
Department of Environment and Heritage

Closed Volume

No Documents to be Added

For prior papers see: _____

For subsequent papers see: 901727 Part 21

Records Management

Page 1 of 1
Issue Date: 03/04/96
Hazardous Waste & Contaminated Sites Section

Officer	Action	Outcome	Signature & Date
Admin Assistant <i>CAZ</i>	CSI List, OLD, NEW & UXO List checked and relevant info attached to file. UXO LA area? <i>✓</i>	☒ Yes-forward to UXO Advisor ☐ No - place 'N/A' where UXO advisor signs & pass to D. Registrar.	s.73 Irrelevant inform <i>26/1/96</i>
UXO Advisor	Assign classification	<i>No UXO</i>	s.73 Irrelevant information <i>26/1/96</i>
Deputy Registrar	Initial Entry/Update of CSR (copy to file)	s.73 Irrelev	<i>26/01/97</i>

Lot & Plan	Report No.	Entry Date	Initial Status	Reclass. Date	Final Status
See Attached.					

Officer	Action	Signature & Date
C14	Check if previous correspondence & attach to file	
Data Validation	Check Notification & General files for previous correspondence & attach to file.	
PLACE CHEM FILES IN APPROPRIATE ORDER IN QUEUE		

PeerReview Advisor	Review Assessment & check typed draft SCR	
Contact Advisor	Check Final SCR	
Manager	Note File & Forward to Director for approval	
Deputy Registrar	Final reclassification	
GIS Officer	Enter relevant information to GIS	
Admin Assistant	Mail SCR, copy to file, check CSI FlowChart is complete, check file, update CSI List, archive file.	

DH : Please look on GIS for
Portion 419. of 1404.

to CAZ 20/5/96.

Application for Site Contamination Report

FM37 OCT95



Queensland
Department of
Environment

Please note: Failure to lodge all required information will result in your application being rejected and returned to you for completion and re-submission.

Hazardous Waste and
Contaminated Sites Section
Department of Environment

PQ Box 155
BRISBANE ALBERT STREET
QLD 4002

Complete both sides of this document: (attach a separate sheet if more space required)

1. Applicant details

(This is the contact person to whom the Site Contamination Report will be sent and to whom all enquiries will be directed)

Contact name JASON FURNER Telephone 3224 4365
Company name (if applicable) PUBLIC WORKS AND HOUSING DEPARTMENT
Postal address GPO BOX 2457 BRISBANE QLD
Postcode 4001

2. Lodging details (Complete this section only if form not lodged by applicant)

Contact name _____ Telephone _____
Company name (if applicable) _____
Postal address _____
Postcode _____

3. Owner's details (Agent's address not acceptable)

Full name PUBLIC WORKS AND HOUSING DEPARTMENT
Postal address GPO BOX 2457 BRISBANE QLD
Postcode 4001

4. Site details

Name of local government BRISBANE CITY COUNCIL
Suburb/town/city FORTITUDE VALLEY Postcode 4006
Prescribed purpose/possible contaminating activity INTRODUCED FILL
Intended use of the site MIXED USE - RESIDENTIAL / PARKLAND / RETAIL

5. Location and zoning details of each parcel in the site

Street number	Street name	Lot on Plan description	Current zoning	Proposed zoning
*	REFER	ATTACHED SHEET		

Checklist — tick each box when complete

- ☒ Completed items 1-5 and written name and address in return slip (*you must answer each item*).
- ☒ Enclosed statutory fee.
- ☒ Enclosed consultants' report (as per *Guidelines for the Assessment of Contaminated Land in Queensland* or *Report Contents for the Investigation or Remediation of UXO Contamination*).
- ☒ Enclosed legible copy/copies of proof of ownership of site/s clearly showing the full name/s of the registered proprietor/s e.g. current Certificates of Title or Title Search/es. (Order in Council (Crown Land) and Form 100 (Change of Ownership Notification) may be accepted if the above are not available.)
- ☒ Enclosed legible copy/copies of all relevant registered plans (available from the Titles Section, Department of Lands) clearly showing location of the site/s and current registered plan details.
- ☒ Enclosed copy of a street map/area map clearly showing location of property.

Office use only ▼

Date received	Date rejected (if applicable)	Date accepted	Initials

Helen Banks

From: Greg McPherson [Greg.McPherson@brisbane.qld.gov.au]
Sent: Tuesday, 23 October 2007 5:22 PM
To: Helen Banks
Cc: Petria McColl
Subject: Howard Smith Wharf Site (Lots 3 on SP128031 and Lot 4 on SP128032)

Helen,

As discussed I am in the process of reviewing a contamination report compiled by Brisbane City Council relevant to the above lots.

The history of the above lots in terms of EMR listing is as follows:

Lot 400 on SL1404 (1181m²) which was previously listed became part of larger Lot 3 on SP128031 (4932m²). *\ on EMR for Haz Contam*

Lot 2 on RP44680 (5094m²), Lot 21 on RP8614 (1893m²), Lot 22 on RP8614 (1539m²) and Lot 4 on RP41821 (1071m²) which were all previously listed became part of larger Lot 4 on SP 128032 (25940m²) *\ on EMR for Heavy Metals*

The contamination assessment involved undertaking a desktop study including historical assessment as well as a detailed sampling program (54 sampling points over a total area of approximately 3.6 hectares).

In summary the review has indicated the following:

The site history assessment did not confirm the existence of any specific notifiable activity being conducted at the site; and

While the laboratory confirmed some discreet exceedances of heavy metals such as lead, when appropriate statistical techniques were applied to the results (as per the NEPM) it became apparent that the contaminant concentrations may not warrant either lot remaining on the EMR.

The contamination assessment report does however indicate that the EPA may be privy to additional information which might support the lots remaining on the EMR.

Can you please advise of any further information that you have in this regard.

Regards,

Greg McPherson

Senior Environmental Engineer
Environmental Management Team
Water & Environment, CITY DESIGN

(302) 74724

This message has passed through an insecure network.
Please direct all enquiries to the message author.

Lot 3 on SP 128031 (BASE PARCEL 400 on SL1404)

1997 - Golder Ass. ~~Env~~ report (96638197(c)) revealed elevated levels of lead > 1000 mg/kg. (also Cu, Zn, Pb)

Lot 4

Published on DES Disclosure Log
RTI Act 2009

Chase
Reports

File 901727
- ordered from
AUSDOC - debbie
31/10/07.
H.

CALL
GREG
McPHERSON.

Hi Helen, no luck in
finding these 2 reports.
Darryl suggest you
call B.C.C & request
via them copies of
the Golder reports.
Thanks, Rose,

HOWARD SMITH WHARF - Boundary Street Fortitude Valley

RPD	CURRENT ZONING	PROPOSED ZONING
Lot 2 ON RP 8616 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 4 ON RP 41821 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 22 ON RP 8614 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 21 ON RP 8614 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 2 ON RP 44680 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 2 ON B 3333 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 4 ON RP 60570 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 3 ON RP 52849 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 6 ON RP 8569 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 2 ON RP 40998 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 400 ON SL 1404 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 4 ON RP 52849 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 3 ON RP 52848 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 419 ON SL 1404 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 1 ON RP 52848 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 2 ON RP 64992 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan

140-037326

140-037322

140-037321

140-037320

140-037323

140-037324

140-037325

File note of meeting/discussion

☐ Meeting

☐ PH: IT ENVIRONMENTAL: 38998359

Date: 29/8/05

Time:

Between

of

And

of

Subject: Find Hazardous Contaminants on Site for Client (IT ENVIRONMENTAL)
who did a search.

16/08/05 Phillip of IT Environmental called to find haz contam on sites:

L4 SP128032 (FILE# 901727)

L6 RP52453 (FILE#901298)

L3 SP128031 (FILE#901727)

L223 SL5130 (FILE#900100)

L1 RP59137 (FILE#901298)

26/08/05 Phoned IT Environmental spoke to a Matt Tannery as he said he is Phillip's supervisor. Advised Matt of Haz Contam on sites.

29/08/05 After seeing chief Scientific Advisor Mark Paton to clarify what haz contam is on L223 SL5130 (FILE#900100); he advised for site L223 SL5130 Hazardous contam is PAH (Polycyclic Aromatic Hydro carbons) and Petroleum Hydrocarbons rang Matt to advise him the updated information.

Told matt that if he is acting on behalf of owner he could look at files. He confirmed he is not.

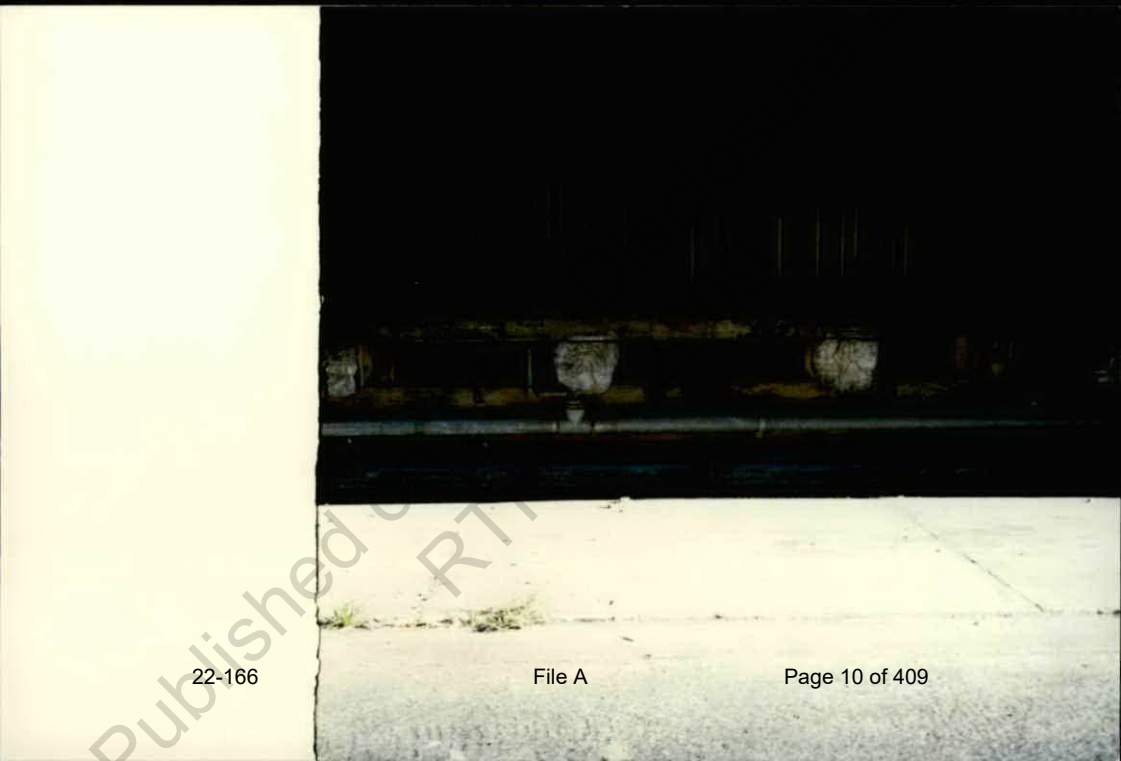
Leil McKenzie

Trainee

Administration Officer

Contaminated Land

Enviromental Protection Agency



22-166

File A

Page 10 of 409





22-166

File A

Page 12 of 409

018 '96



22-166

File A

Page 13 of 409

8 18 '96









22-166

File A

Page 17 of 409

DEC 18 2006

3/12/96

Note

Checked with Golder if formal
approval required at this stage
yes - issued 514

s.73 Irrelevant information

Gary O'Connor
(07) 3227 8619
9668197(F)
901727

5 December 1996

s.73 Irrelevant information

Golder Associates Pty Ltd
PO Box 1734
MILTON QLD 4064

Dear s.73 Irrelevant information

APPROVAL FOR OFF-SITE DISPOSAL OF CONTAMINATED SOIL OR MATERIALS

RE:

Under Section 14 of the *Contaminated Land Act 1991*, approval is given for the removal of approximately 2200m³ of soil contaminated with heavy metals and hydrocarbons, as described in your report on the above site dated November 1996, for disposal to Brisbane City Council Landfill in accordance with the requirements of the Council.

Yours sincerely

s.73 Irrelevant information

Gary O'Connor
Chief Scientific Adviser
Hazardous Wastes & Contaminated Sites Section

cc. A/Supervising Chemist
Hazardous Chemicals
Brisbane City Council
240 Donaldson Road
ROCKLEA QLD 4106

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Published on DES Disclosure Log
RTI Act 2009

A/Supervising Chemist
Hazardous Chemicals
Brisbane City Council
240 Donaldson Road
ROCKLEA QLD 4106

Gary O'Connor
(07) 3227 8619 {Direct fax - (07) 3227 8341}
96638197
901727

2 December, 1996

s.73 Irrelevant information

Golder Associates Pty Ltd
PO Box 1734
MILTON QLD 4064

Dear s.73 Irrelevant information

s.73 Irrelevant information

**Stage II Site Contamination Assessment and Site Management Plan
Howard Smith Wharf - November 1996**

Thank you for providing a copy of the above report. The comments on the draft copy provided by the Department of Environment by letter of 19 September 1996 have been satisfactorily addressed in the final report.

s.73 Irrelevant information

If you require any further information please do not hesitate to contact me.

Yours sincerely

s.73 Irrelevant information

Gary O'Connor
Chief Scientific Adviser
Hazardous Wastes & Contaminated Sites Section

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Memorandum

To

File

File reference 901727

From

S.73 Irrel

Subject

Howard Smith Wharf. Final Report

Date

29/1/96

Notes

DoE comments on draft

2. Golden verify that steel water mains are
on-site p8 services.

1. Health site Image/Kangley

Env Canadian & British phyto toxicity

∴ propose 450 ppm - lowest criterion
for 95% UCL

See 5.1.1

with an upper limit of 600 ppm

Impact on water estimated to be low due

to pH 8.2-8.9 & low biodegradability

3. Agreed. checking with Taylor. p1.B 4 para

4. Added

5. Added

6. Added

7. Done.

Conclusion

Matters in letter of 19/9/96

addressed

TRANSMITTAL OF DOCUMENTS

DATE : 20/11/96 JOB No. 96638197
 TO : Department of Environment
 ATTENTION : Mr Gary O'Connor
 ADDRESS : Level 12
 160 Ann St
 PROJECT : HS Wharf



BRISBANE, AUSTRALIA
 Golder Associates Pty Ltd
 ACN 006 107 857

Unit 12, 97 Castlemaine Street
 Milton, QLD, 4064
 (PO Box 1734, Milton BC,
 4064)

Tel : +617 3217 6444
 Fax : +617 3217 6700



The following is attached for your:

- Information ☐
- Comment ☐
- Approval ☒
- Other ☐

901727
 (GOC)

Reference	Title	Copies
96638197(F)	Stage II Site Contamination Assessment and Site Management Plan Howard Smith Wharf Fortitude Valley Brisbane	1

TRANSMITTED BY : Mail ☐ Local Courier ☒ Overnight Courier ☐ Hand ☐

ACKNOWLEDGEMENT REQUIRED : Yes * ☐ No ☐

* Please return or fax to Golder Associates

SENDER :

s.73 Irrelevant information



Gary O'Connor
(07) 3227 8619 {Direct fax - (07) 3227 8341}
96638197(E)
901727

8 October, 1996

s.73 Irrelevant informat

Golder Associates Pty Ltd
PO Box 1734
MILTON QLD 4064

Dear s.73 Irrelevant info

Site Contamination Assessment and Management Plan - Howard Smith Wharf

Thank you for your letter of 30 September 1996 regarding the above. The following comments are made to clarify matters regarding the proposed zinc clean-up criteria.

The investigation thresholds provide protection under "worst case scenarios" and as a result are conservative. When it is proposed that clean-up goals are set above the thresholds then it is important that a scientific basis for the variation be provided. This concept is outlined in the "Guidelines for the Assessment of Contaminated Land" -CHEM Unit 1992. It is expected that the circumstances regarding the contamination will vary from site to site and, as a result, the degree of scientific justification required is likely to vary.

In this particular instance, it is expected that potential health impacts could be adequately dealt with by reference to USEPA Preliminary Remediation Goals or to the paper by Dr Imray which was recently published in the Proceedings of the Third National Workshop on the Health Risk Assessment and Management of Contaminated Sites. For environmental impacts reference to Dutch criteria along with a basic assessment of the potential impact of the zinc on the surrounding environment would be supported.

It is expected that the above matters could be adequately addressed in less than a half a page of text. If you require any further information please do not hesitate to contact me.

Yours sincerely

s.73 Irreleva

Gary O'Connor
Chief Scientific Adviser
Hazardous Wastes & Contaminated Sites Section
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cc. Mr J Furner
Dept of Public Works and Housing

8/10/96

Rang Jason Furner re Golder letter
Explained that Golder needed to put some
extra justification in the documentation for setting a criterion
of 500 ppm for Zn

Published on DES Disclosure Log
RTI Act 2009

Golder Associates Pty Ltd A.C.N. 006 107 857
BRISBANE OFFICE

Unit 12, 97 Castlemaine Street
Milton, Qld 4064, Australia
(PO Box 1734, Milton BC, 4064)
Telephone (07) 3217 6444
Fax (07) 3217 6700

HAZARDOUS WASTES AND
CONTAMINATED SITES SECTION

04 OCT 1996



**Golder
Associates**

901727

Grol

30 September, 1996

96638197(E)

Hazardous Waste and Contaminated Sites Section
Department of Environment
PO Box 155
BRISBANE ALBERT STREET QLD 4002

96/15962



Attention : Mr David Miles
Director Hazardous Waste and Contaminated Sites Section

RE : SITE CONTAMINATION ASSESSMENT AND MANAGEMENT PLAN
HOWARD SMITH WHARF, FORTITUDE VALLEY, BRISBANE
Your Ref : 901727

Dear Sir

Golder Associates, at the request of our client, The Department of Public Works and Housing, would like to further discuss your letter regarding the above site dated 19 September 1996, specifically the requirement for a site-specific risk assessment in order to set a clean-up criteria for zinc of 500mg/kg for the site. It was initially proposed by Golder Associates to undertake a human health risk assessment on the site following remedial works, allowing validation results to be incorporated into the risk assessment.

Subsequent discussions with Mr Gary O'Connor have further informed us that both human health and environmental risk relating to zinc must be considered as part of the assessment.

Although the possibility of a literature review based presentation by Golder Associates, in relation to the setting of the clean-up criteria, was discussed, no undertaking was provided by Mr O'Connor that this approach would be either adequate or successful. This position makes a full risk assessment incorporating both human and ecological risk assessments virtually mandatory in order to set the clean-up criteria of 500mg/kg for zinc, an undertaking of substantial cost and time penalties.

With reference to the proposed remedial works on this site Golder Associates have proceeded with a methodology acceptable to Department of the Environment in July 1996, when a site-based clean-up criteria for zinc was adopted for a former foundry site in Hill End (your Ref. 901750). In this case approval was given to proceed with a clean-up criteria of 500mg/kg for zinc, with a human health based screening risk assessment performed as part of validation operations.

This substantial shift in position by the DoE was not anticipated by either Golder Associates or our client, and will incur substantial cost and time penalties. In addition it is unclear if the risk assessment calculations will have to be revised at the conclusion of the remedial works, incurring an additional cost penalty.

Golder Associates request that in view of the acknowledged low human health risk presented by zinc, that our initially proposed methodology be accepted, with a screening risk assessment incorporating an assessment of the environmental issues be carried out following validation.

Should you have any further queries please do not hesitate to contact the undersigned.

Yours faithfully

GOLDER ASSOCIATES PTY LTD

per :

s.73 Irrelevant information

Environmental Engineer

s.73 Irrelevant information

Principal

FAus.IMM

cc. Dept. Public Works and Housing
Attention: Mr Jason Furner

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CM:pmw

Unit 12, 97 Castlemaine Street
Milton, Qld 4064, Australia
(PO Box 1734, Milton BC, 4064)
Telephone (07) 3217 6444
Fax (07) 3217 6700



30 September, 1996

96638197(E)

Hazardous Waste and Contaminated Sites Section
Department of Environment
PO Box 155
BRISBANE ALBERT STREET QLD 4002

Attention : Mr David Miles
Director Hazardous Waste and Contaminated Sites Section

RE : SITE CONTAMINATION ASSESSMENT AND MANAGEMENT PLAN
HOWARD SMITH WHARF, FORTITUDE VALLEY, BRISBANE
Your Ref : 901727

Dear Sir

Golder Associates, at the request of our client, The Department of Public Works and Housing, would like to further discuss your letter regarding the above site dated 19 September 1996, specifically the requirement for a site-specific risk assessment in order to set a clean-up criteria for zinc of 500mg/kg for the site. It was initially proposed by Golder Associates to undertake a human health risk assessment on the site following remedial works, allowing validation results to be incorporated into the risk assessment.

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Golder Associates request that in view of the acknowledged low human health risk presented by zinc, that our initially proposed methodology be accepted, with a screening risk assessment incorporating an assessment of the environmental issues be carried out following validation.

Should you have any further queries please do not hesitate to contact the undersigned.

Yours faithfully

GOLDER ASSOCIATES PTY LTD

per :

s.73 Irrelevant information

s.73 Irrelevant information

Aus.IMM

Environmental Engineer

Principal

cc. Dept. Public Works and Housing
Attention: Mr Jason Furner

I:\96638197\38197LE.DOC
CM:pmw

Phone Records from 23 September 1996

Date: 1/10/96 Name: s.73 Irrelevant info Organisation: golder assoc

Action: File No: 901727

Key Words:

Details: public works have requested that golder write to us clarifying matter re risk assessment - public works are concerned that they may have to engage golder to additional works to meet requirements
ok

Published on DES Disclosure Log
RTI Act 2009

Gary O'Connor
(07) 3227 8619 {Direct fax - (07) 3227 8341}
96638197(C)
901727

19 September, 1996

Mr [s.73 Irrelevant info]
Golder Associates Pty Ltd
PO Box 1734
MILTON QLD 4064

Dear [s.73 Irrelevant info]

**Draft Site Contamination Assessment and Site Management Plan
Howard Smith Wharf, Fortitude Valley, Brisbane**

Thank you for the above report. I have reviewed the contents and make the following comments as requested:

1. The site-specific risk assessment which supports the clean-up criteria for zinc should be provided with the assessment report. Consideration should be given to conducting distilled water leach tests on samples containing zinc around 500 mg/kg as part of the risk assessment;
2. Dot point 2 of the Department of Environment letter of 18 June 1996 should be addressed in the *current site* section of the report;
3. The layer above the ash should be validated;
4. Location AH38 should be added to Figure 1A;
5. Zinc results for AH9-1, TP32-2 and TP34-1 should be added to Table 4;
6. Copper and lead results for TP21 to TP28 for the *plaster factory area* should be added to Table 2; and
7. Some of the results for the *main hotspot area* in Table 2 should be shifted right.

Subject to dot point 1, the proposed site management plan is acceptable. If you require any further information please do not hesitate to contact me.

Yours sincerely

[s.73 Irrelevant info]

Gary O'Connor
Chief Scientific Adviser
Hazardous Wastes & Contaminated Sites Section

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27/9/96
[s.73 Irrelevant info] [s.73 Irrelevant info]
first point. I explained why it should happen first ie it would be unfortunate if the risk assessment showed 500 was unacceptable. I said I did not expect an extensive assessment was necessary. I also noted 3rd national Dr Murray.

Memorandum

To

File reference

From

Subject

Q/Comments

Date

Notes

~~AH 38 data is not on 1A.~~

1. AH 38 should be marked on Fig 1A ✓
2. risk assessment should be done to establish 500, some dewatering may be useful. ✓
3. layers above ash should be validated ✓
4. ~~Site~~ ✓ Site entrance
4. Main Hot Spot Table 7 shift a column ✓
5. Zn in Table 4 ✓
6. ~~Fuel bank validate for TPH BTEX~~

Memorandum

To File File reference 901721
 From s.73 Irrele
 Subject Howard Smith Stage II Date 19/9/96
 Notes

Further work: 22 test pits dug in the
 2 filled areas
 6 more bore holes on river bank

New Farm fill ~15m grid 26 test pits.
 1 BH.

ash also analysed for PAH
 4809-19 < LOR PAH. QC ✓

Plaster Factory Area:

Zn_{max} 520 Av 200-300

Pb_{max} 310 Av 150

brown granully sand fill on rocks @ ~0.5m

Proposing to leave in rocks

Main Hotspot:

	Pb _{max}	1600	559	} Hot spot delineated area
	Zn	12400	2645	
	Cu	5450	50125	

1800m³ proposing to remove to landfill (expose to rock & validate water)

brown granully sand, debris glass, brick, steel

(10 wall samples) ✓
 ~200m

Ash Hotspot: 300m² 0.2m thick

	Av	max
Cu	62	70
Pb	330	359
Zn	748	760.

60m³ - proposing to remove then validate

River bank:

marginal Zn - otherwise OK

Memorandum

To File
From s.73 Irrel
Subject (2)

File reference 901727

Date 19/9/96

Notes

Site Entrance: ple had high Pb & Zn

300m ³	Av	Manual
Pb	787	2430
Zn	1370 503	1370
Cu	41	88

proposing to remove & send to lined landfill
proposing to excavate to rock with no
fill to be left in site

Soils adjacent to fuel tank: (Water Police)

sample grabbed - TPH BTEX OK

TPH Hotspot: to be removed to landfill
Invalidator

Proposing to reinstat with quarry fill

[illegible]

TABLE 2

SUMMARY OF ANALYTICAL RESULTS
INORGANICS SAMPLES

Sample Number	Sample Depth	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Zinc
Site entrance								
TP1-1	0.5 - 0.6	34	1	21	88	2430	1	1370
TP1-2	1.1 - 1.2	13	< 1	37	58	780	0.2	430
TP6-1	0.05 - 0.1	21	1	42	57	1330	0.1	773
TP6-2	0.6 - 0.7	21	1	13	38	532	0.3	627
TP8-1	0.05 - 0.15				29	61		59
TP8-2	0.5 - 0.6				24	110		250
TP9-1	0.05 - 0.1				30	1200		600
TP9-2	0.5 - 0.6				37	510		340
AH38-1	0.05 - 0.15				12	130		82
Along River Bank								
AH10-1	0.4 - 0.5				42	110		95
AH11-1	0.3 - 0.35				10	11		46
AH12-1	0.25 - 0.35				37	130		240
AH13-2	0.9 - 1.0				6	16		28
AH14-2	0.75 - 0.85				15	25		79
New Farm End Plaster Factory Area								
TP2-1	0.5 - 0.6	21	1	5	22	166	0.4	440
TP3-1	0.2 - 0.3	13	< 1	< 1	10	39	0.2	79
TP15-1	0.05 - 0.15				93	200		88
TP15-2	0.2 - 0.3				14	76		43
TP16-1	0.35 - 0.45				13	86		100
TP17-1	0.4 - 0.5				24	310		520
TP18-1	0.5 - 0.6				31	200		520
TP19-1	0.05 - 0.1				35	190		390
TP19-2	0.3 - 0.4				17	120		290
TP20-1	0.5 - 0.6				11	120		38
TP21-1	0.05 - 0.15				29	91		300
TP21-2	0.5 - 0.6				14	90		160
TP22-1	0.5 - 0.6				12	97		280
TP24-1	0.15 - 0.25				22	120		270
AH25-1	0.25 - 0.35				58	190		240
TP28-1	0.1 - 0.2				13	84		160
TP28-2	0.4 - 0.5				15	94		210
Ash Hotspot Area								
TP4-1	0.35 - 0.45	16	1	14	54	359	0.1	736
TP4-2	1.5 - 1.6	30	< 1	4	18	109	0.2	156
TP26-1	0.0 - 0.1				31	180		330
TP26-2	0.15 - 0.25				70	300		760
TP26-3	0.4 - 0.5				16	120		200
TP26-4	1.0 - 1.1				15	100		220
Main Hotspot Area								
TP5-1	27	2	46	161	897		0.2	12400
TP5-2	12	1	19	42	296	< 0.1		1380
TP23-1				120	1300			3900
TP23-2				12	93			250
TP27-1				170	140			3600
TP27-2				110	790			2900
TP29-1				540	310			2000
TP29-166				47	350			2200

Sample Number	Sample Depth	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Zinc
TP30-1				24 ✓	130 ✓			
TP30-2				53 ✓	420 ✓			1000 ✓
TP30-3				37 ✓	150 ✓			2000 ✓
TP31-1				70 ✓	700 ✓			440 ✓
TP31-2				60 ✓	1600 ✓			2200 ✓
TP31-3				18 ✓	110 ✓			2300 ✓
TP32-1				44 ✓	260 ✓			460 ✓
TP32-2				180 ✓	1600 ✓			2000 ✓
TP34-1				540 ✓	810 ✓			6700 ✓
TP34-2				20 ✓	100 ✓			1600 ✓
River Bank Area								
TP33-1	0.3 - 0.4			9 ✓	100 ✓			90 ✓
TP33-2	1.4 - 1.5			12 ✓	250 ✓			140 ✓
TP35-1	0.5 - 0.6			11 ✓	90 ✓			170 ✓
TP36-1	0.16 - 0.2			70 ✓	120 ✓			400 ✓
TP36-2	0.6 - 0.7			13 ✓	72 ✓			210 ✓
TP37-1	0.0 - 0.1			15 ✓	140 ✓			230 ✓
TP37-2	0.25 - 0.35			83 ✓	220 ✓			540 ✓
Dutch Intervention Value 1994		55	12	380	190	530	10	720
DoE Investigation Threshold		20	3	50	60	300	1	200
DoE Health Threshold		100	20			300		

Notes :

All results are expressed as mg/kg unless otherwise specified.

All sample depths in metres.

Figures in shading exceed the Chem Unit 1992 guidelines.

Figures in bold italics and shading exceed the Dutch Intervention Values 1994.

* CHEM Unit 1992.

L:\96638197\38197TAB.02

			Soil Concentration mg/kg				Leachate Concentration mg/l			
Sample Number	Sample Depth (m)		Copper	Lead	Zinc	Dieldrin	Copper	Lead	Zinc	Dieldrin
Site Entrance										
TP1-1	0.5-0.6		88	2430	1370		<0.1 ✓	5.2 ✓	13 ✓	
AH8-2	0.5-0.6		24	110	250	2.5			4 ✓	0.0003 ✓
AH9-1	0.05-0.1		30	1200	600	<0.1	0.04	2.9 ✓	14	
Ash Hotspot										
TP4-1	0.35-0.45		54	359	736		—	<0.1 ✓	2.8 ✓	
Main Hotspot										
TP5-1	0.3-0.6		161	897	12400		<0.1 ✓	0.6 ✓	29 ✓	
TP32-2	1.0-1.1		180	1600	6700		0.06 ✓	0.44 ✓	22	
TP34-1	0.2-0.3		540	810	1600		0.12 ✓	0.32 ✓	10	
DoE Investigation Threshold*			60	300	200	0.2				
DoE Health threshold*				300						
Dutch Intervention Value 1994			190	530	720					
BCC Draft Leachate	Unlined						10	0.5	50	0.001
Criteria (1993)	Lined						100	5	500	0.01

TABLE 4 - SUMMARY OF TCLP RESULTS

Notes:

Figures in shading exceed the Chem Unit 1992 guidelines

Figures in bold italics and shading exceed the Dutch Intervention Values 1994

*CHEM Unit 1992

I:\96638197\38197TAB.04

Golder Associates

TABLE 3
SUMMARY OF TPH RESULTS

Sample Number	Units	Sample Depth (m)	C ₆ - C ₉	C ₁₀ - C ₁₄	C ₁₅ - C ₂₈	C ₂₉ - C ₃₆	Total C ₁₀ - C ₃₆
<i>Soils</i>							
TP7-1	mg/kg	0.9 - 1.0	138 ✓	< 20	< 50	< 100	138
TP7-2	mg/kg	2.6 - 2.7	21 ✓	< 20	< 50	< 100	21
AH38-1*	mg/kg	0.05 - 0.15	< 20	< 20	< 50	< 100 ✓	-
DoE Threshold Levels			100	100	1000	1000	1000
Dutch Intervention Value 1994							5000

Notes :

Figures in shading exceed the DoE Threshold Levels.

* All BTEX Species were below their respective detection limits.

I:\96638197\38197TAB.03

Golder Associates Pty Ltd A.C.N. 006 107 857
BRISBANE OFFICE

Unit 12, 97 Castlemaine Street
Milton, Qld 4064, Australia
(PO Box 1734, Milton BC, 4064)
Telephone (07) 3217 6444
Fax (07) 3217 6700



Golder
Associates

TRANSMITTAL OF DOCUMENTS

TO: Department of Environment
ATTENTION: Mr Gary O'Conner
ADDRESS: Level 12
160 Ann St
Hazardous Wastes & Contaminated Sites Section
PROJECT: Howard Smith Wharf

Date: 12/9/96

Mail ☐

Courier Overnight ☐

Courier First Class ☒

Other ☐

JOB No.: 96638197

The following is attached for your:

Information ☒

Comment ☒

Other ☐

For your review & comment

Reference	Title	Copies
96638197(c)	Draft Stage II Contamination Assessment and Site Management Plan.	1
	Letter Approval from BCC regarding proposed disposal of materials.	1

Please phone enquires

FROM:

s.73 Irrelevant information

Golder Form No. GA_BQ-041 Version 2 - Revised 13.3.96

Contact name:

Telephone:

Fax (direct):

Contact name:

Telephone:

Our ref.:

Fax:

Mr Russell Miller

3403 2609

3403 2603



Brisbane City

Brisbane City Council

69 Ann Street

Brisbane

Queensland

GPO Box 1434

Brisbane

Australia 4001

Facsimile 229 1168

4 September 1996

Golder Associates

PO Box 1734

Milton 4064

Attention:

s.73 Irrelevant information

Dear Sir,

Re: Disposal of Approximately 2210m³ Heavy Metal and TPH Contaminated Soil Located at the Howard Smith Wharf Site, New Farm.

In response to your request for the disposal of approx 2210m³ of heavy metal and TPH contaminated soil from the abovementioned site, I am able to confirm that based on the soil analysis supplied by yourself, the soil represented by the locations described in your report as:

- (1) Hot Spot No 1-Site Entrance comprising approx 300m³ will be acceptable for disposal to the Brisbane Lined Landfill at Rochedale as a special receival class VI.
- (2) Hot Spot No 2-Underground Fuel Tank Area comprising approx 50m³ will be acceptable for disposal to a Brisbane City Council Unlined Landfill as a class II waste. However as the TPH contamination is low and volatile I would suggest that on site remediation be investigated.
- (3) Hot Spots No 3&4-New Farm End comprising approx 1860m³ will be acceptable for disposal to a Brisbane City Council Unlined Landfill as a class III waste.
- (4) Plaster Factory Area-would normally be required to be disposed of in a Brisbane City Council Unlined Landfill as the average total Zinc concentration is 243mg/kg. However following discussions with yourself I will leave it up to the Department of Environment to determine if removal of the soil from the site is required.

All landfill disposals will be subject to the following conditions:

- (1) Each load of soil must be wetted with water and covered prior to transportation for the suppression of dusts
- (2) Can you please contact Amanda Morrow, Waste Management Branch, on 34038659 for disposal arrangements and charges.

If you have any further queries, please contact me directly on 340 32609.

Yours faithfully

s.73 Irrelevant information

As Supervising Chemist
Hazardous Waste.

Phone Records Jan 96 to

Date: 7/08/96

File Number: 901727

Name: s.73 Irrelevant informati

Company: golder

Client
Comment:

will submit stage 2 soon, needs some remediation,
elevated metals 2000m3

QDEH
Comment:

sounds ok, i will review and arrange meeting,
possibly on-site

Action:

Gary O'Connor
(07) 3227 8619 {Direct fax - (07) 3227 8341}
27485/1/1
901727

18 June, 1996

Manager, Development Management
Department of Public Works and Housing
GPO Box 2457
BRISBANE QLD 4001
Attention Mr J Furner

Dear Mr Furner

Site Contamination Report - Stage I - Howard Smith Wharf, Boundary Street, Fortitude Valley; prepared by Golder Associates

Thank you for your letter of 16 May 1996 regarding the above. I have reviewed the contents of the report, Stage II sampling proposal and inspected the site. The following comments are provided as requested:

1. Validation of the walls of the former underground storage tank excavation is required;
2. Clarification of the use of the large steel mains located beneath the sheds; and
3. Validation of the soils immediately downslope of the above ground tank near the Water Police office.

Subject to the above comments the Stage II sampling proposal is acceptable.

If you require any further information please do not hesitate to contact me.

Yours sincerely

s.73 Irrelevant in

Gary O'Connor
Chief Scientific Adviser
Hazardous Wastes & Contaminated Sites Section
f:\contam\o'connor\letters\901727_1.doc

Memorandum

To *Julie*

File reference *901727.*

From *s.73 Irrelev*

Subject

Sub Inspect

Date *18/6/96*

Notes

*Land is mostly converted (as per
Golder Report)*

*Suggest sampling for TPH near
Water Police Bldg*

Clarify use of paperwork under bldgs.

*(A/g bund near house is not stained
(not cracked in good cond)*

*A/g bund near Police bldg not so good -
some cracks & staining)*

Memorandum

To File File reference 901727
From s.73 Irrel
Subject Howard Smiths Wharf - Date 17/6/96
U.0021 Ha Notes

Site History: Sources

- (1) Several Photos
- (2) John O'Leary Library
- (3) Water Police staff / Works Dept
- (4) Local Archives
- (5) Heritage consultants

Wharves in place since 1900 at
Boundary St & Collins St Wharf.

1930 photos show wharves in use for waste
and concrete.

1938 river banks excavated & river widened -
significant amount of rock.

