix			**Water**
Eurofins | mgt Sample No.			**B15-Ap17116**
Date Sampled			**Apr 22, 2015**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	6.6
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-36 (Total)	0.1	mg/L	< 0.1
BTEX			
Benzene	0.001	mg/L	0.008
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	68
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.02	mg/L	< 0.02
TRH C6-C10	0.02	mg/L	6.6
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	6.6
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
Volatile Organics			
1.1-Dichloroethane	0.001	mg/L	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001

EHP RTDL Release

Release

Client Sample ID			QC3
Sample Matrix			Water
Eurofins | mgt Sample No.			B15-Ap17116
Date Sampled			Apr 22, 2015
Test/Reference	LOR	Unit	
Volatile Organics			
1.3-Dichloropropane	0.001	mg/L	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001
2-Propanone (Acetone)	0.001	mg/L	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001
Allyl chloride	0.001	mg/L	< 0.001
Benzene	0.001	mg/L	0.008
Bromobenzene	0.001	mg/L	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001
Bromoform	0.001	mg/L	< 0.001
Bromomethane	0.001	mg/L	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001
Chloroethane	0.001	mg/L	< 0.001
Chloroform	0.005	mg/L	< 0.005
Chloromethane	0.001	mg/L	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	3.8
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001
Dibromomethane	0.001	mg/L	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
Iodomethane	0.001	mg/L	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001
o-Xylene	0.001	mg/L	< 0.001
Styrene	0.001	mg/L	< 0.001
Tetrachloroethene	0.001	mg/L	2.3
Toluene	0.001	mg/L	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	0.086
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001
Trichloroethene	0.001	mg/L	1.0
Trichlorofluoromethane	0.001	mg/L	< 0.001
Vinyl chloride	0.001	mg/L	0.64
Xylenes - Total	0.003	mg/L	< 0.003
Fluorobenzene (surr.)	1	%	105
4-Bromofluorobenzene (surr.)	1	%	68
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.001	mg/L	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001
Anthracene	0.001	mg/L	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001

EHP RTDL Release

Release

Eurofins | mgt 1/21 Smallwood Place, Murarrie, QLD, Australia, 4172
ABN : 50 005 085 521 Telephone: +61 7 3902 4600 Facsimile: +61 7 3902 4646

Client Sample ID			QC3
Sample Matrix			**Water**
Eurofins | mgt Sample No.			**B15-Ap17116**
Date Sampled			**Apr 22, 2015**
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001
Chrysene	0.001	mg/L	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001
Naphthalene	0.001	mg/L	< 0.001
Phenanthrene	0.001	mg/L	< 0.001
Pyrene	0.001	mg/L	< 0.001
Total PAH*	0.001	mg/L	< 0.001
2-Fluorobiphenyl (surr.)	1	%	53
p-Terphenyl-d14 (surr.)	1	%	55
Ammonium Ion (as N)	0.01	mg/L	0.02
Chromium (hexavalent)	0.001	mg/L	< 0.001
Nitrate & Nitrite (as N)	0.05	mg/L	0.11
Sulphide (as S)	0.05	mg/L	< 0.05
Chromium (trivalent)	0.001	mg/L	< 0.001
Phosphorus	0.5	mg/L	< 0.5
Heavy Metals			
Aluminium	0.05	mg/L	36
Aluminium (filtered)	0.05	mg/L	< 0.05
Arsenic (filtered)	0.001	mg/L	0.002
Barium (filtered)	0.02	mg/L	0.17
Beryllium (filtered)	0.001	mg/L	< 0.001
Boron (filtered)	0.05	mg/L	0.13
Cadmium (filtered)	0.0002	mg/L	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001
Cobalt (filtered)	0.001	mg/L	0.004
Copper (filtered)	0.001	mg/L	0.002
Iron	0.05	mg/L	72
Iron (filtered)	0.05	mg/L	< 0.05
Lead (filtered)	0.001	mg/L	< 0.001
Manganese (filtered)	0.005	mg/L	0.31
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	0.003
Selenium (filtered)	0.001	mg/L	< 0.001
Vanadium (filtered)	0.005	mg/L	< 0.005
Zinc (filtered)	0.001	mg/L	0.003

EHP RTI DL Release

Release

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 28, 2015	7 Day
- Method: TRH C6-C36 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 28, 2015	7 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
BTEX	Melbourne	Apr 23, 2015	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Volatile Organics	Melbourne	Apr 23, 2015	7 Day
- Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS			
Polycyclic Aromatic Hydrocarbons	Melbourne	Apr 28, 2015	7 Day
- Method: USEPA 8270 Polycyclic Aromatic Hydrocarbons			
Ammonium Ion (as N)	Melbourne	Apr 24, 2015	7 Day
- Method: APHA 4500-NH3 Ammonia Nitrogen by FIA			
Nitrate & Nitrite (as N)	Melbourne	Apr 24, 2015	28 Day
- Method: APHA 4500-NO3/NO2 Nitrate-Nitrite Nitrogen by FIA			
Sulphide (as S)	Melbourne	Apr 23, 2015	7 Day
- Method: APHA 4500-S C & D - Sulphide			
Phosphorus	Melbourne	Apr 23, 2015	180 Day
- Method: USEPA 6010			
Heavy Metals	Melbourne	Apr 23, 2015	180 Day
- Method: USEPA 6010/6020 Heavy Metals			
Heavy Metals (filtered)	Melbourne	Apr 23, 2015	180 Day
- Method: USEPA 6020 Heavy Metals			
Chromium (hexavalent)	Melbourne	Apr 24, 2015	28 Day
- Method: APHA 3500-Cr Hexavalent Chromium			
Mobil Metals : Metals M15	Melbourne	Apr 23, 2015	28 Day
- Method: USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury			

EHP RTI DL Release

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eurofins | mgt

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NATA # 1261 Site # 20794

16-374

Company Name:	Brisbane City Council City Design (BI)	**Order No.:**		**Received:**	Apr 23, 2015 9:00 AM
Address:	GPO Box 2567	**Report #:**	454980	**Due:**	Apr 30, 2015
	Brisbane	**Phone:**	07 3027 4725	**Priority:**	5 Day
	QLD 4001	**Fax:**	07 3334 0071	**Contact Name:**	Erik Dekker
Project Name:	COORPAROO CREEK PARK				
Project ID:	140413				

Eurofins | mgt Client Manager: Mary Makarios

Sample Detail					Aluminium	Aluminium (filtered)	Ammonium Ion (as N)	Iron	Iron (filtered)	Nitrate & Nitrite (as N)	Phosphorus	Selenium (filtered)	Sulphide (as S)	Polycyclic Aromatic Hydrocarbons	BTEX	Total Recoverable Hydrocarbons	NEPM 1999 Metals : Metals M15 filtered	Volatile Organics
Laboratory where analysis is conducted																		
Melbourne Laboratory - NATA Site # 1254 & 14271					X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																		
Brisbane Laboratory - NATA Site # 20794																		
External Laboratory																		
Sample ID	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**														
QC3	Apr 22, 2015		Water	B15-Ap17116	X	X	X	X	X	X	X	X	X	X	X	X	X	X

EHP RTI DL Release

File B

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Eurofins | mgt Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

EHP RTDL Release

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

Release

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Ammonium Ion (as N)	mg/L	< 0.01			0.01	Pass	
Chromium (hexavalent)	mg/L	< 0.001			0.001	Pass	
Nitrate & Nitrite (as N)	mg/L	< 0.05			0.05	Pass	
Sulphide (as S)	mg/L	< 0.05			0.05	Pass	
Phosphorus	mg/L	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Aluminium	mg/L	< 0.05			0.05	Pass	
Aluminium (filtered)	mg/L	< 0.05			0.05	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Barium (filtered)	mg/L	< 0.02			0.02	Pass	
Beryllium (filtered)	mg/L	< 0.001			0.001	Pass	
Boron (filtered)	mg/L	< 0.05			0.05	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Cobalt (filtered)	mg/L	< 0.001			0.001	Pass	

EHP RTI DL Release

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Iron	mg/L	< 0.05			0.05	Pass	
Iron (filtered)	mg/L	< 0.05			0.05	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Manganese (filtered)	mg/L	< 0.005			0.005	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Selenium (filtered)	mg/L	< 0.001			0.001	Pass	
Vanadium (filtered)	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.001			0.001	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	103			70-130	Pass	
TRH C10-C14	%	87			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	103			70-130	Pass	
Toluene	%	76			70-130	Pass	
Ethylbenzene	%	101			70-130	Pass	
m&p-Xylenes	%	97			70-130	Pass	
Xylenes - Total	%	93			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH C6-C10	%	92			70-130	Pass	
TRH >C10-C16	%	89			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1.1-Trichloroethane	%	100			70-130	Pass	
1.2-Dichloroethane	%	89			70-130	Pass	
Trichloroethene	%	112			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	93			70-130	Pass	
Acenaphthylene	%	85			70-130	Pass	
Anthracene	%	87			70-130	Pass	
Benz(a)anthracene	%	123			70-130	Pass	
Benzo(a)pyrene	%	110			70-130	Pass	
Benzo(b&j)fluoranthene	%	120			70-130	Pass	
Benzo(g.h.i)perylene	%	121			70-130	Pass	
Benzo(k)fluoranthene	%	113			70-130	Pass	
Chrysene	%	118			70-130	Pass	
Dibenz(a.h)anthracene	%	103			70-130	Pass	
Fluoranthene	%	109			70-130	Pass	
Fluorene	%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	105			70-130	Pass	
Naphthalene	%	96			70-130	Pass	
Phenanthrene	%	103			70-130	Pass	
Pyrene	%	110			70-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	108			70-130	Pass	
Nitrate & Nitrite (as N)	%	96			70-130	Pass	
Sulphide (as S)	%	100			70-130	Pass	
Phosphorus	%	107			70-130	Pass	
LCS - % Recovery							

EHP RTI DL Release

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heavy Metals							
Arsenic (filtered)	%	98			80-120	Pass	
Boron (filtered)	%	101			80-120	Pass	
Cadmium (filtered)	%	96			80-120	Pass	
Chromium (filtered)	%	97			80-120	Pass	
Cobalt (filtered)	%	98			80-120	Pass	
Copper (filtered)	%	97			80-120	Pass	
Iron (filtered)	%	93			80-120	Pass	
Lead (filtered)	%	97			80-120	Pass	
Manganese (filtered)	%	100			80-120	Pass	
Mercury (filtered)	%	116			70-130	Pass	
Nickel (filtered)	%	98			80-120	Pass	
Selenium (filtered)	%	100			80-120	Pass	
Zinc (filtered)	%	99			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M15-Ap17025	NCP	%	116			70-130	Pass	
TRH C10-C14	M15-Ap16431	NCP	%	116			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M15-Ap17025	NCP	%	110			70-130	Pass	
Toluene	M15-Ap17025	NCP	%	76			70-130	Pass	
Ethylbenzene	M15-Ap17025	NCP	%	110			70-130	Pass	
m&p-Xylenes	M15-Ap17025	NCP	%	107			70-130	Pass	
o-Xylene	M15-Ap17025	NCP	%	96			70-130	Pass	
Xylenes - Total	M15-Ap17025	NCP	%	103			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	M15-Ap17025	NCP	%	118			70-130	Pass	
TRH >C10-C16	M15-Ap16431	NCP	%	124			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1.1-Trichloroethane	M15-Ap17025	NCP	%	105			70-130	Pass	
1.2-Dichlorobenzene	M15-Ap17025	NCP	%	114			70-130	Pass	
1.2-Dichloroethane	M15-Ap17025	NCP	%	101			70-130	Pass	
Trichloroethene	M15-Ap17025	NCP	%	113			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M15-Ap18394	NCP	%	118			70-130	Pass	
Acenaphthylene	M15-Ap18394	NCP	%	121			70-130	Pass	
Anthracene	M15-Ap18394	NCP	%	129			70-130	Pass	
Benz(a)anthracene	M15-Ap18394	NCP	%	122			70-130	Pass	
Benzo(a)pyrene	M15-Ap18394	NCP	%	95			70-130	Pass	
Benzo(b&j)fluoranthene	M15-Ap18394	NCP	%	98			70-130	Pass	
Benzo(g.h.i)perylene	M15-Ap18394	NCP	%	80			70-130	Pass	
Benzo(k)fluoranthene	M15-Ap18394	NCP	%	107			70-130	Pass	
Chrysene	M15-Ap18394	NCP	%	120			70-130	Pass	
Dibenz(a.h)anthracene	M15-Ap18394	NCP	%	84			70-130	Pass	
Fluoranthene	M15-Ap18394	NCP	%	128			70-130	Pass	
Fluorene	M15-Ap18394	NCP	%	122			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M15-Ap18394	NCP	%	73			70-130	Pass	
Naphthalene	M15-Ap18394	NCP	%	101			70-130	Pass	
Phenanthrene	M15-Ap18394	NCP	%	118			70-130	Pass	

EHP RTI DL Release

Release

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	M15-Ap18394	NCP	%	122			70-130	Pass	
Spike - % Recovery									
				Result 1					
Nitrate & Nitrite (as N)	M15-Ap17601	NCP	%	94			70-130	Pass	
Phosphorus	M15-Ap16905	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	M15-Ap17672	NCP	%	103			70-130	Pass	
Barium (filtered)	M15-Ap17672	NCP	%	94			75-125	Pass	
Beryllium (filtered)	M15-Ap17672	NCP	%	114			75-125	Pass	
Cadmium (filtered)	M15-Ap17672	NCP	%	97			70-130	Pass	
Chromium (filtered)	M15-Ap17672	NCP	%	101			70-130	Pass	
Cobalt (filtered)	M15-Ap16796	NCP	%	94			75-125	Pass	
Copper (filtered)	M15-Ap17672	NCP	%	97			70-130	Pass	
Iron (filtered)	M15-Ap16760	NCP	%	88			70-130	Pass	
Lead (filtered)	M15-Ap17672	NCP	%	97			70-130	Pass	
Manganese (filtered)	M15-Ap16760	NCP	%	98			70-130	Pass	
Mercury (filtered)	M15-Ap17672	NCP	%	86			70-130	Pass	
Nickel (filtered)	M15-Ap16796	NCP	%	92			70-130	Pass	
Selenium (filtered)	M15-Ap17672	NCP	%	99			70-130	Pass	
Vanadium (filtered)	M15-Ap17672	NCP	%	103			75-125	Pass	
Zinc (filtered)	M15-Ap17672	NCP	%	100			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M15-Ap17135	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M15-Ap16430	NCP	mg/L	34	39	14	30%	Pass	
TRH C15-C28	M15-Ap16430	NCP	mg/L	22	25	14	30%	Pass	
TRH C29-C36	M15-Ap16430	NCP	mg/L	2.5	3.1	19	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M15-Ap17669	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	M15-Ap17669	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M15-Ap17669	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10	M15-Ap17135	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	M15-Ap17669	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M15-Ap16430	NCP	mg/L	29	34	17	30%	Pass	
TRH >C16-C34	M15-Ap16430	NCP	mg/L	18	21	14	30%	Pass	
TRH >C34-C40	M15-Ap16430	NCP	mg/L	1.7	2.0	15	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

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Release

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.2-Dichlorobenzene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloroethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloropropane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.3-Trichloropropane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.4-Trimethylbenzene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichlorobenzene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichloropropane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3.5-Trimethylbenzene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.4-Dichlorobenzene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Butanone (MEK)	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Propanone (Acetone)	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Chlorotoluene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Allyl chloride	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromobenzene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromochloromethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromodichloromethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromoform	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromomethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon disulfide	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon Tetrachloride	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chlorobenzene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroform	M15-Ap17669	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloromethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.2-Dichloroethene	M15-Ap17135	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.3-Dichloropropene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromochloromethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromomethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dichlorodifluoromethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Iodomethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Isopropyl benzene (Cumene)	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Methylene Chloride	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Styrene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Tetrachloroethene	M15-Ap17135	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.2-Dichloroethene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.3-Dichloropropene	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichloroethene	M15-Ap17135	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichlorofluoromethane	M15-Ap17669	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Vinyl chloride	M15-Ap17135	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Acenaphthylene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Anthracene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benz(a)anthracene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(a)pyrene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(b&j)fluoranthene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(g.h.i)perylene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(k)fluoranthene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chrysene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibenz(a.h)anthracene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluoranthene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluorene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass

For Public Release

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Indeno(1.2.3-cd)pyrene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	M15-Ap18393	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonium Ion (as N)	M15-Ap17601	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Nitrate & Nitrite (as N)	M15-Ap17601	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Sulphide (as S)	M15-Ap18922	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Phosphorus	M15-Ap16895	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Aluminium	M15-Ap18932	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Arsenic (filtered)	M15-Ap17672	NCP	mg/L	0.0030	0.0028	5.0	30%	Pass	
Barium (filtered)	M15-Ap17672	NCP	mg/L	0.11	0.11	4.0	30%	Pass	
Beryllium (filtered)	M15-Ap17672	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Boron (filtered)	M15-Ap16288	NCP	mg/L	1.0	0.99	1.0	30%	Pass	
Cadmium (filtered)	M15-Ap17672	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	M15-Ap17672	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cobalt (filtered)	M15-Ap16796	NCP	mg/L	0.0090	0.0089	1.0	30%	Pass	
Copper (filtered)	M15-Ap17672	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iron	M15-Ap18932	NCP	mg/L	5.9	5.6	5.0	30%	Pass	
Iron (filtered)	M15-Ap16796	NCP	mg/L	0.57	0.57	<1	30%	Pass	
Lead (filtered)	M15-Ap17672	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	M15-Ap16796	NCP	mg/L	0.74	0.74	<1	30%	Pass	
Mercury (filtered)	M15-Ap17672	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	M15-Ap16796	NCP	mg/L	0.0038	0.0037	1.0	30%	Pass	
Selenium (filtered)	M15-Ap17672	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vanadium (filtered)	M15-Ap17672	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Zinc (filtered)	M15-Ap17672	NCP	mg/L	0.010	0.0094	7.0	30%	Pass	

EHP RTOL Release

Release

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Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Mary Makarios	Analytical Services Manager
Carroll Lee	Senior Analyst-Organic (VIC)
Carroll Lee	Senior Analyst-Volatile (VIC)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Huong Le	Senior Analyst-Inorganic (VIC)

sch4p4(6) Personal information

Glenn Jackson

National Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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EHP RTI DL Release

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Dedicated to a better Brisbane

BOREHOLE LOG
Geotechnical

GW1 (BH02/13)

PROJECT No: 140413

CLIENT: Buildings & Civic	**CONTRACTOR:** APOD Soils Pty Ltd	**LOGGED BY:** SDO
PROJECT: Coorparoo Creek Park	**EQUIPMENT:** Landcruiser Rig	**CHECKED BY:**
LOCATION: Coorparoo Creek Park	**NOTES:**	

DATE COMMENCED: 11/10/2013	**ELEVATION (m):**	**AHD**	**EASTING:** 505487.91 **MGA**	**HOLE ANGLE:** 90°
COMPLETED: 11/10/2013	**TOTAL DEPTH (m):** 6.00		**NORTHING:** 6958900.73 **1994**	**BEARING:** ---

DRILLING				LITHOLOGY							SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Elevation	Depth (m)	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
		1.94m, mBTOC			0		Top soil loam, fill					BH02-1		
												BH02-2		
					1		Clay, grey brown, gleyed, firm, iron mottling, medium plasticity, some jarosite inclusions, increasing with depth, moisture increasing with depth, H_2S odour.					BH02-3	1.0	
												BH02ASS01		1.3m, pH_f 5, pH_{fox} 3.1
												BH02-4		
					2							BH02ASS02	2.0	1.8m, SCr 0.14%pH_f 5.4, pH_{fox} 2.6
												BH02ASS03		2.3m, pH_f 5.6, pH_{fox} 3.7
														2.5m, pH_f 5.5, pH_{fox} 3.5
					3							BH02ASS04	3.0	
												BH02ASS05		3.4m, SCr 0.26%, pH_f 5.5, pH_{fox} 2.8
					4		Silty Clay, dark grey, wet, H_2S odour.					BH02ASS06	4.0	3.9m, SCr 0.28%, pH_f 5.4, pH_{fox} 2
												BH02ASS07		4.3m, SCr 0.54%, pH_f 5.2, pH_{fox} 1.7
							Silty Clay, grey with organic inclusions, (woody, red, orange).					BH02ASS08		4.5m, pH_f 5, pH_{fox} 2.5
							Silty Sand, mid grey, wet, negligible H_2S odour.					BH02ASS09		4.7m, pH_f 5.2, pH_{fox} 2.7
					5		Silty Sandy Clay, grey, trace gravel, wet, H_2S odour.					BH02ASS10	5.0	5m, SCr 0.90%, pH_f 5.4, pH_{fox} 2.7
							Extremely weathered rock, grey to pale grey, moderately strong, dry.					BH02ASS11		5.55m, pH_f 6.2, pH_{fox} 2.5
					6								6.0	

Bottom of hole at 6.00 m.

EHP RTI DL Release

NOTE:

LOG TO BE READ IN CONJUNCTION WITH REPORT TEXT AND EXPLANATION SHEETS

16-374

Soil Description and Classification Symbols based on AS 1726

Water Symbols

- Water Level (date)
- Inflow
- Partial Loss
- Complete Loss

Moisture Content

- D - Dry
- M - Moist
- W - Wet
- W_p - Plastic Limit
- W_l - Liquid Limit

Consistancy (cohesive soils)

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

Relative Density (cohesionless soils)

- VL - Very Loose
- L - Loose
- MD - Medium Dense
- D - Dense
- VD - Very Dense

Sampling/Testing

- Bs - Bulk Sample
- Dist - Disturbed Sample
- SPT - Standard Penetration test
- SS - Split Spoon
- N - SPT 'N' Value
- PP - Pocket Penetrometer
- VS - Vane Shear
- U_{50} - Undisturbed Sample/Diameter

SOIL LOG - GEOTECHNICAL 140413 BORELOGS.GPJ CITY DESIGN DATA TEMPLATE.GDT 9/12/13

Release

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Dedicated to a better Brisbane

BOREHOLE LOG
Geotechnical

GW2
(BH10/13)

PROJECT No: 140413

CLIENT: Buildings & Civic	**CONTRACTOR:** APOD Soils Pty Ltd		**LOGGED BY:** SDO
PROJECT: Coorparoo Creek Park	**EQUIPMENT:** Landcruiser Rig		**CHECKED BY:**
LOCATION: Coorparoo Creek Park	**NOTES:**		
DATE COMMENCED: 11/10/2013	**ELEVATION (m):**	**AHD**	**EASTING:** 505471 **MGA** **HOLE ANGLE:** 90°
COMPLETED: 11/10/2013	**TOTAL DEPTH (m):** 3.10		**NORTHING:** 6958833 **1994** **BEARING:** ---

DRILLING				LITHOLOGY						SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Elevation	Depth (m)	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
		1.88m, mBTOC			0		Gravelly Clayey roadbase fill					BH10-1	0	
					1		Silty Clay, grey, natural, iron mottling, moisture increasing with depth, very moist by 1.4m					BH10-2 BH10ASS01	1.0	1.05m, SCr <0.02%, pH_f 7.7, pH_{fox} 4.7
					2		Extremely weathered rock, mid to pale grey with pale orange iron mottling, moderately strong					BH10ASS02 BH10-3	2.0	1.3m, SCr <0.02%,pH_f 7.6, pH_{fox} 5.2
					3		Refusal at 3.1m, rock, pale yellow, grey, green Bottom of hole at 3.10 m.						3.0	
					4								4.0	
					5								5.0	
					6								6.0	

EHP RTI DL Release

NOTE:

LOG TO BE READ IN CONJUNCTION WITH REPORT TEXT AND EXPLANATION SHEETS

Soil Description and Classification Symbols based on AS 1726

Water Symbols
- Water Level (date)
- Inflow
- Partial Loss
- Complete Loss

Moisture Content
- D - Dry
- M - Moist
- W - Wet
- W_p - Plastic Limit
- W_l - Liquid Limit

Consistancy (cohesive soils)
- VS - Very Soft
- S - Soft
- F - Firm
- St - Stiff
- VSt - Very Stiff
- H - Hard

Relative Density (cohesionless soils)
- VL - Very Loose
- L - Loose
- MD - Medium Dense
- D - Dense
- VD - Very Dense

Sampling/Testing
- Bs - Bulk Sample
- Dist - Disturbed Sample
- SPT - Standard Penetration test
- SS - Split Spoon
- N - SPT 'N' Value
- PP - Pocket Penetrometer
- VS - Vane Shear
- U_{50} - Undisturbed Sample/Diameter

SOIL LOG - GEOTECHNICAL 140413 BOREHOLES.GPJ CITY DESIGN DATA TEMPLATE.GDT 9/12/13

Release

CITY PROJECT OFFICE

Ground Engineering
505 St Paul's Tce, Fortitude Valley Qld 4006
Phone: (07) 30274774 Fax: (07) 33340220

Dedicated to a better Brisbane

BOREHOLE LOG
Geotechnical

GW3
(BH11/13)

PROJECT No: 140413

CLIENT: Buildings & Civic	**CONTRACTOR:** APOD Soils Pty Ltd	**LOGGED BY:** SDO
PROJECT: Coorparoo Creek Park	**EQUIPMENT:** Landcruiser Rig	**CHECKED BY:**
LOCATION: Coorparoo Creek Park	**NOTES:** GW3	

DATE COMMENCED: 14/10/2013	**ELEVATION (m):**	**AHD**	**EASTING:** 505502	**MGA**	**HOLE ANGLE:** 90°
COMPLETED: 14/10/2013	**TOTAL DEPTH (m):** 4.10		**NORTHING:** 6958820	**1994**	**BEARING:** ---

DRILLING				LITHOLOGY							SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Elevation	Depth (m)	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
		2.36m, mBTOC			1		Gravelly Clay, moist by 1.1m, fill					BH11-1		
												BH11-2		
												BH11-3	1.0	
							Sandy Clay to Clayey Sand, dark grey, minor iron mottling, wet, black staining, strong hydrocarbon odour					BH11-4		
												BH11-5		
												BH11ASS01		1.6m, Strongest hydrocarbon odours
					2							BH11-6	2.0	1.7m, SCr <0.02%S, pH_f 6.8, pH_{fox} 3.2
							Silty Clay, dark grey, moist, no hydrocarbon odour, medium to high plasticity, mild H_2S odour					BH11ASS02		2.3m, pH_f 6.8, pH_{fox} 3.8
												BH11-7		
					3							BH11ASS03	3.0	3.05m, SCr 0.12%, pH_f 6.6, pH_{fox} 3.1
												BH11ASS04		
					4								4.0	3.90m, pH_f 6.3, pH_{fox} 2.4
							Bottom of hole at 4.10 m.							
					5								5.0	
					6								6.0	

EHP RTI DL Release

NOTE:

LOG TO BE READ IN CONJUNCTION WITH REPORT TEXT AND EXPLANATION SHEETS
16-374

Soil Description and Classification Symbols based on AS 1726

Water Symbols
- Water Level (date)
- Inflow
- Partial Loss
- Complete Loss

Moisture Content
- D - Dry
- M - Moist
- W - Wet
- W_p - Plastic Limit
- W_l - Liquid Limit

Consistancy (cohesive soils)
- VS - Very Soft
- S - Soft
- F - Firm
- St - Stiff
- VSt - Very Stiff
- H - Hard

Relative Density (cohesionless soils)
- VL - Very Loose
- L - Loose
- MD - Medium Dense
- D - Dense
- VD - Very Dense

Sampling/Testing
- Bs - Bulk Sample
- Dist - Disturbed Sample
- SPT - Standard Penetration test
- SS - Split Spoon
- N - SPT 'N' Value
- PP - Pocket Penetrometer
- VS - Vane Shear
- U_{50} - Undisturbed Sample/Diameter

Release

CITY PROJECT OFFICE

Ground Engineering
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Phone: (07) 30274774 Fax: (07) 33340220

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BOREHOLE LOG
Geotechnical

GW4
(BH12/13)