Best Gypsum occupied shed 5 in 1940s
small workshop on-site

Works Dept also had a spraypainting shed
Water Police 1964 storage of boats & equipment
fuel storage in a a/g tank

Works Dept: since 1960

Plant Section - scaffolding cement & masonry

Furniture Joinery

Auctions + Stone Cutting

Vehicle Maintenance panel beating

UST & A/g connected to a bowser

Customs: Shed 5 (clearing shed)

Health: Radiatⁿ stone. Q Health have assessed OK

+ Fill: introduced fill near Water Police + quarry
area to eastern end.

Memorandum

To

File reference

From

Subject

(2)

Date

Notes

Story Bridge maintenance & road traffic compact likely to be minor due to most of the soil being covered with concrete.

Sampling 25-29/3/96

7 test pits

1 wood sample

Fill 6 Test pits

Transit Fill: higher Pb & Zn

East Fill: higher Pb & Zn in some (fill was variable)

TPH & TPB showed most elevated levels of contamination

Some OCS found but not health issues

Ash sample submitted for Pb & Zn - not significant

Tank Pit: walls collapsed

had TPH odours & tank pit fill had minor level of contamination.

Wood: As OK

Stage II proposal: 15m grid New Farm end OK.

(sampling of different fill layers)

- 40m grid for all of area OK

- Transit fill to get ~~some~~ additional samples

Enter

- Validated - VST

- prudent to locate broad area assessment Not 2nd A/g
sample @ A/g tank area bound in
necessary good credit

- assessment for TPH near Police Office.

CISP
Enquiry/Reporting
Trans: CPRT030

Plan Enquiry - All Form 1

CPRF
27 MAY 1996 10
Plan 1 of

+-----+ Lodgement Office: BRISBANE
| Plan No: SL1404 | Custodian: LANDCENTRE
+-----+ Lands File Ref: 36/1401
Lands Region: BRISBANE
Plan Description: POR.400 & 419

Previous Description:

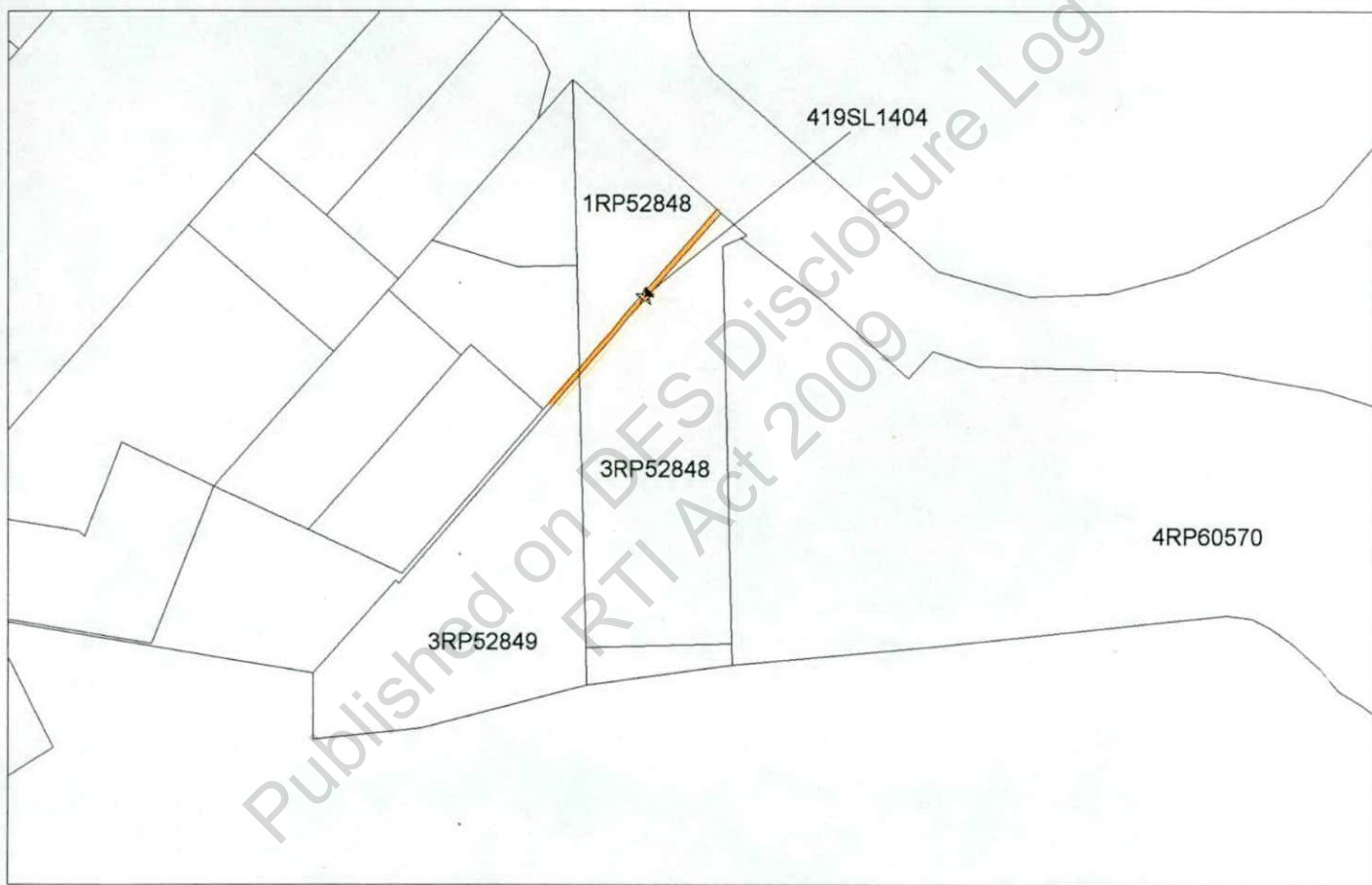
Surveyor: s.73 Irrelevant in
Initials:
Survey Date: 17/04/1936

Size: A
Charted: N

+-----+
| Purpose(s) |
+-----+
| SUBDIVISION |
+-----+

THE ABOVE IS AN EXTRACT FROM CISP, A PARCEL BASED SURVEY PLAN DATA BASE, AN
SHOULD BE USED IN CONJUNCTION WITH A FULL SEARCH OF THOSE PLANS.
NextPlan(F11) NextForm(F12) Order_Plan(F13) Order_All(F14) >

Published on DES Disclosure
RTI Act 2009



17/05/96
3:42pm

3241M0001
GRAHAM W

2 X 15.00
PLU0701 CONT LAND SCH
SUBTOTAL
CHEQUE

30.00
30.00
30.00

17/05/96
3:45pm

3242M0001
GRAHAM W

PLU0701 CONT LAND SCH
SUBTOTAL
CASH

15.00
15.00
15.00

17/05/96
4:05pm

3243M0001
JOSEPH

PLU4116 BOOK 116
PLU4091 BOOK 091
SUBTOTAL
CASH
CHANGE

2.95
2.50
5.45
6.00
0.55

17/05/96
4:09pm

3244M0001
KAY

PLU0706 CONT LAND REP.
SUBTOTAL
CHEQUE

440.00
440.00
440.00

17/05/96
4:11pm

3245M0001
JOSEPH

PLU9183 GLAS 183
PLU9270 CARD 270
PLU4090 BOOK 090
SUBTOTAL
CR CARD

30.00
2.00
2.50
34.50
34.50

17/05/96
4:11pm

3246M0001
KAY

PLU0701 CONT LAND SCH
SUBTOTAL
CHEQUE

15.00
15.00
15.00

17/05/96
4:14pm

3247M0001
KAY

NS

0.00

17/05/96
4:27pm

3248M0001
GRAHAM W

PLU9049 PCRD 049
PLU9193 PCRD 193
PLU9048 PCRD 048
PLU9190 PCRD 190
PLU9691 CARD 691
PLU9630 PCRD630
PLU9193 PCRD 193
PLU9046 PCRD 046
PLU9192 PCRD 192
PLU9191 PCRD 191
SUBTOTAL
CASH
CHANGE

0.20
0.20
0.20
0.20
0.20
0.20
0.20
0.20
0.20
0.20
2.00
20.00
18.00

STRATEGIC ASSET MANAGEMENT
DEVELOPMENT MANAGEMENT BRANCH
Level 6
80 George Street
Brisbane Qld 4000
GPO Box 2457 Brisbane Qld 4001
CDE Box 52
Telephone (07) 322 44364
Facsimile (07) 322 46675



QUEENSLAND GOVERNMENT

Department of Public Works
and Housing

GOVERNMENT SERVICES GROUP

Reply to: Jason Furner
Phone: 322 44365
File Ref: 27485/1/1

16 May 1996

Hazardous Waste and Contaminated Sites Section
Department of Environment
PO Box 155
ALBERT STREET BRISBANE QLD 4002

Dear Sir/Madam

Re: *Howard Smith Wharf, Boundary Street, Fortitude Valley*

Please find enclosed:-

1. an application for a Site Contamination Report;
2. a cheque for \$440.00 being the statutory fee;
3. a Site History and Stage 1 Testing prepared by Golder Associates;
4. Extract from Government Land Register and Title Searches;
5. Registered Plans; and
6. a street map showing location of the property.

The Site History and Stage 1 Testing report is enclosed for review only. We request your comments of the appropriateness and completeness of the Stage 2 program outlined in this report.

Should you require clarification of the above or any further information contact Jason Furner on the abovementioned number.

Yours faithfully

s.73 Irrelevant information

M K Fischer
Manager, Development Management

enc

dmb24169xf.kb

File A

s.73 Irrelevant

Published on DES Disclosure Log
RTI Act 2009

Receipt

3244 ✓

("X78197
NAT. QLD.")

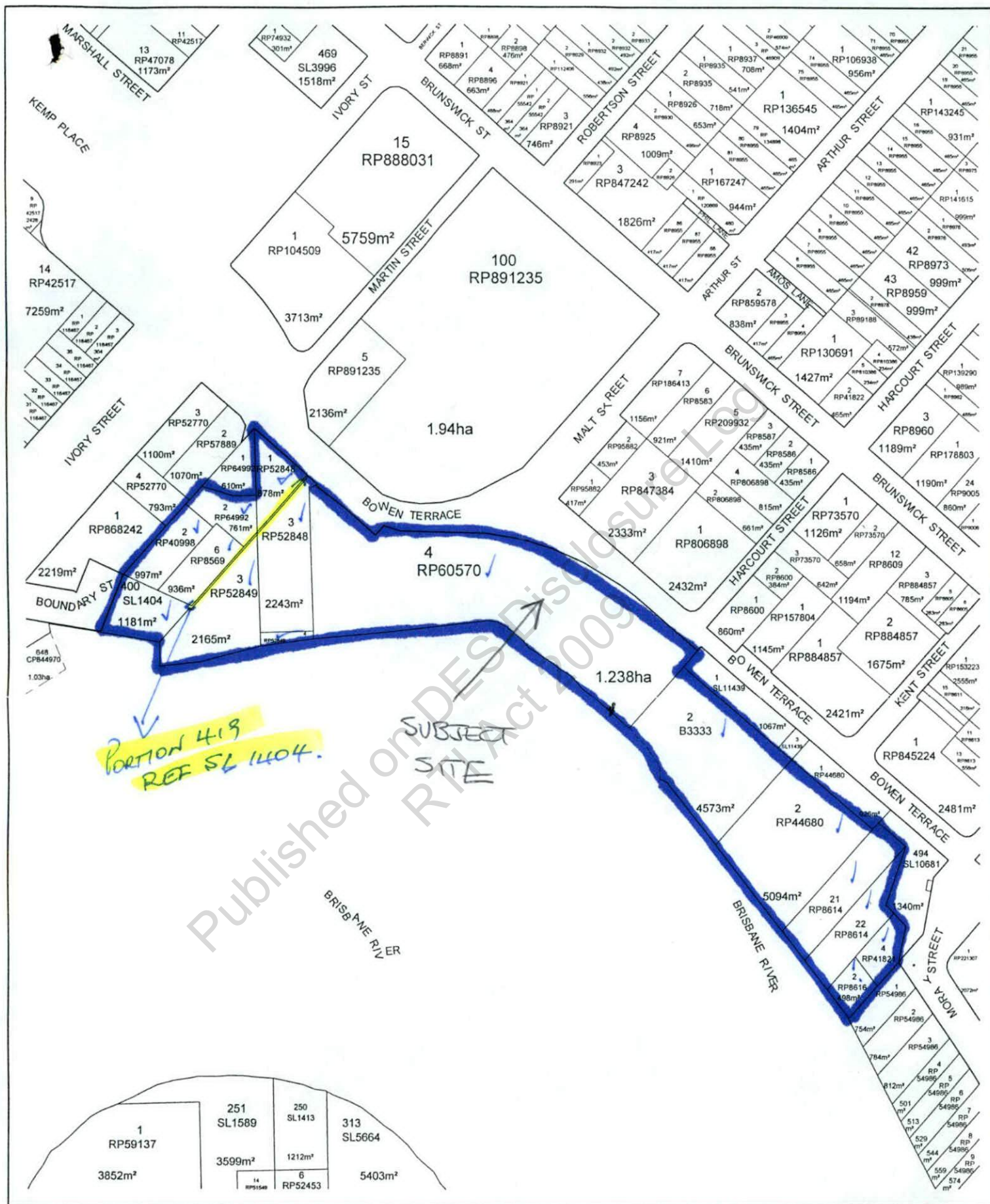
17/5/96

\$440



yes

P/copy of Receipt



STANDARD MAP NUMBER
9543-33313

MAP WINDOW POSITION



NEAREST LOCALITY



22-166

DESCRIPTION

LOT	4
PLAN	RP60570
AREA	1.238ha
TENURE	FH
LOCAL GOVERNMENT	BRISBANE
LOCALITY	FORTITUDE VALLEY
PARISH	NORTH BRISBANE
COUNTY	STANLEY
PRINTED	16/2/1996

CLIENT SERVICE STANDARDS

DCDB	16/1/1996
------	-----------

File A

BLINMAP

A Product of
BLIN

BASIC LAND INFORMATION NETWORK
An integrated network of Department
of Lands' databases.



Page 51 of 409

(C) The State of Queensland, Department of Lands.

GOVERNMENT LAND REGISTERPROPERTY REPORT

Produced: 07/08/1995 at 15:14

Last Updated: 05/01/1995

GLR No: 10891PROPERTY NAME: BRISBANE HOWARD SMITH WHARFPROPERTY ADDRESS: BOUNDARY STREET
BRISBANEOWNER ORGANISATION: 1015 ADMINISTRATIVE SERVICES DEPARTMENTOWNER PARTY: 34 ADMINISTRATIVE SERVICES DEPARTMENTCONTACT POSITION: GENERAL MANAGER PROPERTY GROUP PHONE: 07 224 6277

<u>REAL PROPERTY DESCRIPTION:</u>	<u>LOT</u>	<u>PLAN</u>
	2	B3333
	2	RP40998
	4	RP41821
	2	RP44680
	3	RP52849
	4	RP60570
	6	RP8569
	21	RP8614
	22	RP8614
	494	SL10681
	400	SL1404

TENURE: UNALLOCATED STATE LANDAREA: 4.0021 HATITLE REFERENCE: No titles existLOCAL GOVERNMENT: BRISBANELOCALITY: 1030 FORTITUDE VALLEYREGION:DISTRICT:DIVISION:FILE REFERENCE:PMP CATEGORY: OPERATIONAL LANDTOTAL LAND VALUE FOR PROPERTY: \$0TOTAL VALUE OF IMPROVEMENTS ON PROPERTY: \$0

Continued on next page



CURRENT TITLE SEARCH

DEPARTMENT OF LANDS, QUEENSLAND

Request No: 304496

Search Date: 18/04/1996 2:20 pm

Title Reference: 11966185

Date Created: 21/07/1936

Previous Title: 10985171
10985174

REGISTERED OWNER

THE CO-ORDINATOR-GENERAL OF PUBLIC WORKS

ESTATE AND LAND

Estate in Fee Simple

Lot 4 REGISTERED PLAN 52849
County of STANLEY Parish of NORTH BRISBANE

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10985171 (ESA 8A)
Deed of Grant No. 10985174 (ESA 8A)
2. LEASE No 601547894 (A322373) 16/02/1937
TO HOWARD SMITH LIMITED
FOR 21 YEARS
COMMENCING 01 JAN 1935
3. MORTGAGE No 601542810 (B778701) 27/09/1960
TO AUSTRALIAN MUTUAL PROVIDENT SOCIETY
4. TRANSFER No 700293408 19/10/1994 at 10:45
of
MORTGAGE: 601542810 (B778701)
to
QUEENSLAND TREASURY CORPORATION

ADMINISTRATIVE ADVICES - NIL

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

Requested By: External Token

COMPUTER FOLIO SEARCH

The Registrar of Titles hereby certifies that at the date and time specified in the statement of the computer folio search on the reverse side hereof -

- 1 The information shown in this statement [other than information shown in the section headed **ADMINISTRATIVE ADVICES** and **UNREGISTERED DEALINGS**] had been duly recorded, pursuant to the provisions of the relevant legislation, on the folio of the Register kept pursuant to the Land Title Act in respect of the land or lot described in that statement.
- 2 At the time of this Search Statement where the statement contains a section headed **REGISTERED OWNER** the person/corporation described in that section is the registered owner of an estate in fee simple [or such other estate or interest as is set forth in that section] in the land or lot so described, subject to such easements, encumbrances and interests as appear in the section headed **EASEMENTS, ENCUMBRANCES AND INTERESTS**.
- 3 In relation to information on a BUP/GTP Search Statement dealings have not been recorded unless the date of such recording appears. The information should never be used in lieu of a computer folio search.

NOTE

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Registrar of Titles



CURRENT TITLE SEARCH

DEPARTMENT OF LANDS, QUEENSLAND

Request No: 279866

Search Date: 07/02/1996 11:29 am

Title Reference: 11966184

Date Created: 21/07/1936

Previous Title: 10985171
10985174

REGISTERED OWNER

THE CO-ORDINATOR-GENERAL OF PUBLIC WORKS

ESTATE AND LAND

Estate in Fee Simple

Lot 3 REGISTERED PLAN 52848
County of STANLEY

Parish of NORTH BRISBANE

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10985171 (ESA 8A)
Deed of Grant No. 10985174 (ESA 8A)
2. LEASE No 601547894 (A322373) 16/02/1937
TO HOWARD SMITH LIMITED
FOR 21 YEARS
COMMENCING 01 JAN 1935
3. MORTGAGE No 601542810 (B778701) 27/09/1960
TO AUSTRALIAN MUTUAL PROVIDENT SOCIETY
4. TRANSFER No 700293408 19/10/1994 at 10:45
of
MORTGAGE: 601542810 (B778701)
to
QUEENSLAND TREASURY CORPORATION

ADMINISTRATIVE ADVICES - NIL
UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

Requested By: External Token

COMPUTER FOLIO SEARCH

The Registrar of Titles hereby certifies that at the date and time specified in the statement of the computer folio search on the reverse side hereof -

- 1 The information shown in this statement [other than information shown in the section headed **ADMINISTRATIVE ADVICES** and **UNREGISTERED DEALINGS**] had been duly recorded, pursuant to the provisions of the relevant legislation, on the folio of the Register kept pursuant to the Land Title Act in respect of the land or lot described in that statement.
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Registrar of Titles



CURRENT TITLE SEARCH

DEPARTMENT OF LANDS, QUEENSLAND

Request No: 279866
Search Date: 07/02/1996 11:29 am

Title Reference: 12378089
Date Created: 27/04/1948

REGISTERED OWNER

THE CO-ORDINATOR-GENERAL OF PUBLIC WORKS

ESTATE AND LAND

Estate in Fee Simple

Lot 419 CROWN PLAN SL1404
County of STANLEY Parish of NORTH BRISBANE

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 12378089 (POR 419)
2. MORTGAGE No 601542810 (B778701) 27/09/1960
TO AUSTRALIAN MUTUAL PROVIDENT SOCIETY
3. TRANSFER No 700293408 19/10/1994 at 10:45
of
MORTGAGE: 601542810 (B778701)
to
QUEENSLAND TREASURY CORPORATION

ADMINISTRATIVE ADVICES - NIL
UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

Requested By: External Token

COMPUTER FOLIO SEARCH

The Registrar of Titles hereby certifies that at the date and time specified in the statement of the computer folio search on the reverse side hereof -

- 1 The information shown in this statement [other than information shown in the section headed **ADMINISTRATIVE ADVICES** and **UNREGISTERED DEALINGS**] had been duly recorded, pursuant to the provisions of the relevant legislation, on the folio of the Register kept pursuant to the Land Title Act in respect of the land or lot described in that statement.
- 2 At the time of this Search Statement where the statement contains a section headed **REGISTERED OWNER** the person/corporation described in that section is the registered owner of an estate in fee simple [or such other estate or interest as is set forth in that section] in the land or lot so described, subject to such easements, encumbrances and interests as appear in the section headed **EASEMENTS, ENCUMBRANCES AND INTERESTS**.
- 3 In relation to information on a BUP/GTP Search Statement dealings have not been recorded unless the date of such recording appears. The information should never be used in lieu of a computer folio search.

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Registrar of Titles



CURRENT TITLE SEARCH

DEPARTMENT OF LANDS, QUEENSLAND

Request No: 279857
Search Date: 07/02/1996 11:25 am

Title Reference: 11966182
Date Created: 21/07/1936

Previous Title: 11753136
11955161

REGISTERED OWNER

THE CO-ORDINATOR-GENERAL OF PUBLIC WORKS

ESTATE AND LAND

Estate in Fee Simple

Lot 1 REGISTERED PLAN 52848
County of STANLEY Parish of NORTH BRISBANE

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 19549108 (ESA 7A)
2. MORTGAGE No 601542810 (B778701) 27/09/1960
TO AUSTRALIAN MUTUAL PROVIDENT SOCIETY
3. TRANSFER No 700293408 19/10/1994 at 10:45
of
MORTGAGE: 601542810 (B778701)
to
QUEENSLAND TREASURY CORPORATION

ADMINISTRATIVE ADVICES - NIL
UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

Requested By: External Token

COMPUTER FOLIO SEARCH

The Registrar of Titles hereby certifies that at the date and time specified in the statement of the computer folio search on the reverse side hereof -

- 1 The information shown in this statement [other than information shown in the section headed **ADMINISTRATIVE ADVICES** and **UNREGISTERED DEALINGS**] had been duly recorded, pursuant to the provisions of the relevant legislation, on the folio of the Register kept pursuant to the Land Title Act in respect of the land or lot described in that statement.
- 2 At the time of this Search Statement where the statement contains a section headed **REGISTERED OWNER** the person/corporation described in that section is the registered owner of an estate in fee simple [or such other estate or interest as is set forth in that section] in the land or lot so described, subject to such easements, encumbrances and interests as appear in the section headed **EASEMENTS, ENCUMBRANCES AND INTERESTS**.
- 3 In relation to information on a BUP/GTP Search Statement dealings have not been recorded unless the date of such recording appears. The information should never be used in lieu of a computer folio search.

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Registrar of Titles



CURRENT TITLE SEARCH

DEPARTMENT OF LANDS, QUEENSLAND

Request No: 279857
Search Date: 07/02/1996 11:25 am

Title Reference: 11966183
Date Created: 21/07/1936

Previous Title: 11753136
11955161

REGISTERED OWNER

BUREAU OF INDUSTRY

ESTATE AND LAND

Estate in Fee Simple

Lot 2 REGISTERED PLAN 64992
County of STANLEY Parish of NORTH BRISBANE

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 19549108 (ESA 7A)

ADMINISTRATIVE ADVICES - NIL
UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

Requested By: External Token

COMPUTER FOLIO SEARCH

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- 1 The information shown in this statement [other than information shown in the section headed **ADMINISTRATIVE ADVICES** and **UNREGISTERED DEALINGS**] had been duly recorded, pursuant to the provisions of the relevant legislation, on the folio of the Register kept pursuant to the Land Title Act in respect of the land or lot described in that statement.
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Registrar of Titles

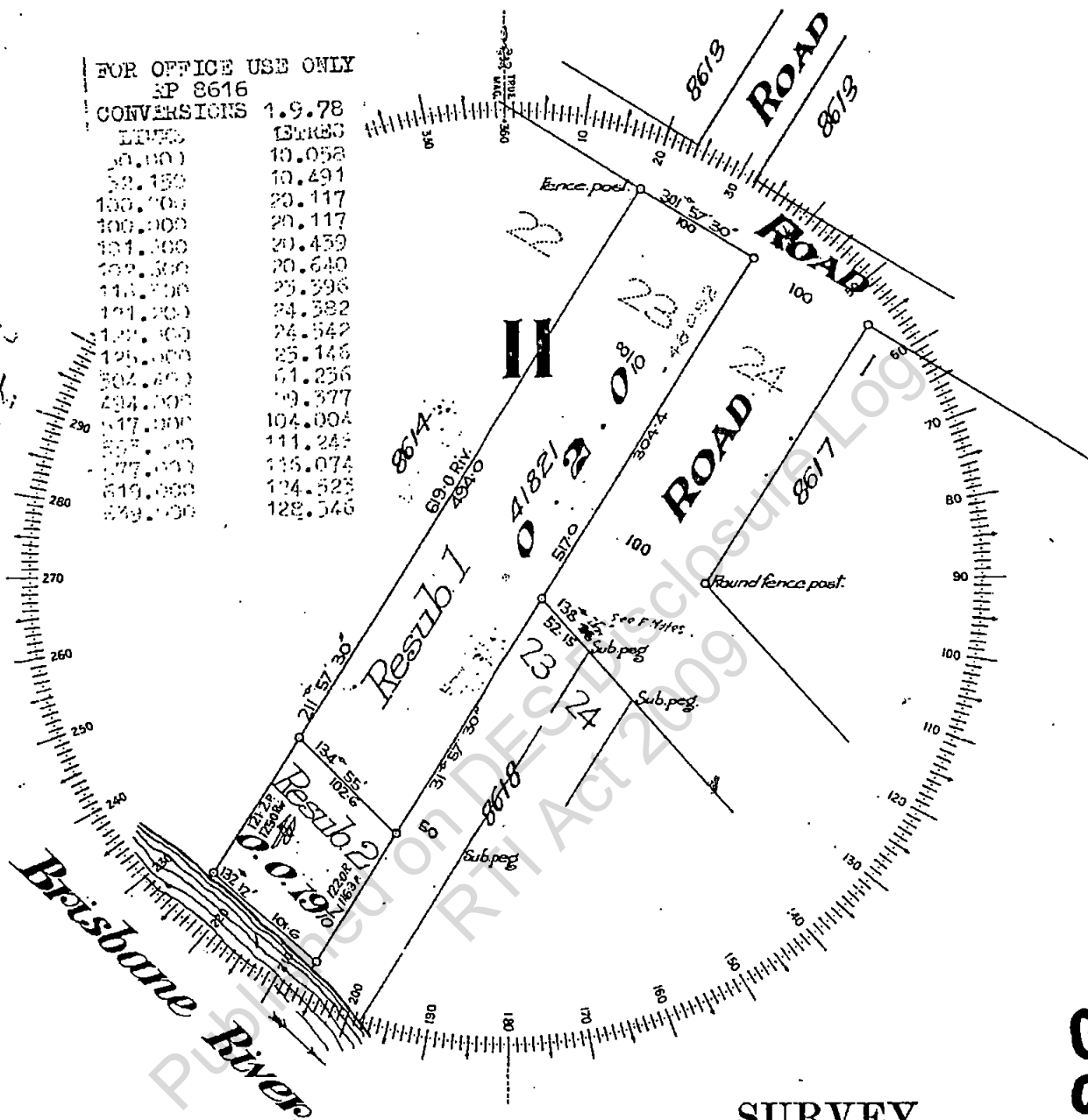
Result 1. Transferred to the Crown

FOR OFFICE USE ONLY

EP 8616

CONVERSIONS 1.9.78

FEET	METRES
50.000	10.058
52.150	10.491
100.000	20.117
100.000	20.117
101.000	20.439
102.000	20.640
110.000	25.396
121.000	24.382
122.000	24.542
125.000	25.146
202.000	61.256
204.000	69.377
217.000	104.004
227.000	111.249
277.000	136.074
280.000	124.523
289.000	128.546



SCALE One chain to an inch.

As Proprietor of this land, I agree to this Plan of subdivision, and dedicate the new roads shown hereon to public use.

Signature of Proprietor

s.73 Irrelevant information

SURVEY
OF SUBDIVISIONS 1 & 2 of Sub 23
OF ALLOTMENT 11

OF SECTION

COUNTY OF

PARISH OF

Stanley
North Brisbane

Cat. No. B1-1913

8616

s.73 Irrelevant information

s.73 Irrelevant information

8616

2886

CISP
M.F.

948371

5016

THIS PLAN should be ROLLED not folded.

CT 27197.13

NOT 4-RP 41821

Claude Ernest James of Brisbane
 Authorised Surveyor, do hereby solemnly and sincerely declare that I have faithfully and truly surveyed, measured, and marked on the ground the parcel of land herein referred to, and that the measurements and boundaries given in this plan are correct; and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the "Oaths Act of 1907."

s.73 Irrelevant information

Made and Signed at *Brisbane*, this *20th* day of *July* 1925 before me

Signature of Registrar of Titles or of a Magistrate

s.73 Irrelevant information

The Council of the City of Brisbane consents to this plan of subdivision, subject to easements, if any, required by the Metropolitan Water Supply and Sewerage Board.

s.73 Irrelevant information

Deputy Mayor

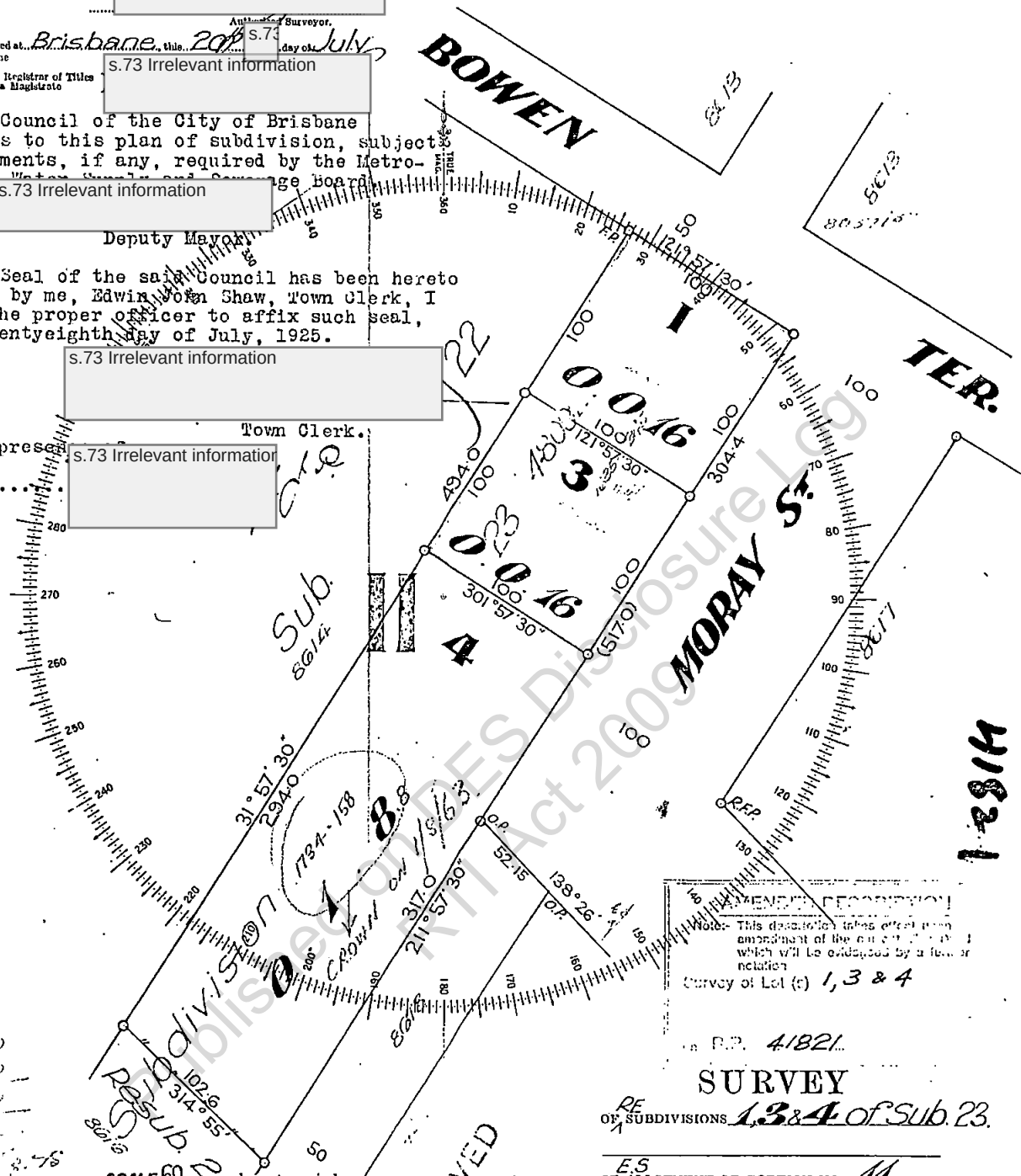
The Seal of the said Council has been hereto affixed by me, *Edwin John Shaw*, Town Clerk, I being the proper officer to affix such seal, this twenty-eighth day of July, 1925.

s.73 Irrelevant information

Town Clerk.

In the presence

s.73 Irrelevant information



MEMORANDUM
 This description refers to the plan of subdivision of the land of the City of Brisbane, which will be embodied by a full or partial survey of Lot (c) 1, 3 & 4

in P.P. 41821

SURVEY

OF SUBDIVISIONS 1, 3 & 4 of Sub. 23.

OF ALLOTMENT OR PORTION NO. 11

OF SECTION

COUNTY OF *Stanley*

PARISH OF *North Brisbane*

Cat. No.

41821 CISP

s.73 Irrelevant information

Signature of Proprietor

s.73 Irrelevant information

1 ROD & 10 PERCHES

= 1234 m²

LOT 2 RP 44680

CT 20361 150-107 Sub 4A

CT 155361 955-107 Sub 8A

8603
8607

Resub 2 see RC 110280

LOT 1 See 15 29353 (ET)

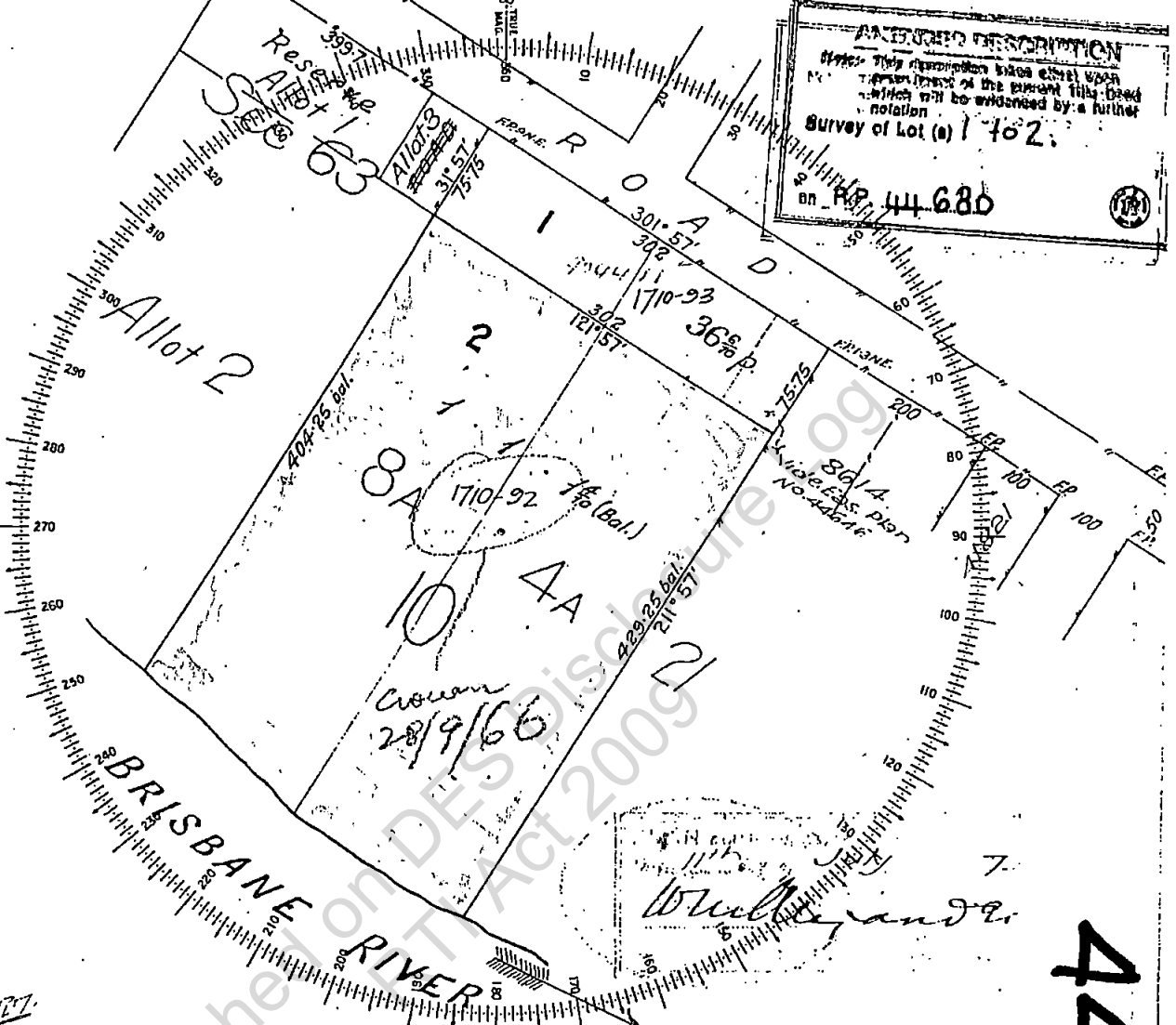
A 22460

ANNECED DESCRIPTION

Order: This description is based upon
the plan of the present title, based
which will be evidenced by a further
notation

Survey of Lot (a) 1 to 2.

on RP 44680

60570A
64091B
64992AFor Additional Plan &
Document Notings
Refer to CISP50
10-00
15-00
8607

I certify that Resub 2 has been correctly
compiled from my Survey as shown in
black figures and from Plan in the Office
of the Registrar of Titles, Brisbane, as shown
in brown figures.

s.73 Irrelevant informa

71396
3

Authorised Surveyor.