PROJECT No: 140413

CLIENT: Buildings & Civic	**CONTRACTOR:** APOD Soils Pty Ltd		**LOGGED BY:** SDO
PROJECT: Coorparoo Creek Park	**EQUIPMENT:** Landcruiser Rig		**CHECKED BY:**
LOCATION: Coorparoo Creek Park	**NOTES:** GW4		
DATE COMMENCED: 14/10/2013	**ELEVATION (m):**	**AHD**	**EASTING:** 505499 **MGA** **HOLE ANGLE:** 90°
COMPLETED: 14/10/2013	**TOTAL DEPTH (m):** 4.00		**NORTHING:** 6958850 **1994** **BEARING:** ---

DRILLING				LITHOLOGY							SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Elevation	Depth (m)	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
							Gravelly fill road base							
					1		Gravelly Clay loam, minor glass and brick fragments, fill					BH12-1		
												BH12-2	1.0	
												BH12-3		QC1=duplicate of BH12-3
					2		Silty Clay, dark brown grey, moist, moderate plasticity, firm, iron mottling					BH12-4		
												BH12ASS01		1.7m, SCr <0.02%S, pH_f 7.3, pH_{fox} 4.9
							Clay, mid grey, iron mottling, moist, firm					BH12ASS02	2.0	2.2m, pH_f 5.1, pH_{fox} 3.4
							Sandy Silty Clay, mid to pale grey, wet					BH12ASS03		2.5m, SCr <0.02%S, pH_f 5.9, pH_{fox} 3
					3		Extremely weathered rock, pale to mid grey, increasing iron mottling with depth, increasing stiffness with depth, moderately strong					BH12ASS04		2.85m, SCr <0.02%S, pH_f 5.6, pH_{fox} 3.2
		2.38m, mBTOC			4								3.0	
							Bottom of hole at 4.00 m.						4.0	
					5								5.0	
					6								6.0	

EHP RTI DL Release

NOTE:

LOG TO BE READ IN CONJUNCTION WITH REPORT TEXT AND EXPLANATION SHEETS
16-374

Soil Description and Classification Symbols based on AS 1726

Water Symbols
- Water Level (date)
- Inflow
- Partial Loss
- Complete Loss

Moisture Content
- D - Dry
- M - Moist
- W - Wet
- W_p - Plastic Limit
- W_l - Liquid Limit

Consistancy (cohesive soils)
- VS - Very Soft
- S - Soft
- F - Firm
- St - Stiff
- VSt - Very Stiff
- H - Hard

Relative Density (cohesionless soils)
- VL - Very Loose
- L - Loose
- MD - Medium Dense
- D - Dense
- VD - Very Dense

Sampling/Testing
- Bs - Bulk Sample
- Dist - Disturbed Sample
- SPT - Standard Penetration test
- SS - Split Spoon
- N - SPT 'N' Value
- PP - Pocket Penetrometer
- VS - Vane Shear
- U_{50} - Undisturbed Sample/Diameter

Release

SOIL LOG - GEOTECHNICAL 140413 BORELOGS.GPJ CITY DESIGN DATA TEMPLATE.GDT 9/12/13

CITY PROJECT OFFICE

Ground Engineering
505 St Paul's Tce, Fortitude Valley Qld 4006
Phone: (07) 30274774 Fax: (07) 33340220

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BOREHOLE LOG
Geotechnical

GW5 (BH13/13)

PROJECT No: 140413

CLIENT: Buildings & Civic	**CONTRACTOR:** APOD Soils Pty Ltd		**LOGGED BY:** SDO
PROJECT: Coorparoo Creek Park	**EQUIPMENT:** Landcruiser Rig		**CHECKED BY:**
LOCATION: Coorparoo Creek Park	**NOTES:** GW5		
DATE COMMENCED: 14/10/2013	**ELEVATION (m):**	**AHD**	**EASTING:** 505503 **MGA** **HOLE ANGLE:** 90°
COMPLETED: 14/10/2013	**TOTAL DEPTH (m):** 4.00		**NORTHING:** 6958796 **1994** **BEARING:** ---

DRILLING				LITHOLOGY							SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Elevation	Depth (m)	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
		2.61m, mBTOC			1		Gravelly Sandy Clay, fill					BH13-1		
												BH13-2		
												BH13-3	1.0	
												BH13-4		
					2		Clay to Silty Clay, dark grey, natural, high plasticity, moist, H_2S odour					BH13-5	2.0	
												BH13ASS01		2.10m, SCr 0.04%S, pH_f 6.5, pH_{fox} 3.6
												BH13ASS02		2.35m, pH_f 6.3, pH_{fox} 2.8
					3		Sandy Silty Clay, dark grey, low plasticity, wet, H_2S odour					BH13-6	3.0	
												BH13ASS03		3.0m, SCr0.03%S, pH_f 6.8, pH_{fox} 2.3
					4		Sandy Silty Clay, dark grey, medium to high plasticity, firm, moist, H_2S odour					BH13ASS04		
												BH13-7	4.0	3.85m, pH_f6.4, pH_{fox} 3.3
							Bottom of hole at 4.00 m.							
					5								5.0	
					6								6.0	

EHP RTI DL Release

NOTE:

LOG TO BE READ IN CONJUNCTION WITH REPORT TEXT AND EXPLANATION SHEETS

16-374

Soil Description and Classification Symbols based on AS 1726

Water Symbols

- Water Level (date)
- Inflow
- Partial Loss
- Complete Loss

Moisture Content

- D - Dry
- M - Moist
- W - Wet
- W_p - Plastic Limit
- W_l - Liquid Limit

Consistancy (cohesive soils)

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

Relative Density (cohesionless soils)

- VL - Very Loose
- L - Loose
- MD - Medium Dense
- D - Dense
- VD - Very Dense

Sampling/Testing

- Bs - Bulk Sample
- Dist - Disturbed Sample
- SPT - Standard Penetration test
- SS - Split Spoon
- N - SPT 'N' Value
- PP - Pocket Penetrometer
- VS - Vane Shear
- U_{50} - Undisturbed Sample/Diameter

Release

CITY PROJECT OFFICE

Ground Engineering
505 St Paul's Tce, Fortitude Valley Qld 4006
Phone: (07) 30274774 Fax: (07) 33340220

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BOREHOLE LOG
Geotechnical

GW6
(BH16/13)

PROJECT No: 140413

CLIENT: Buildings & Civic	**CONTRACTOR:** APOD Soils Pty Ltd	**LOGGED BY:** SDO
PROJECT: Coorparoo Creek Park	**EQUIPMENT:** Landcruiser Rig	**CHECKED BY:**
LOCATION: Coorparoo Creek Park	**NOTES:** GW6	
DATE COMMENCED: 14/10/2013	**ELEVATION (m):** **AHD**	**EASTING:** 505502.83 **MGA**
COMPLETED: 14/10/2013	**TOTAL DEPTH (m):** 2.00	**NORTHING:** 6958667.26 **1994**
HOLE ANGLE: 90°		
BEARING: ---		

DRILLING				LITHOLOGY							SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Elevation	Depth (m)	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
							Silty Clay, cream coloured, fill with minor gravel, fill					BH16-1		
							Gravelly Silty Clay, pale grey, fill					BH16-2	1.0	
					1		Silty Clay, mid brown grey, natural, iron mottling, moist to wet					BH16-3		
		▼ 1.84m, mBTOC										BH16ASS01		1.75m, SCr 0.03%S, pH_f 7.3, pH_{fox} 4.3
					2		Sandy Silty Clay, dark grey, wet, H_2S odour					BH16-4 BH16ASS02	2.0	1.95m, SCr 0.017%S, pH_f 7.4, pH_{fox} 2.3
							Bottom of hole at 2.00 m.							
					3								3.0	
					4								4.0	
					5								5.0	
					6								6.0	

EHP RTI DL Release

NOTE:

LOG TO BE READ IN CONJUNCTION WITH REPORT TEXT AND EXPLANATION SHEETS

16-374

Soil Description and Classification Symbols based on AS 1726

Water Symbols

- Water Level (date)
- Inflow
- Partial Loss
- Complete Loss

Moisture Content

- D - Dry
- M - Moist
- W - Wet
- W_p - Plastic Limit
- W_l - Liquid Limit

Consistancy (cohesive soils)

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

Relative Density (cohesionless soils)

- VL - Very Loose
- L - Loose
- MD - Medium Dense
- D - Dense
- VD - Very Dense

Sampling/Testing

- Bs - Bulk Sample
- Dist - Disturbed Sample
- SPT - Standard Penetration test
- SS - Split Spoon
- N - SPT 'N' Value
- PP - Pocket Penetrometer
- VS - Vane Shear
- U_{50} - Undisturbed Sample/Diameter

File B

SOIL LOG - GEOTECHNICAL 140413 BORELOGS.GPJ CITY DESIGN DATA TEMPLATE.GDT 9/12/13

Release

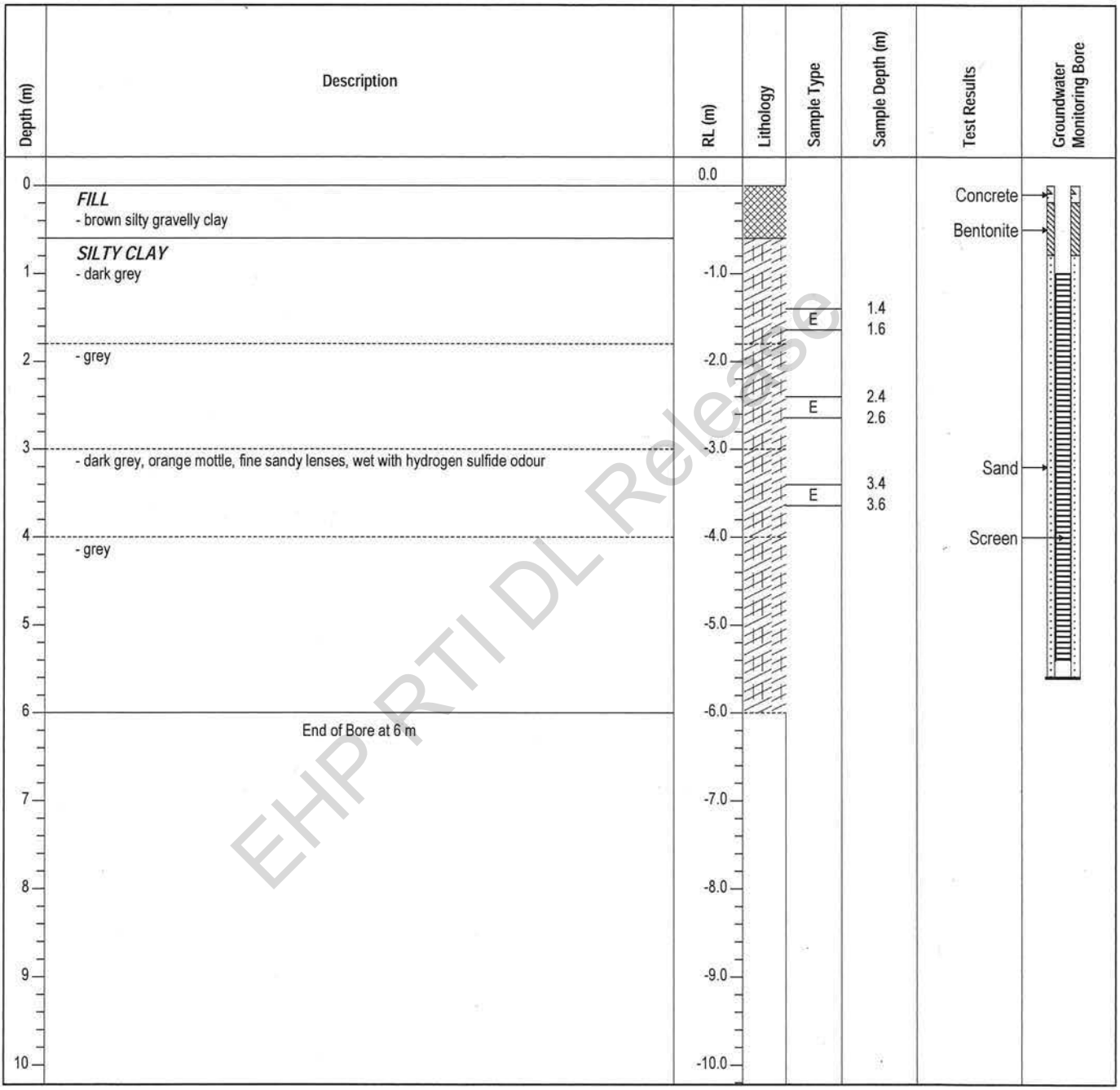
BORE REPORT

BUTLER PARTNERS

Client: Brisbane City Council
Project: Hydrogeological Assessment
Location: Coorparoo Creek Park, Old Cleveland Road, Coorparoo
Project No: 014-110A

BORE 1

Page No: 1 of 1
Date: 13 March 2014
Ground Surface Level: RLTBAm*



EHP RTI DL Release

D Disturbed Sample	E Environmental Sample	C NMLC Coring
B Bulk Sample	S Standard Penetrometer Test (SPT)	Is(50) Point Load Test Result (MPa)
U Undisturbed Tube (50mm diameter)	HB SPT Hammer Bouncing	(d) Diametral Point Load Strength Test
pp Pocket Penetrometer Test (kPa)	( ) No Sample Recovery	(a) Axial Point Load Strength Test

Rig: DT510-H
Drilling Method: Solid Flight Auger
Groundwater: Free groundwater encountered at approximately 1.6m depth
Remarks:

Logged by: KL
Co-Ordinate E:
Co-Ordinate N:

Release

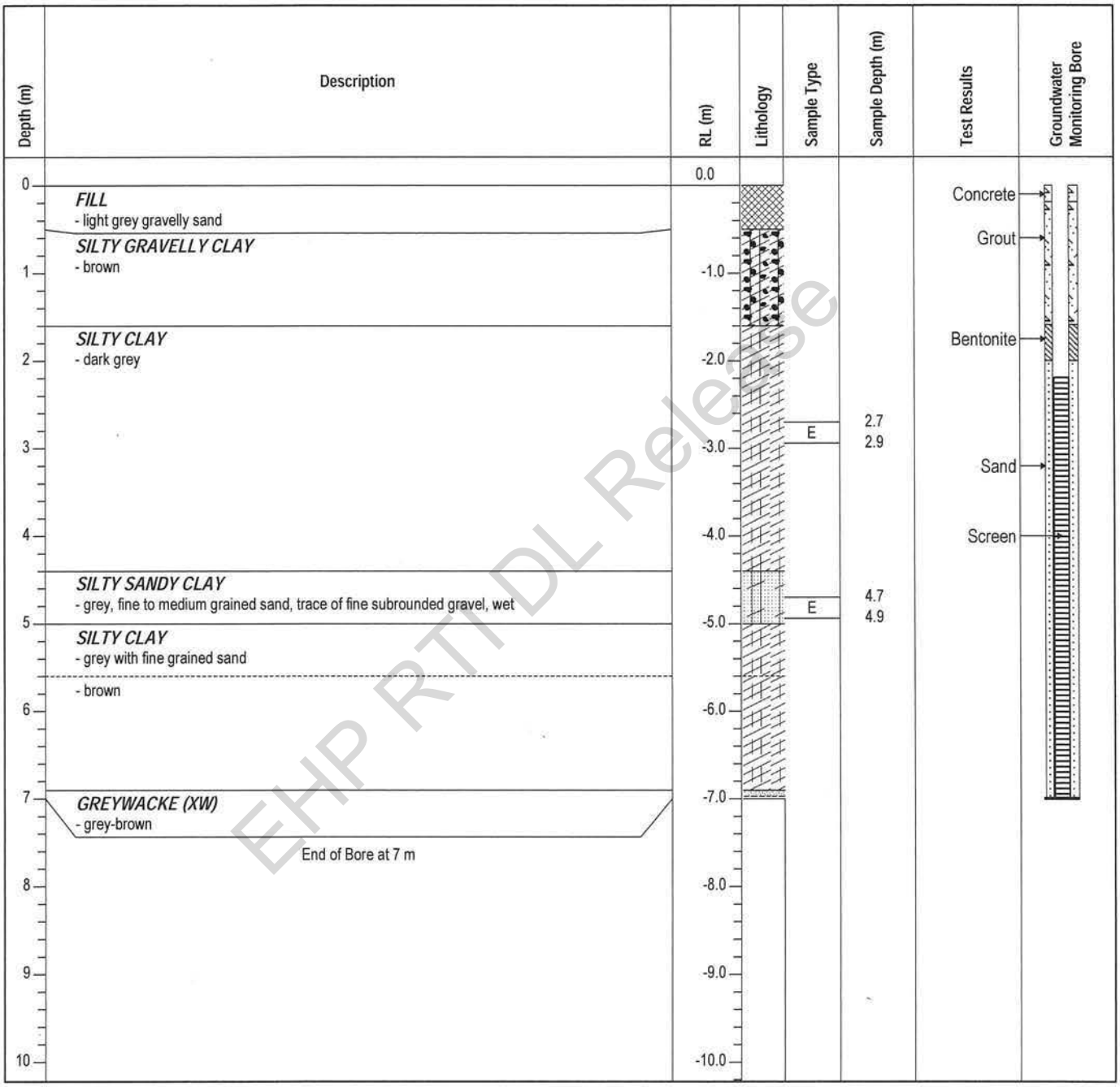
BORE REPORT

BUTLER PARTNERS

Client: Brisbane City Council
Project: Hydrogeological Assessment
Location: Coorparoo Creek Park, Old Cleveland Road, Coorparoo
Project No: 014-110A

BORE 2

Page No: 1 of 1
Date: 13 March 2014
Ground Surface Level: RLTBAm*



EHP RTI DL Release

D	Disturbed Sample	E	Environmental Sample	C	NMLC Coring
B	Bulk Sample	S	Standard Penetrometer Test (SPT)	Is(50)	Point Load Test Result (MPa)
U	Undisturbed Tube (50mm diameter)	HB	SPT Hammer Bouncing	(d)	Diametral Point Load Strength Test
pp	Pocket Penetrometer Test (kPa)	( )	No Sample Recovery	(a)	Axial Point Load Strength Test

Rig: DT510-H
Drilling Method: Solid Flight Auger
Groundwater: Free groundwater encountered at approximately 4.7m depth
Remarks:

Logged by: KL
Co-Ordinate E:
Co-Ordinate N:

Release

BORE REPORT

BUTLER PARTNERS

BORE 3

Client: Brisbane City Council
Project: Hydrogeological Assessment
Location: Coorparoo Creek Park, Old Cleveland Road, Coorparoo
Project No: 014-110A

Page No: 1 of 1
Date: 13 March 2014
Ground Surface Level: RLTBAm*

Depth (m)	Description	RL (m)	Sample Type	Sample Depth (m)
0		0.0		
	CONCRETE - 130mm thick			
	FILL - grey and brown, gravelly sandy clay, medium grained sand, fine to medium subangular gravel	-1.0	E	0.8 1.0
2	***SILTY CLAY*** - dark grey	-2.0	E	1.8 2.0
	- grey-brown	-3.0	E	2.8 3.0
4		-4.0	E	3.8 4.0
5	***SILTY SANDY CLAY*** - brown	-5.0		
	GREYWACKE (XW) - grey-brown			
6	End of Bore at 6 m	-6.0		
7		-7.0		
8		-8.0		
9		-9.0		
10		-10.0		

Test Results: Concrete, Grout, Bentonite, Sand, Screen

Groundwater Monitoring Bore

EHP RTI DL Release

D	Disturbed Sample	E	Environmental Sample	C	NMLC Coring
B	Bulk Sample	S	Standard Penetrometer Test (SPT)	Is(50)	Point Load Test Result (MPa)
U	Undisturbed Tube (50mm diameter)	HB	SPT Hammer Bouncing	(d)	Diametral Point Load Strength Test
pp	Pocket Penetrometer Test (kPa)	( )	No Sample Recovery	(a)	Axial Point Load Strength Test

Rig: DT510-H
Drilling Method: Solid Flight Auger
Groundwater: No free groundwater encountered during drilling
Remarks:

Logged by: KL
Co-Ordinate E:
Co-Ordinate N:

Release

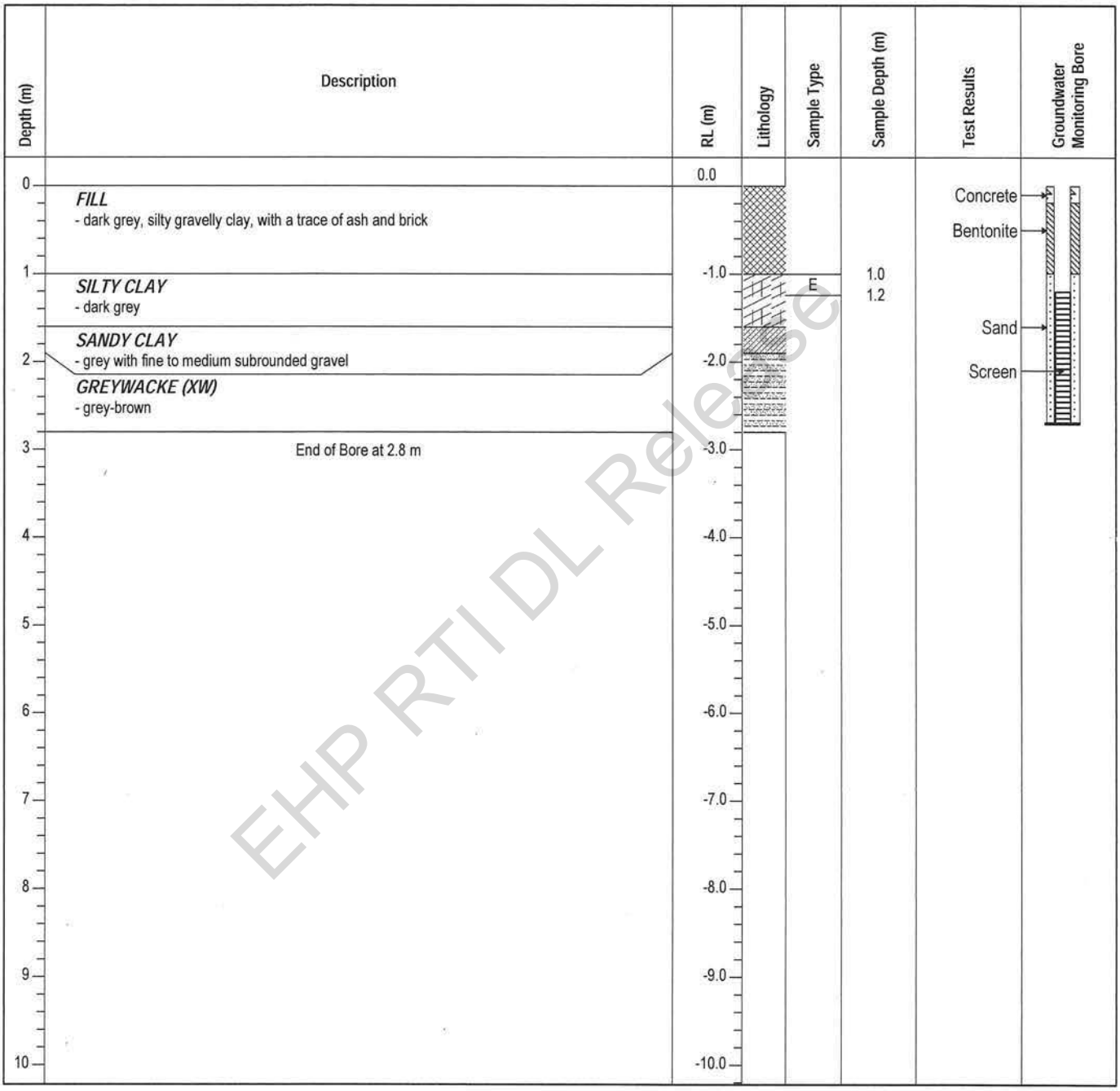
BORE REPORT

BUTLER PARTNERS

Client: Brisbane City Council
Project: Hydrogeological Assessment
Location: Coorparoo Creek Park, Old Cleveland Road, Coorparoo
Project No: 014-110A

BORE 4

Page No: 1 of 1
Date: 13 March 2014
Ground Surface Level: RLTBAm*



D	Disturbed Sample	E	Environmental Sample	C	NMLC Coring
B	Bulk Sample	S	Standard Penetrometer Test (SPT)	Is(50)	Point Load Test Result (MPa)
U	Undisturbed Tube (50mm diameter)	HB	SPT Hammer Bouncing	(d)	Diametral Point Load Strength Test
pp	Pocket Penetrometer Test (kPa)	( )	No Sample Recovery	(a)	Axial Point Load Strength Test

Rig: DT510-H
Drilling Method: Solid Flight Auger
Groundwater: No free groundwater encountered during drilling
Remarks:

Logged by: KL
Co-Ordinate E:
Co-Ordinate N:

EHP RTI DL Release
Release

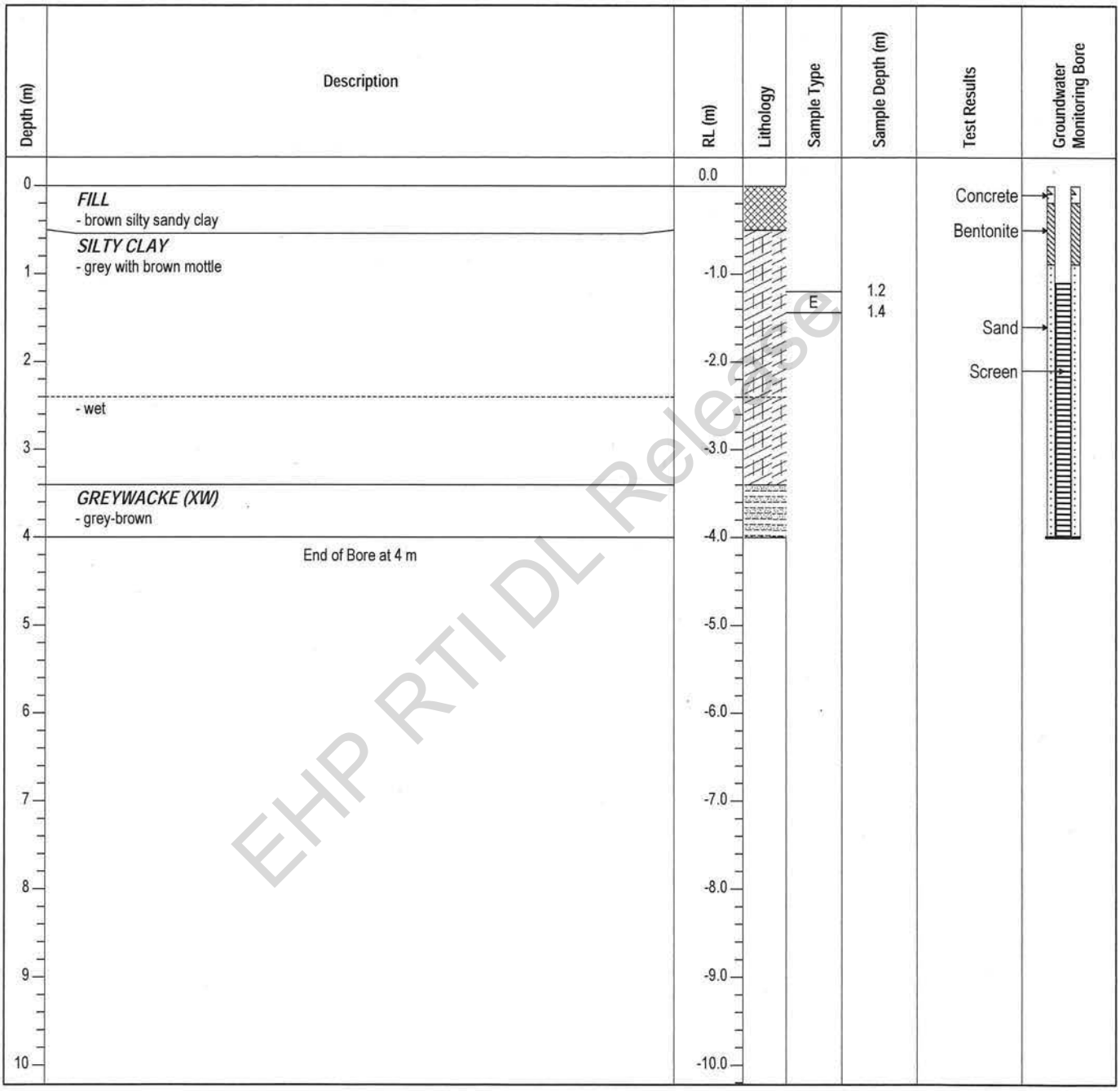
BORE REPORT

BUTLER PARTNERS

Client: Brisbane City Council
Project: Hydrogeological Assessment
Location: Coorparoo Creek Park, Old Cleveland Road, Coorparoo
Project No: 014-110A