FOR LOT DESCRIPTION
SEE ABOVE

CITY OF BRISBANE

SURVEY

15 JUN 1927 Re
OF SUBDIVISIONS 1/2 of Subs 4A & 8AP. Subn.
OF ALLOTMENT OR PORTION NO. 10

OF SECTION -

COUNTY OF Stanley (L. 1/2)

PARISH OF North Brisbane

Cat. No. 44680

FOR LOT DESCRIPTION
SEE ABOVE

GSP

M.F.

As proprietors of Parcel 1 of the above title and on behalf
of the owners of Parcel 2, Brisbane City Council, the successors of the
Council of the City of Brisbane, we and the owners of the
the new roads shown hereon do hereby agree to this plan of subdivision, and dedicate
the new roads shown hereon to public use.

s.73 Irrelevant information

Signature
of Proprietor

Town Clerk

44680

1 ACRE 1 ROD 1 4/10 PERCH

= 5094 M²

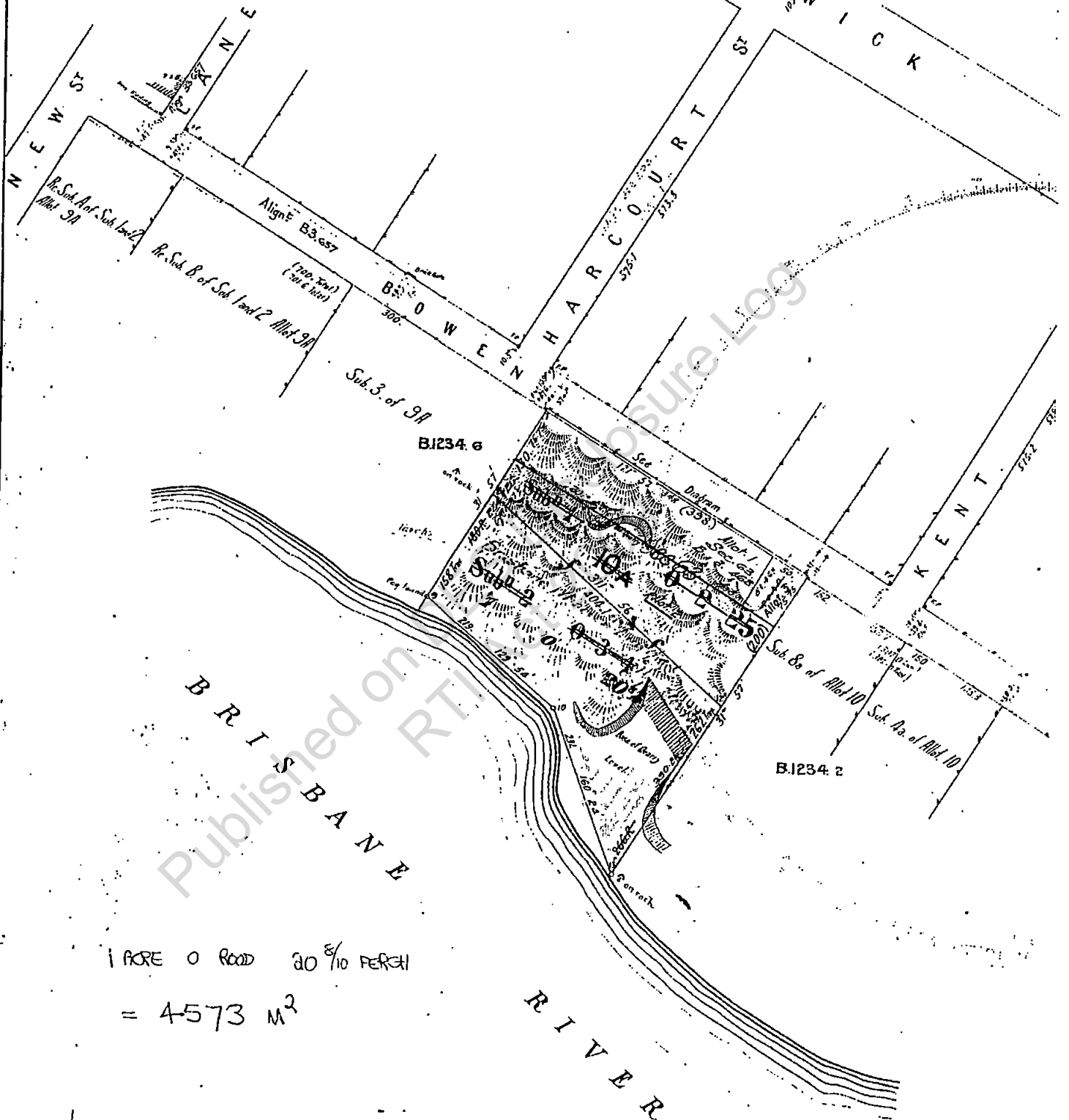
LOT 2 - B33333

Reference to Traverse
and Road Sections.

Line	Bearing	Dist
------	---------	------

Particulars

Line	Bearing	Dist	Remarks
------	---------	------	---------



1 ACRE 0 ROD 30 ⁸/₁₀ PERCH
= 4573 M²

I hereby certify that I, in person, made, under the May 1861
completed the survey represented by this plan on which are written
the bearings and lengths of the lines surveyed by me, and that the
survey has been executed in accordance with the existing re-
gulations of the Surveyor General's Department.

s.73 Irrelevant information

10 US. D. 12 1908.

10 US. D. 12 1910.

Meridian Observations

(This form can also be adapted to stellar observations.)

Date	Time	Lat.	Long.	Baromet.	Thermom.	Wind	Direction	Force	Remarks

NOTE: Observing distance in miles by the light of day.

B33333

LOT 22 RP 8614
 LOT 22 RP 8614

Subs 21&22 See F.N. H 387
 Subs 21&22 Transferred to the Crown
 Subs 21&22 See RC110280

PLAN

Subdivision No. 21, 22, 23, 24 & 25 of Portion No. 11,
 Parish and Town of

NORTH-BRISBANE,
 COUNTY OF STANLEY.

s.73 Irrelevant information

SCALE: ONE CHAIN TO ONE IN
 BOWEN TERRACE.

FOR OFFICE USE ONLY
 RP 8614
 CONVERSIONS 31.178
 LINKS
 100.000 101.590
 505.000 101.590
 529.000 105.418
 553.000 111.246
 577.900 116.074
 601.000 120.902
 625.000 125.750

This is the Plan referred to in my declaration of

April 26th 1872, and

numbered 14/17 s.73 Irrelevant information

Being seized of the Land herein delineated, I

approve of this Plan.

s.73 Irrelevant information

Declarator.
 s.73 Irrelevant information

For Additional Plan &
 Document Notings
 Refer to CISP

8614

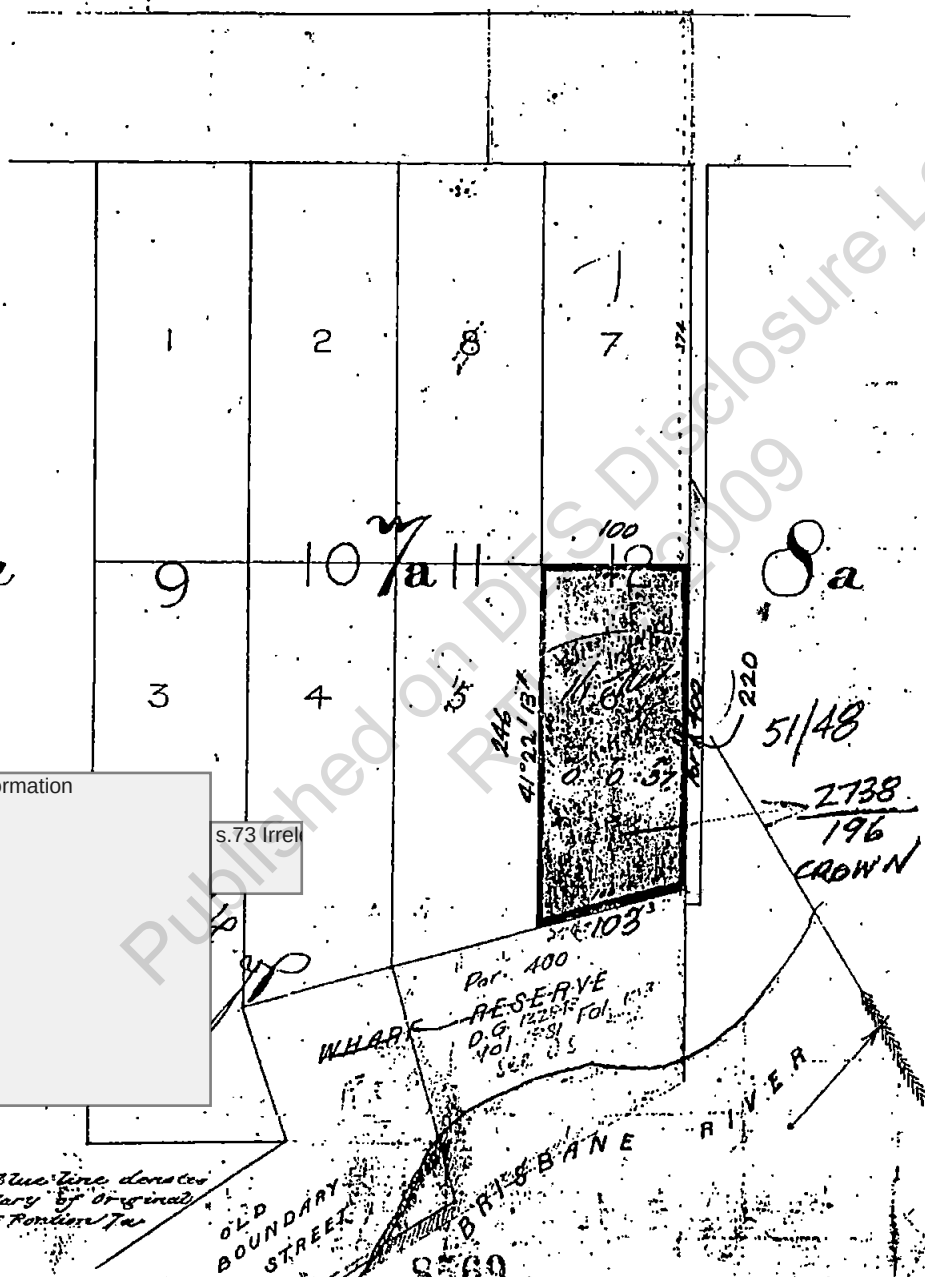
CISP

LOT 6 RP 8569

PLAN of 37 Perches
being Subdivision 6 in Orig^l Subdivision 12

PORTION 7A
NORTH BRISBANE

Scale 1 chain to an Inch



s.73 Irrelevant information

s.73 Irrel

Note the blue line denotes the boundary of original Survey of Portion 7A

FOR LOT DESCRIPTION
 SEE OVER

8569

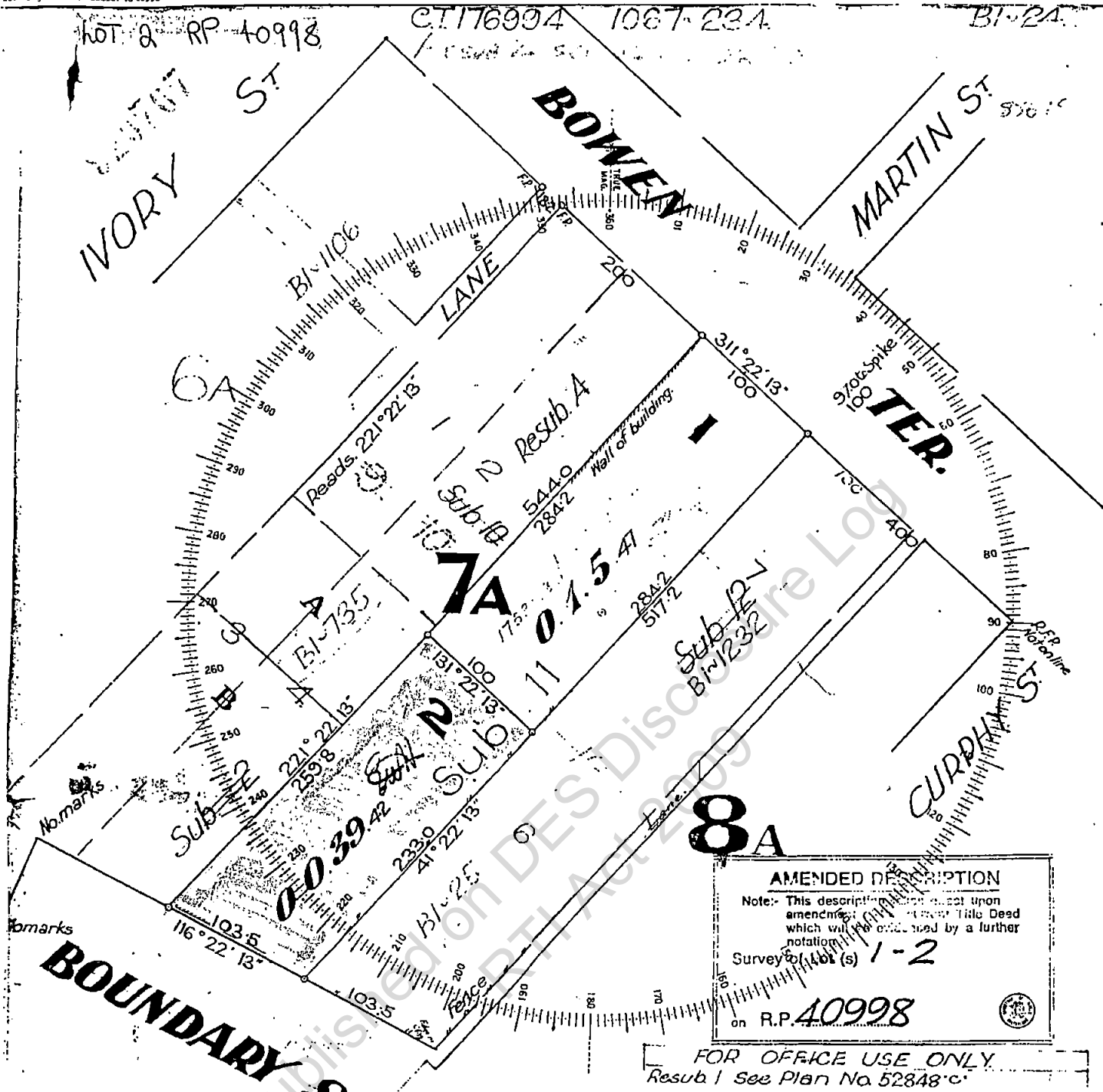
37 PERCH

= 936 M²

File A

CISP

8569



For Additional Plan & Document Notings Refer to CISP

AMENDED DESCRIPTION

Note: This description is based upon amendments to the original Title Deed which will be effected by a further notation

Survey of Lot (s) 1-2 on R.P. 40998

FOR OFFICE USE ONLY. Resub 1 See Plan No 52848-c

SURVEY

RE OF SUBDIVISIONS 182 of sub 11

ES. OF ALLOTMENT OR PORTION NO. 1A

COUNTY OF Stanley

PARISH OF North Brisbane

CISP Cat. No 40998

39.42 PERCH

= 997 M2

File A

22-166

Plan Number: RP40998 Printed: Tue Aug 8 09:47:46 1995

**** NOT TO SCALE ****

Page 70 of 409

hot 2. RP 6499a:

s.73 Irrelevant info

M. Q. 13.

Made and signed at Brisbane this 14th day of May,
1897, before me

s.73 Irrelevant info

Signature of Registrar of
Land & Municipalities

Signature of Registrar of
of a Municipality

Signature of Registrar of
of a Municipality

Verify that this plan has been correctly copied & compiled from my survey (as shown in black figures) & from Plan Ent. No 52848^c in the Registrar of Titles Office Brisbane (as shown in brown figures hereon).

s.73 Irrelevant in
auth. surveyor. v. *undis.*
14.6.1947

[illegible]

THE BRISBANE CITY COUNCIL CONSENTED
TO THIS PLAN OF SUBDIVISION.

s.73 Irrelevant information

Deputy TOWN CLERK

575092

64285

TERRACE

8A

RIVER

—CITY OF BRISBANE—

SURVEY

Sub A (Esmt) of Pops 400 & 419 of Res 6 of Sub 12
 & of Res 1 of Sub 7 of ESA 1A & of Res 11 of Sub 2
 of Resub. 2. of Sub 1 of ESA 8. Sub 162
 of Resub 2 of Sub 7 of Res 1 of Sub 162 of ESA 1A

COUNTY OF Stanley
PARISH OF North Brisbane

Cat. No. 64992

AMENDED DESCRIPTION

Note:- This description takes effect upon amendment of the current Title Deed which will be evidenced by a further notation.

Survey of Lot (s) 1 and 2

Survey of Lat (

AP 64992

SCALE 60

As Proprietor of this land, ~~the~~ ^{the} ~~ordinating~~ ^{ordinating} ~~Secretal~~ ^{Secretal}
and dedicating the same ~~here~~ ^{here} ~~shown~~ ^{shown} ~~designed~~ ^{designed} to public use.

Signature _____

and Proprietors

Received 77: 10 18 48
03/87 at 11 20 a.m. S
Examined 21: 2 19 50 86
Discovered 77: 2 19 50 86
s.73 Irrelevant info
Disturbances in Groups 6
TITLES OF: ...

s 7.3 Irrelevant info

U 90:157-158 in Q. 157-158
TITLES OF THE PAGES

CONFIRMATION GENERAL DE RECEPTE

64992

Plan Number: KP64992 Printed: Tue Aug 8 09:47:46 1995
**** NOT TO SCALE ****

22-166

30 1/2 PERCH

$$= 761 \text{ N}^2$$

Page 71 of 409

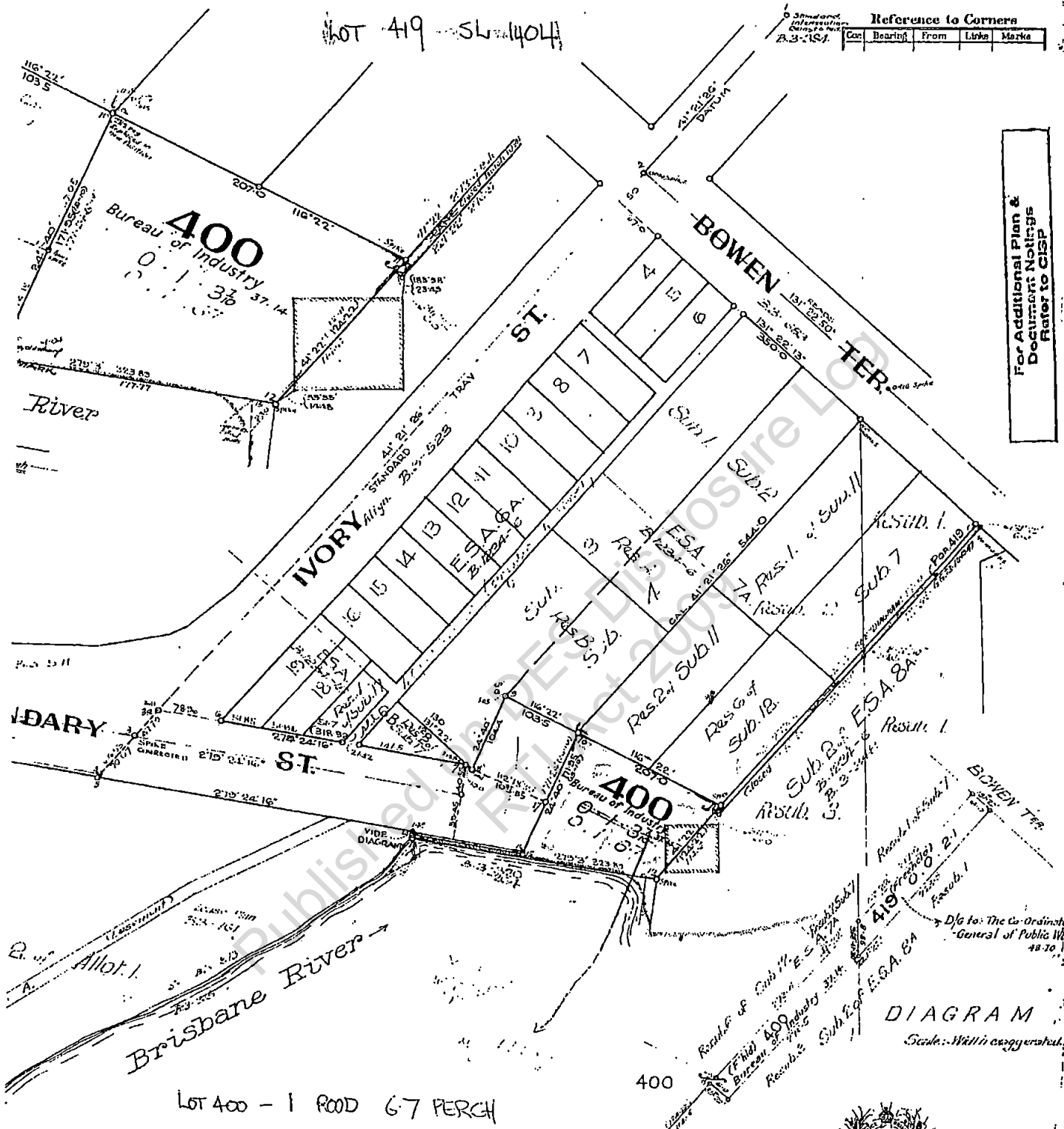
Stars	Color	Remarks

36/1401
L.S.B.

LOT 400 SL 1404

LOT 419 SL 1404

Reference to Corners	Con	Bearing	From	Links	Mark
0 Standard Information B.S. 187					

For Additional Plan &
Document Notings
Refer to CISP

Lot 400 - 1 ROD 6.7 PERCH

= 1181 M²

Lot 419 - ?

SURVEY OFFICE
11401 17 APR 1936
QUEENSLAND

Date of Instructions... 8th April 1936
Date of transmission of plans &c... 17th April 1936
Examined by... 17th April 1936
Voucher N^o 1401... Passed for payment...
Sales Register Vol... Fol...
Calculation Book N^o 1010

Scale... 1 Chain to an Inch.

PLAN OF

PORTION N^o 400 & 419
PARISH OF North Brisbane
County of Stanley
Land Agents Brisbane
District of
Cal. N^o **SL 1404.**



Unit 12, 97 Castlemaine Street
Milton, Qld 4064, Australia
(PO Box 1734, Milton BC, 4064)
Telephone (07) 3217 6444
Fax (07) 3217 6700



REPORT ON

SITE CONTAMINATION ASSESSMENT

STAGE I

HOWARD SMITH WHARF

FORTITUDE VALLEY BRISBANE

Submitted to :

Administrative Services Department
Property Services Branch
c/- CMR Pty Ltd
157 Ann Street
Brisbane Queensland 4001

DISTRIBUTION:

3 Copies - Administrative Services Department - Property Services Branch
2 Copies - Golder Associates Pty Ltd

April, 1996

96638005(E)

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1.0 INTRODUCTION

Subsequent to the initial site history study, this Stage I contamination assessment study has been carried out on the Howard Smith Wharf site in order to determine the extent of contamination in fill materials identified at the site, and to assess the extent of any arsenic contamination of timber structures in the former wharf facilities.

It is understood that the investigation is required to assist the joint State Government and Brisbane City Council committee currently assessing redevelopment options for the site.

The real property descriptions and tenure status of parcels of land which are covered by this assessment are shown in Table 1 below.

TABLE 1 - LOT AND PLAN DETAILS

Property No.	Description	Tenure Status	Proprietor	Area m ²
1	Lot 4 RP 41821	Vacant Crown Land	Crown	1121.7
2	Lot 22 RP8614	Vacant Crown Land	Crown	1534.9
3	Lot 21 RP8614	Vacant Crown Land	Crown	1893.2
4	Lot 2 RP44680	Vacant Crown Land	Crown	5093.9
5	Lot 2 B3333	Vacant Crown Land	Crown	4567.9
6	Lot 4 RP60570	Vacant Crown Land	Crown	12360.4
7	Lot 3 RP52849	Vacant Crown Land	Crown	2165.1
8	Lot 6 RP8569	Vacant Crown Land	Crown	935.8
9	Lot 2 RP40998	Vacant Crown Land	Crown	997.0
10	Lot 400 SL1404	Vacant Crown Land	Crown	1181.2
Sub Total				31851.2
11	Lot 2 RP52849	Freehold	Coordinator General	187.2
12	Lot 3 RP52848	Freehold	Coordinator General	2190.4
13	Lot 419 SL1404	Freehold	Coordinator General	40.5
14	Lot 1 RP52848	Freehold	Coordinator General	878.2
15	Lot 2 RP64992	Freehold	Coordinator General	761.3
TOTAL				4057.5

1.1 Scope of Work

This Stage I contamination assessment has been undertaken to provide an appreciation of the risk of significant contamination of soil or groundwater at the site due to past activities. A document titled "Important Information About Your Environmental Site Assessment" is attached as Appendix D to this report.

1.2 Methodology

This Stage I contamination assessment study was undertaken by an environmental engineer from our Brisbane office. The site history for the assessment was based on information from the following sources:

- Aerial photographs of the site (1994, 1987, 1982, 1978, 1972, 1958 and 1946).
- John Oxley Library
- Interviews with Messrs Richard Bartley, John Dickson and Cedric Nash, all s.73 Irrelevant
s.73 Irrelevant members of the Water Police s.73 Irrelevant.
- The Brisbane City Council
- Commonwealth Archives
- Interviews with previous Works Department employees at the site, Messrs Steve McCoy (formerly Works Vehicle maintenance section at the site), Dennis Hood (Works Department furniture auctions and timber joinery formerly at the site) and Ken Cronin (formerly in the Works Department plant storage section at the site).
- Historical plans held by the Administrative Services Department.
- The Administrative Services Department Historical Section.

- Information provided by Allom Lovell Marquis-Kyle.

An initial assessment was made based on the compiled site history, focussing on possible areas of concern. Two filled areas, a former underground fuel tank, and potential arsenic contamination of timber structures in the wharf facilities were the main areas of concern identified in the initial site history study. This Stage I contamination assessment study has focussed on the target areas, with test pitting in the two fill areas and the former underground fuel tank area, and a single wood sample taken for analysis from each of the former wharf storage sheds (No2, No3 and No4 sheds). Parameters for the Stage I investigation were selected based on the site history, with heavy metal and organochlorine pesticide screens proposed for sampled fill materials, total petroleum hydrocarbon (TPH) analysis carried out on samples from the former underground fuel tank area, and arsenic analysis of the wood samples.

2.0 SITE HISTORY

2.1 Past Usage

General

Wharf facilities have been located on or near the site since before the turn of the century, with a Boundary Street Wharf and Collins Wharf shown on the river at this point on a historical plan from the period (1900). Historical photographs of the site from this period show the two separate wharf facilities on the river with residential housing near the river on the western part of the site.

It appears from the records that residential housing was never located on the eastern part of the site, with this part of the site (New Farm end) the last to be fully developed.

Plans of the site dating from the 1930's show the wharfing facilities at the site to be well established, with four or five major sheds extending from Boundary Street to the New

Farm end, where three smaller sheds were indicated. Historical photographs from this period (1932 and 1934) show the wharves in use, with bales of wool stacked for transport. Further inspection of these photographs show most of the site (access road between the wharves and the cliffs) to have been concreted at this time.

The wharf facilities which existed at the site prior to around 1938 were removed around this time with the remainder of the site subject to extensive modification. The river was widened and the river bank associated with the previous wharves excavated and removed. As a consequence any contamination of soil materials on the river bank occurring prior to around 1938 would have been removed with the excavated river bank materials. Photographs of the excavation carried out show excavation of predominantly rock material from the bank as part of the river widening operations. Any arsenic contaminated construction materials from the previous wharf buildings are likely to have been removed from the site as part of the demolition operations.

The photographic record of the post-1938 wharves begins in 1938. A historical photograph taken in this year shows the current No. 4 and No. 5 sheds with the quay line (which was greatly reduced following the destruction of the 1974 floods) at its original extent. The section of wharf adjacent to No. 5 shed was roofed at this time. Also clearly shown in the photograph are the premises of Australian Gypsum Products Pty Ltd, plaster manufacturers who occupied a site adjacent to the cliffs, and No. 5 shed at the New Farm end of the site. Australian Gypsum Products were listed in records as being on the site until 1944, at which time plaster manufacturers Australian Plaster Industries (API) were also at the site. From 1945 only Australian Plaster Industries were listed at the site, and this latter company may have been the descendant of the original Australian Gypsum Products (i.e a name change or sale of the same industrial premises). The API building appears at the site on aerial photography as late as 1958, but had been demolished and removed by 1972. The API building slab is still in place at the site.

Various smaller sheds were identified at the New Farm end of the site. One small shed, for which the slab is still in place at the site, dates from the 1946 photography, with a second shed (for which a second slab also exists at the site) present on 1958 aerial photography. These two sheds are likely to have been associated with the Plaster Factory

operations, and were still present on 1987 photography. Three smaller sheds adjacent to the cliff face, noted on 1982 and 1987 photography, may have been demountable buildings. It is known from the site history that at least one of these sheds (probably one of the larger ones associated with the plaster factory) was used by the Works Department (mid 1960's to around 1990) as a spray painting/detailing workshop.

Plans of the wharf dating from 1946 identify a small garage near the site entrance, with a shelter nearby used as an oil store (refer Figure 1).

A small incinerator was also located at the site.

Water Police

The Water Police are likely to have occupied the current site at Howard Smith Wharf since around 1964, with a plan dated 17-10-63 showing the proposed conversion of the shipping company office building and adjacent shed (No. 2 shed) for the water police.

The water police headquarters remains in the original building, however their gear storage and minor maintenance area was moved from No. 2 to No. 3 shed following termite damage in No. 2 shed's roof structure. They later moved from No. 3 shed to No. 5 shed due to a lack of structural integrity in No. 3 shed's floor.

The water police have carried out minor maintenance activities in all three sheds, with fuel storage in a bunded above ground tank near the headquarters (diesel) and a small flammable goods store in the same area. The water police have never stored or used any chemicals apart from fuel and small quantities of oil (as mentioned above).

State Government Facilities

The date which the Works Department established its facilities at the site is unclear, however based on the modifications made around the mid 1960's it is likely to be around this date.

Based on interviews with water police personnel who have been at the site since 1976, and former Works Department employees at the site (various employees who have been at the site from 1982 to 1990) the Works Department had three main sections at the Howard Smith Wharf site; a Plant Section, a furniture joinery and auctions area and vehicle maintenance section. The Housing Commission also had a vehicle maintenance and panel beating operation at the site.

These areas are shown on Figures 1 and 2 attached along with other historical detail.

The Works Department vehicle maintenance area was located in the eastern half of No. 4 shed. Waste oil was stored in drums for removal, with fuel dispensed from two bowzers at the eastern corner of the shed. The petrol bowser was connected originally to an underground tank, being later connected to a bunded above ground tank, with the diesel bowser connected to an overhead tank across the roadway (piping was installed beneath the concrete strip).

The western part of No. 1 shed and No. 3 shed were also used by the Works Department for construction of furniture (joinery) and furniture auctions, being used later for storage. No significant chemical or fuel storage was associated with these operations.

The Plant Section stored items such as scaffolding, cement mixers, etc. The largest mechanical equipment they stored were small front end loaders ("dumpy trucks") used by the Brisbane City Council. They stored no fuel or chemicals with the exception of LP gas, and all maintenance was performed by the maintenance section.

The Housing Commission workshop was located beneath the Story Bridge on a concrete slab. It is not known how they disposed of their waste oil, however three separate individuals confirmed they did not store fuel but obtained it from the bowzers near the vehicle maintenance area.

Customs Facilities

Discussions with long serving members of the water police revealed that No. 5 shed was used as a clearing house by Customs. The shed floor was concreted at this time and it is unlikely any great quantities of fuel or chemicals were stored here during this period.

Health Department Radiation Store

The Health Department used a converted bomb shelter at the site for storage of low level radioactive waste from around 1973 to 1995. The waste comprised mainly decommissioned x-ray machines.

2.2 Current Site

Water Police

The Water Police currently occupy their headquarters near the site entrance and No. 5 shed (New Farm end), with fuel storage adjacent to their headquarters as described earlier.

Q-Build

Q-Build currently store miscellaneous pieces of machinery and stone for their masonry operations in the eastern part of the site (once occupied by API plaster manufacturers). They still use No. 3 and No. 4 sheds for storage purposes, and have a stone cutting machine and associated above-ground triple interceptor and sediment storage tank located at the east end of No. 4 shed.

Housing Commission Workshop

The area in which the former Housing Commission workshop was located was inspected as part of the survey. The concrete is intact, and the open stormwater drain at the base of the cliff demonstrated no visual evidence of TPH contamination. The concrete extends to the

in situ rock of the cliff face, and there appears to be no potential for residual soil contamination.

Introduced Fill

A small area of introduced fill was identified at the site. This is shown on Figure 1. Discussions with Richard Bartley (Water Police) revealed a quantity of soil material was imported to the site from the Transit Centre site around 1985/1986 for "site beautification" purposes. The soil was spread over the remaining rock and timber structure of the wharf in the former location of No. 1 shed, with grass later grown in the area.

General

It is understood that No. 2 shed is currently unused, with the remaining sheds (with the exception of the Water Police shed - No. 5) used for only for storage. The greater proportion of the site is either covered with concrete or appears as in situ rock. Inspection of the existing wharves and concrete apron revealed that the extent of any fill materials beneath the slab or surrounding the concreted areas was minimal with existing sheds positioned directly on substantial concrete slabs or timber structure on rock. Examination of a trench cut at the base of the cliff revealed that the concrete was laid directly on the natural rock with minimal sub-base material.

The small garage area and oil storage area (1946) near the site entrance shows no evidence of TPH contamination. The air raid shelter used as an oil store has a concrete base, and the small former garage area appeared as bare concrete consistent with the rest of the hardstand, with the exception of two small rectangular sections which may have been maintenance pits.

The above ground tanks associated with the Works Department operations and the two bowsers have been removed.

Various small sheds and demountable units are located along the cliff base at the site. Following inspection it was determined these are unlikely to be associated with any soil contamination.

3.0 ENVIRONMENTAL ASSESSMENT

3.1 General

Given the size of the site, it appears from the Stage I studies that minimal fill materials have been used to develop the site. A concrete slab founded directly on the in situ rock covers most of the site, extending in most areas from the river bank to the toe of the cliff face. Exceptions to this are the Q-Build storage area at the New Farm (eastern) end of the site, a small area of introduced fill adjacent to the site entrance and some areas of the bank which may have been raised above natural levels to accommodate the wharf structures and associated concrete apron.

The former location of the small incinerator was inspected and no ash materials or other remnants of the incinerator were identified. No significant soil materials were identified here, with concrete extending to the toe of the cliff. The possibility of lead contamination from maintenance activities on the Story Bridge (i.e lead based paint stripping) was considered and not thought to be significant due to the total coverage of the area with hardstand and the lack of available soil materials for contamination.

Based on the initial site history study, areas at the site which may have been potentially contaminated were identified as follows:

- Potential contamination of soils (in so far as they exist on the site) adjacent to the former underground petrol tank, bowser area and associate piping and above ground diesel tank, bowser area and associated piping.
- Possible general contamination of soil material at the New Farm end of the site from a range of industrial activities carried out in this area (Plaster manufacture factory,

Works Department panel beating shed, other unidentified activities carried out in now demolished buildings).

- Possible contamination of buildings with Arsenic, as associated with wool and hide storage.
- Possible contamination of imported fill sourced from the Transit Centre site (i.e former rail yards).

The radiation storage area (now decommissioned) was found to demonstrate no elevated radiation levels in either soil or dust samples or in the ambient environment in the two surveys carried out. The sensitivity of the survey was stated as adequate for health survey purposes by Radiation Health Staff, and a letter regarding the final survey results is attached as Appendix A.

3.2 Field Work

The field work was carried out during the week 25 - 29 March 1996 using a backhoe and wood sampling equipment. The studies were carried out in the presence of an environmental engineer from our Brisbane office who logged soils encountered and obtained representative samples. Seven test pits were excavated and on the site. One sample of wood was removed from the structure on site, using a chisel. Care was taken in sampling procedure to ensure that cross contamination of samples did not occur and the samples were appropriately stored for subsequent laboratory testing. A Photoionisation detector (PID) was used to detect any volatile gases. The PID was calibrated using Iso Butylene Gas on the day of use. The reports of the test pits are attached as Appendix B and the Test Pit locations are shown on Figures 1 and 2.

The soil sampling equipment was washed and triple rinsed prior to the collection of each sample. The sampled soil was then placed in the correct pre-treated jars, with no head space, and placed in an esky. These samples were kept cool in the esky, and submitted to Australian Laboratory Services Pty Ltd, a NATA registered laboratory for these analytical

procedures. The analytical results have been summarised in Tables 1 and 2 and the analytical documentation has been included as Appendix C.

3.3 Assessment Criteria

In order to provide benchmarks for the assessment of the degree of contamination found in soil, three criteria were used:

- The DoE Investigation Thresholds (CHEM Unit 1992). These are "trigger" levels above which further investigation is required, and are more applicable for preliminary investigations.
- The Dutch B levels. These are also investigation thresholds, and are used when no DoE criteria for further investigation are available.
- The Dutch Intervention levels (1994). These are clean-up criteria calculated based on risk assessment methodologies, and represent the upper limit of concentrations which can remain in-situ before significant environmental or human health risk is incurred.

At present the DoE do not have clean-up criteria, but do present health-based thresholds for arsenic and lead.

3.4 Fill Material

A total of six test pits were excavated in the fill materials at the site. As proposed two of these test pits were excavated in the recently introduced fill placed near the site entrance (TP1 and TP6), with four test pits excavated in the fill present at the New Farm end of the site (TP2 to TP5).

Between one and two samples were taken per test pit, with all samples submitted for screening for selected heavy metals (Cu, Cr, Cd, As, Hg, Pb, Zn). Additional samples were also chosen for analysis for organochlorine pesticides (7 analyses) and polyaromatic

hydrocarbons (a single sample was submitted for PAH due to the presence of ash material in TP4).

Heavy Metals

The results of the heavy metal analyses are presented in Table 1. The introduced fill material near the site entrance (TP1 and TP6) was found to contain elevated lead concentrations (ranging from 532 to 2430 mg/kg), all above the Dutch Intervention level. The persistent elevation of concentrations at depth makes it unlikely that the lead concentrations were derived from stripped lead-based paints arising from maintenance on the Story Bridge.

The introduced fill near the site entrance was also found to be elevated in zinc, with all soil concentrations above the investigation threshold (ranging from 430 to 1370 mg/kg), and two of these concentrations exceeding the Dutch Intervention value. Elevations of arsenic and copper were also noted, however these are regarded as minimal, and were well below the respective Dutch Intervention values.

The profiles noted in the fill materials in the New Farm end of the site were found to be variable. A fill material similar to quarry scalp material (sand, broken rock) was found extending from the surface to depths from 0.60 - 0.85m on rock adjacent to the toe of the cliff face (TP2 and TP3). This material may be quarry rubble from previous activities at the site, later spread to provide a level surface. The natural ground surface appears to slope away from the cliff toward the river, and test pits excavated adjacent to the bank (TP4 and TP5) revealed that significant, and variable, fill materials have been introduced in this area to raise the ground level. The sandy, broken rock material found adjacent to the cliff face was also found at depth on the in-situ rock in TP4, possibly indicating a former working surface which was later covered by fill in the vicinity of the river bank.

The sandy, broken rock material was sampled for analysis at two locations (TP2 and TP3). The sample taken adjacent to the former location of the API building (for which the slab is still in place), was slightly elevated in zinc (440 mg/kg cf investigation threshold of 200 mg/kg), with arsenic minimally elevated. A sample of similar fill material taken away

from the API building (TP3) was found to contain no concentrations of heavy metals above the respective investigation thresholds. This may indicate some contamination of soil materials adjacent to the API building, or may indicate the sandy broken rock material changes in nature across this part of the site, possibly mixed with other material in the vicinity of the API building due to building activities (ie laying of the slab) or other activities in the area.

The fill materials encountered in TP4 were variable, with an ash layer noted from 0.30 to 0.50m depth. A sample of the ash material was submitted for analysis for heavy metals, and was found to be elevated in both lead and zinc, with the zinc concentration found to be above the Dutch Intervention level. The main fill material at this location (brown gravelly clayey sand), was only minimally elevated in arsenic.

A shallow layer of fill (0.85m) was found at location TP5, being predominantly a dark brown gravelly sand. This material was highly elevated in zinc, with a concentration of 12400 mg/kg noted at 0.5m depth.

Organics

Three distinct fill types were encountered in the introduced fill adjacent to the site entrance, with a sample from each type submitted for organochlorine pesticide analysis (TP1-1, TP1-2, TP6-2). Significant concentrations of dieldrin were found in all samples, with concentrations of 0.49, 0.07 and 0.09 mg/kg found in samples TP1-1, TP1-2 and TP6-2 respectively. The concentration of dieldrin in sample TP1-1 was above the environmental investigation threshold of 0.20 mg/kg.

Four samples of fill material from the New Farm end were submitted for organochlorine pesticide analysis, TP2-1 from the broken rock material, sample TP4-2 (main fill type from TP4) and TP5-1 and TP5-2. No organochlorine pesticide species were found above their respective detection limits.

A sample of ash material (TP4-1) was submitted for analysis for polyaromatic hydrocarbons (PAH). No PAH species were found above the respective detection limits

with the exception of Fluorathene, which was found to be present at a concentration of 0.5 mg/kg. Total PAH in this soil sample was well below the investigation threshold (CHEM Unit 1992) of 20 mg/kg. PAH results are presented in Table 3.

All organics results are included in Appendix C.

3.5 Former Underground Fuel Storage Area

The concrete was broken adjacent to the former petrol bowser, with investigation of the tank pit undertaken via backhoe. It was initially proposed to analyse six samples of the fill materials at various points in the tank pit, however this was found to be impractical due to the sandy nature of the material and the amount of water present in the tank pit, with all test pits collapsing upon excavation.

Investigations showed the tank had been removed, with the tank pit backfilled with sand fill material. Some remnants of pipework and other general debris (concrete, metal) were also noted in the fill material. The tank pit appeared to have been excavated, not in in-situ rock as initial thought, but in clay material which appears to be native to the river bank at this location. The tank pit extends to a depth of 2.5m with approximate perimeter dimensions 3x5m.

An investigation of the fill material revealed it to be consistent in nature, discoloured from 0.1m depth and evincing a distinct petroleum hydrocarbon odour. A single sample was taken of the excavated, obviously TPH contaminated material, with an additional sample taken in the natural material below the base of the tank pit.

Results of the TPH analysis are shown in Table 2. The results confirm the general contamination of the bulk fill material (estimated volume ~ 50m³), with the C₆ - C₉ fraction exceeding the guidelines in sample TP7-1. The second sample, TP7-2 taken in the natural material below the base of the tank pit, was found to be below the guidelines values, indicating contamination is likely to be confined to the tank pit.

3.6 Arsenic contamination of structures

As proposed a single wood sample was taken from the original wooden flooring material in each of the former wharf sheds, No2, No3 and No4 sheds (shown in Figures 1 and 2) denoted samples GS2 to GS4 respectively. Each was submitted for analysis for arsenic, and the results are shown in Table 1. Arsenic was found above detection limit in the flooring material from No2 and No3 sheds (GS2 and GS3), however the concentrations were well below the investigation threshold for soil (20 mg/kg). Based on the results there is unlikely there are any health and safety or environmental issue associated with demolition or removal of the existing wharf structures.

4.0 CONCLUSIONS

Four areas of the Howard Smith wharf site were identified as potentially contaminated in the site history studies.

- The location of the former underground fuel tank.
- Imported fill near the site entrance.
- Fill on the New Farm end of the site.
- Wooden structural materials in the former wharf facilities.

The former underground fuel tank had been found to be decommissioned and removed, however around 40m³ of hydrocarbon contaminated sand fill remains in the tank pit. Sampling has indicated that contamination in this area is likely to be confined to the tank pit, however additional in situ clay material (100mm) will need to be removed in any remedial operations to ensure that only clean materials remain. It is likely that 50m³ of material will have to be taken off-site prior to validation sampling of the remaining clay material (including soil materials associated with the bowsers and piping).

Various contaminated fill materials were identified at the site. These are summarised as follows:

- Recently introduced fill (from Transit Centre) near site entrance. A lead and zinc "hot spot" of around 300m³, which also contains significant concentrations of dieldrin.
- A zinc "hot spot" at the New Farm end which may represent up to 1500m³ of material.
- Moderately contaminated ash layer of unknown extent, which contains significant lead and zinc concentrations and may represent up to 400m³.
- Possibly 150m³ of broken rock material moderately elevated in zinc.

It is difficult to provide accurate estimates of the volumes of contaminated material without application of an appropriate sampling grid over the affected areas.

The results of the testing of wooden structural materials indicate it is unlikely there are any health and safety or environmental issues associated with demolition or removal of the existing wharf structures.

The concentrations of lead in the Transit Centre fill, and the zinc in the New Farm end "hot-spot" are both significantly elevated, and may represent a health risk for residential usage.

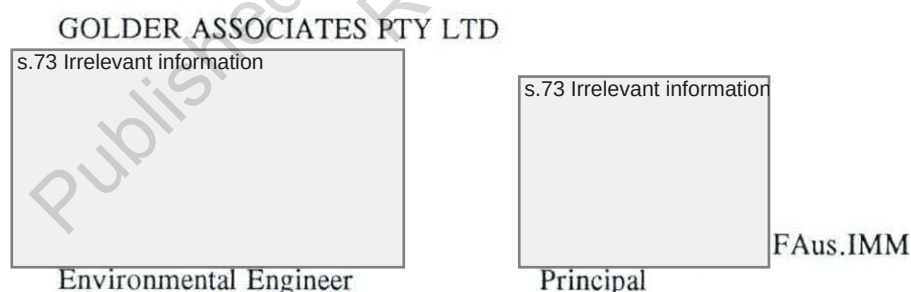
There are two main options for the site:

1. Leaving material in-situ. Previous experience with the Department of Environment indicates they would support leaving the materials in-situ, provided a buffer layer (such as a concrete cap) was installed and an appropriate management plan were put in place for the site. This would result in the site having a "Restricted" classification on the contaminated land register. Special conditions may be required regarding containment of the more highly elevated hot spots.

2. Remediation to a "former" classification. Remediation of the site, or parts of the site to a "former" classification is feasible, but would necessitate the removal of large volumes of contaminated fill material. Initial estimates indicate more than 2000m³ of contaminated material may require removal, most of which would probably require special disposal (lined landfill). Before any remedial works could proceed, additional investigations would need to be carried out to further define the extent of contaminated material, in particular the hot spot materials. The proposed Stage II sampling program is shown on Figures 3 and 4.

Further characterisation of the fill materials at the New Farm end of the site would be carried out by the application of an approximate 15m grid across the area (10 to 20m spacing), with sampling undertaken in each fill material encountered for parameters of interest (copper, lead, zinc in all samples and PAH's also analysed in ash materials).

Two additional sampling locations would be positioned in the lead and zinc hot spot near the site entrance to further define this material, with an additional six test pits excavated through the concrete hardstand adjacent to the river bank to further investigate the extent and degree of contamination of fill material in these areas.



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NB: Attention is drawn to the "Important Information About
Your Environmental Site Assessment" which is appended.

TABLE 1
HEAVY METALS

Sample Number	Sample Depth (m)	Arsenic	Cadmium	Chromium	Copper	Lead	Zinc	Mercury
SOILS								
<i>Site entrance</i>								
TP1-1	0.5-0.6	34	1	21	88	2430	1370	1.0
TP1-2	1.1-1.2	13	<1	37	58	780	430	0.2
TP6-1	0.05-0.1	21	1	42	57	1330	773	0.1
TP6-2	0.6-0.7	21	1	13	38	532	627	0.3
<i>New Farm End</i>								
TP2-1	0.5-0.6	21	1	5	22	166	440	0.4
TP3-1	0.2-0.3	13	<1	1	10	39	79	0.2
TP4-1	0.35-0.45	16	1	14	54	359	736	0.1
TP4-2	1.5-1.6	30	<1	4	18	109	156	0.2
TP5-1	0.3-0.4	27	2	46	161	897	12400	0.2
TP5-2	0.5-0.6	12	1	19	42	296	1380	<0.1
WOODS								
GS2		1 ✓						
GS3		0.5 ✓						
GS4		<0.5 ✓						
Chem Unit 1992		20	3	50	60	300	200	1
Chem Unit 1992 Health threshold		100				300		
Dutch Intervention Value 1994		55	12	380	190	530	720	10

Notes

All results are expressed as mg/kg unless otherwise specified

Figures in shading exceed the Chem Unit 1992 guidelines

Figures in bold italics and shading exceed the Dutch Intervention Values 1994

TABLE 2

TPH

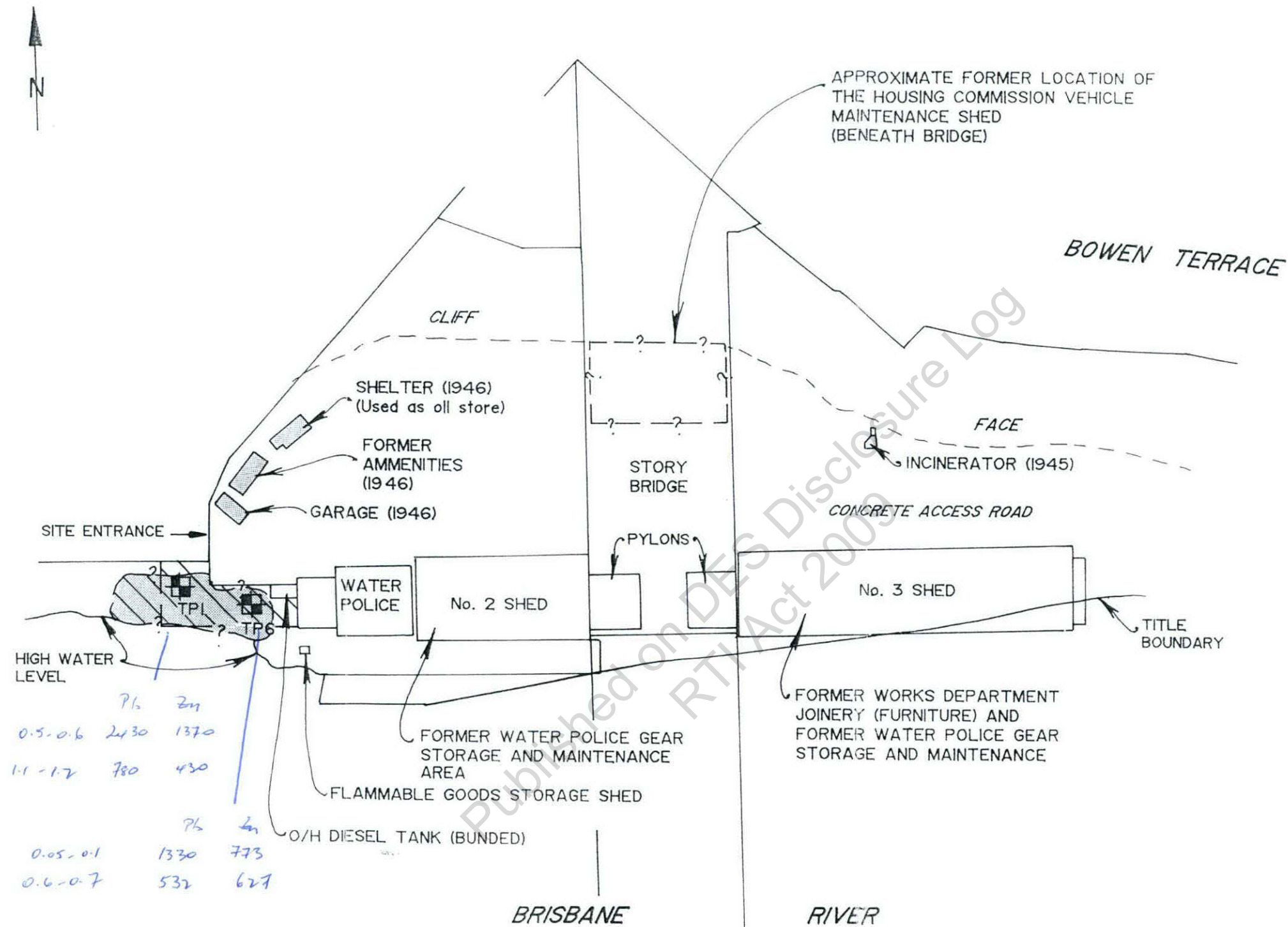
Sample Number	Units	Sample Depth (m)	C ₆ -C ₉	C ₁₀ -C ₁₄	C ₁₅ -C ₂₈	C ₂₉ -C ₃₆	Total C ₁₀ -C ₃₆
<i>Soils</i>							
TP7-1	mg/kg	0.9-1.0	138	<20	<50	<100	138
TP7-2	mg/kg	2.6-2.7	21	<20	<50	<100	21
DoE Threshold Levels			100	100	1000	1000	1000
Dutch Intervention Value 1994							5000

Figures in shading exceed the DEH Threshold Levels

TABLE 3
POLYAROMATIC HYDROCARBONS

Sample Number	Sample Depth(m)	Units	Naphthalene	Acenaphthalene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Ideno (123 cd) pyrene	Dibenzo (ah)anthracene	Benzo(ghi)perylene	Total PAHs
<i>Soils</i>																			
TP4-1	0.35-0.45	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chem Unit 1992/Dutch B			5				10	10	10	10	10								20
Dutch Intervention 1994																			40

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RTI Act 2009

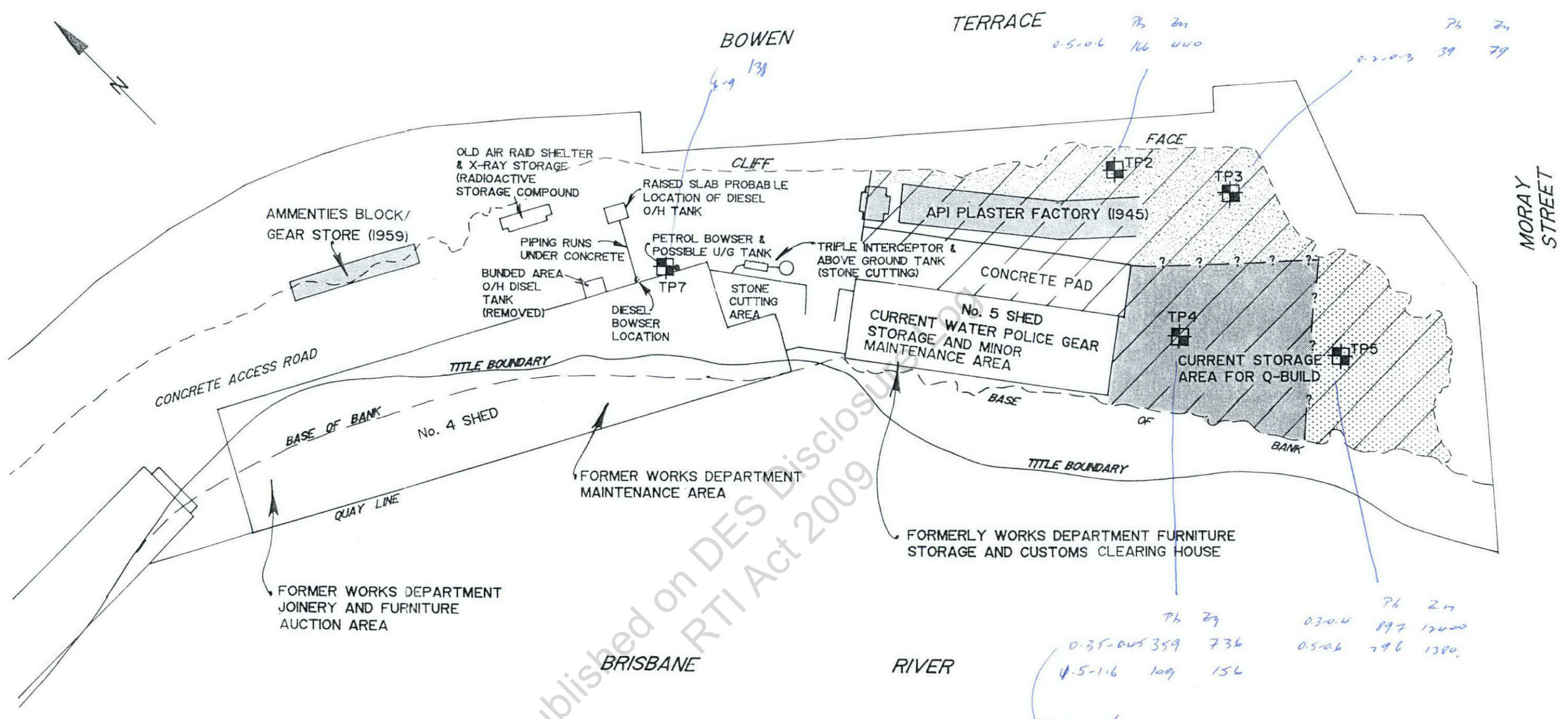


LEGEND

- INTRODUCED FILL
- HISTORICAL DETAILS SHOWN WITH A DATE OF REFERENCE.
- TEST PIT LOCATION
- LEAD AND ZINC HOT SPOT



Project No. 96638005-4	Scale 1 : 1000 APPROX.	HOWARD SMITH WHARF PROPOSED STAGE II SAMPLING PROGRAM (SHEET 1 OF 2)	Fig. 1
Drawn L.M.B.	Date 02-02-96		
Checked s.73 lrr	11/5/96		



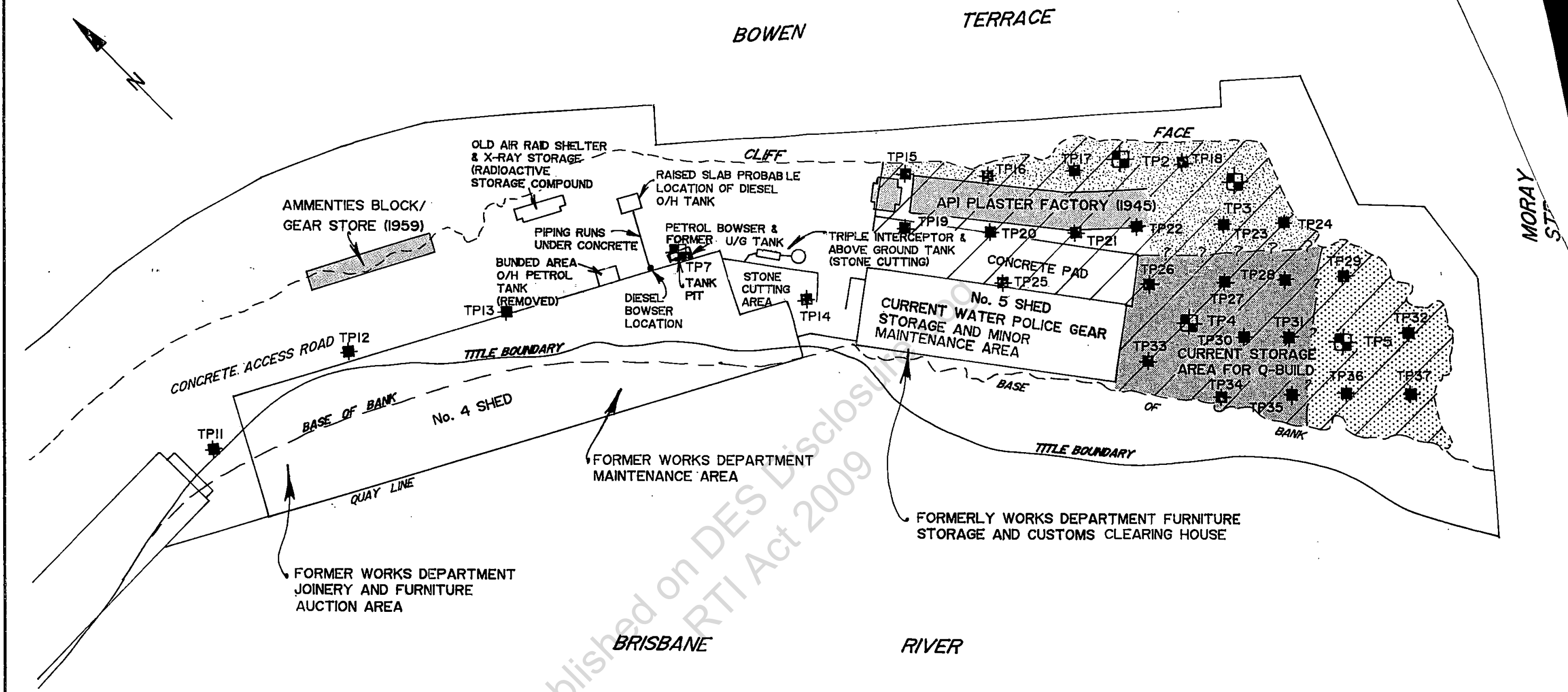
LEGEND

- HISTORICAL DETAILS SHOWN WITH A DATE REFERENCE
- CURRENT Q-BUILD STORAGE AREA
- TEST PIT LOCATION
- ZINC HOT SPOT
- BROKEN ROCK MATERIAL (POSSIBLE QUARRY RUBBLE)
- VARIABLE FILL UP TO APPROX. 2m DEPTH

Project No.	96638005-3	Scale	1:1000 APPROX.
Drawn	L.M.B.	Date	02-02-96
Checked	S.73 Irrell		1/5/96

**HOWARD SMITH WHARF
SITE PLAN**
(SHEET 2 OF 2)





LEGEND

- HISTORICAL DETAILS SHOWN WITH A DATE REFERENCE
- CURRENT Q-BUILD STORAGE AREA
- PROPOSED STAGE II TEST PIT LOCATION
- TEST PIT LOCATION
- ZINC HOT SPOT
- BROKEN ROCK MATERIAL (POSSIBLE QUARRY RUBBLE)
- VARIABLE FILL UP TO APPROX. 2m DEPTH

Project No: 96638005-5	Scale: 1:1000 APPROX.	HOWARD SMITH WHARF PROPOSED STAGE II SAMPLING PROGRAM (SHEET 2 OF 2)	Fig. 4
Drawn: L.M.B.	Date: 02-02-96		
Checked: S.73 Irrele	1/5/96		



APPENDIX A

Letter regarding the former radiation storage area



**CENTRAL OFFICE
ENVIRONMENTAL HEALTH**

OFFICE **RADIATION HEALTH
450 GREGORY TERRACE
FORTITUDE VALLEY Q 4006**
POSTAL **450 GREGORY TERRACE
FORTITUDE VALLEY Q 4006**
PHONE **(07) 252 5446**
FAX **(07) 252 9021**

ENQUIRIES

s.73 Irrelevant inform

PHONE

252 5446

OUR REF

100.13

YOUR REF

5 February 1996

s.73 Irrelevant information

Senior Projects Officer
Property Services
Asset Management Unit
Level 15, Mineral House
41 George Street
BRISBANE 4000

Dear

s.73 Irrelevant informat

PETRIE BIGHT

As you are aware, the Health Department used an old war shelter located at Howard Smith Wharf, Petrie Bight, to store radioactive sources. These sources have been shipped to a new facility located near Esk.

Radiation Health Officers conducted the following tests for radioactive contamination in the store and its immediate surrounds:

- Soil samples were taken around the facility and analysed by the Australian Radiation Laboratory, Melbourne;
- Removable radioactive contamination wipe tests were made within the store and on the benches adjacent to the store and analysed by Radiation Health's radiation monitoring laboratory;
- A contamination survey was conducted around the compound and within the store; and
- An external radiation survey was conducted around the compound and within the store.

All results are consistent with environmental radiation levels. There is no evidence of contamination due to the operation of the store and consequently no residual radiation hazard associated with the facility.

The sensitivity of radiation monitoring equipment used in these surveys was suitable for the measurement of environment levels of radiation.

s.73 Irrelevant information

Yours faithfully

s.73 Irrelevant information

s.73 Irrelevant information

J D WALLACE

Principal Physicist

cc

s.73 Irrelevant information

Golder Associates
72 Kelvin Grove Road
NORMANBY 4059

fax: 832 2596

APPENDIX B

Test Pit Reports



Golder Associates

REPORT OF TEST PIT : TP1

CLIENT : ASD
PROJECT : H.S. WHARF
JOB NUMBER : 96638005
DATE STARTED : 26 MARCH 1996

TEST PIT LOCATION : REFER TO SITE PLAN
APPROX. ELEVATION :
DATUM :

s.73 Irrel

CHECKED BY :

SHEET : 1 OF 1
MACHINE : BACKHOE
LOGGED : s.73 Irrelevant
ON : 1/5/96

DEPTH (metres)	EXCAVATION METHOD	INFERRED STRATIGRAPHY	GRAPHIC LOG	RL Depth (m)	Recovered Lost	SAMPLING AND TESTING	OTHER
0		FILL Grey brown gravelly sandy fill . large boulders		0.00			
	450mm BUCKET	FILL Brown gravelly sand fill . some large boulders		0.70		TP1-1 0.50 - 0.60m TP1-2 1.10 - 1.20m	
1		. Weathered rock		1.60			GROUNDWATER NOT OBSERVED
		TEST PIT DISCONTINUED @ 1.65m		1.65			LOOSELY BACKFILLED ON COMPLETION
2							
3							



Golder Associates

REPORT OF TEST PIT : TP2

CLIENT : ASD
PROJECT : H.S. WHARF
JOB NUMBER : 96638005
DATE STARTED : 26 MARCH 1996

TEST PIT LOCATION : REFER TO SITE PLAN
APPROX. ELEVATION :
DATUM :

CHECKED BY :

SHEET : 1 OF 1
MACHINE : BACKHOE
LOGGED : s.73 Irrelevant
ON : 1/5/96

DEPTH (metres)	EXCAVATION METHOD	INFERRED STRATIGRAPHY	GRAPHIC LOG	RL Depth (m)	Recovered Lost	SAMPLING AND TESTING	OTHER
0	450mm BUCKET	FILL Orange/brown sand and broken rock fill . possibly quarry rubble		0.00			
						TP2-1 0.50 - 0.60m	
		. Rock		0.80			GROUNDWATER NOT OBSERVED
		TEST PIT DISCONTINUED @ 0.85m		0.85			LOOSELY BACKFILLED ON COMPLETION
1							
2							
3							



Golder Associates

REPORT OF TEST PIT : TP3

CLIENT : ASD
PROJECT : H.S. WHARF
JOB NUMBER : 96638005
DATE STARTED : 26 MARCH 1996

TEST PIT LOCATION : REFER TO SITE PLAN
APPROX. ELEVATION :
DATUM :
CHECKED BY : s.73 Irrel

SHEET : 1 OF 1
MACHINE : BACKHOE
LOGGED : s.73 Irrelevant Ir
ON : 1/5/96

DEPTH (metres)	EXCAVATION METHOD	INFERRED STRATIGRAPHY	GRAPHIC LOG	RL Depth (m)	Recovered Lost	SAMPLING AND TESTING	OTHER
0	450mm BUCKET	FILL Orange/brown sand and broken rock fill . possibly quarry rubble		0.00		TP3-1 0.20 - 0.30m	
		. Rock		0.55			WATER INFLOW AT 0.50m
		TEST PIT DISCONTINUED @ 0.60m		0.60			LOOSELY BACKFILLED ON COMPLETION
1							
2							
3							



Golder Associates

REPORT OF TEST PIT : TP4

CLIENT : ASD
PROJECT : H.S.WHARF
JOB NUMBER : 96638005
DATE STARTED : 26 MARCH 1996

TEST PIT LOCATION : REFER TO SITE PLAN
APPROX. ELEVATION :
DATUM :

CHECKED BY

SHEET : 1 OF 1
MACHINE : BACKHOE
LOGGED : s.73 Irrelevant
ON : 15/96

DEPTH (metres)	EXCAVATION METHOD	INFERRED STRATIGRAPHY	GRAPHIC LOG	RL Depth (m)	Recovered Lost	SAMPLING AND TESTING	OTHER
0	450mm BUCKET	DECO FILL		0.00		TP4-1 0.35 - 0.45m	
		FILL Light grey broken rock fill		0.15			
		FILL Light grey sandy ash fill		0.30			
		FILL Brown gravelly clayey sand fill		0.50		TP4-2 1.50 - 1.60m	
1		FILL Orange/brown gravelly sand fill with broken rock		1.40			Water inflow at 1.60m
		. Rock		1.80			
2		TEST PIT DISCONTINUED @ 1.85m		1.85			LOOSELY BACKFILLED ON COMPLETION
3							



Golder Associates

REPORT OF TEST PIT : TP5

CLIENT : ASD
PROJECT : H.S. WHARF
JOB NUMBER : 96638005
DATE STARTED : 26 MARCH 1996

TEST PIT LOCATION : REFER TO SITE PLAN
APPROX. ELEVATION :
DATUM :
CHECKED BY : s.73 Irre

SHEET : 1 OF 1
MACHINE : BACKHOE
LOGGED : s.73 Irrelevant in
ON : 15/96

DEPTH (metres)	EXCAVATION METHOD	INFERRED STRATIGRAPHY	GRAPHIC LOG	RL Depth (m)	Recovered Lost	SAMPLING AND TESTING	OTHER
0	450mm BUCKET	FILL Dark brown gravelly sand fill . broken rock		0.00		TP5-1 0.30 - 0.40m	
		FILL Light to dark grey gravelly clayey sand fill . broken rock and debris		0.50		TP5-2 0.50 - 0.60m	
		FILL Dark brown gravelly sand fill . broken rock		0.60			
		. Rock		0.80			GROUNDWATER NOT OBSERVED
1		TEST PIT DISCONTINUED @ 0.85m		0.85			LOOSELY BACKFILLED ON COMPLETION
2							
3							



Golder Associates

REPORT OF TEST PIT : TP6

CLIENT : ASD
PROJECT : H.S. WHARF
JOB NUMBER : 96638005
DATE STARTED : 26 MARCH 1996

TEST PIT LOCATION : REFER TO SITE PLAN
APPROX. ELEVATION :
DATUM :
CHECKED BY : S.73 Irre

SHEET : 1 OF 1
MACHINE : BACKHOE
LOGGED : S.73 Irrelevant
ON : 1/5/96

DEPTH (metres)	EXCAVATION METHOD	INFERRED STRATIGRAPHY	GRAPHIC LOG	RL Depth (m)	Recovered Lost	SAMPLING AND TESTING	OTHER
0	450mm BUCKET	FILL Brown sandy clay silt fill		0.00		TP6-1 0.05 - 0.10m	
						TP6-2 0.60 - 0.70m	GROUNDWATER NOT OBSERVED
		TEST PIT DISCONTINUED @ 0.75m		0.75			LOOSELY BACKFILLED ON COMPLETION
1							
2							
3							



Golder Associates

REPORT OF TEST PIT : TP7

CLIENT : ASD
PROJECT : H.S. WHARF
JOB NUMBER : 96638005
DATE STARTED : 26 MARCH 1996

TEST PIT LOCATION : REFER TO SITE PLAN
APPROX. ELEVATION :
DATUM :

CHECKED BY

SHEET : 1 OF 1
MACHINE : BACKHOE
LOGGED : s.73 Irrelevant i
ON : 1/5/96

DEPTH (metres)	EXCAVATION METHOD	INFERRED STRATIGRAPHY	GRAPHIC LOG	RL Depth (m)	Recovered Lost	SAMPLING AND TESTING	OTHER
0		Brown sand		0.00			
		FILL Grey sand fill . discoloured due to Hydrocarbon contamination . strong odour		0.10			
1	450mm BUCKET					TP7-1 0.90 - 1.00m	
2		. Orange/brown sandy silty clay		2.50		TP7-2 2.60 - 2.70m	GROUNDWATER NOT OBSERVED
		TEST PIT DISCONTINUED @ 2.55m		2.70			LOOSELY BACKFILLED ON COMPLETION
3							

DESCRIPTION AND CLASSIFICATION OF SOIL

GENERAL

Description and classification of soil and rock are based on definitions and systems outlined in Australian Standard AS1726, SAA Site Investigation Code 1981. Description of rock fracturing is based on a system set out by the Sydney Group of the Australian Geomechanics Society, 1975.

DESCRIPTION AND CLASSIFICATION OF SOIL

Soils are classified on the basis of predominating grain size, modified by other significant grain size or sizes present (e.g. CLAYEY SAND) on the following basis:

<u>Classification</u>	<u>Particle Size</u>
CLAY	less than 0.002mm
SILT	0.002 - 0.06mm
SAND	
fine sand.....	0.06- 0.2mm
medium sand ...	0.2 - 0.6mm
coarse sand	0.6 - 2.0mm
GRAVEL	
fine gravel.....	2 - 6mm
medium gravel.	6 - 20mm
coarse gravel ...	20 - 60mm
COBBLES	60 - 200mm
BOULDERS	greater than 200mm

COHESIVE SOILS are described in terms of consistency, colour and structure with comments on minor constituents or apparent special features. Consistency is based on the shear strength of the soil, and is generally estimated from experience, measured by hand penetrometer or determined by laboratory testing. Terms used in describing consistency are set out below:

<u>Term</u>	<u>Shear Strength</u>
VERY SOFT.....	less than 12kPa
SOFT	12 - 25kPa
FIRM.....	25 - 50kPa
STIFF.....	50 - 100kPa
VERY STIFF	100 - 200kPa
HARD.....	greater than 200kPa

NON-COHESIVE SOILS are described in terms of relative density, colour, with comments on minor constituents or apparent special features. Relative density or density index is generally based on standard penetration testing (AS1289 Test F3.1), or other forms of penetration testing. Terms used in describing relative density are set out below:

<u>Term</u>	<u>Relative Density</u>	<u>SPT "N" Values</u> <u>blows/300mm</u>
VERY LOOSE..	less than 15%... ..	less than 5 blows
LOOSE	15 - 35%	5 - 10 blows
MEDIUM DENSE	35 - 65%	10 - 30 blows
DENSE	65 - 85%	30 - 50 blows

ENGINEERING CLASSIFICATION OF ROCK¹

ROCK STRENGTH

DESCRIPTION TERM	GENERAL FIELD GUIDE	Is (50) ² MPa	AS1726 ROCK STRENGTH	APPROX. ³ q _u MPa
Extremely Weak	Easily remoulded by hand to a material with soil properties	0.03	Extremely Low	0.7
Very Weak	May be crumbled and fragmented by hand	0.1	Very low	2.4
Weak	A piece of core 150mm x 50mm diameter may be broken by hand and easily scored with a knife. Sharp edges of the core may be friable and break during handling. Lumps of rock crumble with light hammer blow.	0.3	Low	7
Medium Strong	A piece of core 150mm x 50mm diameter may be broken by hand with considerable difficulty but may be scored with a knife. Core may be broken with a light hammer blow.	1	Medium	24
Strong	A piece of core 150mm x 50mm diameter cannot be broken by hand, but can be slightly scratched or scored with a knife. Core may be broken with a blow from a hammer.	3	High	70
Very Strong	A piece of core 150mm x 50mm diameter may be broken with a heavy hammer blow, but cannot be scratched by a knife.	10	Very high	240
Extremely Strong	A piece of core 150mm x 50mm diameter is difficult to break with a hammer and rings when struck.		Extremely High	

Notes: 1. Based on AS1726 - 1981 - SAA Site Investigation Code.