BORE 5

Page No: 1 of 1
Date: 13 March 2014
Ground Surface Level: RLTBAm*



EHP RTI DL Release

D	Disturbed Sample	E	Environmental Sample	C	NMLC Coring
B	Bulk Sample	S	Standard Penetrometer Test (SPT)	Is(50)	Point Load Test Result (MPa)
U	Undisturbed Tube (50mm diameter)	HB	SPT Hammer Bouncing	(d)	Diametral Point Load Strength Test
pp	Pocket Penetrometer Test (kPa)	( )	No Sample Recovery	(a)	Axial Point Load Strength Test

Rig: DT510-H
Drilling Method: Solid Flight Auger
Groundwater: Free groundwater encountered at approximately 2.4m depth
Remarks:

Logged by: KL
Co-Ordinate E:
Co-Ordinate N:

Release

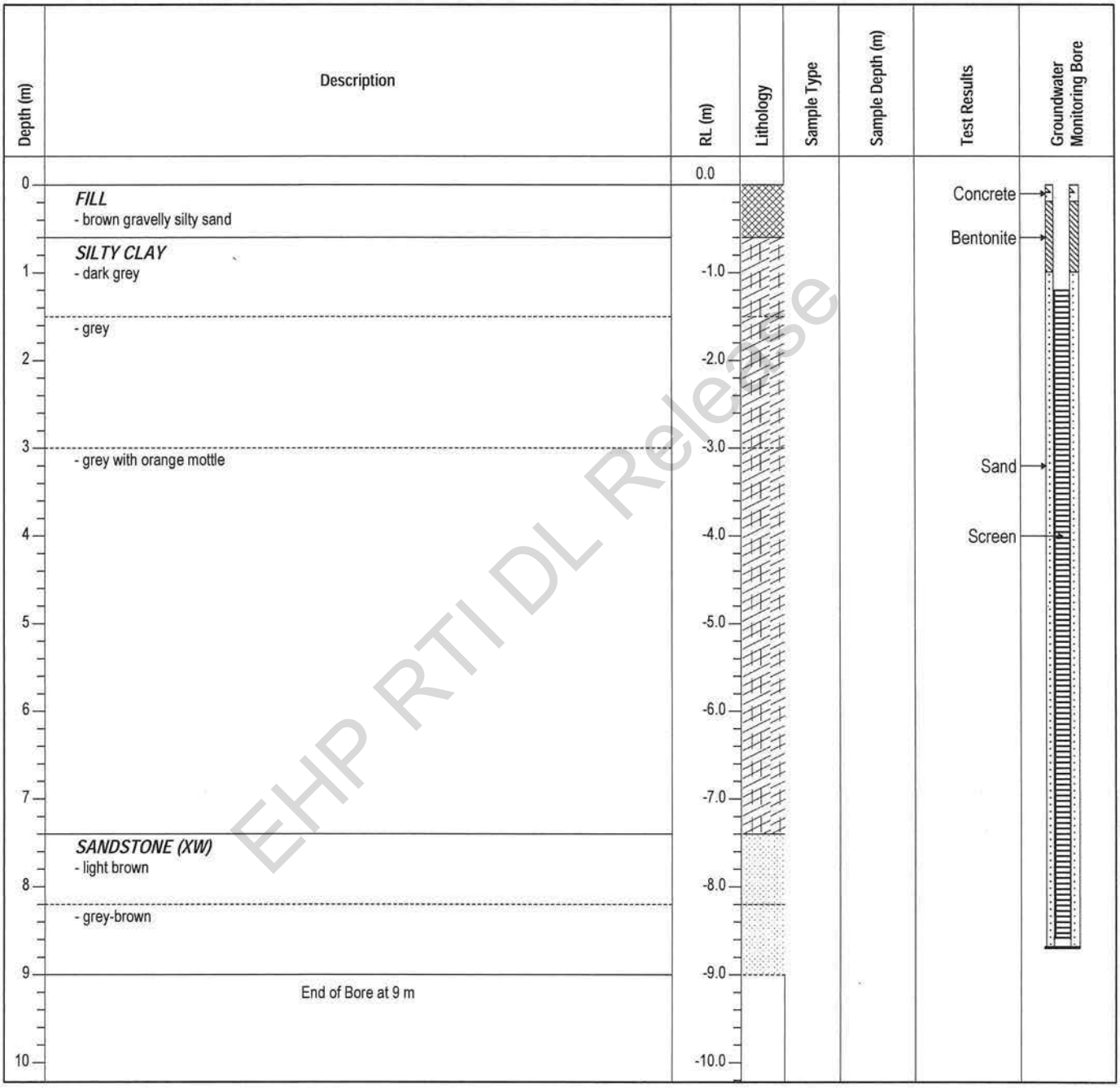
BORE REPORT

BUTLER PARTNERS

Client: Brisbane City Council
Project: Hydrogeological Assessment
Location: Coorparoo Creek Park, Old Cleveland Road, Coorparoo
Project No: 014-110A

BORE 6

Page No: 1 of 1
Date: 18 March 2014
Ground Surface Level: RLTBAm*



EHP RTI DL Release

D	Disturbed Sample	E	Environmental Sample	C	NMLC Coring
B	Bulk Sample	S	Standard Penetrometer Test (SPT)	Is(50)	Point Load Test Result (MPa)
U	Undisturbed Tube (50mm diameter)	HB	SPT Hammer Bouncing	(d)	Diametral Point Load Strength Test
pp	Pocket Penetrometer Test (kPa)	( )	No Sample Recovery	(a)	Axial Point Load Strength Test

Rig: Hydrapower Scout
Drilling Method: Solid Flight Auger
Groundwater: Free groundwater encountered at approximately 4.5m depth
Remarks:

Logged by: KL
Co-Ordinate E:
Co-Ordinate N:

Release

BORE REPORT

BUTLER PARTNERS

BORE 7

Client: Brisbane City Council
Project: Hydrogeological Assessment
Location: Coorparoo Creek Park, Old Cleveland Road, Coorparoo
Project No: 014-110A

Page No: 1 of 1
Date: 13 March 2014
Ground Surface Level: RLTBAm*

Depth (m)	Description	RL (m)	Sample Type	Sample Depth (m)	Test Results	Groundwater Monitoring Bore
0	**CONCRETE** - 150mm thick	0.0			Concrete	
	FILL - brown silty gravelly clay	-1.0			Grout	
1					Bentonite	
2	**SILTY CLAY** - dark grey with organics and a trace of sand	-2.0	E	1.8 2.0		
	- grey, wet		E	2.4 2.6		
3	- grey with red-orange mottle	-3.0	E	3.4 3.6	Sand	
4	**CLAYEY SAND** - grey-brown	-4.0			Screen	
5		-5.0				
6	**SILTY SANDY CLAY** - grey	-6.0				
7	**GREYWACKE (XW)** - grey-brown	-7.0				
	End of Bore at 7.5 m					
8		-8.0				
9		-9.0				
10		-10.0				

EHP RTI DL Release

D Disturbed Sample	E Environmental Sample	C NMLC Coring
B Bulk Sample	S Standard Penetrometer Test (SPT)	Is(50) Point Load Test Result (MPa)
U Undisturbed Tube (50mm diameter)	HB SPT Hammer Bouncing	(d) Diametral Point Load Strength Test
pp Pocket Penetrometer Test (kPa)	( ) No Sample Recovery	(a) Axial Point Load Strength Test

Rig: DT510-H
Drilling Method: Solid Flight Auger
Groundwater: Free groundwater encountered at approximately 2.5m depth
Remarks:

Logged by: KL
Co-Ordinate E:
Co-Ordinate N:

Release

Sally Dodds

From: Sally Dodds
Sent: Monday, 3 August 2015 4:06 PM
To: 'KARLE Matt'; 'PUSCHMANN Cate'; 'MCKENZIE Ben'
Cc: Erik Dekker; Matthew Pomeroy
Subject: TRIM: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater and soil vapour
Attachments: 2015_20 july_Results Summary Table_GW_Coorparoo gw.pdf; Soil vapour results_ 226 Old Cleveland Rd_July 2015.pdf; Coorparoo_chlorinated solvent investigation_ 20 July 2015.pdf; EN1512428_0_COA.pdf; EB1523525_0_COA.pdf; EB1523525_0 _QC.pdf; EB1523525_0_QCI.pdf; EB1523525_COC.pdf; EN1512428_0_QCI.pdf; EN1512428_0_QC-USEPA.pdf; EN1512428_0_SRN_150729151332.pdf; EN1512428 _COC.pdf; EB1523611_0_COA.pdf; 60 holdsworth st, coorparoo.pdf; chlorinated solvent bore logs.pdf; vapour well 226 old cleveland rd, coorparoo.pdf

Importance: High

Tracking:

Recipient	Read
'KARLE Matt'	
'PUSCHMANN Cate'	
'MCKENZIE Ben'	
Erik Dekker	
Matthew Pomeroy	Read: 3/08/2015 4:15 PM

BHP RTI DL Release

Hi Matt and Ben

Further to our previous advice and discussions relating to volatile organic compounds in shallow groundwater associated with our previous notification for 226 Old Cleveland Rd, Coorparoo. Brisbane City Council (BCC) now has further information which is provided below.

BCC environmental staff have installed a series of additional groundwater monitoring wells in the vicinity of the previously identified groundwater solvent plume (GW8, GW9, GW10, GW11 and GW12).

All of the buildings on BCC-owned properties in this area have now been demolished and the concrete slab removed. One slab of concrete, approximately 5m by 5m square was left in place for the purpose of determining likely solvent concentrations which may be associated with vapour intrusion into structures. A soil vapour well was installed within this concrete slab on 226 Old Cleveland Road (VW1).

The locations of the new plus existing groundwater wells and the soil vapour well are shown in the attached Figure 1. The borelogs for the new monitoring wells including vapour well are also attached to this email. Bore logs for existing wells have been provided in previous emails.

Sampling and analysis of groundwater monitoring wells and preliminary sampling of the soil vapour well was conducted on 20 July 2015.

Groundwater collected from the wells and vapour collected from the soil vapour well was sent to a NATA-accredited laboratory for analysis of a variety of potential contaminants. The laboratory certificates are attached to this email as well as laboratory results summary tables (Table 1 groundwater and Table 2 soil vapour).

Chlorinated solvents were detected in the groundwater with the groundwater contaminant plume now reasonably defined on Council land. The contaminants identified were: cis–1,2 dichloroethene; trans-1,2-di-chloroethene; 1,1 dichloroethene; trichloroethene (TCE); vinyl chloride (chloro-ethene); and tetrachloro-

Release

ethene (PCE). These contaminants are consistent with a contaminant source comprising dry cleaning fluids.

The level of the groundwater was gauged prior to sampling and was in the range 1.19 to 3.28 metres below ground level. Groundwater sampling was conducted using low-flow sampling equipment.

The concentrations of chlorinated solvents within groundwater are highest closest to the adjacent property at 224 Old Cleveland Road and decrease moving away from this property. This data provides further weight to Council's previous assumption that this groundwater contamination may have migrated from the adjacent property at 224 Old Cleveland Road (Lot 1 on RP89855) which was formerly a dry cleaning operation.

The results of the preliminary soil vapour sampling and analysis showed that the concentrations of chlorinated solvents within shallow soil vapour beneath the concrete slab at 226 Old Cleveland Road exceed Health Investigation Levels (as outlined in NEPM 1999, as amended 2013) for low density residential (HIL'A'), high density residential (HIL'B'), recreational open space (HIL'C') and commercial/industrial (HIL'D') land uses for vapour intrusion into buildings.

Council is aware that these results suggest that the concentrations of chlorinated solvents beneath the neighbouring property 224 Old Cleveland Road are likely to be at a level which would have the potential to present a risk to human health from vapour intrusion. The concentrations of chlorinated solvents beneath other nearby properties to the west and north of 224 Old Cleveland Road may also be at levels which may represent a risk to human health from vapour intrusion in confined spaces.

Council notes that buildings located on 224 Old Cleveland Road and neighbouring properties are occupied by a variety of operational businesses.

Council understands that the property at 100 Holdsworth Road has an approved Development Application for the construction of a multi-storey building with an underground car park. Council notes that the presence of chlorinated solvents within this area may present a risk to this development which may require management.

Council have now obtained sufficient data to support our proposed works in the area and Council do not propose to undertake any further investigations in relation to this matter.

Council strongly recommends that EHP notes this advice and takes action to address any potential risks to all parties involved.

Council are able to meet with EHP to discuss any of the findings collected to date in order for appropriate measures to be implemented such that improvements in groundwater (and associated vapour intrusion) can occur on Council land.

EHP PT DL Release

Attachments
Figure 1 – sample locations
Table 1 – groundwater results summary table
Table 2 – soil vapour results summary table
Borelogs
Laboratory certificates

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

Release

Green Square | Level 1 505 St Pauls Terrace, Fortitude Valley QLD 4006
Phone: + 61 7 3178 8858 | Fax: + 61 7 3334 0220
Email: sally.dodds@brisbane.qld.gov.au

SECURITY LABEL: FOR OFFICIAL USE ONLY

From: Sally Dodds
Sent: Friday, 1 May 2015 11:07 AM
To: 'KARLE Matt'; 'PUSCHMANN Cate'; 'MCKENZIE Ben'
Cc: Erik Dekker
Subject: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater

HI Matt,

Further to our previous discussions, I have attached a Direction Notice under the EPA Act 1994 Section 363B from Council to Hilda's Dry Cleaning dated 14 march 2011. This direction notice specified actions the company was to carry out to cease discharging contaminants.