2. Point Load Strength Index: ISRM Committee on Laboratory Tests, Document No. 1, October 1972.

3. The approximate unconfined compressive strength (q_u) is based on a assumed ratio to the point load index of 24:1. This ratio may vary widely.

FRACTURING

DESCRIPTIVE TERM	GENERAL FIELD GUIDE
Fragmented	The core is comprised primarily of fragments of length less than 20mm and mostly of width less than the core diameter. Generally >50 breaks/metre.
Highly Fractured	Core lengths are generally 20-40mm with occasional fragments. Generally 25-50 breaks/metre.
Moderately Fractured	Core lengths are generally 30-100mm with occasional shorter and longer section. Generally 10-30 breaks/metre.
Fractured	Core lengths are generally 80-400mm with occasional shorter and longer sections. Generally 3-12 breaks/metre.
Slightly Fractured	Core lengths are generally 300-100mm with occasional shorter and longer sections. Generally 0-3 breaks/metre.
Unbroken	The core does not contain any natural breaks.

Note: This classification applies to drill cores and refers to the spacing of all types of natural fractures along which the core is discontinuous (i.e. natural breaks.) Such natural fractures include joints, bedding plane partings and other natural rock defects but exclude artificial fractures such as breaks caused by drilling and boxing core. Natural unbroken defects such as tight joints and veins along which no fracture is present are also excluded.

- Modified from draft prepared by the Sydney Group of the Australian Geomechanics Society, January 1975.

RQD: ROCK QUALITY DESIGNATION (expressed as a percent) for core recovered from borehole, defined as:

$$\frac{\text{sum of sound core pieces 100mm or more long}^*}{\text{total length of section considered}}$$

* core fractured by drilling process considered unbroken

NOTES AND ABBREVIATIONS USED ON LOGS

DRILLING METHOD

AUGER	Continuous Flight Augering
ROTARY	Rotary Drilling with flushing of cuttings from hole using water circulation.
ROTARY/AIR	Rotary Drilling with flushing of cuttings from hole using air circulation.
ROTARY/MUD	Rotary Drilling with flushing of cuttings from hole using bentonite or polymer mud circulation.
DTHH	Down Hole Hammer drilling using air or foam circulation.
D	Diatube Diamond Core Drilling.
NMLC	NMLC 52mm Triple Tube Core Drilling.
NQ	NQ 47mm Triple Tube Core Drilling.

FIELD SAMPLING AND TESTING

Recovery	Recovered soil sample or length of recovered rock core
Lost	Lost soil sample or length of lost rock core
SPT	Standard Penetration Test to AS 1289 6.3.1. 1993 N = penetration resistance (blows for 300mm penetration following 150mm seating drive). Result reported according to penetration (P) achieved: . P=450mm blows for each 150mm of penetration, and N Value . 150<P<450 blows for seating drive, plus subsequent blows and penetration . P<150mm total blows and penetration RW = Rod weight only caused full penetration HW = Hammer and Rod weight only caused full penetration HB = Hammer bouncing
U50	Thin wall tube sample advanced by hydraulic pressure from drill rig. . number indicates nominal sample diameter in mm.
UP	Piston sample.
UA	Pneumatic sample
FV	Field vane shear test (result expressed as shear strength s_v)
PP	Pocket penetrometer test (result expressed as nominal shear strength s_{pp}) (instrument reading/2)
DS	Disturbed sample.
BULK	Bulk disturbed sample.
RQD	Rock Quality Designation (expressed as a percent) for core retrieved from borehole defined as : $\frac{\text{sum of sound core pieces} > 100\text{mm in length}}{\text{total length of section cored (run)}}$
TV	Torvane Shear Test (result expressed as shear strength S_v)

OTHER

GROUNDWATER :	
GWO	Groundwater level first observed while drilling.
GWL	Observed Groundwater level at time or date shown.
GROUNDWATER	The observation of groundwater, whether present or not, was not possible due to drilling water, surface seepage, rain, etc, caving of borehole or test pit or where borehole or test pit was backfilled soon after completion.
NOT OBSERVED	
FP	Field Rising or Falling Head Permeability test over section noted.
CP	Field Constant Head Permeability Test (k = hydraulic conductivity)
PM	Pressuremeter test over section noted. (E = Young's Modulus) (s_u = undrained shear strength)
WP	Water Pressure Packer test over section noted. (UL = Lugeon Units)

APPENDIX C

Analytical Documentation



CHAIN OF CUSTODY

GOLDER ASSOCIATES PTY LTD

Unit 12, 97 Castlemaine St Phone: : (07) 3217 6444
MILTON Qld 4064 Fax : (07) 3217 6700

Page 1
of 1

Job Number:

96638005

Location/Job:

New Farm

Order No.:

s.73 Irrelevant information

Sampled By:

Job Contact:

COMPOSITE ID	TEST LOCATION	SAMPLE DEPTH (m)	SAMPLE No.	No. OF JARS/VIALS	SAMPLE DATE
--------------	---------------	------------------	------------	-------------------	-------------

			653		
			653		
			654		

pH

Metals (As Cd Cr Cu Pb Zn Hg)

Total Petroleum Hydrocarbons

Polyaromatic Hydrocarbons

Organochlorine Pesticides

BTEX

Phenolics

Cyanide

Metals (Sb Be Co Mn Ni Se Sn)

Polychlorinated Biphenyls

Halogenated Volatile Organics

XXX Arsenic

LB 4073 WOOD (A) 25/3

COMPOSITE ID*

SAMPLE No.'s

Special Instructions:

Urgent. Please provide results by Friday 21 March if possible. Refer

s.73 Irrelevant information

s.73 Irrelevant information

Relinquished by:

Date: 25/3/96

Relinquished by:

Date:

Organisation:

s.73 Irrelevant information

Time:

Organisation:

Time:

Received

Date: 25/3

Received by:

Date:

Organisation:

ALS

Time:

Organisation:

Time:

No. Date: 29/3/96

FAX RECEIVED

Golder Associates

EB4087 5 © 2013

CHAIN OF CUSTODY

GOLDER ASSOCIATES PTY LTD

Unit 12, 97 Castlemaine St
MILTON Qld 4064

Phone: : (07) 3217 6444

Fax : (07) 3217 6700

Page

of

Job Number: 96638005 organic 1/4
Location/Job: New Farm in org 29/3
Order No.: s.73 Irrelevant information
Sampled By:
Job Contact:

[illegible][illegible][illegible]

Special Instructions:

Urgent all results by Monday 1 April at the latest, sooner if possible. Refer

s.73 Irrelevant information

Relinquished by:

Date:

Relinquished by:

Date _____

Organisation:

s.73 Irrelevant information

Time:

Organisation:

Three

Received by:

Date:

Received by:..

Date _____

Organisation:

Three:

File Organisation:

Time

s.73 Irrelevant information

FAX RECEIVED
No. Date: 2/3/96



SAMPLE RECEIPT ADVICE

COMPANY: GOLDER ASSOCIATES
ATTENTION: s.73 Irrelevant informati
DATE: Mar. 25, 1996
FROM: s.73 Irrelevant informati ENV BRISBANE

ALS has received samples pertaining to your reference: 96638005

For future reference the batch number on this order is: EB04073

All samples and paper work were received in good order.

Samples chilled when received.

Samples received in appropriately pretreated and preserved containers.

Please direct any turnaround/technical queries to s.73 Irrelevant infor

Any queries relating to sample condition/numbering/breakages should be directed to s.73 Irrelevant infor

You can expect results to be reported as detailed below:

All Environmental Results

Mar. 29, 1996

A L S - SERVICING YOUR NEEDS BETTER

FAX RECEIVED

No.....Date 26/3/96..

AUSTRALIAN LABORATORY SERVICES P/L

A.C.N. 009 936 029

Brisbane
Phone (07) 352 5577
Fax (07) 352 5109

Sydney
Phone (02) 899 5722
Fax (02) 899 3200

Melbourne
Phone (03) 853 5299
Fax (03) 853 0730

Perth Laboratory
Phone (09) 249 2988
Fax (09) 249 2942



SAMPLE RECEIPT ADVICE

COMPANY: **GOLDER ASSOCIATES**
 ATTENTION: s.73 Irrelevant information
 DATE: **Mar. 26, 1996**
 FROM: s.73 Irrelevant information **ENV BRISBANE**

ALS has received samples pertaining to your reference: 96638005

For future reference the batch number on this order is: EB04087

All samples and paper work were received in good order.

Samples chilled when received.

Samples received in appropriately pretreated and preserved containers.

Please direct any turnaround/technical queries to s.73 Irrelevant information

Any queries relating to sample condition/numbering/breakages should be directed to s.73 Irrelevant information

You can expect results to be reported as detailed below:

Inorganic Results	Mar. 29, 1996
Organic Results	Apr. 01, 1996

A L S - SERVICING YOUR NEEDS BETTER

FAX RECEIVED

No.....Date **27/3/96**...

AUSTRALIAN LABORATORY SERVICES P/L
A.C.N. 009 936 029

Brisbane
 Phone (07) 352 5577
 Fax (07) 352 5109

Sydney
 Phone (02) 899 5722
 Fax (02) 899 3200

Melbourne
 Phone (03) 853 5299
 Fax (03) 853 0730

Perth Laboratory
 Phone (09) 249 2988
 Fax (09) 249 2942



SAMPLE RECEIPT ADVICE

COMPANY: GOLDER ASSOCIATES
ATTENTION: s.73 Irrelevant inform
DATE: Mar. 28, 1996
FROM: s.73 Irrelevant informa ENV BRISBANE

ALS has received samples pertaining to your reference: 96638005

For future reference the batch number on this order is: EB04105

All samples and paper work were received in good order.

Samples chilled when received.

Samples received in appropriately pretreated and preserved containers.

Please direct any turnaround/technical queries to s.73 Irrelevant info

Any queries relating to sample condition/numbering/breakages should be directed to s.73 Irrelevant inform

You can expect results to be reported as detailed below:

All Environmental Results

Apr. 01, 1996

A L S - SERVICING YOUR NEEDS BETTER

FAX RECEIVED

No.....Date 29/3/96

AUSTRALIAN LABORATORY SERVICES P/L

A.C.N. 009 936 029

Brisbane
Phone (07) 352 5577
Fax (07) 352 5109

Sydney
Phone (02) 899 5722
Fax (02) 899 3200

Melbourne
Phone (03) 853 5299
Fax (03) 853 0730

Perth Laboratory
Phone (09) 249 2988
Fax (09) 249 2942

AUSTRALIAN LABORATORY SERVICES P/L

A.C.N. 009 936 029

ANALYTICAL REPORT

GOLDER ASSOCIATES PTY. LTD.
CONSULTING ENGINEER

01 APR 1996

UNIT 12, 97 CASLEMAINE STREET
MILTON QLD 4064

s.73 Irrelevant information

CONTACT:

CLIENT:

ADDRESS:

GOLDER ASSOCIATES

P O BOX 1734

MILTON QLD 4064

LABORATORY:

BATCH NUMBER:

SUB BATCH:

No. OF SAMPLES:

DATE RECEIVED:

DATE COMPLETED:

ENV BRISBANE

EB4073

0

3

25/03/96

29/03/96

ORDER No.: 96638005

SAMPLE TYPE: WOOD

PROJECT:

method	Analysis description	Units	LOR	GS2	GS3	GS4
EG-0057	Arsenic - Total	mg/kg	0.5	1.0	0.5	<0.5

Published on DES Disclosure Log
RTI Act 2009

s.73 Irrelevant info

COMMENTS:

Samples digested in HNO₃/Perchloric Acids prior to the determination of metals. Results reported on an as received basis.

This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

QUALITY SYSTEM



Brisbane
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Sydney
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Melbourne
Phone: (03) 853 5299 Fax: (03) 853 0730
Perth
Phone: (09) 249 2988 Fax: (09) 249 2942

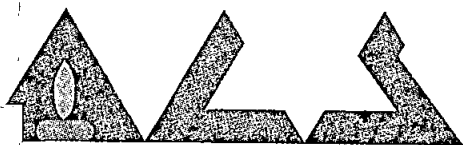
Laboratories also in:
Singapore
Malaysia
Thailand
Hong Kong
New Zealand

File A

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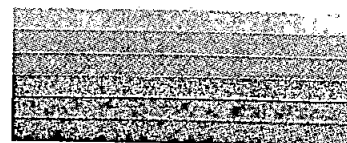


No. 825



AUSTRALIAN LABORATORY
SERVICES P/L

A.C.N. 009 936 029



ANALYTICAL REPORT

PAGE 1 of 1

CONTACT: s.73 Irrelevant information
CLIENT: GOLDER ASSOCIATES
ADDRESS: P O BOX 1734
MILTON QLD 4064

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB4073
SUB BATCH: 0
No. OF SAMPLES: 3
DATE RECEIVED: 25/03/96
DATE COMPLETED: 29/03/96

ORDER No.: 96638005

SAMPLE TYPE: QUALITY CONTROL PROJECT:

method	Analysis description	Units	LOR	GS2 %SPK REC	GS4 CHK
EG-005T	Arsenic - Total	mg/kg	0.5	105 %	<0.5

Published on DES Disclosure Log
RTI Act 2009

s.73 Irrelevant information

COMMENTS:

Results which appear on this report are routine laboratory checks for QUALITY CONTROL purposes.

This is the Final Report which supersedes any preliminary reports with this batch number.

Results apply to sample(s) as submitted by client.

QUALITY SYSTEM



22-100

Brisbane
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Sydney
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Melbourne
Phone: (03) 853 5299 Fax: (03) 853 0730
Perth
Phone: (09) 249 2988 Fax: (09) 249 2942

Laboratories also in:
Singapore
Malaysia
Thailand
Hong Kong
New Zealand

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ANALYTICAL REPORT

PAGE 1 of 2

CONTACT: s.73 Irrelevant information
CLIENT: **GOLDER ASSOCIATES**
ADDRESS: P O BOX 1734
MILTON QLD 4064

GOLDER ASSOCIATES PTY. LTD.
CONSULTING ENGINEER

04 APR 1996

UNIT 12, 87 CASTLEMAINE STREET
MILTON QLD 4064

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB4087
SUB BATCH: 0
No. OF SAMPLES: 10
DATE RECEIVED: 26/03/96
DATE COMPLETED: 02/04/96

ORDER No.: 96638005

SAMPLE TYPE: SOIL

PROJECT:

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Moisture % EA-055 0.1	As mg/kg EG-005T 1	Cd mg/kg EG-005T 1	Cr mg/kg EG-005T 1	Cu mg/kg EG-005T 1	Pb mg/kg EG-005T 1
TP1-1		7.9	34	1	21	88	2430
TP1-2		8.7	13	<1	37	58	780
TP6-1		19.4	21	1	42	57	1330
TP6-2		10.2	21	1	13	38	532
TP2-1		5.7	21	1	5	22	166
TP3-1		10.5	13	<1	<1	10	39
TP4-1		8.3	16	1	14	54	359
TP4-2		15.3	30	<1	4	18	109
TP5-1		12.0	27	2	46	161	897
TP5-2		23.2	12	1	19	42	296



No. 825

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COMMENTS:

Samples as received digested by USEPA method 3051 prior to the determination of metals. Results reported on a dry weight basis.

This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

Alice Springs Laboratory
Phone: (089) 52 6020 Fax: (089) 52 6028
Brisbane Laboratory
Phone: (054) 46 1390 Fax: (054) 46 1389
Brisbane Laboratory 22-166
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Charters Towers Laboratory
Phone: (077) 87 4155 Fax: (077) 87 4220

Cloncurry Laboratory
Phone: (077) 42 1323 Fax: (077) 42 1685
Kalgoorlie Laboratory
Phone: (090) 21 1457 Fax: (090) 21 6253
Mt Isa Laboratory
Phone: (077) 49 5545 Fax: (077) 49 5546
New Zealand Laboratory
Phone: (07) 575 7654 Fax: (07) 575 7641

Orange Laboratory
Phone: (063) 63 1722 Fax: (063) 63 1189
Perth Laboratory
Phone: (09) 249 2988 Fax: (09) 249 2942
Flemington Laboratory
Phone: (077) 79 9155 Fax: (077) 79 9729

All pages of this report
have been checked and
approved for release.
Page 125 of 409

ANALYTICAL REPORT

PAGE 2 of 2

CONTACT:
CLIENT: GOLDER ASSOCIATES
ADDRESS: P O BOX 1734
MILTON QLD 4064

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB4087
SUB BATCH: 0
No. OF SAMPLES: 10
DATE RECEIVED: 26/03/96
DATE COMPLETED: 02/04/96

ORDER No.: 96638005

SAMPLE TYPE: SOIL

PROJECT:

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Zn mg/kg EG-005T 1	Hg mg/kg EG-020T 0.1				
TP1-1		1370	1.0				
TP1-2		430	0.2				
TP6-1		773	0.1				
TP6-2		627	0.3				
TP2-1		440	0.4				
TP3-1		79	0.2				
TP4-1		736	0.1				
TP4-2		156	0.2				
TP5-1		12.4g/k	0.2				
TP5-2		1380	<0.1				



No. 825

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s.73 Irrelevant information

COMMENTS:

This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

AUSTRALIAN LABORATORY SERVICES P/L

A.C.N. 009 936 029

ANALYTICAL REPORT

PAGE 1 of 2

CONTACT: s.73 Irrelevant information
CLIENT: **GOLDER ASSOCIATES**
ADDRESS: **P O BOX 1734
MILTON QLD 4064**

LABORATORY: **ENV BRISBANE**
BATCH NUMBER: **EB4087**
SUB BATCH: **0**
No. OF SAMPLES: **10**
DATE RECEIVED: **26/03/96**
DATE COMPLETED: **02/04/96**

ORDER No.: **96638005**

SAMPLE TYPE: **DUPLICATES**

PROJECT:

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Moisture % EA-055 0.1	As mg/kg EG-005T 1	Cd mg/kg EG-005T 1	Cr mg/kg EG-005T 1	Cu mg/kg EG-005T 1	Pb mg/kg EG-005T 1
*** TP1-1 %SPK REC Original Result		----	91.0%	85.0%	105%	84.0%	----
*** TP1-2 %SPK REC Original Result		----	----	----	----	----	----
*** TP5-2 CHK Original Result		24.5	7	1	18	42	291
<div style="text-align: right;">  No. 825 This Laboratory is Registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full. </div>							

s.73 Irrelevant information

COMMENTS:

Results which appear on this report are routine laboratory duplicates for QUALITY CONTROL purposes.

This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

Alice Springs Laboratory
Phone: (089) 52 6020 Fax: (089) 52 6028
Argo Laboratory
Phone: (054) 46 1390 Fax: (054) 46 1389
Bane Laboratory 22-166
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Charters Towers Laboratory
Phone: (077) 87 4155 Fax: (077) 87 4220

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Kalgoorlie Laboratory
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Mt Isa Laboratory
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New Zealand Laboratory
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Orange Laboratory
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Perth Laboratory
Phone: (09) 249 2988 Fax: (09) 249 2942
Port Hedland Laboratory
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AUSTRALIAN LABORATORY SERVICES P/L

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ANALYTICAL REPORT

PAGE 2 of 2

CONTACT: s.73 Irrelevant information
CLIENT: GOLDER ASSOCIATES
ADDRESS: P O BOX 1734
MILTON QLD 4064

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB4087
SUB BATCH: 0
No. OF SAMPLES: 10
DATE RECEIVED: 26/03/96
DATE COMPLETED: 02/04/96

ORDER No.: 96638005

SAMPLE TYPE: DUPLICATES

PROJECT:

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Zn mg/kg EG-005T 1	Hg mg/kg EG-020T 0.1				
*** TP1-1 %SPK REC Original Result		----	----				
*** TP1-2 %SPK REC Original Result		----	125%				
*** TP5-2 CHK Original Result		1350	<0.1				
				<div> No. 825 This Laboratory is Registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full.</div>			

s.73 Irrelevant information

COMMENTS:

s.73 Irrelevant information

This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

Alice Springs Laboratory
Phone: (089) 52 6020 Fax: (089) 52 6028
Brisbane Laboratory
Phone: (054) 46 1390 Fax: (054) 46 1389
Brisbane Laboratory 22-166
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Charters Towers Laboratory
Phone: (077) 87 4155 Fax: (077) 87 4220

Cloncurry Laboratory
Phone: (077) 42 1323 Fax: (077) 42 1685
Kalgoorlie Laboratory
Phone: (090) 21 1457 Fax: (090) 21 6253
Mt Isa Laboratory
Phone: (077) 49 5545 Fax: (077) 49 5546
New Zealand Laboratory
Phone: (07) 575 7654 Fax: (07) 575 7641

Orange Laboratory
Phone: (063) 63 1722 Fax: (063) 63 1189
Perth Laboratory
Phone: (09) 249 2988 Fax: (09) 249 2942
Fitzroyville Laboratory
Phone: (077) 79 9155 Fax: (077) 79 9729

AUSTRALIAN LABORATORY SERVICES P/L

A.C.N. 009 936 029

ANALYTICAL REPORT

PAGE 1 of 1

CONTACT: s.73 Irrelevant information
CLIENT: GOLDER ASSOCIATES
ADDRESS: P O BOX 1734
MILTON QLD 4064

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB4087
SUB BATCH: 1
No. OF SAMPLES: 1
DATE RECEIVED: 26/03/96
DATE COMPLETED: 02/04/96

ORDER No.: 96638005

SAMPLE TYPE: SOIL

PROJECT:

Method	Analysis description	Units	LOR	TP4-1
EA-055	Moisture Content (dried @ 103°C)	%	0.1	8.3
758-SS	POLYNUCLEAR AROMATICS			
	Naphthalene	mg/kg	0.5	<0.5
	2-Methylnaphthalene	mg/kg	0.5	<0.5
	2-Chloronaphthalene	mg/kg	0.5	<0.5
	Acenaphthylene	mg/kg	0.5	<0.5
	Acenaphthene	mg/kg	0.5	<0.5
	Fluorene	mg/kg	0.5	<0.5
	Phenanthrene	mg/kg	0.5	<0.5
	Anthracene	mg/kg	0.5	<0.5
	Fluoranthene	mg/kg	0.5	<0.5
	Pyrene	mg/kg	0.5	<0.5
	N-2-Fluorenylacetamide	mg/kg	0.5	<0.5
	Benz(a)anthracene	mg/kg	0.5	<0.5
	Chrysene	mg/kg	0.5	<0.5
	Benzo(b) & (k)fluoranthene	mg/kg	1	<1
	7,12-Dimethylbenz(a)anthracene	mg/kg	0.5	<0.5
	Benzo(a)pyrene	mg/kg	0.5	<0.5
	3-Methylcholanthrene	mg/kg	0.5	<0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	<0.5
	Dibenz(a,h)anthracene	mg/kg	0.5	<0.5
	Benzo(g,h,i)perylene	mg/kg	0.5	<0.5

COMMENTS:

Samples analysed on an as received basis. Results reported on a dry weight basis. Sample preparation techniques: Semivolatile - Separatory Funnel and Tumbler, Volatile - Purge & Trap. Sample analysis techniques: Semivolatile components - GC/MS; TPH - GC/FID; Volatile components - GC/MS; Pesticides - GC/ECD, GC/MS.

This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.



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A.C.N. 009 936 029

ANALYTICAL REPORT

PAGE 1 of 2

CONTACT: s.73 Irrelevant information
CLIENT: GOLDER ASSOCIATES
ADDRESS: P O BOX 1734
MILTON QLD 4064

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB4087
SUB BATCH: 2
No. OF SAMPLES: 7
DATE RECEIVED: 26/03/96
DATE COMPLETED: 02/04/96

ORDER No.: 96638005

SAMPLE TYPE: SOIL

PROJECT:

Method	Analysis description	Units	LOR	TP1-1	TP1-2	TP6-2	TP2-1
EA-055	Moisture Content (dried @ 103°C)	%	0.1	7.9	8.7	10.2	5.7
57A-SS	ORGANOCHLORINE PESTICIDES						
	alpha-BHC	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	beta- & gamma-BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
	delta-BHC	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	Heptachlor	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	Aldrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	Heptachlor epoxide	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	Endosulfan 1	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	4,4'-DDE	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	Dieldrin	mg/kg	0.05	0.49	0.07	0.09	<0.05
	Endrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	Endosulfan 2	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	4,4'-DDD	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	Endrin aldehyde	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	Endosulfan sulfate	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
	4,4'-DDT	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2

COMMENTS:

Samples analysed on an as received basis. Results reported on a dry weight basis. Sample preparation techniques: Semivolatile - Separatory Funnel and Tumbler, Volatile - Purge & Trap. Sample analysis techniques: Semivolatile components - GC/MS; TPH - GC/FID; Volatile components - GC/MS; Pesticides - GC/ECD, GC/MS.

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ANALYTICAL REPORT

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CONTACT: s.73 Irrelevant information
CLIENT: **GOLDER ASSOCIATES**
ADDRESS: **P O BOX 1734
MILTON QLD 4064**

LABORATORY: **ENV BRISBANE**
BATCH NUMBER: **EB4087**
SUB BATCH: **2**
No. OF SAMPLES: **7**
DATE RECEIVED: **26/03/96**
DATE COMPLETED: **02/04/96**

ORDER No.: **96638005**

SAMPLE TYPE: **SOIL**

PROJECT:

Method	Analysis description	Units	LOR	TP4-2	TP5-1	TP5-2
EA-055	Moisture Content (dried @ 103°C)	%	0.1	15.3	12.0	23.2
57A-SS	ORGANOCHLORINE PESTICIDES					
	alpha-BHC	mg/kg	0.05	<0.05	<0.05	<0.05
	beta- & gamma-BHC	mg/kg	0.1	<0.1	<0.1	<0.1
	delta-BHC	mg/kg	0.05	<0.05	<0.05	<0.05
	Heptachlor	mg/kg	0.05	<0.05	<0.05	<0.05
	Aldrin	mg/kg	0.05	<0.05	<0.05	<0.05
	Heptachlor epoxide	mg/kg	0.05	<0.05	<0.05	<0.05
	Endosulfan 1	mg/kg	0.05	<0.05	<0.05	<0.05
	4.4'-DDE	mg/kg	0.05	<0.05	<0.05	<0.05
	Dieldrin	mg/kg	0.05	<0.05	<0.05	<0.05
	Endrin	mg/kg	0.05	<0.05	<0.05	<0.05
	Endosulfan 2	mg/kg	0.05	<0.05	<0.05	<0.05
	4.4'-DDD	mg/kg	0.05	<0.05	<0.05	<0.05
	Endrin aldehyde	mg/kg	0.05	<0.05	<0.05	<0.05
	Endosulfan sulfate	mg/kg	0.05	<0.05	<0.05	<0.05
	4.4'-DDT	mg/kg	0.2	<0.2	<0.2	<0.2

OMMENTS:

s.73 Irrelevant information

This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.



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ORGANICS QUALITY CONTROL REPORT

BATCH No. : EB4087

DATE BATCH RECEIVED : 26/03/96

CLIENT: Golder Associates

DATE BATCH COMPLETED : 01/04/96

Method Code	Test	Matrix	QC Lot Number	Date Samples Extracted	Date Samples Analysed
EP-067	Pesticides	Soil	OCOPS402	27/03/96	29/03/96
EP-075	Semivolatile Scan	Soil	SVOCS341	27/03/96	29/03/96

ORGFORM(60/0)

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ALS EP-067 : PESTICIDES

QC LOT No. : OCOPS402

MATRIX: Soil

ANALYST: s.73 Irrelevant infor

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Conc	DCS Conc	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
EP-067A : ORGANOCHLORINE PESTICIDES									
alpha-BHC	<LOR	0.25	0.25	0.25	100	3	68	108	20
beta & gamma-BHC	<LOR	0.50	0.51	0.52	102	2	68	115	20
delta-BHC	<LOR	0.25	0.24	0.25	99	5	68	109	20
Heptachlor	<LOR	0.25	0.23	0.24	95	6	68	115	20
Aldrin	<LOR	0.25	0.24	0.25	98	5	68	109	20
Heptachlor epoxide	<LOR	0.25	0.24	0.25	98	7	68	112	20
Endosulfan 1	<LOR	0.25	0.24	0.25	98	6	63	119	20
4,4'-DDE	<LOR	0.25	0.24	0.25	99	5	68	113	20
Dieldrin	<LOR	0.25	0.24	0.25	98	5	67	110	20
Endrin	<LOR	0.25	0.24	0.25	97	3	49	130	20
Endosulfan 2	<LOR	0.25	0.23	0.24	95	5	69	112	20
4,4'-DDD	<LOR	0.25	0.24	0.26	100	5	69	112	20
Endrin aldehyde	<LOR	0.25	0.24	0.25	99	4	58	141	20
Endosulfan sulfate	<LOR	0.25	0.25	0.25	102	0	67	116	20
4,4'-DDT	<LOR	0.25	0.24	0.25	98	3	62	119	20
EP-067B : ORGANOPHOSPHORUS PESTICIDES									
Dichlorvos	<LOR	0.25	0.25	0.26	100	3	66	109	20
Dimethoate	<LOR	0.25	0.25	0.26	101	3	72	121	20
Diazinon	<LOR	0.25	0.24	0.26	100	6	64	112	20
Chlorpyrifos methyl	<LOR	0.25	0.24	0.25	97	5	68	112	20
Malathion	<LOR	0.25	0.24	0.25	99	6	69	117	20
Fenthion	<LOR	0.25	0.24	0.26	99	7	64	115	20
Chlorpyrifos	<LOR	0.25	0.24	0.25	100	3	70	111	20
Pirimiphos ethyl	<LOR	0.25	0.24	0.25	98	5	65	117	20
Bromophos ethyl	<LOR	0.25	0.24	0.25	98	5	66	114	20
Prothiofos	<LOR	0.25	0.24	0.25	98	5	70	111	20
Ethion	<LOR	0.25	0.24	0.25	97	4	67	123	20

COMMENTS :

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

BATCH QUALITY CONTROL

ALS EP-075 : SEMIVOLATILE SCAN

QC LOT No. : SVOCS341
MATRIX: Soil

ANALYST: s.73 Irrelevant info

COMPOUND	Blank Conc.	Spike Level	QC SPIKE RESULTS				Control Limits		
			SCS Conc	DCS Conc	Average Rec.	RPD	Recovery		RPD
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
EP-075A : PHENOLS									
Phenol	<LOR	1.25	0.95	0.87	73	9	48	124	35
2-Chlorophenol	<LOR	1.25	0.93	0.85	71	9	55	111	35
2-Methylphenol	<LOR	1.25	0.93	0.87	72	7	60	115	35
4-Methylphenol	<LOR	1.25	0.97	0.89	75	9	49	117	35
2-Nitrophenol	<LOR	1.25	0.81	0.75	62	7	49	110	35
2,4-Dimethylphenol	<LOR	1.25	0.80	0.78	63	2	42	112	35
2,4-Dichlorophenol	<LOR	1.25	0.97	0.89	75	9	40	116	35
2,6-Dichlorophenol	<LOR	1.25	1.03	0.90	77	13	43	117	35
4-Chloro-3-methylphenol	<LOR	1.25	1.01	0.91	77	10	54	121	35
2,4,6-Trichlorophenol	<LOR	1.25	1.08	0.96	81	11	50	115	35
2,4,5-Trichlorophenol	<LOR	1.25	1.09	0.98	83	10	51	119	35
Pentachlorophenol	<LOR	1.25	1.10	0.93	81	16	0	131	35
EP-075B : POLYAROMATIC HYDROCARBONS									
Naphthalene	<LOR	1.25	1.03	0.93	78	10	74	112	35
2-Methylnaphthalene	<LOR	1.25	0.95	0.87	73	9	60	111	35
2-Chloronaphthalene	<LOR	1.25	1.06	0.93	80	12	69	113	35
Acenaphthalene	<LOR	1.25	1.03	0.96	80	7	66	116	35
Acenaphthene	<LOR	1.25	1.03	0.89	77	15	70	118	35
Fluorene	<LOR	1.25	1.06	0.92	79	14	55	137	35
Phenanthrene	<LOR	1.25	1.02	0.91	77	11	69	123	35
Anthracene	<LOR	1.25	1.02	0.92	78	10	55	120	35
Fluoranthrene	<LOR	1.25	1.18	1.04	89	12	68	126	35
Pyrene	<LOR	1.25	1.16	1.02	87	13	66	126	35
N-2-Fluorenylacetamide	<LOR	1.25	0.90	0.82	69	9	43	122	35
Benz(a)anthracene	<LOR	1.25	1.11	0.99	84	12	65	126	35
Chrysene	<LOR	1.25	1.14	1.00	85	13	70	126	35
Benzo(b) & (k) fluoranthene	<LOR	2.50	2.18	1.97	83	10	69	123	35
7,12-Dimethyl benz(a)anthracene	<LOR	1.25	1.11	1.00	85	11	0	169	35
Benzo(a)pyrene	<LOR	1.25	1.02	0.92	78	11	47	127	35
3-Methylchloanthrene	<LOR	1.25	0.98	0.87	74	12	0	191	35
Indeno(1,2,3-cd)pyrene	<LOR	1.25	0.95	0.84	72	12	54	172	35
Dibenz(a,h)anthracene	<LOR	1.25	0.94	0.89	73	6	40	168	35
Benzo(g,h,i)perylene	<LOR	1.25	0.98	0.89	75	9	46	172	35

COMMENTS :

- 1) The control limits are based on ALS laboratory statistical data (Method QWI-ORG/07).
- 2) *: Recovery or RPD falls outside the recommended limits.

ANALYTICAL REPORT

PAGE 1 of 1

CONTACT: s.73 Irrelevant information
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ADDRESS: **P O BOX 1734
MILTON QLD 4064**

GOLDER ASSOCIATES PTY. LTD.
CONSULTING ENGINEER

04 APR 1996

UNIT 12, 97 CASTLEMAINE STREET
MILTON QLD 4084

LABORATORY: **ENV BRISBANE**
BATCH NUMBER: **EB4105**
SUB BATCH: **0**
NO. OF SAMPLES: **2**
DATE RECEIVED: **28/03/96**
DATE COMPLETED: **02/04/96**

ORDER No. **96638005**

SAMPLE TYPE: **SOIL**

PROJECT: **NEW FARM**

Method	Analysis description	Units	LOR	TP7-1	TP7-2
--------	----------------------	-------	-----	-------	-------

FA 455	Moisture Content (dried @ 103°C)	%	0.1	15.0	13.6
1-SS	TOTAL PETROLEUM HYDROCARBONS				
	C6 - C9 Fraction	mg/kg	2	138	21
	C10 - C14 Fraction	mg/kg	50	<50	<50
	C15 - C28 Fraction	mg/kg	100	<100	<100
	C29 - C36 Fraction	mg/kg	100	<100	<100

COMMENTS:

Samples analysed on an as received basis. Results reported on a dry weight basis. Sample preparation techniques: Semivolatile - Separatory Funnel and Tumbler, Volatile - Purge & Trap. Sample analysis techniques: Semivolatile components - GC/MS; TPH - GC/FID; Volatile components - GC/MS; Pesticides - GC/ECD, GC/MS.

This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.



ORGANICS QUALITY CONTROL REPORT

BATCH No. : EB4105

DATE BATCH RECEIVED : 28/03/96

CLIENT: Golder Associates

DATE BATCH COMPLETED : 02/04/96

Method Code	Test	Matrix	QC Lot Number	Date Samples Extracted	Date Samples Analysed
EP-071	TPH-Volatile	Soil	VOCS1002	28/03/96	29/03/96
	-Semivolatile	Soil	TPHT951	29/03/96	29/03/96

ORGFORM(60/0)

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BATCH QUALITY CONTROL

ALS EP-071 : Total Petroleum Hydrocarbons by Fractions

QC Lot No. : VOCS1002
MATRIX: Soil

ANALYST:

s.73 Irrelevant inform

Volatile Components

COMPOUND	Level Of	Blank	Spike	SPIKE RESULTS				Control Limits		
	Reporting	Conc	Conc	SCS	DCS	Av.	RPD	Recovery		RPD
	(LOR)			Conc	Conc	Rec.		(%)		
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
C6-C9	2.0	<LOR	47	44	43	92	3	88	108	20
C10	2.0	<LOR	5.8	5.3	5.4	91	2	76	115	20

COMMENTS :

- 1) The control limits are based on ALS laboratory statistical data. (Method QWI-ORG/06)
- 2) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL

ALS EP-071 : Total Petroleum Hydrocarbons by Fractions

MATRIX: Soil

ANALYST: s.73 Irrelevant

QC LOT No.: TPHT951

Semivolatile Components

COMPOUND	Level Of	Blank	Spike	Spike Results				Control Limits		
	Reporting	Conc.	Conc.	SCS	DCS	Av.	RPD	Recovery	RPD	
	(LOR)			Conc.	Conc.	Rec.		%		
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
C11-C14	50	<LOR	375	315	317	84	1	67	103	20
C15-C28	100	<LOR	195	161	162	83	1	67	105	20
C29-C36	100	<LOR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20

APPENDIX D

**“Important Information Regarding Your Environmental Site
Assessment”**

IMPORTANT INFORMATION ABOUT YOUR ENVIRONMENTAL SITE ASSESSMENT

Sheet 1 of 2

These notes have been prepared by Golder Associates Pty Ltd using guidelines prepared by ASFE: The Association of Engineering Firms Practising in the Geosciences, of which Golder Associates is a member. They are offered to help you in the interpretation of your Environmental Site Assessment (ESA) reports.

REASONS FOR CONDUCTING AN ESA

ESA's are typically, though not exclusively carried out in the following circumstances:

- as pre-acquisition assessments, on behalf of either purchaser or vendor, when a property is to be sold;
- as pre-development assessments, when a property or area of land is to be redeveloped or have its use changed, for example, from a factory to a residential subdivision;
- as pre-development assessments of greenfield sites, to establish "baseline" conditions and assess environmental, geological and hydrological constraints to the development of, for example, a landfill; and
- as audits of the environmental effects of an ongoing operation.

Each of these circumstances requires a specific approach to the assessment of soil and groundwater contamination. In all cases, however, the objective is to identify and if possible quantify the risks which unrecognised contamination poses to the proposed activity. Such risks may be both financial, for example, clean-up costs or limitations on site use, and physical, for example, health risks to site users or the public.

THE LIMITATIONS OF AN ESA

Although the information provided by an ESA can reduce exposure to such risks, no ESA, however diligently carried out, can eliminate them. Even a rigorous professional assessment may fail to detect all contamination on a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which showed no signs of contamination when sampled.

AN ESA REPORT IS BASED ON A UNIQUE SET OF PROJECT SPECIFIC FACTORS

Your environmental report should not be used:

- When the nature of the proposed development is changed, for example, if a residential development is proposed instead of a commercial one;
- when the size or configuration of the proposed development is altered;
- when the location or orientation of the proposed structure is modified;
- when there is a change of ownership; or
- for the application to an adjacent site.

To help avoid costly problems, refer to your consultant to determine how any factors which have changed subsequent to the date of the report may affect its recommendations.

ESA "FINDINGS" ARE PROFESSIONAL ESTIMATES

Site assessment identifies actual subsurface conditions only at those points where samples are taken, when they are taken. Data derived through sampling and subsequent laboratory testing are interpreted by geologists, engineers or scientists who then render an opinion about overall subsurface conditions, the nature and extent of contamination, its likely impact on the proposed development and appropriate remediation measures. Actual conditions may differ from those inferred to exist, because no professional, no matter how qualified, and no subsurface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than a report indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to prevent the unanticipated, but steps can be taken to help minimise its impact. For this reason, owners should retain the services of their consultants through the development stage, to identify variations, conduct additional tests which may be needed, and to recommend solutions to problems encountered on site.

IMPORTANT INFORMATION ABOUT YOUR ENVIRONMENTAL SITE ASSESSMENT

Sheet 2 of 2

SUBSURFACE CONDITIONS CAN CHANGE

Subsurface conditions are changed by natural processes and the activity of man. Because an ESA report is based on conditions which existed at the time of subsurface exploration, decisions should not be based on an ESA report whose adequacy may have been affected by time. Speak with the consultant to learn if additional tests are advisable.

ESA SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND PERSONS

Every study and ESA report is prepared in response to a specific Brief to meet the specific needs of specific individuals. A report prepared for a consulting civil engineer may not be adequate for a construction contractor, or even some other consulting civil engineer. A report should not be used by other persons for any purpose, or by the client for a different purpose. No individual other than the client should apply a report even apparently for its intended purpose without first conferring with the consultant. No person should apply a report for any purpose other than that originally contemplated without first conferring with the consultant.

AN ESA REPORT IS SUBJECT TO MISINTERPRETATION

Costly problems can occur when design professionals develop their plans based on misinterpretations of an ESA. To help avoid these problems, the environmental consultant should be retained to work with appropriate design professionals to explain relevant findings and to review the adequacy of their plans and specifications relative to contamination issues.

LOGS SHOULD NOT BE SEPARATED FROM THE ENGINEERING REPORT

Final borehole or test pit logs are developed by environmental scientists, engineers or geologists based upon their interpretation of field logs (assembled by site personnel) and laboratory evaluation of field samples.

Only final logs are customarily included in our reports. These logs should not under any circumstances be redrawn for inclusion in site remediation or other design drawings, because drafters may commit errors or omissions in the transfer process. Although photographic reproduction eliminates this problem, it does nothing to minimise the possibility of contractors misinterpreting the logs during bid preparation. When this occurs, delays, disputes and unanticipated costs are the all-too-frequent result.

To reduce the likelihood of boring log misinterpretation, the complete report must be available to persons or organisations involved in the project, such as contractors, for their use. Those who do not provide such access may proceed under the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing all the available information to persons and organisations such as contractors helps prevent costly construction problems and the adversarial attitudes which may aggravate them to disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY

Because an ESA is based extensively on judgement and opinion, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, model clauses have been developed for use in written transmittals. These are not exculpatory clauses designed to foist liabilities onto some other party. Rather, they are definitive clauses which identify where your consultant's responsibilities begin and end. Their use helps all parties involved recognise their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your ESA report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

HOWARD SMITH WHARF - Boundary Street Fortitude Valley

RPD	CURRENT ZONING	PROPOSED ZONING
Lot 2 ON RP 8616 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 4 ON RP 41821 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 22 ON RP 8614 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 21 ON RP 8614 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 2 ON RP 44680 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 2 ON B 3333 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 4 ON RP 60570 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 3 ON RP 52849 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 6 ON RP 8569 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 2 ON RP 40998 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 400 ON SL 1404 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 4 ON RP 52849 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 3 ON RP 52848 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 419 ON SL 1404 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 1 ON RP 52848 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan
Lot 2 ON RP 64992 ✓	Commercial	Special Development - New Farm and Teneriffe Hill Development Control Plan

140-037326

140-037322

140-037321

140-037320

140-037323

140-037324

140-037325

File note of meeting/discussion

☐ Meeting

☐ PH: IT ENVIRONMENTAL: 38998359

Date: 29/8/05

Time:

Between

of

And

of

Subject: Find Hazardous Contaminants on Site for Client (IT ENVIRONMENTAL)
who did a search.

16/08/05 Phillip of IT Environmental called to find haz contam on sites:

L4 SP128032 (FILE# 901727)

L6 RP52453 (FILE#901298)

L3 SP128031 (FILE#901727)

L223 SL5130 (FILE#900100)

L1 RP59137 (FILE#901298)

26/08/05 Phoned IT Environmental spoke to a s.73 Irrelevant info as he said he is s.73 Irrelevant
supervisor. Advised s.73 Irr of Haz Contam on sites.

29/08/05 After seeing chief Scientific Advisor Mark Paton to clarify what haz contam is on L223 SL5130 (FILE#900100); he advised for site L223 SL5130 Hazardous contam is PAH (Polycyclic Aromatic Hydro carbons) and Petroleum Hydrocarbons rang Matt to advise him the updated information.

Told s.73 Irr that if he is acting on behalf of owner he could look at files. He confirmed he is not.

Leil McKenzie
Trainee
Administration Officer
Contaminated Land
Environmental Protection Agency

Action Sheet Department of Environment & Heritage

Action Sheet Department of Environment & Heritage

Folio No.	B/U Bring Ups	Action Officer	Action Complete	Additional Comments
		CBZ	9-4-97	File-Leardo.

L2 RP 8616. ✓
 L4 RP 41821 ✓
 L2/22 8614 ✓
 L2 44680 ✓
 L2 83333 ✓
 L4 RP 60570 ✓
 L3⁴ RP 52849 ✓
 L6 - 8569 ✓
 L2 - 40998 ✓
 L400 - SL 1404 ✓
 L419 - SL 1404 ✓
 L3H, 52848 ✓
 L2 64992 .

Memorandum

To Gary O'Connor
From Arlene Mikhosich
Subject Harvard Smith Wharf

File reference 901727

Date 22/3/00.

Notes

Received a phone call today from
Steve Waddell from the Council Mail Ph 3666 6362.

He inquired about 'a heritage listed site' which
has fallen into the river.

He has ENR/CLR search results for lots
in this area eg lot 2 B3333. His questions are

- why are some lots on the ENR & others not?
- why are sites on the ENR (not CLR)
where search responses state the land is
affected by a hazardous contaminant?
- could contaminated material have gone into
the river?

22/3

Spoke to Arlene Waddell C-M 3666 6362
after speaking to Natasha Neale & Heritage
(part of wharf had fallen in to river)

I advised about minor contaminant @ ex former
quarry. Zn Cu - stable land form, also briefly spoke
about building not secure about fuel store
also advised. He asked about ex radioactive
store (toxic store) I referred him to Q Health.

(Zang NN & advised

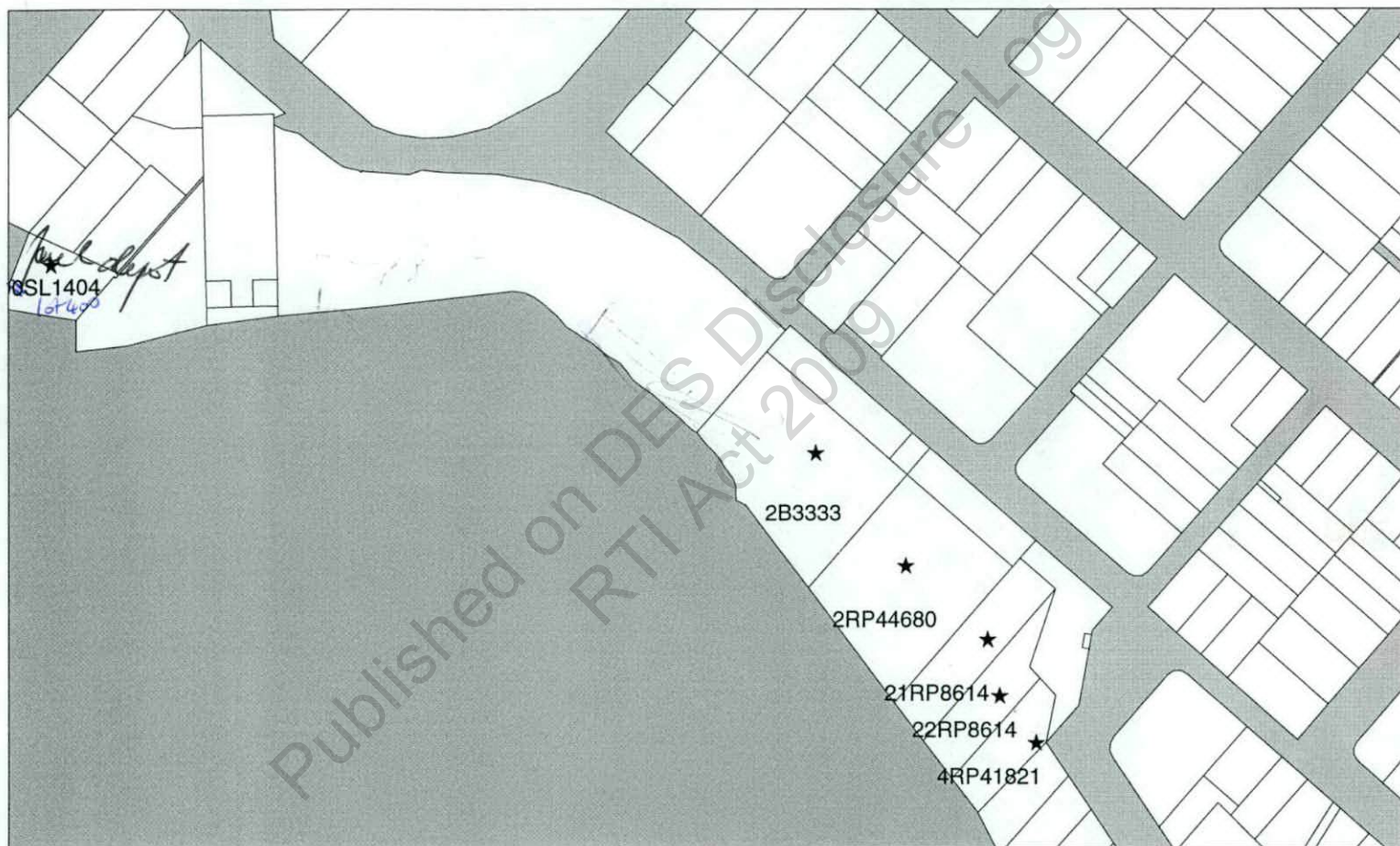
s.73 Irrelevant inform

Date Printed: 22/03/2000

V1.0.1

Where Clause: *where doe_file_number = 901727*

Entity LGA	ID	Lot	Plan	Site Description	Cat	N.A.	File
EMR 100	2815	21	RP8614	HEAVY METAL - HOWARD SMITH WHARF. 247 BOWEN TERRACE NEW FARM 4005	H	50	901727
EMR 100	2816	22	RP8614	HEAVY METAL - HOWARD SMITH WHARF 247 BOWEN TERRACE NEW FARM 4005	H	50	901727
EMR 100	2817	4	RP41821	HEAVY METAL - HOWARD SMITH WHARF 247 BOWEN TERRACE NEW FARM 4005	H	50	901727
EMR 100	2818	2	RP44680	HEAVY METAL - HOWARD SMITH WHARF BOUNDARY STREET BRISBANE 4000	H	50	901727
EMR 100	2819	2	B3333	FUEL STORAGE - HOWARD SMITH WHAR BOUNDARY STREET BRISBANE 4000	H	50	901727
EMR 100	2820	400	SL1404	HEAVY METALS - HOWARD SMITH WHAR BOUNDARY STREET BRISBANE 4000	H	50	901727
EMR 100	2821	2	RP8616	HEAVY METALS - HOWARD SMITH WHAR 237B BOWEN TCE NEW FARM 4005	H	50	901727
HST 140	140-37324	2	B3333	FUEL STORAGE - HOWARD SMITH WHAR BOUNDARY STREET BRISBANE 4000			901727
HST 140	140-37323	2	RP44680	HEAVY METAL - HOWARD SMITH WHARF BOUNDARY STREET BRISBANE 4000			901727
HST 140	140-37326	2	RP8616	HEAVY METALS - HOWARD SMITH WHAR 237B BOWEN TCE NEW FARM 4005			901727
HST 140	140-37322	4	RP41821	HEAVY METAL - HOWARD SMITH WHARF 247 BOWEN TERRACE NEW FARM 4005			901727
HST 140	140-37320	21	RP8614	HEAVY METAL - HOWARD SMITH WHARF 247 BOWEN TERRACE NEW FARM 4005			901727
HST 140	140-37321	22	RP8614	HEAVY METAL - HOWARD SMITH WHARF 247 BOWEN TERRACE NEW FARM 4005			901727
HST 140	140-37325	400	SL1404	HEAVY METALS - HOWARD SMITH WHAR BOUNDARY STREET BRISBANE 4000			901727



* sites on Enr (File 901727)
 nb - also lot 2 RP8616 - not on map.

ADDITIONAL ADVICE

If you have any queries in relation to this search please phone (07) 3227 7370 or (07) 3225 1827.

Ariane Milinovich
Registrar, Contaminated Land Unit

Published on DES Disclosure Log
RTI Act 2009



y

!



e **os** Earn points here. Fly Buys. 10% Off Any dozen selected wines. Wine & food matching

14705 LIQ bcm 23/3/00

...more from
Mr Chalke, whose survey was taken before allegations of lapses in maintenance standards which were believed to have caused contaminated air to filter into a Qantas flight cabin, found 12 percent of Australians claimed to be dissatisfied with the quality of service compared with 9 percent in 1998.
"Level of satisfaction and sense of improving quality has faded away. It is almost as if the airlines have stopped trying," Mr Chalke said.

Australian flying public is extremely good in comparison to a number of overseas markets," she said.
"As far as integrity and schedule, safety is absolutely fantastic, we provide a full food service on flight."
A Qantas spokeswoman yesterday said they would need more details to be able to comment at length.
"Qantas monitors its customer-service standards very closely and in 1999 we achieved the highest ever ratings in regular internal surveys of our customer service standards," she said.

CM 23/3/00 Collapsed river wharf may face demolition

Steven Wardill

A HERITAGE-listed Brisbane wharf may have to be destroyed after the part of the building collapsed and ended in the Brisbane River yesterday.

A Department of Public Works and Housing contractor had been "removing loose material" when the empty storage shed split.

The Howard Smith Wharves building, located beneath the Story Bridge, was being assessed yesterday by government engineers after it was left partially submerged and hanging over the river.

The engineers held fears that the tide may further decrease the stability of the building.

The Department of Public Works had applied to have the 63-year-old building demolished after part of the wharf building collapsed 10 days ago.

The Environmental Protection Agency had authorised the removal of loose timber from the site after it had posed a threat to passing boats.

An EPA spokesman said a formal approval process to have the heritage building demolished may have to be bypassed if the building proved a safety hazard.

"We have had discussions with the Public Works Department about the building falling in the river and if it is a danger it may have to go," the spokesman said.

QBuild, the Works Department branch responsible for hiring the contractor, said only loose material was being removed, although it would not comment further.

The Howard Smith Wharves were heritage-listed because they were the surviving evidence of the port of Brisbane in the central city.

The wharves were built during the 1930s Depression to provide employment and infrastructure under the Forgan-Smith administration. The wharves area also has several air-raid shelters that had previously been used to store radioactive waste.

A Department of Works spokeswoman said there was "no suggestion the area was a contaminated site" and it did not present a water pollution threat.

Regional harbour master, Captain Richard Johnson, said he had been warning the Works Department of the danger of the building "for some time".

He said river traffic would have to be navigated around the wharves area and reduce speed until a decision on the structure was made.

Aussie first for thirst

AUSTRALIANS are the highest consumers of water in the world with householders drinking, swimming in, making tea with, washing in and flushing 350 litres of water daily.

A report by the Australian Water Association claimed this high rate of consumption — mainly from irrigators — came despite the fact Australia was also the driest continent.

The report claimed 70 percent of water was used in production of agriculture.

At an average household level, 50 percent of water was used in the garden, 20 percent in the flushing of toilets, 20 percent in the bathroom and the remain-

More Senior Professional Opportunities in Saturday's General News

Careers

CSI FILE CHECKING

THIS FILE HAS BEEN CHECKED AS PART OF AN ONGOING PROJECT TO CORRECT AND CHECK THE INFORMATION HELD ON CONTAMINATED SITE INVESTIGATION REPORTS AGAINST THE CORRESPONDING DATA HELD ON THE CONTAMINATED SITES REGISTER FOR A COMPLETE LIST OF THE FILES AND THE CHANGES MADE SEE THE CSI - MASTER LIST

FILE: 901727

ASSOCIATED FILES: N/A

DATE: 21st November 1997

Checks performed :- (1) file is current in CARMD, 11 sites are linked, yet tracker sheets notes that there are 16(?).

:- (2) 7 sites are linked to 901727 -> see (attach 1)

:- (3) file has a conflagration of ambiguous data. The first consultants report has 15 sites linked, with a map listing 16. That was easily solved as it appears one site was actually linked as 2, and was kept that way. - see (attach 2)

:- (4) in part 2 the confusion is further abated as the 2 sites are confirmed, not the 1 linked in CISP. However only 7 sites made it to the Register because after all the sampling they were the only ones deemed to be probable. Greg only linked to on his pink non-prescribed purpose site list, however, the existence of the 7th was again due to the same incorrect listing in CISP which meant 1 parcel of land was actually 2.

Conclusions :- (1) CARMD has for some reason cut off or could not hold all 16 sites linked.

(2) of the 16 eventual sites, only 7 needed to be listed. Hence the remaining 9 remain unlinked until any further information may come to hand.

Action Taken :- (1) update (ARMD) with all 16 sites. /OB 21/11/97.

(2) update tracker with status of 7 on and 9 off the Register. /OB 21/11/97

(3) reprint full link on part 1 and attach to part 2 of file 901727. /OB 21/11/97.

Attch 1

DEH
Report: ESADH01

Contaminated Lands Unit - Ad-Hoc Inquiry Report
Printed: 21 NOV 1997 14:20

Page: 1

Site ID	Lot/Plan	Site Name and Location	Cat	Purp	File
140-037320	21/RP8614	HEAVY METAL - HOWARD SMITH W 247 BOWEN TERRACE NEW FARM, 4005	PRO	2000	901727
140-037321	22/RP8614	HEAVY METAL - HOWARD SMITH W 247 BOWEN TERRACE NEW FARM, 4005	PRO	2000	901727
140-037322	4/RP41821	HEAVY METAL - HOWARD SMITH W 247 BOWEN TERRACE NEW FARM, 4005	PRO	2000	901727
140-037323	2/RP44680	HEAVY METAL - HOWARD SMITH W BOUNDARY STREET BRISBANE, 4000	PRO	2000	901727
140-037324	2/B3333	FUEL STORAGE - HOWARD SMITH BOUNDARY STREET BRISBANE, 4000	PRO	2000	901727
140-037325	400/SL1404	HEAVY METALS - HOWARD SMITH BOUNDARY STREET BRISBANE, 4000	PRO	2000	901727
140-037326	2/RP8616	HEAVY METALS - HOWARD SMITH 237B BOWEN TCE NEW FARM, 4005	PRO	2000	901727

Attch 2

1.0 INTRODUCTION

Subsequent to the initial site history study, this Stage I contamination assessment study has been carried out on the Howard Smith Wharf site in order to determine the extent of contamination in fill materials identified at the site, and to assess the extent of any arsenic contamination of timber structures in the former wharf facilities.

It is understood that the investigation is required to assist the joint State Government and Brisbane City Council committee currently assessing redevelopment options for the site.

The real property descriptions and tenure status of parcels of land which are covered by this assessment are shown in Table 1 below.

TABLE 1 - LOT AND PLAN DETAILS

Property No.	Description	Tenure Status	Proprietor	Area m ²
1	Lot 4 RP 41821	Vacant Crown Land	Crown	1121.7
2	Lot 22 RP8614	Vacant Crown Land	Crown	1534.9
3	Lot 21 RP8614	Vacant Crown Land	Crown	1893.2
4	Lot 2 RP44680	Vacant Crown Land	Crown	5093.9
5	Lot 2 B3333	Vacant Crown Land	Crown	4567.9
6	Lot 4 RP60570	Vacant Crown Land	Crown	12360.4
7	Lot 3 RP52849	Vacant Crown Land	Crown	2165.1
8	Lot 6 RP8569	Vacant Crown Land	Crown	935.8
9	Lot 2 RP40998	Vacant Crown Land	Crown	997.0
10	Lot 400 SL1404	Vacant Crown Land	Crown	1181.2
Sub Total				31851.2
11	Lot 2 RP52849	Freehold	Coordinator General	187.2
12	Lot 3 RP52848	Freehold	Coordinator General	2190.4
13	Lot 419 SL1404	Freehold	Coordinator General	40.5
14	Lot 1 RP52848	Freehold	Coordinator General	878.2
15	Lot 2 RP64992	Freehold	Coordinator General	761.3
TOTAL				4057.5

2 RP 8616 mined off lot

NON-PRESCRIBED PURPOSE SITE

File No 90/1727

REVIEWED 31/10/1996

SITE ID		SITE NAME	Howard Smr R Wharf		
RPD		SITE LOCATION			
ADMINISTRATIVE OFFICER				DATE	
PROBLEM STATEMENT	Not Relevant				
ATTACHMENTS	Screen Dump, Council Notification, Council Correspondence, Owner Correspondence, Other (please list)				
REVIEW OFFICER	Gary O'Lennon				
SUMMARY ATTACHED	Background, Discussion, Conclusion				
REVIEW OFFICER'S RECOMMENDATION	<p>Substantial investigations on site (Reference folder reports) Elevated materials; Pb >1000 mg/kg Sect 14 issued</p> <p>Recommend identified parcels be classified as probable</p>				
s.73 Irrelevant information					
PRESCRIBED PURPOSE	2000	CLASSIFICATION	PRO	DATE	13/12/96
MANAGER'S AUTHORISATION	<p>Based on the information available, site should be listed on the CSR as probable site</p>				
s.73 Irrelevant information					
ENTER	✓	DON'T ENTER		DATE	16.12.96
REGISTRY OFFICER	<p>LOT 2 RP44680 (140-037323), 400 SL 1404 (140-037325)</p> <p>21 RP8614 (140-037320), 22 RP8614 (140-037321) AND LOT 4 RP41821 (140-037322)</p> <p>AND LOT 2 RP8616 (140-037326) ENTERED AS PRO P2000</p>				
DATE					06/01/97
s.73 Irrelevant					

Site ~~id~~: 140-037321-----
Site Name: HEAVY METAL - HOWARD SMITH WHARF

Official Authorisation for CSR Site: N

Local Government: BRISBANE CITY

Category: PRO

Entry Date: 06/01/97

Last Altered:

Location: 247 BOWEN TERRACE
NEW FARM
4005

Lot: 22 on Plan RP8614

Tenure:

Owner: UNALLOCATED STATE LAND
C/- DEPARTMENT OF NATURAL RESOURCES
PO BOX 168
NORTH QUAY
QLD
4000

Zoning:

Current Use: 910

Prescribed Purpose: 2000

File: 901727

UXO region:

Contaminants:

Action Officer:

Vol:

Comments:

Cu Pb Zn

OCONNOR

Area: 5095 ha/s

Past Use: 331

Status: A

Folio: 0000

REPORT BY GOLDER ASSOCIATES REF: 96638197(C)
REVEALED ELEVATED LEVELS OF HEAVY METALS,
INCLUDING LEAD LEVELS >1000 MG/KG. MULTIPLE
PARCELS ASSOCIATED WITH THIS SITE: LOTS 21-22
RP9614, 2 B3333, 4 RP41821, 2 RP8616 AND 400
SL1404 REFER.-06/01/1997-DOH.//-----
** END OF REPORT **

Site ID: 140-037322

Site Name: HEAVY METAL - HOWARD SMITH WHARF

Official Authorisation for CSR Site: N

Local Government: BRISBANE CITY

Category: PRO

Entry Date: 06/01/97

Last Altered:

Location: 247 BOWEN TERRACE
NEW FARM
4005

Lot: 4 on Plan RP41821

Tenure:

Owner: UNALLOCATED STATE LAND
C/- DEPARTMENT OF NATURAL RESOURCES
PO BOX 168
NORTH QUAY
QLD
4000

Zoning:

Current Use: 910

Area: 5095 ha/s

Prescribed Purpose: 2000

Past Use: 331

File: 901727

UXO region:

Contaminants:

Cu Pb Zn

Action Officer:

OCONNOR

Status: A

Vol:

Folio: 0000

Comments:

REPORT BY GOLDER ASSOCIATES REF: 96638197(C)
REVEALED ELEVATED LEVELS OF HEAVY METALS,
INCLUDING LEAD LEVELS >1000 MG/KG. MULTIPLE
PARCELS ASSOCIATED WITH THIS SITE: LOTS 21-22
RP9614, 2 B3333, 4 RP41821, 2 RP8616 AND 400
SL1404 REFER.-06/01/1997-DOH.//-----
** END OF REPORT **

Site ID: 140-037323

Site Name: HEAVY METAL - HOWARD SMITH WHARF

Official Authorisation for CSR Site: N

Local Government: BRISBANE CITY

Category: PRO

Entry Date: 06/01/97

Last Altered:

Location: BOUNDARY STREET
BRISBANE
4000

Lot: 2 on Plan RP44680

Tenure:

Owner: QPM PROPERTY MANAGEMENT
C/- THE FINANCIAL CONTROLLER
GPO BOX 1462
BRISBANE
QLD
4001

Zoning: COM

Area: 30691 ha/s

Current Use: 910

Past Use: 331

Prescribed Purpose: 2000

File: 901727

UXO region:

Contaminants:

Cu Pb Zn

Action Officer:

OCONNOR

Status: A

Vol:

Folio: 0000

Comments:

REPORT BY GOLDER ASSOCIATES REF: 96638197(C)
REVEALED ELEVATED LEVELS OF HEAVY METALS,
INCLUDING LEAD LEVELS >1000 MG/KG. MULTIPLE
PARCELS ASSOCIATED WITH THIS SITE: LOTS 21-22
RP9614, 2 B3333, 4 RP41821, 2 RP8616 AND 400
SL1404 REFER.-06/01/1997-DOH.//

** END OF REPORT **

Site ~~15~~ 140-037324-----
Site Name: FUEL STORAGE - HOWARD SMITH WHARF

Official Authorisation for CSR Site: N

Local Government: BRISBANE CITY

Category: PRO

Entry Date: 06/01/97

Last Altered:

Location: BOUNDARY STREET
BRISBANE
4000

Lot: 2 on Plan B3333

Tenure:

Owner: QPM PROPERTY MANAGEMENT
C/- THE FINANCIAL CONTROLLER
GPO BOX 1462
BRISBANE
QLD
4001

Zoning: COM

Area: 30691 ha/s

Current Use: 910

Past Use: 331

Prescribed Purpose: 2000

File: 901727

UXO region:

Contaminants:

Action Officer: Cu Pb Zn
OCONNOR

Status: A

Vol:

Folio: 0000

Comments:

REPORT BY GOLDER ASSOCIATES REF: 96638197(C)
REVEALED ELEVATED LEVELS OF HEAVY METALS,
INCLUDING LEAD LEVELS >1000 MG/KG. MULTIPLE
PARCELS ASSOCIATED WITH THIS SITE: LOTS 21-22
RP9614, 2 B3333, 4 RP41821, 2 RP8616 AND 400
SL1404 REFER.-06/01/1997-DOH.//-----
** END OF REPORT **

Site ID: 140-037325

Site Name: HEAVY METALS - HOWARD SMITH WHARF

Official Authorisation for CSR Site: N

Local Government: BRISBANE CITY

Category: PRO

Entry Date: 06/01/97

Last Altered:

Location: BOUNDARY STREET
BRISBANE
4000

Lot: 400 on Plan SL1404

Tenure:

Owner: QPM PROPERTY MANAGEMENT
C/- THE FINANCIAL CONTROLLER
GPO BOX 1462
BRISBANE
QLD
4001Zoning: COM
Current Use: 910
Prescribed Purpose: 2000
File: 901727Area: 30691 ha/s
Past Use: 331

UXO region:

Contaminants:

Action Officer:

Vol:

Comments:

Cu Pb Zn

OCONNOR

Status: A

Folio: 0000

REPORT BY GOLDER ASSOCIATES REF: 96638197(C)
REVEALED ELEVATED LEVELS OF HEAVY METALS,
INCLUDING LEAD LEVELS >1000 MG/KG. MULTIPLE
PARCELS ASSOCIATED WITH THIS SITE: LOTS 21-22
RP9614, 2 B3333, 4 RP41821, 2 RP8616 AND 400
SL1404 REFER.-06/01/1997-DOH.//-----
** END OF REPORT **

Site ID: 140-037326

Site Name: HEAVY METALS - HOWARD SMITH WHARF

Official Authorisation for CSR Site: N

Local Government: BRISBANE CITY

Category: PRO

Entry Date: 06/01/97

Last Altered:

Location: BOUNDARY STREET
BRISBANE
4000

Lot: 2 on Plan RP8616

Tenure:

Owner: UNALLOCATED STATE LAND
C/- DEPARTMENT OF NATURAL RESOURCES
PO BOX 168
NORTH QUAY
QLD
4000

Zoning:

Current Use: 910

Area: 5095 ha/s

Prescribed Purpose: 2000

Past Use: 331

File: 901727

UXO region:

Contaminants: Cu Pb Zn

Action Officer: OCONNOR

Status: A

Vol:

Folio: 0000

Comments:

REPORT BY GOLDER ASSOCIATES REF: 96638197(C)
REVEALED ELEVATED LEVELS OF HEAVY METALS,
INCLUDING LEAD LEVELS >1000 MG/KG. MULTIPLE
PARCELS ASSOCIATED WITH THIS SITE: LOTS 21-22
RP9614, 2 B3333, 4 RP41821, 2 RP8616 AND 400
SL1404 REFER. PLEASE NOTE THAT LOT 2 RP8616 IS
CURRENT IN CISP, BUT CANNOT BE DISPLAYED IN BLIN.
THE DCDB DATA IN MAPINFO DISPLAYS LOT 2 RP8616 AS
BEING LOCATED BETWEEN LOT 4 RP41821 AND THE
BRISBANE RIVER.-06/01/1997-DOH.//-----
** END OF REPORT **

400SL1404

elevated heavy metals
Pb Zn Cu

David,
Please enter these identified
sites on the CSR as
probable

File No 901727

Action Officer GOC

S.73 Irrelevant in



2B3333

fuel storage

TPH

2RP44680

21RP8614

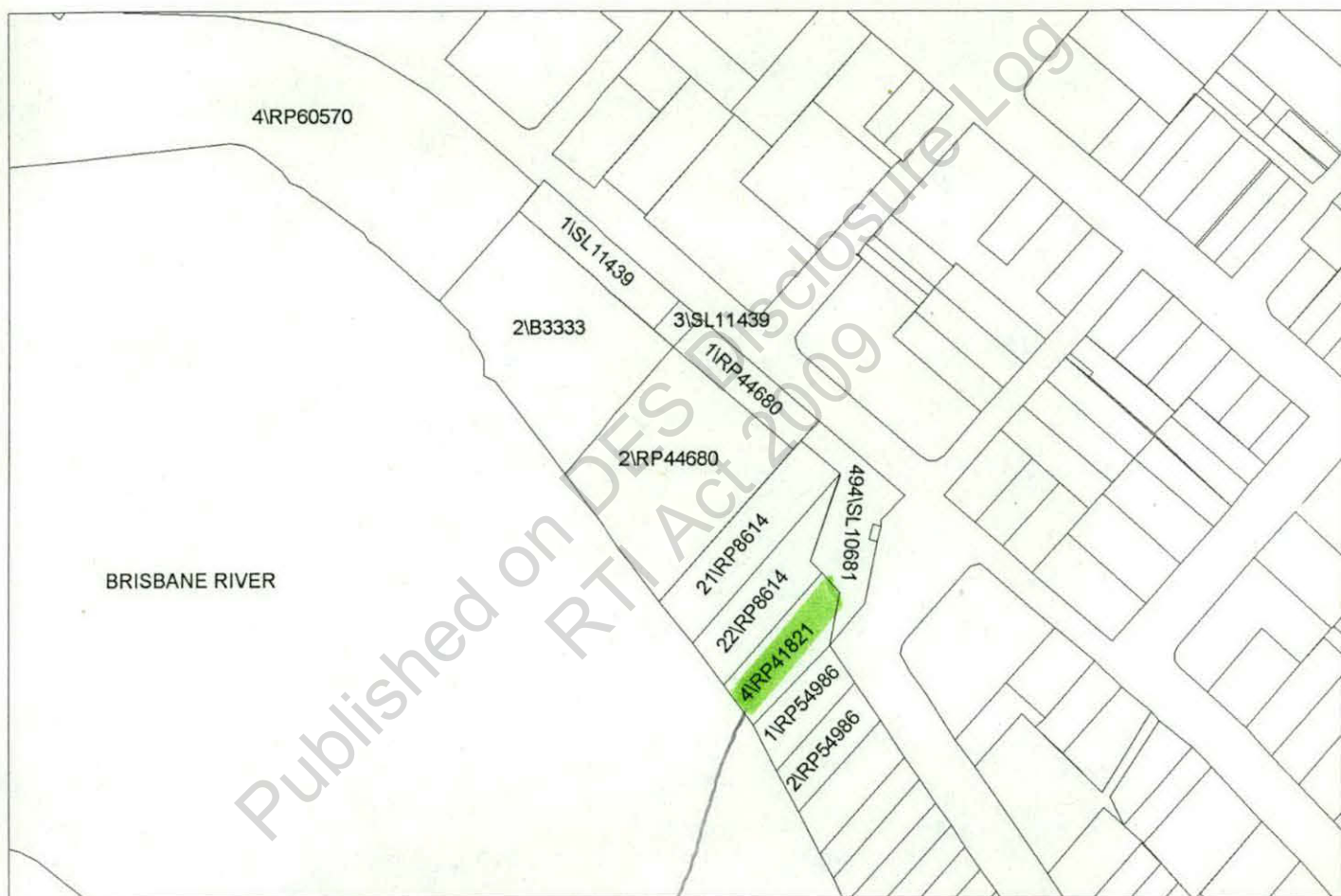
elevated heavy metals

22RP8614

Pb Zn Cu

4RP41821

2RP8616



N.B. LOT 2 RP8616
'APPEARS' TO BE PART
OF THIS PARCEL, BUT
NO EVIDENCE IN CISP
TO SUPPORT SAME.

G O'CONNOR RECOMMENDS
SEPARATE CSR LISTINGS
FOR LOT 2 RP8616

LA/Div: 015 BC
Valn No: 2421/

PESRPDA

REAL PROPERTY DESCRIPTION

Property 0000 B
Address: BRISBA

RPD: L400/SL1404

Row No. 1 of 3 Rows

Owners:

CO-ORDINATOR GE

D/Effect D/Valn

30/06/96 01/01/

Real Property Description

L400/SL1404 & L6/RP8569 & L2/RP40998 & L2/B3333 &
L2/RP44680 & L3-4/RP52849 & L1/3/RP52848 & L4/
RP60570 & L419/SL1404:PAR NORTH BRISBANE

Help(F11) End(F3) Exit(F4)

3 Boundary St.

Lot 2 RP64991

~~Lot 2 RP64992~~

QPM Property Mgmt.