I have also attached some photos of the Hilda's Dry Cleaning which show blue drums containing concentrated PCE (dry-cleaning fluid) stored on the bare ground surface with no bunding or cover.

Unfortunately, because of the limitations on Council's jurisdiction under the EP Act, the reason given for the requirement to store chemicals in a covered and bunded area was to prevent the potential for stormwater contamination. As Council does not have jurisdiction for material or serious environmental harm or for contaminated land, it was not possible to make the prevention of environmental harm or contamination of soil or groundwater a reason for the direction – it would then have been beyond power.

As I mentioned on to you Wednesday (29 Apr 2015), the chlorinated solvents within this shallow groundwater contamination plume have the potential to pose a serious health risk to occupants of buildings located over the groundwater plume. I would strongly urge EHP to escalate this investigation to a higher priority. It may be beneficial to seek technical advice from someone like EHP's Tony Bradshaw as chlorinated solvent plumes are quite complex contamination issues.

I hope this helps with EHP's investigations of this issue.

I will send through the results of any further investigations that we undertake on our property.

Please let me know if you require any further information.

Can Council please be kept informed of progress on this issue to inform Council's re-development works in the area?

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

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EHP RTI/IP Release A

Release

SECURITY LABEL: FOR OFFICIAL USE ONLY

From: Sally Dodds
Sent: Friday, 17 April 2015 5:26 PM
To: 'KARLE Matt'; PUSCHMANN Cate; MCKENZIE Ben
Cc: Erik Dekker
Subject: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater

Hi Matt,

Council provides the following information for your review:

a) I have discovered that Council charged Hilda's Dry Cleaners Pty Ltd with two (2) offences against section 440ZG(a) of the *Environmental Protection Act* 1994 for depositing prescribed water contaminants in water in 2011.

I have attached a 'Statement of facts' relating to these charges. This document was tendered in court so it is in the public domain.

Council will provide other documents and photos which were also tendered in court in the near future.

b) EHP notified Council on 11 October 2012 that properties at 214-222 Old Cleveland Rd and 100 old Cleveland Rd had been investigated and are now subject to a Site Management Plan (SMP) - EHP file ref BNE45756). The SMP included statements suggesting that these properties may be impacted by contamination from the former dry cleaner's located at 224 Old Cleveland Rd.

c) Review of news media revealed that two large fires occurred at the former dry cleaner's located at 224 Old Cleveland Rd – one in March 2008 and one in July 2012.

I hope this information assists EHP to progress its investigations and actions in relation to the potential risk associated with chlorinated solvent contamination in shallow groundwater in this area, most notably potential health risks to occupants of buildings from possible vapour intrusion into buildings.

Please keep Council informed in relation to this issue that impacts Council-owned property.

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

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EHP RTI DL Release

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From: KARLE Matt [mailto:Matt.Karle@ehp.qld.gov.au]
Sent: Tuesday, 14 April 2015 9:50 AM
To: EVERETT David; Sally Dodds; PUSCHMANN Cate; MCKENZIE Ben
Subject: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater

Hi Sally

Thanks for your information regarding this site, and the recent monitoring undertaken. I confirm David Everett from EHP's Pollution Hotline forwarded the matter to the Brisbane Moreton Compliance team, which has since been allocated to Senior Environmental Officer Ben Mckenzie. Ben is currently [sch4p4(6) Personal information] but the matter will be scheduled on his return I'm sure.

I note the site was previously regulated as an ERA by Brisbane City Council, and that Brisbane City Council may have issued a formal compliance notice under the EPAct (Env Evaluation or TEP?) to the site owner / operator to investigate the source cause and extent of harm, or to address the contamination problem?

It would be of considerable use to EHP to understand that history and to be aware of the position Council arrived at regarding those dealings. Did Council receive an Environmental Report or Draft TEP and was it approved?; Was the client compliant with that Notice?

Any detail about Councils dealings with the site would be appreciated, and would assist to inform Ben on his return to work.

Regards

Matt Karle
A / Manager, South Queensland Compliance – Brisbane Moreton Bay
Environmental Services and Regulation
Department of Environment and Heritage Protection
33 King Street, Caboolture QLD 4510
Ph: (07) 5316 8403
Email: matt.karle@ehp.qld.gov.au
www.ehp.qld.gov.au

Queensland Government

EHP RTI DL Release

From: EVERETT David
Sent: Tuesday, 14 April 2015 8:57 AM
To: Sally Dodds
Subject: RE: Coorparoo site alert - chlorinated solvents in shallow groundwater

Hi Sally,

This matter was forwarded to the appropriate compliance centre after our discussions on 6 March. I have now forwarded this additional information to the compliance centre too.

Thanks.

David Everett
Principal Project Officer, Community Response | Regulatory Capability & Customer Service
Environmental Services and Regulation
Department of Environment and Heritage Protection

Level 9 | 400 George Street| Brisbane
Pollution Hotline 1300 130 372 (option 2)
Email pollutionhotline@ehp.qld.gov.au
www.ehp.qld.gov.au

Queensland Government

Please consider the environment before printing this email

From: Sally Dodds [mailto:Sally.Dodds@brisbane.qld.gov.au]
Sent: Monday, 13 April 2015 5:13 PM
To: EVERETT David
Cc: JOHNS Allen; Erik Dekker; COOK David
Subject: FW: Coorparoo site alert - chlorinated solvents in shallow groundwater
Importance: High

Hi David,

Further to our discussions of Friday 6 March 2015 relating to volatile organic compounds in shallow groundwater in Coorparoo, Brisbane City Council (BCC) now has further information which is provided below.

BCC environmental staff conducted sampling and analysis of a groundwater monitoring well (B3) located on Council-owned property at 226 old Cleveland Rd Coorparoo on 1 April 2015. The location of the monitoring well is shown in Figure 1, attached. The borelog for the monitoring well and a photo of the monitoring well are also attached to this email.

Groundwater collected from B3 was sent to a NATA-accredited laboratory for analysis of a variety of potential contaminants. The laboratory certificates are attached to this email.

Chlorinated solvents were detected in the groundwater. The contaminants identified were: cis–1,2 dichloroethene, trans-1,2-di-chloroethene, trichloroethene (TCE), vinyl chloride (chloro-ethene) and tetrachloro-ethene (PCE). These contaminants are consistent with a contaminant source comprising dry cleaning fluids.

The level of the groundwater was gauged prior to sampling and was 2.66 metres below ground level. Groundwater sampling was conducted using a disposable PVC bailer and the well was purged to dry and allowed to return to its pre-purging groundwater level prior to sampling.

CLS assumes that this groundwater contamination has migrated from the adjacent property at 224 Old Cleveland Road (Lot 1 on RP89855) which was formerly a dry cleaning operation.

Council is aware that these chlorinated solvent concentrations may have the potential to present a risk to human health from vapour intrusion in confined spaces. However, buildings on the Council-owned property at 226 old Cleveland Rd are not occupied and are currently vacant awaiting demolition to facilitate future development.

Council notes that it appears that buildings located on 224 Old Cleveland Road are occupied by a variety of businesses.

Can EHP please advise what actions it proposes to take in relation to this contamination issue so that Council can be informed in relation to the development of the adjoining Council land.

Kind regards

EHP RTI DL Release

Release

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

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SECURITY LABEL: FOR OFFICIAL USE ONLY

From: Sally Dodds
Sent: Monday, 9 March 2015 11:59 AM
To: 'david.everett@ehp.qld.gov.au'
Subject: FW: Coorparoo site alert

Hi Dave,

Thanks for taking the time to discuss this issue on Friday 6 March 2015.

Could you please keep Council in the communication loop once you are able to ascertain any information and/or course of action on this issue.

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

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SECURITY LABEL: FOR OFFICIAL USE ONLY

From: Sally Dodds
Sent: Friday, 6 March 2015 12:17 PM
To: allen.johns@ehp.qld.gov.au
Cc: Erik Dekker
Subject: FW: Coorparoo site alert

Allen

Thanks for your time today. As per our telephone discussions this morning, Council has been made aware of the presence volatile organic compounds in shallow groundwater beneath a road reserve in Coorparoo. I have included the information that Council received as attachments to this email.

EHP RTI DL Release

Release

The volatile organic compounds include cis–1,2 dichloroethene, trichloroethene and tetrachloro-ethene and are consistent with a contaminant source comprising dry cleaning fluids.

The road reserve is a portion of Old Cleveland Road in Coorparoo adjacent to 224 Old Cleveland Road (Lot 1 on RP89855)

This contamination was reported to EHP (then DERM) on 4 December 2009 (Notification letter attached to this email).

Could you please advise what, if any, action was taken relating to this report of groundwater contamination.

Council suspects that this groundwater contamination plume may have migrated to impact Council owned property as well. The Council owned property in question, is 226 Old Cleveland Road Coorparoo (L3 RP89855, L12 RP 152616, L13 RP 152617) and is already listed on the EMR.

Kind regards

Sally Dodds

Sally Dodds
Senior Environmental Scientist (Contaminated Land and Acid Sulfate Soils) | Contaminated Land Services | Planning and Design
City Projects Office | Brisbane Infrastructure | **BRISBANE CITY COUNCIL**

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Email: sally.dodds@brisbane.qld.gov.au

SECURITY LABEL: FOR OFFICIAL USE ONLY

From: Astbury, Tanya [mailto:Tanya.Astbury@vivaenergy.com.au]
Sent: Wednesday, 4 March 2015 5:00 PM
To: Sally Dodds
Cc: Zillman, Alicia J
Subject: Coorparoo site alert

Hi Sally,
Thank you for contacting me over the query relating to C6-C10 detections north of our Coorparoo Coles Express site. I received your emails.

As per our discussion, I have found some information that supports that the groundwater impact north of our site has been identified as solvents, like those associated with dry cleaners.

I attach for your reference a copy of the letter to DERM Notification of Land Dec 2009.
I also spoke with our environmental focal point in Queensland, Alicia Zillman (ph. 3364 5480), who confirmed that the report detailing the tank replacement works in 2009 was sent to Brisbane City Council in Aug 2009, copy of the cover letter attached.
If the report is difficult to locate, we can provide you with another copy, preferably electronically, upon request. That report indicated that offsite well MW08 (location shown in DERM letter) has been sampled twice and both times returned significant detections in the C6-9 range with negligible BTEX (13ppm in June 2008 and 21ppm in June 2009). MGT laboratory conducted some further analysis and confirmed that the sample contained TCE and similar (extract attached below).
I understand that there have been substantial roadworks and we suspect that the well has likely been destroyed, or may even have been abandoned as we were only given temporary consent for the well in the median strip.

EHP RTI DL Release

I hope this has been helpful for you. As previously stated, it appears that the offsite impacts are unrelated to Shell Coles Express Coorparoo site.
If you have any further questions, I suggest you contact Alicia who has more direct knowledge of the investigations conducted on and near our site.

Otherwise, good luck with your plans.

kind regards,

Tanya Astbury / Environmental Risk and Assurance Lead
T +61 8 9432 1410 **M** +61 sch4p4(6) Personal information
E tanya.astbury@vivaenergy.com.au

Viva Energy Australia Ltd (ABN 46 004 610 459)
22 Bracks Street, North Fremantle, WA 6159
www.vivaenergy.com.au

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CITY PROJECTS OFFICE

Ground Engineering
505 St Paul's Tce, Fortitude Valley Qld 4006
Phone: (07) 30274774 Fax: (07) 33340220

Dedicated to a better Brisbane

BOREHOLE LOG GW10

PROJECT No: 140413

CLIENT: 3.7	**CONTRACTOR:** APOD	**LOGGED BY:** SD
PROJECT: 3.8	**EQUIPMENT:** Solid Flight Auger	**CHECKED BY:** SD
LOCATION: Coorparoo Creek Park	**NOTES:**	

DATE COMMENCED: 24/06/2015	**ELEVATION (m):** 3.36	**AHD**	**EASTING:** 505502	**MGA**	**HOLE ANGLE:** 90°
COMPLETED: 24/06/2015	**TOTAL DEPTH (m):** 6.00		**NORTHING:** 6958709	**94**	**BEARING:** ---

DRILLING				LITHOLOGY					SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Depth (m) / Elevation	Graphic Log	Material Description	Moisture Content	Consistency / Relative Density	Recovery	Samples Test Results Remarks	Depth (m)	
Solid Flight Auger		20/07/15		0.5 / 3.0		**GRAVELLY SANDY CLAY** Pale Brown, Orange Mottle						FILL
						GRAVELLY SANDY CLAY Dark Brown/Black	M				0.5	FILL
										(0.5 - 0.6) QC3 Dup		
						CLAYEY SAND Dark to Mid Grey	W					FILL
				1.0 / 2.5						(0.7 - 0.8)		
						SILTY CLAY High Plasticity, Dark Grey with Pale Grey Mottle					1.0	NATURAL
				1.5 / 2.0		**SILTY CLAY** Pale Grey, Some Orange/Yellow Mottle	M				1.5	NATURAL
				2.0 / 1.5		**SANDY CLAY WITH SILT** Orange Mottle, Mild Odour	W				2.0	NATURAL
				2.5 / 1.0							2.5	
				3.0 / 0.5							3.0	
				3.5 / 0.0							3.5	
				4.0 / -0.5							4.0	
				4.5 / -1.0		**SILTY CLAY** Light Grey, Orange Mottles	W				4.5	NATUAL
				5.0 / -1.5							5.0	

EHP RTI DL Release

NOTE:

LOG TO BE READ IN CONJUNCTION WITH REPORT TEXT AND EXPLANATION SHEETS

16-374

Soil Description and Classification Symbols based on AS 1726

Water Symbols

- Water Level (date)
- Inflow
- Partial Loss
- Complete Loss

Moisture Content

- D - Dry
- M - Moist
- W - Wet
- W_p - Plastic Limit
- W_l - Liquid Limit

Consistancy (cohesive soils)

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

Relative Density (cohesionless soils)

- VL - Very Loose
- L - Loose
- MD - Medium Dense
- D - Dense
- VD - Very Dense

Sampling/Testing

- Bs - Bulk Sample
- Dist - Disturbed Sample
- SPT - Standard Penetration test
- SS - Split Spoon
- N - SPT 'N' Value
- PP - Pocket Penetrometer
- VS - Vane Shear
- U_{50} - Undisturbed Sample/Diameter

Release

CITY PROJECTS OFFICE

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Phone: (07) 30274774 Fax: (07) 33340220

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BOREHOLE LOG GW10

PROJECT No: 140413

CLIENT: 3.7	**CONTRACTOR:** APOD	**LOGGED BY:** SD
PROJECT: 3.8	**EQUIPMENT:** Solid Flight Auger	**CHECKED BY:** SD
LOCATION: Coorparoo Creek Park	**NOTES:**	

DATE COMMENCED: 24/06/2015	**ELEVATION (m):** 3.36 **AHD**	**EASTING:** 505502	**MGA**	**HOLE ANGLE:** 90°
COMPLETED: 24/06/2015	**TOTAL DEPTH (m):** 6.00	**NORTHING:** 6958709	**94**	**BEARING:** ---

DRILLING				LITHOLOGY						SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Depth (m)	Elevation	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
Solid Flight Auger		▼		5.5	-2.0		**SILTY CLAY** Light Grey, Orange Mottles *(continued)*						5.5	
				6.0	-2.5		**SANDY CLAY** Light Grey, Water at 5.8m in Gravel	W					6.0	NATURAL
							Bottom of hole at 6.00 m.							NATURAL
				6.5	-3.0								6.5	
				7.0	-3.5								7.0	
				7.5	-4.0								7.5	
				8.0	-4.5								8.0	
				8.5	-5.0								8.5	
				9.0	-5.5								9.0	
				9.5	-6.0								9.5	
				10.0	-6.5								10.0	

EHP RTI DL Release

NOTE:

LOG TO BE READ IN CONJUNCTION WITH REPORT TEXT AND EXPLANATION SHEETS

16-374

Soil Description and Classification Symbols based on AS 1726

Water Symbols

- Water Level (date)
- Inflow
- Partial Loss
- Complete Loss

Moisture Content

- D - Dry
- M - Moist
- W - Wet
- W_P - Plastic Limit
- W_l - Liquid Limit

Consistancy (cohesive soils)

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

Relative Density (cohesionless soils)

- VL - Very Loose
- L - Loose
- MD - Medium Dense
- D - Dense
- VD - Very Dense

Sampling/Testing

- Bs - Bulk Sample
- Dist - Disturbed Sample
- SPT - Standard Penetration test
- SS - Split Spoon
- N - SPT 'N' Value
- PP - Pocket Penetrometer
- VS - Vane Shear
- U_{50} - Undisturbed Sample/Diameter

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1 COORPAROO CREEK PARK.GPJ CITY DESIGN DATA TEMPLATE.GDT 3/8/15

CITY PROJECTS OFFICE

Ground Engineering
505 St Paul's Tce, Fortitude Valley Qld 4006
Phone: (07) 30274774 Fax: (07) 33340220

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BOREHOLE LOG GW8

PROJECT No: 140413

CLIENT: 3.7	**CONTRACTOR:** APOD	**LOGGED BY:** SD
PROJECT: 3.8	**EQUIPMENT:** Solid Flight Auger	**CHECKED BY:** SD
LOCATION: Coorparoo Creek Park	**NOTES:**	

DATE COMMENCED: 24/06/2015	**ELEVATION (m):** 4.85	**AHD**	**EASTING:** 505516	**MGA**	**HOLE ANGLE:** 90°
COMPLETED: 24/06/2015	**TOTAL DEPTH (m):** 3.70		**NORTHING:** 6958615	**94**	**BEARING:** ---

DRILLING				LITHOLOGY					SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Depth (m) / Elevation / Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
Solid Flight Auger		20/07/2015		0.0 / 4.85	**GRAVELLY CLAY** Pale to mid grey, Orange and Grey Clay Inclusions	M						FILL
										(0.3 - 0.4) PID 0.3ppm	0.5	
										(0.6 - 0.8) PID 0.1ppm		
				1.0 / 3.85							1.0	
										(1.2 - 1.4) PID 0.1ppm		
				1.5 / 3.35							1.5	
										(1.6 - 1.8) PID 0.0ppm		
				2.0 / 2.85							2.0	
										(2 - 2.2) PID 0.0ppm		
				2.5 / 2.35	**SILTY CLAY** High Plasticity, Mid to Dark Grey	M				(2.2 - 2.4) PID 0.1ppm		NATURAL
											2.5	
				3.0 / 1.85						(2.9 - 3.1) PID 0.2ppm	3.0	
				3.5 / 1.35	**META-SANDSTONE** Highly weathered rock, Mid to Pale Grey, Orange Mottle						3.5	NATURAL
				4.0 / 0.85	**META-SANDSTONE** Rock at 3.7m, Refusal Bottom of hole at 3.70 m.						4.0	
				4.5 / 0.35							4.5	
				5.0 / 0.0							5.0	

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NOTE:

LOG TO BE READ IN CONJUNCTION WITH REPORT TEXT AND EXPLANATION SHEETS

16-374

Soil Description and Classification Symbols based on AS 1726

Water Symbols

- Water Level (date)
- Inflow
- Partial Loss
- Complete Loss

Moisture Content

- D - Dry
- M - Moist
- W - Wet
- W_P - Plastic Limit
- W_l - Liquid Limit

Consistancy (cohesive soils)

- VS - Very Soft
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Relative Density (cohesionless soils)

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- Bs - Bulk Sample
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- PP - Pocket Penetrometer
- VS - Vane Shear
- U_{50} - Undisturbed Sample/Diameter

1 COORPAROO CREEK PARK.GPJ CITY DESIGN DATA TEMPLATE.GDT 3/8/15

Release

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BOREHOLE LOG GW9

PROJECT No: 140413

CLIENT: 3.7	**CONTRACTOR:** APOD	**LOGGED BY:** SD
PROJECT: 3.8	**EQUIPMENT:** Solid Flight Auger	**CHECKED BY:** SD
LOCATION: Coorparoo Creek Park	**NOTES:**	

DATE COMMENCED: 24/06/2015	**ELEVATION (m):** 4.82	**AHD**	**EASTING:** 505516	**MGA**	**HOLE ANGLE:** 90°
COMPLETED: 24/06/2015	**TOTAL DEPTH (m):** 6.00		**NORTHING:** 6958642	**94**	**BEARING:** ---

DRILLING				LITHOLOGY					SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Depth (m) / Elevation / Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
Solid Flight Auger		20/07/2015		0.0 / 4.82	**GRAVELLY CLAY** Pale Brown, No Odour	D					0.0	
										(0.3 - 0.5)	0.5	
										(0.8 - 1)	1.0	
										(1.2 - 1.4)	1.5	
				1.5 / 3.32	**ASH**, Black Gravelly Sandy, Mild Odour	M				(1.5 - 1.8) pHF PID, pHFOX 0.1ppm		FILL
				2.0 / 2.82	**GRAVELLY SANDY CLAY WITH BLACK ASH** Mild Odour	M				(1.8 - 2) pHF PID, pHFOX 0.3ppm	2.0	FILL
				2.5 / 2.32	**SILTY CLAY** High Plasticity, Dark Grey, Mild Odour	M				(2.5 - 2.7) pHF 7.7, pHFOX 5.0	2.5	FILL
				3.0 / 1.82	**SANDY CLAY** Medium Plasticity, Mid Grey, Orange Mottle, Mild Odour	M				(3.2 - 3.3) pHF 7.5, pHFOX 5.2	3.0	NATURAL
				3.5 / 1.32						(3.6 - 3.8) ASS + JAR QC2	3.5	
				4.0 / 0.82						(3.9 - 4)	4.0	
				4.5 / 0.32							4.5	
				5.0 / -0.18	**META-SANDSTONE** Exteremly Weathered Rock, Pale Grey with Orange and Dark Grey Mottle,	M					5.0	NATURAL

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1 COORPAROO CREEK PARK.GPJ CITY DESIGN DATA TEMPLATE.GDT 3/8/15

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BOREHOLE LOG GW9

PROJECT No: 140413

CLIENT: 3.7	**CONTRACTOR:** APOD	**LOGGED BY:** SD
PROJECT: 3.8	**EQUIPMENT:** Solid Flight Auger	**CHECKED BY:** SD
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DATE COMMENCED: 24/06/2015	**ELEVATION (m):** 4.82	**AHD**	**EASTING:** 505516	**MGA**	**HOLE ANGLE:** 90°
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DRILLING				LITHOLOGY						SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Depth (m)	Elevation	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
Solid Flight Auger				5.5	-0.5		**META-SANDSTONE** Exteremly Weathered Rock, Pale Grey with Orange and Dark Grey Mottle, *(continued)*						5.5	NATURAL
				6.0	-1.0		**META-SANDSTONE** Weathered Rock, Pale Grey, Orange and Dark Grey Mottle						6.0	
							Bottom of hole at 6.00 m.							
				6.5	-1.5								6.5	
				7.0	-2.0								7.0	
				7.5	-2.5								7.5	
				8.0	-3.0								8.0	
				8.5	-3.5								8.5	
				9.0	-4.0								9.0	
				9.5	-4.5								9.5	
				10.0	-5.0								10.0	

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16-374

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Release

1 COORPAROO CREEK PARK.GPJ CITY DESIGN DATA TEMPLATE.GDT 3/8/15

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BOREHOLE LOG VW1

PROJECT No:

CLIENT: Lee Garnett	**CONTRACTOR:** APOD	**LOGGED BY:** SD
PROJECT: 226 Old Cleeveland Road, Cooparoo	**EQUIPMENT:** Solid Flight Auger	**CHECKED BY:** SD
LOCATION: 226 Old Cleeveland Road, Cooparoo	**NOTES:**	

DATE COMMENCED: 9/07/2015	**ELEVATION (m):** 5.01	**AHD**	**EASTING:** 505501	**MGA**	**HOLE ANGLE:** 90°
COMPLETED: 9/07/2015	**TOTAL DEPTH (m):** 1.00		**NORTHING:** 6958606	**94**	**BEARING:** ---

DRILLING				LITHOLOGY						SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Depth (m)	Elevation	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
Solid Auger - TC Bit				0.0	5.0		**GRAVELLY SANDY CLAY** Mid Brown, with Black Inclusions						0.0	FILL
														Plastic tubing
												(0.3 - 0.5) 1.2ppm		Vapour insert (metal)
				0.5	4.5								0.5	
				1.0	4.0							(0.8 - 1.0)	1.0	
							Bottom of hole at 1.00 m.							
				1.5	3.5								1.5	
				2.0	3.0								2.0	
				2.5	2.5								2.5	
				3.0	2.0								3.0	
				3.5	1.5								3.5	
				4.0	1.0								4.0	
				4.5	0.5								4.5	
				5.0									5.0	

Preliminary Release

NOTE:

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16-374

Soil Description and Classification Symbols based on AS 1726

Water Symbols

- Water Level (date)
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- Partial Loss
- Complete Loss

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Sampling/Testing

- Bs - Bulk Sample
- Dist - Disturbed Sample
- SPT - Standard Penetration test
- SS - Split Spoon
- N - SPT 'N' Value
- PP - Pocket Penetrometer
- VS - Vane Shear
- U_{50} - Undisturbed Sample/Diameter

1 226 OLD CLEVELAND RD, COORPAROO.GPJ CITY DESIGN DATA TEMPLATE.GDT 3/8/15

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BOREHOLE LOG GW11

PROJECT No:

CLIENT: Lee Garnett	**CONTRACTOR:** APOD	**LOGGED BY:** SD
PROJECT: 60 Holdsworth Street, Coorparoo	**EQUIPMENT:** Solid Flight Auger	**CHECKED BY:** SD
LOCATION: 60 Holdsworth Street, Coorparoo	**NOTES:**	

DATE COMMENCED: 9/07/2015	**ELEVATION (m):** 3.19 **AHD**	**EASTING:** 505515	**MGA**	**HOLE ANGLE:** 90°
COMPLETED: 9/07/2015	**TOTAL DEPTH (m):** 6.60	**NORTHING:** 6958683	**94**	**BEARING:** ---

DRILLING					LITHOLOGY						SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Depth (m)	Elevation	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
Solid Auger - V Bit		20/07/2015		0.0	3.0		**SANDY GRAVELLY CLAY** Grey Brown	M					0.0	FILL
							ASH Black Sandy, Pid 0.7ppm	M				(0.2 - 0.4) PID. 0.7ppm		FILL
				0.5	2.5		**GRAVELLY CLAY** Grey Brown	M					0.5	FILL
							ASH Black Sandy with Clay Brown	M						FILL
				1.0	2.0							(1 - 1.3) QC1 Dup	1.0	
				1.5	1.5		**SILTY CLAY** Mid Grey, H2S Odour,	M					1.5	NATURAL
												(1.6 - 1.8) ASS		
				2.0	1.0							(1.9 - 2)	2.0	
							SILTY CLAY Dark to Mid Grey, H2S Odour, Water entered at 3.8m, Wet from 3.8m	M						NATRUAL
				2.5	0.5								2.5	
				3.0	0.0								3.0	
				3.5	-0.5							(3.5 - 3.7) ASS	3.5	
												(3.7 - 3.8)		
				4.0	-1.0								4.0	
				4.5	-1.5								4.5	
				5.0				M					5.0	NATURAL

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NOTE:

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16-374

Soil Description and Classification Symbols based on AS 1726

Water Symbols

- Water Level (date)
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- Bs - Bulk Sample
- Dist - Disturbed Sample
- SPT - Standard Penetration test
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CITY PROJECTS OFFICE

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BOREHOLE LOG GW11

PROJECT No:

CLIENT: Lee Garnett	**CONTRACTOR:** APOD	**LOGGED BY:** SD
PROJECT: 60 Holdsworth Street, Coorparoo	**EQUIPMENT:** Solid Flight Auger	**CHECKED BY:** SD
LOCATION: 60 Holdsworth Street, Coorparoo	**NOTES:**	