40 The Financial Controller

GPO Box 1462

Brisbane 4001

2 RP44680 140-037323

2 B3333 140-037324

400 SL 1404 140-037325

LA/Div: 015 BCC - BRISBANE
Valn No: 2421/00000

Area: 3.0691HA
Map Ref: 0923000000

Rating Cat:
SMA: 99 Financial Div:
Primary Land Use:

Property 0000 BOUNDARY ST,
Address: BRISBANE CITY, 4000

RPD: L400/SL1404 & L6/RP8569 & L2/RP40998 & L2/B3333 &

Row No. of 1 R
Zoning:

Owners: Row No. 1 of 1 Rows

+-----+
|CO-ORDINATOR GENERAL OF PUBLIC WORKS|
+-----+

+-----+
|COMMERCIAL (PLOT RA|
+-----+

D/Effect	D/Valn	Value	Sect	D/Issue
30/06/96	01/01/96	\$12,000,000	02	13/08/96

FullRPD(Sh-F1) More(F12) Options(Sh-F4) >

LA Div: 015 BCC - BRISBANE
Valn No: 4554/00000

Area: 5095M2
Map Ref: 1054000000

Rating Cat:
SMA: 99 Financial Div:
Primary Land Use:

Property 247 BOWEN TCE,
Address: NEW FARM, 4005

RPD: L494/SL10681 & BAL L21-22/RP8614 & L4/RP41821:PAR

Row No. of 1 R
Zoning:

Owners: Row No. 1 of 1 Rows

+-----+
| UNALLOCATED STATE LAND ✓ |
+-----+

+-----+
| OPEN SPACE |
+-----+

D/Effect	D/Valn	Value	Sect	D/Issue
30/06/96	01/01/96	\$410,000	28	26/02/96

FullRPD(Sh-F1) More(F12) Options(Sh-F4) >

DEPARTMENT OF NATURAL RESOURCES

P.O Box 168

North Quay 4000

21 140-037320

22 140-037321

4 140-037322

2 RP 8616 140-037326.

CISP
Enquiry/Reporting
Trans: CPRT030

Plan Enquiry - All Form 1

CPRF
06 JAN 1997 12
Plan 1 of

+-----+ Lodgement Office: BRISBANE
| Plan No: RP8616 | Custodian: BRISBANE
+-----+ Lands File Ref:

Lands Region: BRISBANE

Plan Description: LOTS 1 & 2

Previous Description: LOT 23 ON RP8614

Surveyor: JAMES
Initials: C E
Survey Date: 10/01/1918

Size: C
Charted: N

+-----+
| Purpose(s) |
+-----+
| SUBDIVISION |
+-----+

THE ABOVE IS AN EXTRACT FROM CISP, A PARCEL BASED SURVEY PLAN DATA BASE, AN
SHOULD BE USED IN CONJUNCTION WITH A FULL SEARCH OF THOSE PLANS.
NextPlan(F11) NextForm(F12) Order_Plan(F13) Order_All(F14) >

CISP
Enquiry/Reporting
Trans: CPRT030

Plan Enquiry - All Form 1

CPRF
06 JAN 1997 12
Plan 1 of

+-----+ Lodgement Office: BRISBANE
| Plan No: RP41821 | Custodian: BRISBANE
+-----+ Lands File Ref:

Lands Region: BRISBANE

Plan Description: LOTS 1 AND 3-4

Previous Description: LOT 23 ON RP8616

Surveyor: JAMES
Initials: C E
Survey Date: 20/07/1925

Size: C
Charted: N

+-----+
| Purpose(s)
+-----+
| SUBDIVISION
+-----+

THE ABOVE IS AN EXTRACT FROM CISP, A PARCEL BASED SURVEY PLAN DATA BASE, AN
SHOULD BE USED IN CONJUNCTION WITH A FULL SEARCH OF THOSE PLANS.
NextPlan(F11) NextForm(F12) Order_Plan(F13) Order_All(F14) >



Project Running Report

Date 31-MAR-2004 Status Application Validation Decision Level 2

Agency Interests/Ratings

Category	Type	Rating
Heritage	Heritage - historic buildings and locations	Low

Permits: 1

Permit Ref	Permit Type	Status
CHCH00078904	QH Act / Exemption Certificate	Expired

Date 10-JUN-2008 Status Assessment Decision Level 2

Primary Clients

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Brisbane City Council	City Property	GPO Box 1434	BRISBANE	4001	QLD

Primary Contact

Name	Contact Number
Brisbane City Council	3407 2947

Activities

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

Locations

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
5 Boundary Street Brisbane,	5 Boundary St Brisbane and 175 Bowen Trc Fortitude Valley				

Agency Interests/Ratings

Category	Type	Rating
----------	------	--------

Permits: 1

Permit Ref	Permit Type	Status
CLEA00001308	Site Report Assessment for Land on the Environmental Management Register or Contaminated Land Register	Assessment





Project Running Report

Project Ref 193530	Project Name HR601781/Howard Smith Wharves (Brisbane Central Wharves)	Status Active	Project Director BARRY, Kim	Project Manager NOT, Allocated	Office Responsible ES - TO - Contaminated Land - Southern - Bne
------------------------------	---	-------------------------	---------------------------------------	--	--

Assessing Officers

Name

PRICE, Marina
RICHARDSON, Marcus

Applications: 3

Date 22-APR-2003	Status Application Validation	Decision Level 2
----------------------------	---	----------------------------

Primary Clients

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Brisbane City Council	City Property	GPO Box 1434	BRISBANE	4001	QLD

Primary Contact

Name	Contact Number
Brisbane City Council	3407 2947

Activities

Name
New Construction Within A Registered Place

Locations

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Howard Smith Wharves (Brisbane Central Wharves)	3 Boundary Street	Petrie Bight	BRISBANE	4000	QLD

Agency Interests/Ratings

Category	Type	Rating
Heritage	Heritage - historic buildings and locations	Unknown (default)

Permits: 1

Permit Ref	Permit Type	Status
CHCF00029603	QH Act / Private Development in Registered Place - Pre-QHOLAA	Withdrawn

Date 31-MAR-2004	Status Application Validation	Decision Level 2
----------------------------	---	----------------------------

Primary Clients

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Brisbane City Council	City Property	GPO Box 1434	BRISBANE	4001	QLD

Primary Contact

Name	Contact Number
Brisbane City Council	3407 2947

Activities

Name
Painting

Locations

Name	Address Line 1	Address Line 2	Suburb	Postcode	State
Howard Smith Wharves (Brisbane Central Wharves)	3 Boundary Street	Petrie Bight	BRISBANE	4000	QLD

Bring Up Details Report

193530 - HR601781/Howard Smith Wharves (Brisbane Central Wharves)

Ref:	<input type="text" value="33187"/>	Created Date:	<input type="text" value="12-JUN-08"/>
Status:	<input type="text" value="Submitted"/>	Closed Date:	<input type="text"/>
Assigned To:	<input type="text" value="BARRY, Kim"/>	Due Date:	<input type="text" value="13-JUN-08"/>
Email Address:	<input type="text" value="Kim.Barry@epa.qld.gov.au"/>	Reminder Date:	<input type="text"/>
Project Director:	<input type="text"/>		
Project Manager:	<input type="text"/>		
CC:	<input type="text"/>		
CC:	<input type="text"/>		
Subject:	<input type="text" value="site investigation report"/>		

Comments: Client - 306596
Permit - CLEA00001308
Project : 193530

Dear Kim,

application received for assessment of Site investigation Report. The application will be forwarded to the Contaminated Land unit on 130608.

Application Form

Part A

General details for all applications

OFFICIAL USE ONLY

DATE RECEIVED

FILE REF

PROJECT REF

COMPLETE FORM

☐

ENTERED BY [SIGNATURE]

DATE

RECEIPTING DETAILS ONLY

DATE RECEIPTED

RECEIPT NUMBER

AMOUNT RECEIVED

\$

PROCESSED BY (INITIALS AND NAME)

GUIDE

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

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

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

Important information for applicants

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

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

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

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

- ☐ an individual or sole trader
☐ individuals in a partnership
☐ individual(s) acting on behalf of an unincorporated organisation

→ Go to Section 1

- ☒ an incorporated company
☐ an incorporated association
☐ a statutory authority
☐ a body politic

→ Go to Section 2

1. Individual applicant(s) details⁽¹⁾

APPLICANT'S FULL NAME

TITLE

DATE OF BIRTH

REGISTERED ADDRESS

POST CODE

TELEPHONE

FACSIMILE

E-MAIL

POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS)

POST CODE



Application form – Part A
General details for all applications

Guardian details (if applicable)

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

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

→ Go to Section 3

2. Applicant details

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

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

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

REGISTERED LEGAL ENTITY NAME Brisbane City Council		
TRADING NAME (IF APPLICABLE)		
REGISTERED ADDRESS GPO Box 1434, Brisbane, Qld Level 1, Green Square South Tower 505 St Pauls Terrace Fortitude Valley QLD 4006		POST CODE 4001
TELEPHONE 3027 5453	FACSIMILE	E-MAIL/WEBSITE
POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS) as above		POST CODE
ABN/ACN/AN OR TITLE AND SECTION OF LEGISLATION 72002765795		

EPA Customer Service Centre
Ground Floor
160 Ann Street
07 3227 8185

TAX INVOICE ABN 8-221 158 756

Invoice No.	Date	Time
IN205017	10/06/08	16:06:40

0801	Gen Susp GST Fr	2.00
------	-----------------	------

Total Amount Incl GST	2.00
293639	

Payment Amount	2.00
Change	0.00

GST Amount	0.00
------------	------

* indicates taxable supply.
Thank-you for visiting
EPA Customer Service Centre.
Please come again.



Dedicated to a better Brisbane

Phone direct: 3027 4724

Fax direct: 333 40071

Mobile: s.73 Irrelevant in

Email: greg.mcpherson@brisbane.qld.gov.au

Reference: CD/W4-080520

RECEIVED

10 JUN 2008

ECSU



6 June 2008

Ecoaccess
Environmental Protection Agency
PO Box 15155
City East QLD 4002

Attention: Kim Barry

Re: Submission of an Application for Assessment of a Site Investigation

Please find attached an application for the assessment of a site investigation report for Howard Smith Wharf.

Also enclosed is the City Design Environmental Management (CDEM) Report Review of the Howard Smith Wharf Site (May 2008) which outlines the results of previous assessments relevant to the Howard Smith Wharf site and applies statistical techniques to the results obtained by City Design - Geotechnical and Environmental Engineering (1999) in order to assess the significance of residual contamination at the site.

As part of the process, CDEM reviewed EPA File No 901727 and from this was able to confirm that significant assessment and remediation of the site had occurred during 1996 including the development of a site management plan for the site. Neither the draft of final Stage II Contamination Assessment Report or the site management plan, which were referenced in the EPA file, were able to be located during a search by EPA officers therefore CDEM has developed new SMPs for each of the lots being considered.

On the basis of the review, CDEM is seeking a determination from the EPA that the site (Lot 3 on SP 128031 and Lot 4 on SP 128032) is suitable for any use, subject to implementation of the attached Site Management Plans.

Yours faithfully

s.73 Irrelevant information

Greg McPherson
Senior Environmental Engineer
City Design
Brisbane City Council

Brisbane City Council ABN 72 002 765 795

Page 1 of 1



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☐ For Regional Information & Filing

☒ Regional Action Required

Admin. Office: Contaminated Land Unit, Southern Region

Project No: 193530

Client No: 306596

EMR/CLR ID No: 78499
31053

Permit No: CLEA 00001308

Ecoaccess Customer Service Unit

CROW No: 94533

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

Date Received:

10 / 6 / 08

Date Application Deemed Valid:

10 / 6 / 08

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

08 / 07 / 08

Due Date for report that has had
a Third Party Review (5 Business
Days after received): This applies
to sites requesting removal from
the Register.

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

Due Date for Decision of IPA Application
(20 Business Days):

____ / ____ / ____

Third Party Reviewer:

Applicant Name: Nigel Jacob RCC
Lot 3 SP 190810

Contact: Greg McPherson

Location: 5 Boundary St, Brisbane Lot 2 SP 128032
175 Bowen Tce, Fortitude Valley

Coordinator: Nigel Jacobs

Receipt details: Fees correct ☒ N/A ☐

Receipt No: IN205017 Date: 10 / 6 / 2008

Amount Paid \$ 2,000

Receipt sent to client Yes ☐ No ☒

Payment Method:

Cheque ☐ EFT ☐ Cash ☐ Credit ☐

Cheque No:

Drawer (if other than the applicant):

.....

COST CENTRE/CODE:

Record of consultation

Applicant name:

BCC

Date	Person Contacted:		Phone No:	
	Information Requested: Nigel confirmed Recommendation with Kim Barry. OK to accept.			
	Response:			
	Ecoaccess CSU Staff:			

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

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

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

Application form – Part A
General details for all applications

Principal contact or person in charge details

PRINCIPAL CONTACT/PERSON IN CHARGE FULL NAME Greg McPherson		TITLE Mr
POSITION IN CORPORATION Senior Environmental Engineer		
TELEPHONE 3027 4724	FASCIMILE	E-MAIL/WEBSITE
POSTAL ADDRESS (WRITE "AS ABOVE" IF THE SAME AS REGISTERED ADDRESS) as above		POST CODE

Authorised signatory

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

AUTHORIZED SIGNATORY FULL NAME Greg McPherson	TITLE Mr
POSITION IN CORPORATION Senior Environmental Engineer	

3. Project details

Pre-lodgement

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

☒ NO ☐ YES

PROJECT NUMBER (IF APPLICABLE)

Project description

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

DESCRIPTION Assessment of site investigation report - remove land from EMR

Application form – Part A

General details for all applications

Approvals required

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

APPLICATION FORMS

Application for assessment of a site investigation/validation report

Project site

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

STREET ADDRESS

1. 5 Boundary St Brisbane
2. 175 Bowen Tce Fortitude Valley

LOT

1. Lot 3
2. Lot 4

PLAN

1. SP190810
2. SP128032

LOCAL GOVERNMENT AREA

Brisbane

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

SPECIFIC LOCATION/PROPERTY NAME

Howard Smith Wharf

PROTECTED AREA

GEOGRAPHICAL CO-ORDINATES

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

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

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

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

Attachments

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

ATTACHMENTS (LABEL ALL ATTACHMENTS ALPHABETICALLY – E.G. 'ATTACHMENT A')

Attachment A - Application form Part B
Attachment B - Cheque for \$2000
Attachment C - Statutory declaration
Attachment D - Report - 'Report Review Howard Smith Wharf'
Attachment E - Titles searches & plans
Attachment F - Map of site

4. Applicant's certification

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

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

APPLICANT(1) SIGNATURE s.73 Irrelevant informa

Joint applicant signatures (if applicable)

APPLICANT(2) SIGNATURE

APPLICANT(3) SIGNATURE

APPLICANT(4) SIGNATURE

APPLICANT(5) SIGNATURE

DATE

Complete the following checklist.

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

Please return your completed application kit to:

Ecoaccess Customer Service Unit
Environmental Protection Agency

PO Box 15155
City East
Queensland 4002

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

Application for assessment of a site investigation / validation report

NOTIFIABLE ACTIVITY/POSSIBLE CONTAMINATING ACTIVITY Hazardous Contaminant	
CURRENT LAND USE Bikepath/footpath linking Ivory Lane to the floating walkway along the Brisbane River (adjacent to Storey Bridge, Fortitude Valley) with several buildings	PROPOSED LAND USE Commercial precinct
STREET ADDRESS 175 Bowen Tce Fortitude Valley	
LOT(S) Lot 4	PLAN(S) SP 128032
LOCAL GOVERNMENT AUTHORITY Brisbane	
NOTIFIABLE ACTIVITY/POSSIBLE CONTAMINATING ACTIVITY HAZARDOUS CONTAMINANT	
CURRENT LAND USE BIKEPATH/FOOTPATH LINKING IVORY LANE TO THE FLOATING WALKWAY ALONG THE BRISBANE RIVER (ADJACENT TO STOREY BRIDGE, FORTITUDE VALLEY) WITH SEVERAL BUILDINGS	PROPOSED LAND USE COMMERCIAL PRECINCT

4. Details of report

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

☒ NO ☐ YES

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

☐ Stage 1 and Stage 2 investigation

☐ Stage 3 and Stage 4 remediation and validation report

If previous submissions have been made quote:
Ref no. _____

4.3 Is a response required from the EPA at this time or is further information following?

☒ Response required ☐ Further information following

5. Payment

The applicable fee¹ of \$ 2000

¹ The fee is \$445.30 per lot where the land is used exclusively for residential purposes and is not the subject of a development application. For any other lot the fee is \$1000 per lot.

Application form — Part B

Sections 375 & 390 — *Environmental Protection Act 1994*

Application for assessment of a site investigation / validation report

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

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

1. Lodgement details

Complete this section only if form not lodged by applicant

NAME	TELEPHONE
COMPANY/ORGANISATION	
POSTAL ADDRESS	
EMAIL	FACSIMILE

2. Site owner's details

An Agent's address is not acceptable.

NAME Brisbane City Council	TELEPHONE 3027 4727
POSTAL ADDRESS GPO Box 1434 Brisbane Qld 4001	FACSIMILE

3. Site details

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

STREET ADDRESS 5 Boundary St Brisbane	
LOT(S) Lot 3	PLAN(S) SP 190810
LOCAL GOVERNMENT AUTHORITY Brisbane	

Attachment A

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Application for assessment of a site investigation / validation report

- ☒ is enclosed with this application (cheque, money order etc.); or
☐ was paid by electronic funds transfer (EFT) on _____; and
details required in the information sheet *Electronically paying fees to the EPA* were included.

The payment was for:

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

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

6. Applicant checklist

- ☒ Application form(s) completed and signed.
- ☒ Permit fees paid or enclosed (if applicable).
- ☒ Enclosed statutory declarations by investigators, preparers and owners as per Section 383 of the *EP Act*.
- ☒ Enclosed signed consultant's report (as per Guidelines for the Assessment and Management of Contaminated Land in Queensland).
- ☒ Enclosed legible copy/copies of proof of ownership of site/s clearly showing the full name(s) of the registered proprietor(s) e.g. current certificates of Title or Title Searches.
- ☒ Enclosed legible copy/copies of all relevant registered plans (available from the Titles Section, Department Natural Resources and Mines) clearly showing location of the site/s and current registered plan details.
- ☒ Enclosed copy of a street map/area map clearly showing location of property.

Please return your completed application kit to:

**Ecoaccess Customer Service Unit
Environmental Protection Agency**

PO Box 15155
City East
Queensland 4002

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

² Available at www.epa.qld.gov.au or through the Ecoaccess Customer Service Unit (phone 1300 368 326).

Application for assessment of a site investigation / validation report

OFFICE USE ONLY

Account code: 9090411/433019

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Attachment B

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RTI Act 2009

Attachment C

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RTI Act 2009

STATUTORY DECLARATION

(INVESTIGATION REPORT PREPARER)

Address of Site Investigated: 3 Boundary Street Brisbane, Queensland 4000 and 175 Bowen Terrace Fortitude Valley, Queensland 4006

Real Property Descriptions: Lot 3 on SP 190810 and Lot 4 on SP 128032

Title of Report: Report Review Howard Smith Wharf
May 2008

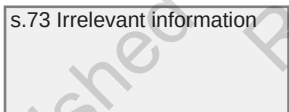
I, Gregory James McPherson of Brisbane City Council, Level 1, Green Square, South Tower, 505 St Paul's Terrace, Fortitude Valley, in the State of Queensland, do solemnly and sincerely declare that;

- I was the investigator and preparer of the report described above;
- I am a member of Environment Institute of Australia and New Zealand (EIANZ); and my qualifications and experience as previously submitted to the Environmental Protection Agency are relevant to this investigation;
- I have not knowingly included any false, misleading or incomplete information in the report;
- I have not knowingly failed to reveal any relevant information or document to the administering authority; and

I certify that:

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

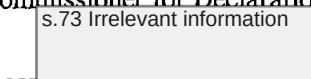
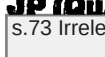
And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1867*

Signature  s.73 Irrelevant information

Name GREGORY JAMES MCPHERSON

Taken and Declared before me at BRISBANE this 29TH day of MAY 2008..

Witness (Justice of the Peace/Commissioner for Declarations)

Signature  s.73 Irrelevant information
Jeffrey James Dowling
JP (Qld) 29426
 s.73 Irrelevant information

Name (& JP Number if applicable).....

Attachment D

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FOR INTERNAL USE ONLY
ENVIRONMENTAL PROTECTION AGENCY

SEARCH RESPONSE

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

Transaction ID: 1056011 EMR Site Id: 78499 12 June 2008
This response relates to a search request received for the site:
Lot: 3 Plan: SP190810

EMR RESULT

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

Lot: 400 Plan: SL1404
Address: BOUNDARY STREET
BRISBANE 4000

The site has been subject to contamination from a hazardous contaminant as follows:
HAZARDOUS CONTAMINANT - This site has been subject to a hazardous contaminant.
Refer to the summary given below.
Please contact this Department for further details.

CLR RESULT

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

ADDITIONAL ADVICE

Note: Searches maybe conducted online through the State Government Website
www.smartservice.qld.gov.au or Citec Confirm www.confirm.com.au.

If you have any queries in relation to this search please phone (07) 3227 7370.

Lindi Bowen
Registrar, Contaminated Land Unit

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

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RTI Act 2009

FOR INTERNAL USE ONLY
ENVIRONMENTAL PROTECTION AGENCY

SEARCH RESPONSE

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

Transaction ID: 1056018 EMR Site Id: 31053 12 June 2008
This response relates to a search request received for the site:
Lot: 4 Plan: SP128032

SEARCH RESULT

The site you have searched is a lot resulting from the amalgamation of the following sites, which are included on the Environmental Management Register (EMR) or the Contaminated Land Register (CLR), as indicated below. Further details for these sites are available by contacting this Agency.

Lot	Plan	
2	B3333	EMR
2	RP44680	EMR
2	RP8616	EMR
4	RP41821	EMR
21	RP8614	EMR
22	RP8614	EMR

ADDITIONAL ADVICE

Note: Searches maybe conducted online through the State Government Website www.smartservice.qld.gov.au or Citec Confirm www.confirm.com.au.

If you have any queries in relation to this search please phone (07) 3227 7370.

Lindi Bowen
Registrar, Contaminated Land Unit

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

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

Specific Parcel Report

Lot: 3 on Plan: SP190810

Parcel: on Segment:

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

Plan	Registered Description
SP190810 07/01/2008	LOTS 1 & 3 (VOLUMETRIC) CANCELLING LOT 3 ON SP128031
DP190809 25/07/2007	LOT 12 (VOLUMETRIC); PLAN OF LOT 251 ON SL1589 AND LOT 3 ON SP128031 CANCELLING USL (PART OF THE BRISBANE RIVER, KANGAROO POINT AND FORTITUDE VALLEY ADJACENT TO LOT 251 ON SL1589 AND LOT 3 ON SP128031)
AP14996	LOTS 1-4; & PART OF ADJOINING LOT 3 ON SP128031, LOT 4 ON SP128032 AND LOT 4 ON RP52849 CANCELLING PART OF BRISBANE RIVER
IS193482	LOT 1-4 ON RP64991, LOT 1&2 ON RP64992, LOT 3&4 ON RP52770, LOT 2 ON RP57889, LOT 4 ON RP52849, LOT 1 ON RP104509, LOT 3 ON SP128031, LOT 5 ON RP891235, LOT 2&3 ON RP116467, LOT 13 ON RP47078(ETC.)
SP150140 17/07/2002	EMT B IN LOT 3 ON SP128031
SP128031 28/07/2000	LOT 3 CANCELLING LOT 6 ON RP8569, LOT 2 ON RP40998, LOT 3 ON RP52849 AND LOT 400 ON SL1404
IS155578	LOT 400 ON SL1404
RC906985	LOT 400 CANCELLING LOT 6 ON RP8569, LOT 2 ON RP40998, LOT 3 ON RP52849 & LOT 400 ON SL1404
RC110280	LOTS 1-4 CANCELLING LOT 400 ON SL1404, LOT 2 ON B3333, LOT 6 ON RP8569, LOTS 21-22 ON RP8614, LOT 2 ON RP44680
RP64992 22/02/1950	LOTS 1 AND 2 AND EMT A IN LOTS 400 AND 419 ON SL1404, LOT 6 ON RP8569, LOTS 1 AND 3 ON RP52848 AND IN LOT 3 ON RP52849 CANCELLING LOT 2 ON RP52848
RP52849 16/07/1936	LOTS 2 - 4 CANCELLING LOTS 4 - 5 ON B3342
SL1404 17/04/1936	POR. 400 & 419
RP40998 06/02/1925	LOTS 1-2 CANCELLING LOT 11 ON RP8567
RP8568 29/07/1915	LEASE A IN LOT 11 ON RP8567
B3342 29/10/1901	SUB OF ESA.888A; RESUB A OF SUB 1 & 2 OF ESA.9A (FOR B.334.2 SEE SL11143)
RP8567 16/04/1865	LOT 11 CANCELLING LOT 9007 ON B12346
RP8569 16/05/1864	LOT 6 CANCELLING LOT 9007 ON B12346
B12346 01/01/1801	ESA.6A,7A,8A,9A & 10A;ESA.6A,7A,8A,9A & 10A

ATS:**Title Reference:****50700219****Original Deed of Grant:****10985174 (ESA 8A)****Previous Title References:****50323248****QVAS:****Registered Owner:****BRISBANE CITY COUNCIL****Address:****5-5A BOUNDARY ST, BRISBANE CITY QLD 4000****Primary Land Use Code:****WAREHOUSE & BULK STORES(28)****Secondary Land Use Code:****NONE(0)****TAS:****No TAS data found.**

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Department of Natural Resources and Mines


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

Specific Parcel Report

Lot: 4 on Plan: SP128032
Parcel: on Segment:

DCDB:

Tenure:

FH

Description:

FREEHOLD

CISP:

Previous Plan Details:

Plan	Registered Description
AP14996	LOTS 1-4; & PART OF ADJOINING LOT 3 ON SP128031, LOT 4 ON SP128032 AND LOT 4 ON RP52849 CANCELLING PART OF BRISBANE RIVER
RC172119	LOT 1; PLAN OF LOT 4 ON SP128032 & LOT 900 ON SP134601 CANCELLING USL(PART OF THE BRISBANE RIVER ADJACENT TO LOT 4 ON SP128032 & LOT 900 ON SP134601)
SP128032 28/07/2000	LOT 4 CANCELLING LOT 2 ON B3333, BAL OF LOTS 21 & 22 ON RP8614, LOT 2 ON RP8616, BAL OF LOT 4 ON RP41821, LOT 2 ON RP44680 AND LOT 4 ON CP890874
RC906986	LOT 22 CANCELLING LOT 2 ON RP8616, LOT 2 ON RP44680, LOT 4 ON RP60570, LOT 2 ON B3333, THE BALANCE OF LOTS 21 & 22 ON RP8614 & THE BALANCE OF LOT 4 ON RP41821
CP890874 24/02/1995	LOT 4 CANCELLING LOT 4 ON RP60570
IS104559	LOT 4 (PART) ON RP41821, LOTS 21 AND 22 (PART) ON RP8614, LOT 2 (PART) ON RP44680, LOT 2 (PART) ON B3333, LOT 4 (PART) ON RP60570, LOTS 1 AND 3 (PART) ON RP52848, LOT 2 (PART) ON RP64992
RP8598 22/06/1978	LOTS 1 AND 2 CANCELLING LOT 1 ON RP8574 AND LOT 1 ON RP8582
RC110280	LOTS 1-4 CANCELLING LOT 400 ON SL1404, LOT 2 ON B3333, LOT 6 ON RP8569, LOTS 21-22 ON RP8614, LOT 2 ON RP44680
RP60570 19/12/1949	LOTS 1-4 CANCELLING LOT 1 ON RP8578, LOT 3 ON RP8595, LOT 2 ON RP8596 AND LOT 2 ON RP52849
RP52849 16/07/1936	LOTS 2 - 4 CANCELLING LOTS 4 - 5 ON B3342
RP44680 11/07/1927	LOTS 1 TO 2 CANCELLING LOT 4 ON RP8603 & LOT 8 ON RP8607
IS201944	LOTS 21&22 ON RP8614 & LOTS 1&2 ON RP48092 (NO PLAN - FIELD NOTES ONLY)
RP41821 05/08/1925	LOTS 1 AND 3-4 CANCELLING LOT 23 ON RP8616
RP8578 16/12/1920	LOTS 1-2 CANCELLING LOT 1 ON RP8598 & LOT 9009 ON B3342
RP8616 09/03/1918	LOTS 1 & 2 CANCELLING LOT 23 ON RP8614
B3342 29/10/1901	SUB OF ESA.888A; RESUB A OF SUB 1 & 2 OF ESA.9A (FOR B.334.2 SEE SL11143)
B3333 14/05/1901	ALLOT 2 OF SEC.63;;ALLOT 2 OF SEC.63;
RP8574 02/08/1881	LOTS 1-2 CANCELLING LOT 10-13 ON RP8573
RP8594 01/09/1878	LOTS 1-4 CANCELLING LOT 9009 ON B3342
RP8614 26/04/1872	LOTS 21-25 CANCELLING PART OF LOT 11 ON B12342
RP8596 06/04/1872	LOTS 1 AND 2 CANCELLING LOTS 1 AND 2 ON RP8595
RP8603 30/05/1869	LOT 4 CANCELLING LOT 901 ON B12346
RP8573 09/03/1866	LOT 10-13 CANCELLING LOT 8 ON B12342
RP8607 03/01/1865	LOT 8,10 CANCELLING LOT 910 ON B12346
RP8595 06/05/1864	LOTS 1-3 CANCELLING LOTS 1-4 ON RP8594
B12342 01/01/1801	ESA.1-62;R.1289 & R.989
B12346 01/01/1801	ESA.6A,7A,8A,9A & 10A;ESA.6A,7A,8A,9A & 10A

ATS:

Title Reference:

50323249

Original Deed of Grant:

40025609

Previous Title References:

40025609

QVAS:

Registered Owner: BRISBANE CITY COUNCIL
Address: 5-5A BOUNDARY ST, BRISBANE CITY QLD 4000
Primary Land Use Code: WAREHOUSE & BULK STORES(28)
Secondary Land Use Code: NONE(0)

TAS:
No TAS data found.

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CURRENT TITLE SEARCH

NATURAL RESOURCES AND WATER, QUEENSLAND

Request No: 4127531

Search Date: 03/06/2008 13:23

Title Reference: 50323249

Date Created: 31/07/2000

Previous Title: 40025609

REGISTERED OWNER

Dealing No: 707890862 14/07/2004

BRISBANE CITY COUNCIL

ESTATE AND LAND

Estate in Fee Simple

LOT 4

SURVEY PLAN 128032

County of STANLEY

Parish of NORTH BRISBANE

Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 40025609 (Lot 4 on SP 128032)

ADMINISTRATIVE ADVICES - NIL

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

** End of Current Title Search **

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Requested By: D APPLICATIONS GLOBAL X

Page 1/1

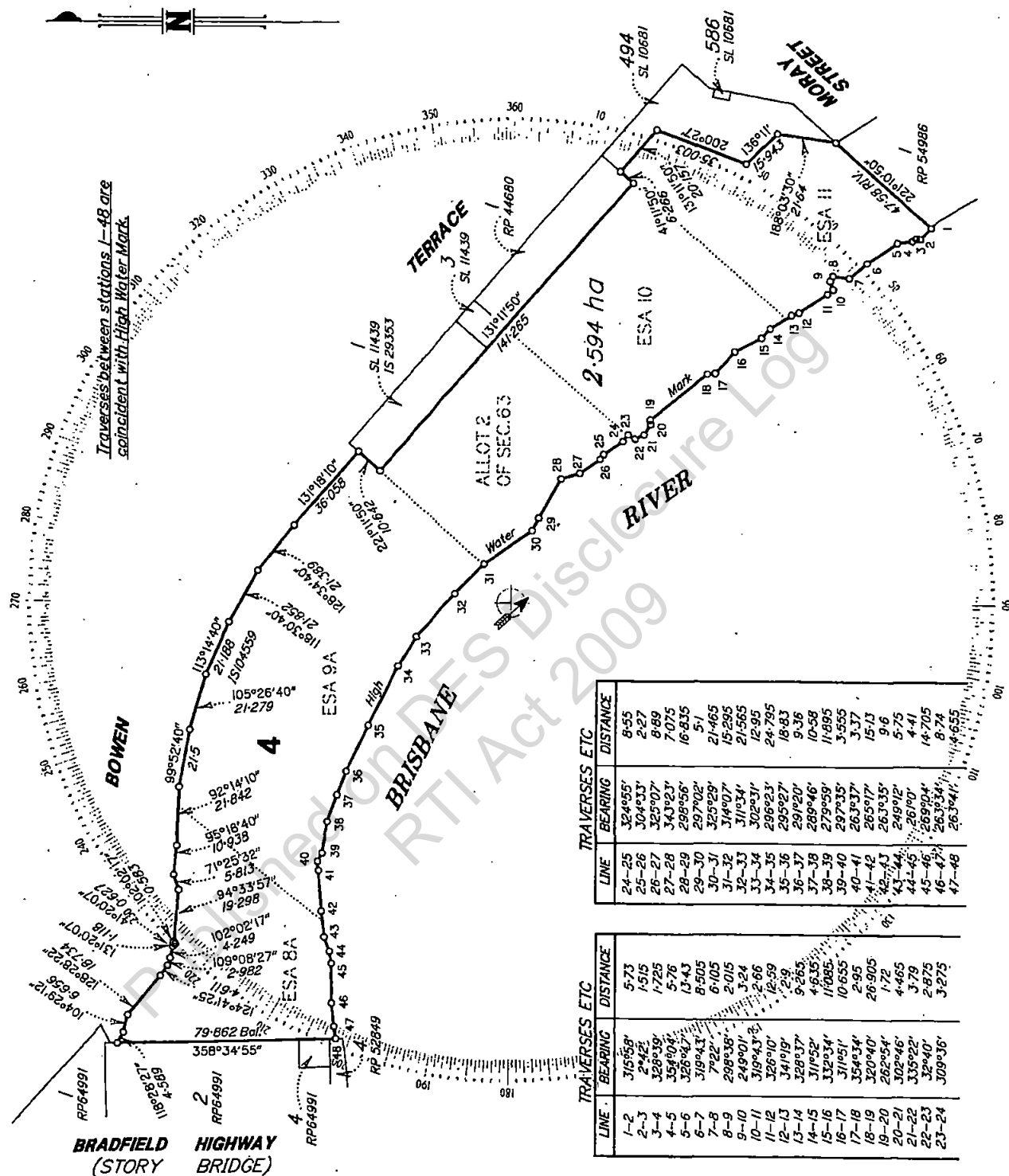
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Land Title Act 1994 : Land Act 1994
Form 21 Version 2

SURVEY PLAN

Sheet 1 of 1



LINE	BEARING	DISTANCE
24-25	32°45'55"	8.55
25-26	304°33'	2.27
26-27	325°07'	8.89
27-28	343°23'	7.075
28-29	298°56'	16.835
29-30	297°02'	5.1
30-31	325°29'	21.465
31-32	311°34'	15.265
32-33	302°31'	21.565
33-34	296°23'	12.95
34-35	295°27'	24.795
35-36	291°20'	18.83
36-37	289°46'	9.36
37-38	279°59'	10.58
38-39	279°35'	11.895
39-40	267°37'	3.555
40-41	263°37'	3.37
41-42	265°17'	15.13
42-43	263°33'	9.6
43-44	249°12'	5.75
44-45	261°01'	4.41
45-46	269°04'	14.705
46-47	263°34'	8.74
47-48	263°41'	4.655

LINE	BEARING	DISTANCE
1-2	316°59'	5.73
2-3	2°42'	1.515
3-4	328°39'	1.725
4-5	354°04'	5.76
5-6	328°04'	13.43
6-7	319°43'	8.505
7-8	7°22'	6.105
8-9	298°38'	2.015
9-10	249°01'	3.24
10-11	318°43'	2.66
11-12	328°10'	12.39
12-13	341°19'	2.9
13-14	328°37'	9.265
14-15	316°52'	4.635
15-16	332°34'	11.085
16-17	316°51'	10.655
17-18	354°34'	2.95
18-19	320°40'	26.905
19-20	262°54'	1.72
20-21	302°46'	4.465
21-22	335°22'	3.79
22-23	32°40'	2.875
23-24	309°16'	3.275

Kellar Fox & McChie Pty. Ltd. ACN 010 162 197
hereby certify that the Company has made this plan
pursuant to Section 25 of the Surveyors Regulation
1992, and that the plan is accurate, and compiled from
RC906986 & CP906974 in the Department of Natural
Resources



Director and Licensed Surveyor

Director

Date: 11.6.00

0m 75m 150m 225m
0 50m 100m 150m State copyright reserved

Plan of Lot 4

Cancelling U.S.L. being Lot 2 on B3333, the balance of
Lots 21 & 22 on RP8614, Lot 2 on RP8616, the balance of
Lot 4 on RP41821, Lot 2 on RP44680 and Lot 4 on CP890874

PARISH: NORTH BRISBANE COUNTY: Stanley

Meridian: AMG Zone 56 Vide RC906986

F/N's: NO

Scale: 1:1500

Format: STANDARD

SP128032

Plan Status

704127834

NO FEE
23/08/2008 15:58

BE 494

IDealing No 1

WARNING : Folded or Mutilated Plans will not be accepted.
Plans may be rolled.

Information may not be placed in the outer margins.

Registered

6. Lodged by

~~Wally Cowley~~
Senior Property Analyst
Portfolio and Housing Unit
Department of Public Works
GPO Box 2457, Brisbane Q 4001
Phone: 3404 3787
(Include address, phone number, reference, and Lodger Code)Bernie Magin
Property Services
Unit 14, AXA
Ph: X78110

525

1 Certificate of Registered Owners or Lessees.

I/We

(Names in full)

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

*as Lessees of this land agree to this plan.

Signature of *Registered Owners *Lessees

APPROVED

S.73 Irrelevant

S.73

Douglas James Fergusson
Delegate of the Minister for Natural Resources

21/8/00.

* Rule out whichever is inapplicable

2 Local Government Approval.

hereby approves this plan in accordance with the :

%

Dated this day of

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

3. Plans with Community Management Statement :

CMS Number :

Name :

4 References :

Dept File : BRI/000369

Local Govt :

Surveyor : TA 2283-00

ESAs 8A,
9A, 10 & 11
and Allot 2
of Sec. 63

4

Orig

Lots

7 Portion Allocation :

8 Map Reference :

9543-33313

9 Locality :

FORTITUDE VALLEY

10 Local Government :

BRISBANE C. C.