DATE COMMENCED: 9/07/2015	**ELEVATION (m):** 3.19 **AHD**	**EASTING:** 505515	**MGA**	**HOLE ANGLE:** 90°
COMPLETED: 9/07/2015	**TOTAL DEPTH (m):** 6.60	**NORTHING:** 6958683	**94**	**BEARING:** ---

DRILLING					LITHOLOGY					SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Depth (m) / Elevation	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
Solid Auger - V Bit				5.5 / -2.0		**SANDY CLAY** Extremely Weathered Rock, Pale Grey, Orange Mottle *(continued)*						5.5	NATURAL
				6.0 / -2.5								6.0	
				6.5 / -3.0								6.5	
				-3.5		**REFUSAL** at 6.6 on Rock Bottom of hole at 6.60 m.							
				7.0 / -4.0								7.0	
				7.5 / -4.5								7.5	
				8.0 / -5.0								8.0	
				8.5 / -5.5								8.5	
				9.0 / -6.0								9.0	
				9.5 / -6.5								9.5	
				10.0								10.0	

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1 60 HOLDSWORTH ST, COORPAROO.GPJ CITY DESIGN DATA TEMPLATE.GDT 3/8/15

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BOREHOLE LOG GW12

PROJECT No:

CLIENT: Lee Garnett	**CONTRACTOR:** APOD	**LOGGED BY:** SD
PROJECT: 60 Holdsworth Street, Coorparoo	**EQUIPMENT:** Solid Flight Auger	**CHECKED BY:** SD
LOCATION: 60 Holdsworth Street, Coorparoo	**NOTES:**	

DATE COMMENCED: 9/07/2015	**ELEVATION (m):** 4.74	**AHD**	**EASTING:** 505502	**MGA**	**HOLE ANGLE:** 90°
COMPLETED: 9/07/2015	**TOTAL DEPTH (m):** 7.70		**NORTHING:** 6958653	**94**	**BEARING:** ---

DRILLING				LITHOLOGY						SAMPLING/TESTING			ADDITIONAL COMMENTS/ INTERPRETED GEOLOGY
Method	Support	Groundwater	Well Construction	Depth (m)	Elevation	Graphic Log	Material Description	Moisture Content	Consistency (VS S F St VSt H)	Relative Density (VL L MD D VD)	Recovery	Samples Test Results Remarks	Depth (m)	
Solid Auger - V Bit		20/7/2015		0.5	4.5		**GRAVELLY CLAY** Low Plasticity, Mid Brown/Grey, Dry	D				0.6ppm (0.4 - 0.6)	0.5	FILL
				1.0	4.0		**GRAVELLY** ASH Black, Some White Ash	M				0.2ppm (1.4 - 1.6)	1.0	FILL
				1.5	3.5		**CLAY** Sandy, Black, Mid Odour					0.6ppm (2 - 2.2)	1.5	FILL
				2.0	3.0		Red Brick Fragments						2.0	FILL
				2.5	2.5		**SILTY CLAY** H2S Odour, Dark Grey, Some Sandy Lenses, Water Entered at 3.7m, in a Sandy Lens						2.5	FILL
				3.0	2.0							ASS (3.4 - 3.6)	3.0	
				3.5	1.5							0.4ppm (3.6 - 3.7)	3.5	
				4.0	1.0			W					4.0	
				4.5	0.5		ORGANIC SILTY CLAY in Woody Inclusions, Black, Wet, Water Entered 4.7m in Sandy Lense	W				ASS (4.8 - 5)	4.5	NATURAL
				5.0	0.0								5.0	

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16-374

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1 60 HOLDSWORTH ST, COORPAROO.GPJ CITY DESIGN DATA TEMPLATE.GDT 3/8/15

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PROJECT: 60 Holdsworth Street, Coorparoo	**EQUIPMENT:** Solid Flight Auger	**CHECKED BY:** SD
LOCATION: 60 Holdsworth Street, Coorparoo	**NOTES:**	

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Solid Auger - V Bit				0.0	-0.5		**SILTY CLAY** Black, H2S Odour	W						NATURAL
				5.5	-1.0		**SANDY CLAY** Extremely Weathered Rock, Pale Grey, Orange Mottle,					ASS (5.3 - 5.40	5.5	NATURAL
				6.0	-1.5								6.0	
				6.5	-2.0		Weathered Rock, Clayey						6.5	NATURAL
				7.0	-2.5								7.0	
				7.5	-3.0		REFUSAL ON ROCK AT 7.7M Bottom of hole at 7.70 m.						7.5	
				8.0	-3.5								8.0	
				8.5	-4.0								8.5	
				9.0	-4.5								9.0	
				9.5	-5.0								9.5	
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1 60 HOLDSWORTH ST, COORPAROO.GPJ CITY DESIGN DATA TEMPLATE.GDT 3/8/15

Release

Information Notice

Environmental Protection Act 1994

Notice of decision to grant a soil disposal permit with conditions

This information notice is issued by the administering authority in accordance with section 424(5) of the Environmental Protection Act *1994 (EP Act) to advise you of a decision for your application for a soil disposal permit, and your review and appeal rights.*

Our Reference: 329479

Brisbane City Council

Level 1, 505 St Paul's Terrace

Fortitude Valley, QLD 4006

Attn: Sally Dodds

Email: sally.dodds@brisbane.qld.gov.au

Re: Application to remove and dispose of contaminated soil from 60 Holdsworth Street, Coorparoo (Lot 12 on RP152616) and 228 Old Cleveland Rd, Coorparoo (Lot 3 on RP89855)

Decision

The administering authority has considered your application received on 13 July 2015 and has decided to grant the application but to impose conditions on the permit.

Reasons for the decision

The granting of the permit subject to the conditions imposed is consistent with the standard criteria defined in schedule 4 of the *Environmental Protection Act 1994* (EP Act).

Assessment criteria used in making the decision

In accordance with section 424(4) of the EP Act in making its decision whether to grant or refuse the application for a disposal permit the administering authority has considered the standard criteria listed in Schedule 4 of the EP Act including:

- best practice environmental management for removal, treatment and disposal of contaminated soil
- any applicable environmental protection policy
- any applicable site investigation report or validation report or site management plan
- any applicable Commonwealth, State or local government plans, standards, agreements or requirements.

EHP RTI DL Release

Release

Findings as a result of the administering authority's assessment of the application

The information provided in the disposal permit application is sufficient to justify the disposal of the soil.

Information considered by the administering authority in making its determination

Information provided in the application submitted by Brisbane City Council on 14 July 2015, including:

- Part A and B application forms.
- Analysis Results
- Letter of Acceptance provided by Veolia Environmental Services dated 7 July 2015 stating they are willing to accept approximately **50m^3** of contaminated soil from 60 Holdsworth Street, Coorparoo (Lot 12 on RP152616) and 228 Old Cleveland Rd, Coorparoo (Lot 3 on RP89855) **to unlined landfill disposal at Wattle Glen Landfill**, Halletts Road, Patrick Street and Greenwood Village Road, Redbank Plains QLD (Lot 288 on S31235 and Lot 1 on RP885033)
- Letter of Acceptance provided by Veolia Environmental Services dated 7 July 2015 stating they are willing to accept approximately **350m^3** of contaminated soil from 60 Holdsworth Street, Coorparoo (Lot 12 on RP152616) and 228 Old Cleveland Rd, Coorparoo (Lot 3 on RP89855)) **to lined landfill disposal at Ti Tree bioENERGY, Champions Way,** Willowbank QLD (Lot 4 on RP24574)

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Review and appeal details

You may apply for an internal review of this decision under Chapter 11, Part 3 Division 2 of the EP Act in accordance with section 521 of the EP Act the application must be:

1. Made to the administering authority within 10 business days after receipt of this notice and be supported by enough information for the administering authority to decide the application;
2. Made to the administering authority in the approved form 'Application for internal review of an original decision' (EM219), which is available www.ehp.qld.gov.au using the publication number EM219 as a search term. The completed form must be sent to the address on the form; and
3. be supported by enough information to enable the authority to decide the application.

For more information see the Information sheet: Internal review and appeal to Planning and Environment Court.

An application to review a decision does not stay the original decision. If you apply for an internal review of this decision you can also apply to the chief executive (using the same form) or the Queensland Civil and Administrative Tribunal (using form 44: Application to stay a decision, available at www.qcat.qld.gov.au for a stay of the original decision.

Sections 519-522 of the *Environmental Protection Act 1994* cover the internal review process.

Sections 531-539 of the *Environmental Protection Act 1994* cover the appeal to Court process.

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Should you have any questions in relation to this matter, please contact Waste and Contaminated Land Assessment at WLCA@ehp.qld.gov.au

sch4p4(6) Personal information

Signature

21/7/15

Date

Allen Johns

Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:

Josh Brown – (07) 3339 5842

Waste and Contaminated Land Assessment
Department of Environment and Heritage Protection
Level 8, 400 George Street
GPO Box 2454
Brisbane QLD 4001
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Email josh.brown@ehp.qld.gov.au

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Extracts from the *Environmental Protection Act 1994* regarding reviews and appeals

Procedure for review

s. 521

1. A dissatisfied person may apply for a review of an original decision.
2. The application must—
   a) be made in the approved form to the administering authority within—
      I. 14 days after the day on which the person receives notice of the original decision or the administering authority is taken to have made the decision (the "review date"); or
      II. the longer period the authority in special circumstances allows not later than the review date; and
   b) be supported by enough information to enable the authority to decide the application.
3. On or before making the application, the applicant must send the following documents to the other persons who were given notice of the original decision—
   a) notice of the application (the "review notice");
   b) a copy of the application and supporting documents.
4. The review notice must inform the recipient that submission on the application may be made to the administering authority within seven days after the application is made to the authority.
5. If the administering authority is satisfied the applicant has complied with subsection (2) and (3), the authority must, within 14 days after receiving the application—
   a) review the original decision;
   b) consider any submissions properly made by a recipient of the review notice; and
   c) make a decision (the "review decision") to—
      I. confirm or revoke the original decision; or
      II. vary the original decision in a way the administering authority considers appropriate.
6. The application does not stay the original decision.
7. The application must not be dealt with by—
   a) the person who made the original decision; or
   b) a person in a less senior office than the person who made the original decision.
8. Within 14 days after making the decision, the administering authority must give written notice of the decision to the applicant and persons who were given notice of the original decision.
9. The notice must—
   a) include the reasons for the review decision; and
   b) inform the person of their right of appeal against the decision.

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Release

10. If the administering authority does not comply with subsections (5) or (8), the authority is taken to have made a decision confirming the original decision.
11. Subsection (7) applies despite section *Acts Interpretation Act 1954*, section 27A.
12. This section does not apply to an original decision made by—
    a) for a matter, the administration and enforcement of which has been devolved to a local government, the local government itself or the chief executive officer of the local government personally; or
    b) for another matter-the chief executive personally.

Stay of operation of original decisions

s. 522

1. If an application is made for review of an original decision, the applicant may immediately apply for a stay of the decision to—
    a) for an original decision mentioned in schedule 1, part 1 - the tribunal; or
    b) for an original decision mentioned in schedule 1, part 2 - the Court.
2. The tribunal or Court may stay the decision to secure the effectiveness of the review and any later appeal to the tribunal or Court.
3. A stay may be given on conditions the tribunal or the Court considers appropriate and has effect for the period stated by the tribunal or Court.
4. The period of a stay must not extend past the time when the administering authority reviews the decision and any later period the tribunal or the Court allows the applicant to appeal against the review decision.

Who may appeal

s. 531

1. A dissatisfied person who is dissatisfied with a review decision, other than a review decision to which subdivision 1 applies, may appeal against the decision to the Court.
2. The chief executive may appeal against another administering authority's decision (whether an original or review decision) to the Court.
3. A dissatisfied person who is dissatisfied with an original decision to which section 202 does not apply may appeal against the decision to the Court.

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SOIL DISPOSAL PERMIT

Environmental Protection Act 1994 (EP Act)

Disposal permit number:	CLEB05389415
Commencement date:	21 July 2015
Expiry Date:	21 July 2016
Permit holder:	Brisbane City Council
Authorised activity:	Disposal of approximately **50m^3** of contaminated soil from 60 Holdsworth Street, Coorparoo (Lot 12 on RP152616) and 228 Old Cleveland Rd, Coorparoo (Lot 3 on RP89855) **to unlined landfill disposal at Wattle Glen Landfill**, Halletts Road, Patrick Street and Greenwood Village Road, Redbank Plains QLD (Lot 288 on S31235 and Lot 1 on RP885033) Disposal of approximately **350m^3** of contaminated soil from 60 Holdsworth Street, Coorparoo (Lot 12 on RP152616) and 228 Old Cleveland Rd, Coorparoo (Lot 3 on RP89855) **to lined landfill disposal at Ti Tree bioENERGY, Champions Way,** Willowbank QLD (Lot 4 on RP24574)
Maximum volume:	**50m^3 to unlined landfill disposal at Wattle Glen Landfill** **350m^3 to lined landfill disposal at Ti Tree bioenergy, Champions Way**

This disposal permit is subject to the attached conditions in Schedule A.

The administering authority provides further information about the removal treatment and disposal of contaminated soil under section 424 of the EP Act on the EHP website at www.ehp.qld.gov.au. This document must be read in conjunction with any permit conditions found in Schedule A.

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sch4p4(6) Personal information

Signature

21/7/15

Date

Enquiries:

Josh Brown – (07) 3339 5842

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Allen Johns

Delegate of the administering authority
Environmental Protection Act 1994

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Schedule A - Conditions

1. Records of soil removal, treatment and disposal authorised under this permit must be kept for a period of no less than seven years and be available to the administering authority by request. The information to be kept in the records must include:
   a. the quantity of material disposed; and
   b. acceptance receipts from the waste disposal/treatment facility.
2. The permit holder must provide a copy of the permit to any person acting under the permit.
3. Contaminated soil must not be released to air, land or water during excavation, loading, storage, treatment and transport of the soil in a manner that causes environmental harm.

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