11 Passed & Endorsed :

Kellor Fox & McHie Pty. Ltd.

By : ACN 010 162 197

Date : 18.6.00

Signed : S.73 Irr

Designation : Liaison Officer

12 Building Format Plans only.

I certify that :

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

Licensed Surveyor/Director * Date
* delete words not required

13. Lodgement Fees :

Survey Deposit

Lodgement

New Titles

Photocopy

Postage

TOTAL

FEES

\$ 27.00

\$

\$

\$

\$ 87.00

14 Insert
Plan
Number

SP128032

CURRENT TITLE SEARCH

NATURAL RESOURCES AND WATER, QUEENSLAND

Request No: 4127462

Search Date: 03/06/2008 13:19

Title Reference: 50700219

Date Created: 07/01/2008

Previous Title: 50323248

REGISTERED OWNER

Dealing No: 711289700 19/12/2007

BRISBANE CITY COUNCIL

ESTATE AND LAND

Estate in Fee Simple

LOT 3 SURVEY PLAN 190810

County of STANLEY

Parish of NORTH BRISBANE

Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10985174 (ESA 8A)
Deed of Grant No. 11981103 (POR 400)
Deed of Grant No. 19549108 (ESA 7A)
2. EASEMENT IN GROSS No 705796394 16/07/2002 at 12:30
burdening the land
BRISBANE CITY COUNCIL
over
EASEMENT B ON SP150140

ADMINISTRATIVE ADVICES - NIL

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Requested By: D APPLICATIONS GLOBAL X

Page 1/1

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

SURVEY PLAN

Sheet
1 of
2

REFERENCE MARKS

STN	TO	ORIGIN	BEARING	DIST
1	O.Screw in Conc	4/15193482	177°58'45"	1.741
2	O.Nail	13/RP64991	358°42'40"	1.497
14	O.Screw in Kerb	24/15193482	344°50'	7.421
14	O.Screw in Kerb	24/15193482	66°42'	21.078
14	O.Screw in Conc	24/15193482	77°08'40"	37.779
14	O.Cor Building	24/15193482	96°37'	37.885

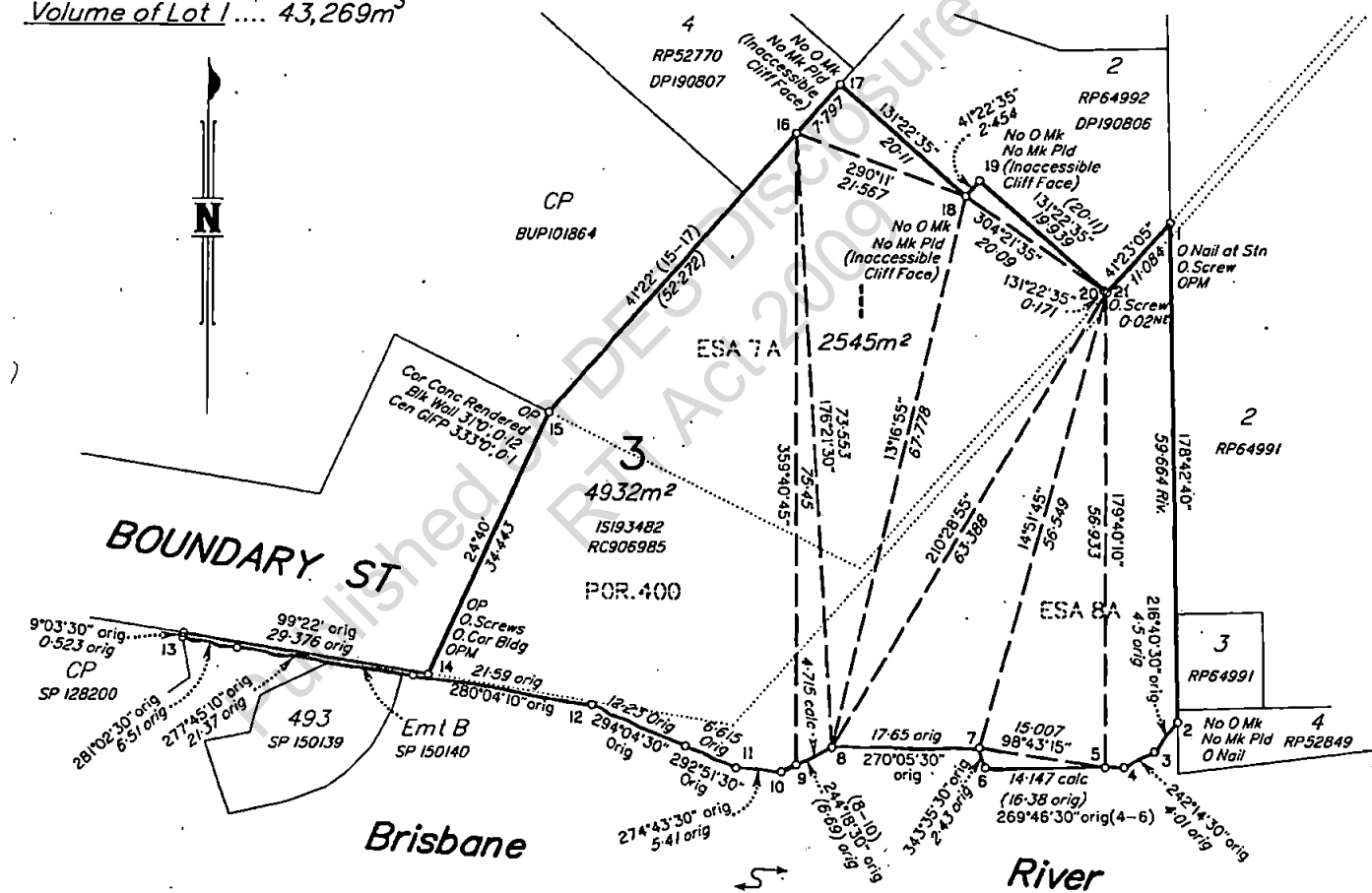
PERMANENT MARKS

PM	ORIGIN	BEARING	DIST	NO
1-OPM (New Conn.)	12/15193482	109°50'	72.6	16370
14-OPM	24/15193482	239°45'15"	94.548	131399

DATUM FOR LEVELS

PM131399

RL=2.05m AHD (Der.)

Lot 3 is a Standard Format LotLot 1 is Bounded by vertical planesNo Marks placed for Lot 1 as all new corners are underground and inaccessible.Original information compiled from 15193482 in the Department of Natural Resources and Water.Original Traverse between Stns. 2-13 coincident with High Water Mark(H.W.M.)Area of Footprint of Lot 1 2,545m²Volume of Lot 1 43,269m³Direction of
Isometric View
SEE SHEET 2

JONES FLINT & PIKE PTY. LTD. (ACN 050 414 045) hereby certify that the land comprised in this plan was surveyed by the corporation, by Fabian Bruno SALVATI, Surveying Graduate, for whose work the corporation accepts responsibility, under the supervision of Mark Thomas FITZGERALD, Cadastral Surveyor, and that the plan is accurate, that the said survey was performed in accordance with the Survey and Mapping Infrastructure Act 2003 and Surveyors Act 2003 and associated Regulations and Standards and that the said survey was completed on 6/09/06



s.73 Irrelevant in
Director s.73 Irrelevant
Director
Date 27/10/06

Plan of Lots 1 & 3

Cancelling Lot 3 on SPI28031

PARISH: NORTH BRISBANE COUNTY: Stanley

Meridian: MGA 94 Vide 15193482

F/N's: No

Scale: 1:600

Format: VOLUMETRIC

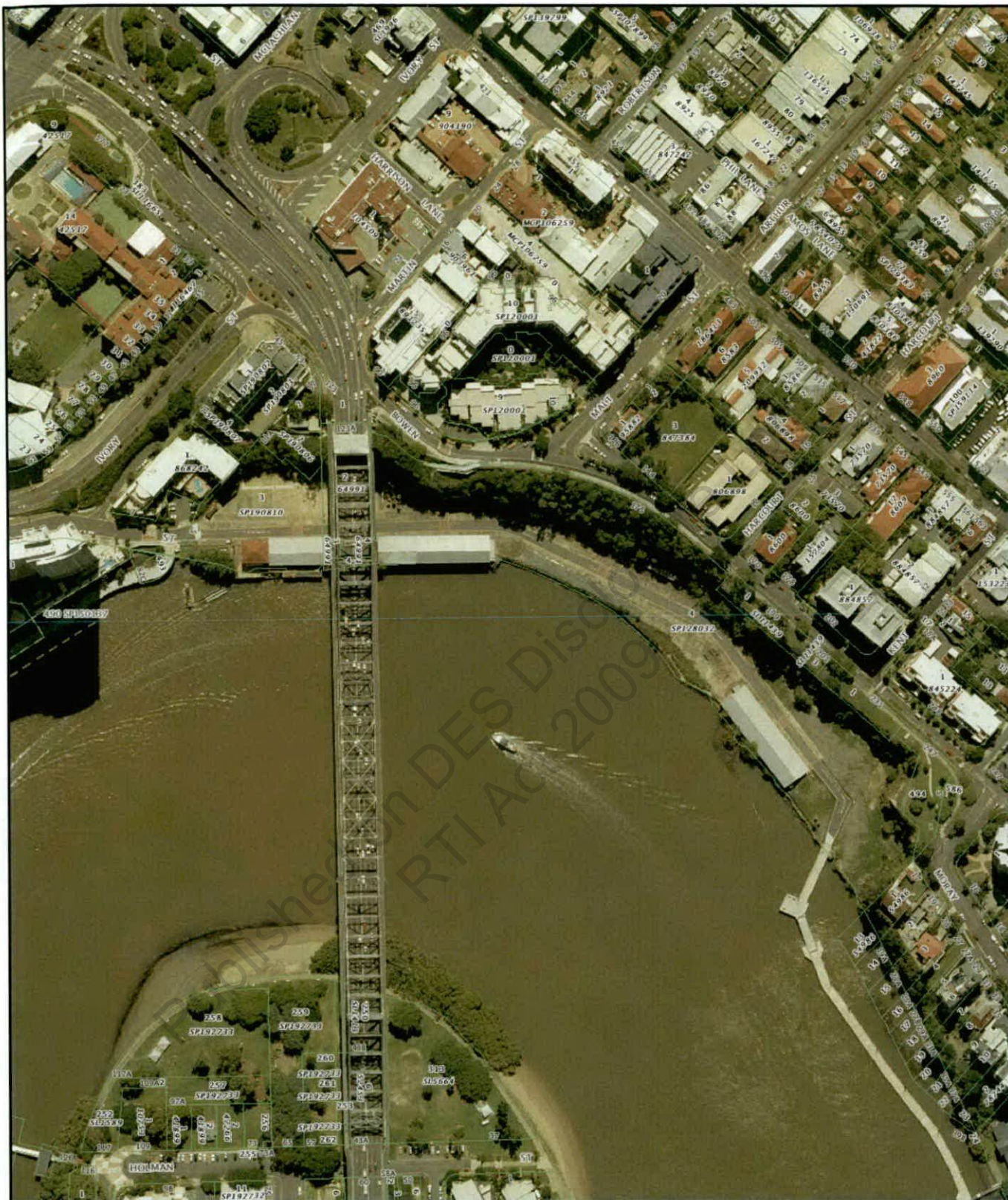


SP190810

Plan Status:

Attachment F

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Howard Smith Wharf

Scale = 1:3,417
Metres 50 100 150

Date : Jun 3, 2008

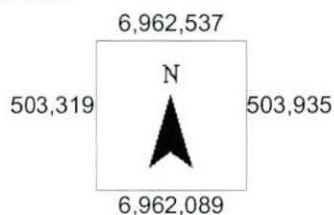
User : 068575

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2005 Brisway (c) 2005 Melway Publishing

Location :



Copyright BCC, 2006





Report Review Howard Smith Wharf

May 2008

Prepared on behalf of:
City Planning - Brisbane City Council

Prepared by:
Environmental Management
Water and Environment Group
Brisbane City Council

City Design

Level 1 South Tower
Green Square
505 St Pauls Terrace
Fortitude Valley QLD 4006

Locked Bag 6996
Albion QLD 4010

Telephone 07 3403 3849
Facsimile 07 3403 0438

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Sustainable Communities*

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Issue No.	Date of Issue	Amdt	Prepared By (Author/s)		Edited and Proofread By		Reviewed By		Approved for Issue (Project Director)	
			Name	Initial	Name	Initials	Name	Initials	Name	Initials
1	16-3-2008		Greg McPherson		Kate Atkins		Greg McPherson		Michael Lane	
2	26-5-2008		Greg McPherson	s.73 Irrelevant	Kate Atkins	s.73 Irrelevant	Greg McPherson	s.73 Irrelevant	Michael Lane	s.73 Irrelevant

Executive Summary

In order to assist in the preliminary application for a material change of use for the Howard Smith Wharf Site, City Design - Environmental Management (CDEM) was commissioned by City Planning to undertake a review of previous contamination assessment reports and to prepare a submission to the EPA (including Draft Site Management Plans (SMPs) if required).

The specific scope undertaken by CDEM and described in this report included:

- Review of available information pertaining to the site including EPA File No 901727 and previous contamination assessment (Howard Smith Wharf, Fortitude Valley Site Contamination Assessment Draft Report March 1999);
- Provision of recommendations including an application to the EPA to remove the site from the EMR if the results of the review warrant this action; and
- Development of appropriate Site Management Plans (SMPs) in the event that the lots are not removed from the EMR;

The history of the site as reported by City Design Geotechnical and Environmental Engineering (1999) indicates a range of activities having been historically conducted at the site including:

- General stevedoring;
- Naval ship maintenance, and storage and loading of supplies during wartime;
- As a base for the Water Police and Police Diving Squad;
- As a police impoundment area for stolen cars and as a holding area for property to be used in court cases;
- Government stores for equipment being held for auction;
- Vehicle maintenance and refuelling;
- Storage of low level radioactive waste; and
- Various other small scale maintenance and engineering purposes.

There was no indication from the site history of any specific notifiable activity ever having been conducted at the Howard Smith Wharf site with the exception of the historical presence of an underground fuel storage tank which was reportedly decommissioned and removed from site prior to 1996.

It is further understood from review of the 1999 City Design report and EPA file No 901727 that Queensland Health undertook radiation monitoring in the shed used for storage of low level radioactive waste and found no evidence of radiation levels exceeding National Health and Medical Research Council (NHMRC) guidelines.

During the assessment conducted by City Design -Geotechnical & Environmental Engineering in 1999, a total of 54 boreholes were drilled over the 3.6 hectare area of the Howard Smith Wharf site. A total of 50 soil samples were collected during the assessment with 34 selected samples subsequently dispatched to the laboratory for analysis.

A statistical interpretation of the laboratory results obtained by City Design – Geotechnical and Environmental & Environmental Engineering in 1999 was undertaken as part of the review conducted by CDEM.

On the basis of the review of the available information CDEM concludes the following:

- No specific notifiable activities are known to have occurred at the site with the exception of the historical presence of a single underground fuel storage tank which was reportedly decommissioned and removed from site prior to 1996;
- Significant remediation of the site including the off-site disposal of approximately 2200m³ of Total Petroleum Hydrocarbons (TPH) and heavy metal contaminated soil appears to have been conducted by Golder Associates in late 1996;
- A Site Management Plan was also developed by Golder in 1996. It would appear from correspondence between the DoE and Golder in late 1996 that the SMP was accepted by the DoE;
- The EPA was unable to locate either a copy of the SMP or the Stage II Contamination Assessment report pertaining to the site during a search in late 2007;
- Discreet samples collected by City Design in 1999 returned concentrations for various heavy metal contaminants exceeding environmental investigation levels;
- The 95% upper confidence level (UCL) for the mean concentration for all heavy metals analysed with the exception of zinc were below the EIL;
- The 95% upper confidence level (UCL) for the mean zinc concentration while exceeding the EIL was well below the health based investigation level for standard residential land use;
- While isolated samples returned TPH, Total Polycyclic Aromatic Hydrocarbons (PAH) and benzo(a)pyrene concentrations exceeding guideline values, the sample analysis for these samples was highly targeted and the resulting exceedances obtained are not considered representative of the soil/fill at the site in general;
- Given the shallow depth to bedrock at the site there is little potential for significant volumes of contaminated soil to exist at the site and little potential for contaminants to migrate to depth;
- None of the contamination concentration exceedances reported were sufficiently elevated to raise serious concerns with respect to human health or the environment given the overall exposure potential at the site and given any future land use; and
- The site is therefore considered suitable for any land use subject to implementation of the provisions of the draft SMPs provided in **Attachment D**.

On the basis of this review it is recommended that this report be forwarded to the Director of the Queensland Environmental Protection Agency along with a recommendation that the site (Lot 3 on SP 190810 and Lot 4 on SP 128032) is suitable for any use, subject to implementation of the attached Site Management Plans.

Table of Contents

EXECUTIVE SUMMARY	I
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6.0 RECOMMENDATIONS	11
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Appendix A – Site Contamination Assessment Draft Report- Geotechnical and Environmental Engineering, March 1999.

Appendix B – Summary of Soil Analysis Results and Statistical Analysis

Appendix C Photographs

Appendix D Draft Site Management Plans

1.0 Introduction

City Policy and Strategy Division is undertaking a planning study and compiling a preliminary application for a material change in use for the Howard Smith Wharves site at Boundary Street, Brisbane.

The site considered in the planning study/preliminary application includes eight lots (Lots 1 and 2 on RP.64992, Lot 3 on SP 190810 (formerly Lot 3 on SP.128031), Lot 2 on RP.64991, Lots 3 and 4 on RP.64991, Lot 4 on RP.52849 and Lot 4 on SP.128032). Lot 3 on SP.190810 and Lot 4 on SP.128032 are listed on the Environmental Protection Agency's (EPA) Environmental Management Register (EMR) for a notifiable activity (hazardous contaminant site).

In order to assist in the preliminary applications City Design - Environmental Management (CDEM) was commissioned by City Planning to undertake a review of previous contamination assessment reports and to prepare a submission to the EPA (including a Site Management Plan (SMP) if required) for the Howard Smith Wharf site.

The specific scope undertaken by CDEM and described in this report included:

- Review of available information pertaining to the site including the previous contamination assessment (Howard Smith Wharf, Fortitude Valley Site Contamination Assessment Draft Report March 1999);
- Provision of recommendations including an application to the EPA to remove the site from the EMR if the results of the review warrant this action; and
- Development of appropriate Site Management Plans (SMPs) in the event that the lots are not removed from the EMR;

In addition to the above scope a site inspection for the Howard Smith Wharf site was undertaken in order to assess the current state of the site.

2.0 Review of available information

The following reports and information were reviewed as part of the scope of works undertaken by CDEM:

- Howard Smith Wharf, Fortitude Valley Site Contamination Assessment Draft Report, City Design – Geotechnical and Environmental Engineering, March 1999;
- City Design Geotechnical and Environmental Engineering File Number 98-155;
- Brisbane City Council WeBbasx database; and
- EPA File No 901 727.

A copy of the *Howard Smith Wharf, Fortitude Valley Site Contamination Assessment Draft Report*, City Design – Geotechnical and Environmental Engineering, March 1999 is provided in **Appendix A**.

A summary of the information from the above sources and relevant to this review is provided below.

The real property description of the site at the time of the contamination assessment conducted in 1999 consisted of the following lots:

Lot 400 on SL1404;
Lot 2 on RP 40998;
Lot 2 on RP64992;
Lots 1,2,3 and 4 on RP64991;
Lot 6 on RP8569;
Lots 3 and 4 on RP52849;
Lot 4 on RP60570;
Lot 2 on B3333;
Lot 2 on RP44680;
Lots 21 and 22 on RP8614; and
Lot 4 on RP41821.

Of these sites, Lot 400 on SL1404, Lot 2 on RP44680, Lots 21 and 22 on RP8614 and Lot 4 on RP41821 were listed on the EPA's Environmental Management Register (EMR) at the time of the 1999 assessment.

The size of site covered by the 1999 assessment was reported to be approximately 3.6 hectares.

Review of Councils WebBASX/IBimap system confirms that the majority of the site covered by the 1999 contamination assessment was subsequently re-configured to form Lot 3 on SP 128031 and Lot 4 on SP 128032. Lot 3 on SP128031 was again re-configured in January 2008 to form Lot 3 on SP 190810.

Specifically:

- Lot 400 on SL1404 (1,181m²) became part of Lot 3 on SP128031(4,931m²) which was in turn re-configured to form Lot 3 on SP 190810 (4,932m²);

- Lot 2 on RP44680 (5,094 m²), Lot 21 on RP8614 (1,893 m²), Lot 22 on RP8614 (1,539 m²); and Lot 4 on RP41821 (1071 m²) became part of Lot 4 on SP 128032 (25,940 m²).

The geology of the site consists of a thin veneer of soil or fill (generally less than 1 metre depth) overlying bedrock.

The history of the site as reported by City Design Geotechnical and Environmental Engineering (1999) indicates a range of activities having been historically conducted at the site including:

- General stevedoring;
- Naval ship maintenance, and storage and loading of supplies during wartime;
- As a base for the Water Police and Police Diving Squad;
- As a police impoundment area for stolen cars and as a holding area for property to be used in court cases;
- Government stores for equipment being held for auction;
- Vehicle maintenance and refuelling;
- Storage of low level radioactive waste; and
- Various other small scale maintenance and engineering purposes.

There is no indication from the site history with respect to any specific notifiable activity ever having been conducted at the Howard Smith Wharf site with the exception of the historical presence of an underground fuel storage tank (UST) which was reportedly decommissioned and removed from site prior to 1996.

It is understood from review of the 1999 City Design report that Queensland Health undertook radiation monitoring in the shed used for storage of low level radioactive waste in 1994 and found no evidence of radiation levels exceeding National Health and Medical Research Council (NHMRC) guidelines.

During the assessment conducted by City Design –Geotechnical & Environmental Engineering in 1999, a total of 54 boreholes were drilled over the 3.6 hectare area of the Howard Smith Wharf site. A total of 50 soil samples were collected during the assessment with 34 selected samples subsequently dispatched to the laboratory for analysis.

2.1 Review of EPA File No 901727

EPA file (Reference No 901 727) was reviewed by CDEM on 19 November 2007.

The information obtained during this review is summarised below:

A letter dated 5 February 1996 from the Environmental Health - Radiation Health branch confirmed that that there were no radiation levels exceeding NHMRC guidelines detected at the site.

A letter dated 16 May 1996 from the Department of Public Works and Housing to the Hazardous Waste and Contaminated Sites Section of the Department of Environment (DoE) indicated the following enclosures:

1. An Application for Site Contamination Report;
2. A cheque for \$440.00 being the statutory fee;
3. A site history and Stage II testing proposal by Golder Associates;
4. Extract from the Government Land Register;
5. Real Property descriptions; and
6. Street Map.

A letter dated 18 June 1996 from Gary O'Connor (DoE) to Mr J Furner from the Dept of Public Works and Housing provided recommended/required:

1. *Validation of walls of the former UST excavation;*
2. *Clarification of the use of the large steel mains beneath the sheds; and*
3. *Validation of the soils immediately downslope of the aboveground tank near the water police office.*

The correspondence further indicated that:

"Subject to the above comments the Stage II sampling proposal is acceptable".

A document transmittal dated 12 September 1996 indicated transmittal of a Draft Stage II Contamination Assessment Report and Site Management Plan (Reference 96638197 (c)) from Golder Associates to DoE.

Correspondence dated 19 September 1996 from Gary O'Connor (DoE) to Mr R Morphet from Golder Associates provided "Comments re Draft Site Contamination Assessment and Site Management Plan" including a request for further clarification regarding the zinc clean up criteria proposed for the site by Golder Associates.

Correspondence dated 30 September from Golder to DoE "queried" the risk assessment required by DoE.

A letter dated 8 October 1996 from Gary O'Connor (DoE) to R Morphet (Golder Associates Pty Ltd) provided further clarification regarding the DoE risk assessment requirements.

A document Transmittal dated 20 November 1996 indicated transmittal of Stage II Contamination Assessment Report and Site Management Plan from Golder Associates to DoE.

Correspondence dated 2 December 1996 from Gary O'Connor (DoE) to Golder Associates acknowledged that DoE comments regarding the draft report had been satisfactorily addressed in the final report.

Correspondence from Mr Russel Miller from the Brisbane City Council Hazardous Waste section to Chris McMahon from Golder Associates confirmed acceptance of 2210m³ of heavy metal and Total Petroleum Hydrocarbon (TPH) contaminated soil.

Correspondence dated 5 December 1996 from Gary O'Connor (DoE) to R Morphet (Golder Associates) confirmed DoE approval for off-site disposal of 2,200m³ of contaminated soil.

Note: Only the Laboratory Results Table from the Stage II Contamination Assessment report was found in the EPA file reviewed. Neither the draft or the final Stage II contamination reports or the Site Management Plan referenced in the file were able to be located and a subsequent search by the EPA failed to find copies of these documents. A copy of the Stage I Contamination Assessment report compiled by Golder Associates was contained in the file. A summary of the findings of this report is provided in Section 2.2.1 below.

2.1.1 Review of Stage 1 Contamination Assessment Report

The EPA file contained the following report;

Site Contamination Assessment
Stage 1
Howard Smith Wharf
Fortitude Valley Brisbane
Golder Associates April 1996.

Conclusions contained in this report included the following:

"Four areas of the Howard Smith Wharf Site were identified as potentially contaminated in the site history studies:

- *The location of the former underground fuel tank.*
- *Imported fill near the site entrance.*
- *Fill on the New Farm end of the site.*
- *Wooden structural materials in the former wharf facilities."*

The former underground fuel tank had been found to be decommissioned and removed however 40m³ of hydrocarbon contaminated sand fill remains in the tank pit. Sampling has indicated that contamination in this area is likely to be confined to the tank pit however additional in situ clay material (100mm) will need to be removed in any remedial operations to ensure that only clean materials remain.....

Various contaminated materials were identified at the site. These are summarised as follows:

- *Recently introduced fill (from Transit Centre) near site entrance A lead and zinc "hot spot" of around 300m³ which also contains significant concentrations of dieldrin";*
- *A zinc "hot spot" at the New Farm end which may represent up to 1500m³ of material;*
- *Moderately contaminated ash layer of unknown extent which contains significant lead and zinc concentrations and may represent up to 400m³; and*
- *Possibly 150m³ of broken rock material moderately elevated in zinc."*

Identified options included:

- Leaving material in situ resulting in a "restricted" classification; and
- Remediation to a "former" classification.

Further characterisation was recommended.

The history contained in the Stage 1 report was generally consistent with the history reported by City Design in 1999..

It was noted that the No 5 shed at the site had been occupied by Australian Gypsum Product Pty Ltd, a plaster manufacturer, up to 1944 and Australian Plaster Industries from 1945 until 1972 when the shed was demolished and removed.

The most significant TPH contamination levels reported for the Stage 1 Assessment was 138mg/kg for the C₆-C₁₀ TPH fraction.

Lead concentrations ranging between 532mg/kg and 2430mg/kg were recorded in fill at the site entrance while zinc concentrations of between 430mg/kg and 1370mg/kg were reported for the fill from the Transit Centre.

3.0 Site Inspection - CDEM

A contaminated land professional from CDEM conducted a site inspection on 11 October 2007.

Photographs taken at the time of the inspection are reproduced in **Appendix C**.

The observations made during this inspection are summarised below:

- The majority of the site is paved with either bitumen or concrete;
- Lot 3 is separated from Lot 4 by the deck width of the story bridge;
- A walkway/cycleway bisects the sites;
- Several buildings are present on the southern side of the walkway/cycle way;
- The building labelled as Building No 4 in the 1999 assessment had been demolished;
- The diesel AST previously identified at the site remained in situ;
- Areas to the north of the walkway were fenced and secured from the remainder of the site;
- There were no obvious signs of any significant contamination at the site observed during the site inspection; and
- There were no notifiable activities observed to be occurring at the site at the time of the inspection.

4.0 Interpretation of Laboratory Results (City Design – Geotechnical and Environmental Engineering, 1999)

4.1 Assessment Guidelines

To assess the significance of the results obtained during environmental investigations, laboratory results for soil testing are commonly compared to criteria developed or applied by regulatory authorities. These criteria are developed through research and represent concentrations of contaminants within the environment that may lead to adverse health or environmental effects.

In the case of soil investigations, The National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM) Urban Ecological Investigation Levels (EILs) have been used in the first instance as the regulatory criteria with the NEPM health based soil investigation levels (HIL) guidelines used where contaminant levels exceed EIL. These criteria specify different exposure settings (ranging from residential to industrial land use) enabling the application of more site-specific criteria to a particular site depending on its land use.

The criteria specified within this assessment have been developed with consideration to Queensland EPA guidelines and the NEPM for Assessment of Site Contamination. These guidelines are subject to change with the further development of the NEPMs and through the updating of scientific knowledge with respect to potential health and environmental risks.

4.2 Statistical Assessment and Discussion

A statistical interpretation of the laboratory results obtained by City Design – Geotechnical and Environmental & Environmental Engineering in 1999 was undertaken as part of the review conducted by CDEM.

A summary of the Soil Analysis Results including mean and standard deviation calculations is provided in **Appendix B**.

The review of the laboratory results indicates the following:

- Various “low level” discreet exceedances of environmental investigation levels (EIL’s) for heavy metals were reported for various samples;
- The 95% upper confidence level (UCL) for the mean concentration for all heavy metals analysed, with the exception of zinc, were below the EIL;
- The 95% UCL for the mean for zinc (364 mg/kg), while exceeding the EIL, is well below the health based threshold for standard residential land use of 7000mg/kg;

- The 95% UCL for TPH (C₁₀-C₁₄ fraction) exceeds the EPA's standard investigation threshold for this TPH fraction of 100 mg/kg. The mean value of the TPH (C₁₀-C₁₄ fraction) concentration is however below the adopted threshold level;
- The 95% UCL for benzo(a)pyrene exceeds the EPA's health based investigation threshold for standard residential land use however the mean value reported for benzo(a)pyrene was below the EPA's health based investigation threshold for standard residential land use;
- Limited targeted analysis was conducted for TPH (10 samples analysed only) and polycyclic aromatic hydrocarbons including benzo(a)pyrene (six samples analysed only). (Only fill samples where ash was noted were analysed for PAH constituents); and
- None of the contamination concentration exceedances reported were sufficiently elevated to raise serious concerns with respect to human health or the environment given the overall exposure potential at the site and given any future land use.

Samples BH1-0.2 and BH22-0.2 which returned concentrations for benzo(a)pyrene of 1.2 mg/kg and 1.9 mg/kg were among 5 fill samples noted to contain ash material. None of the other 50 samples collected were noted to contain any traces of ash. Given the specific targeting of the PAH analysis and the generally low concentrations of PAH and benzo(a) pyrene reported despite this targeting, it is unlikely that the PAH concentrations reported are indicative of any significant risk to human health or the environment given any subsequent land use of the site.

Soil samples selected for TPH analysis were generally targeted on the basis of visual assessment and/or proximity to areas where petroleum products were suspected to have been historically stored. Samples BH51-0.2 and BH52-0.2 which returned concentrations for TPH exceeding EPA guideline values were collected at shallow depth in an area described in the 1999 report as possibly previously housing fuel storage tanks and associated pipework. Samples collected from a further four sampling locations in this vicinity returned concentrations for TPH below EPA guideline values. Sample BH44-0.2 which was collected from adjacent to the diesel AST returned TPH concentrations below EPA guideline values.

Given the time that has elapsed since the City Design 1999 assessment and now, and given that hydrocarbon storage at the site had ceased in about 1999 it is likely that any residual hydrocarbons within shallow soil/fill at the site will have reduced/attenuated on those levels recorded in 1999.

5.0 Conclusions

On the basis of the review of the available information CDEM concludes the following:

- No specific notifiable activities are known to have occurred at the site with the exception of the historical presence of a single underground fuel storage tank which was reportedly decommissioned and removed from site prior to 1996;
- Significant remediation of the site including the off-site disposal of approximately 2200m³ of TPH and heavy metal contaminated soil appears to have been conducted by Golder Associates in late 1996;
- A Site Management Plan (SMP) was also developed by Golder in 1996. It would appear from correspondence between the DoE and Golder in late 1996 that the SMP was accepted by the DoE;
- The EPA was unable to locate either a copy of the SMP or the Stage II Contamination Assessment report pertaining to the site during a search in late 2007;
- Discreet samples collected by City Design in 1999 returned concentrations for various heavy metal contaminants exceeding environmental investigation levels;
- The 95% upper confidence level (UCL) for the mean concentration for all heavy metals analysed with the exception of zinc were below the EIL;
- The 95% upper confidence level (UCL) for the mean zinc concentration while exceeding the EIL was well below the health based investigation level for standard residential land use;
- While isolated samples returned TPH, total PAH and benzo(a)pyrene concentrations exceeding guideline values, the sample analysis for these samples was highly targeted and the resulting exceedances obtained are not considered representative of the soil/fill at the site in general;
- Given the shallow depth to bedrock at the site there is little potential for significant volumes of contaminated soil to exist at the site and little potential for contaminants to migrate to depth;
- None of the contamination concentration exceedances reported were sufficiently elevated to raise serious concerns with respect to human health or the environment given the overall exposure potential at the site and given any future land use; and
- The site is therefore considered suitable for any land use subject to implementation of the provisions of the draft SMPs provided in **Attachment D**.

6.0 Recommendations

On the basis of this review it is recommended that this report be forwarded to the Director of the Queensland Environmental Protection Agency along with a recommendation that the site (Lot 3 on SP 190810 and Lot 4 on SP 128032) is suitable for any use, subject to implementation of the attached Site Management Plans.

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**Appendix A – Site Contamination Assessment Draft
Report- Geotechnical and Environmental
Engineering, March 1999.**

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HOWARD SMITH WHARF, FORTITUDE VALLEY

SITE CONTAMINATION ASSESSMENT

DRAFT REPORT

Distribution:

2 Copies: City Planning

1 Copy: Geotechnical and Environmental Engineering

Reference: 98155(B)

Date Issued: 9 March 1999

EXECUTIVE SUMMARY

City Planning commissioned City Design to complete a site contamination assessment of Howard Smith Wharf at Boundary St, Fortitude Valley.

The purpose of the investigation is to assess the contamination status of the site to provide City Planning with information required as part of the proposed transfer of ownership of the site from State Government to Brisbane City Council. The site contamination assessment is also being prepared for submission, if requested by City Planning, to the Department of Environment and Heritage (DEH), for issuance of a Suitability Statement for the intended future use and/or to identify the remediation/management requirements of the site.

The results of soil sampling and laboratory analysis indicate some low level heavy metals contamination at the site, with two sampling locations exceeding Queensland DEH health-based guidelines for lead. Some low level petroleum hydrocarbon contamination was also found in one area, with two sampling locations exceeding Qld CHEM Unit guidelines for Total Petroleum Hydrocarbons.

The site is considered suitable for high to medium density residential, commercial / industrial or open space / recreational subject to either remediation of contaminated areas or by managing future use of the site under a Site Management Plan.

It is recommended that a Site Management Plan be developed and submitted to DEH for approval prior to commencement of site development works.

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1.0 INTRODUCTION

In December 1998, City Design was commissioned by City Planning to carry out a site contamination assessment of Howard Smith Wharf, under the Story Bridge in Brisbane City.

The assessment was carried out in accordance with the *DEH Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland, May 1998*. The purpose of the assessment is to assess the contamination status of the site to provide City Planning with information required as part of the proposed transfer of ownership of the site from State Government to Brisbane City Council. The site contamination assessment is also being prepared for submission, if requested by City Planning, to the Department of Environment and Heritage (DEH), for issuance of a Suitability Statement for the intended future use and/or to identify the remediation/management requirements of the site.

1.1 Objective and Scope of Work

The objective of the site contamination assessment is to provide City Planning with the necessary information on the contamination status of the site to enable the transfer of property ownership in accordance with statutory and due diligence requirements.

The scope of the work carried out for the site contamination assessment, comprises four stages:

- Stage 1 - Preliminary Site Investigation (Completed)
Includes site description and site history
- Stage 2 - Detailed Site Investigation (Completed)
Includes sampling and testing for contaminants
Defining contaminant boundaries
- Stage 3 - Health and environmental assessment and determination of remediation plan (Future if required)
- Stage 4 - Implementation of agreed remediation plan and validation sampling (Future if required)

2.0 SITE DESCRIPTION

2.1 Property Description

The site is located at Boundary Street, Fortitude Valley under the Story Bridge and comprises the following lots in the Parish of North Brisbane:

Lot 400 on SL1404;
Lot 2 on RP40998;
Lot 2 on RP64992;
Lots 1,2,3 and 4 on RP64991;
Lot 6 on RP8569;
Lots 3 and 4 on RP52849;
Lot 4 on RP60570;
Lot 2 on B3333;
Lot 2 on RP44680;
Lots 21 and 22 on RP8614; and
Lot 4 on RP41821.

The site covers a total area of approximately 3.6 Ha. The actual wharf area is currently zoned "Commercial" with the remainder of the site being zoned "Special Development" under the Brisbane Town Plan.

2.2 Site Layout and Surrounding Land Use

The site currently contains 9 permanent buildings and approximately 10 mobile storage sheds or demountable buildings. Four of the permanent buildings are large wharf storage sheds, with parts of each shed being located on wharf areas which extend out over the Brisbane River. These buildings are constructed of timber, steel, corrugated iron and tin, with raised timber floors. In addition, there are 4 bomb shelters dating back to the Second World War located at the base of the cliffs throughout the site. There are 2 fenced off areas within the site as well as 2 lockable gates (excluding the entrance gate) which enable other sections within the site to be fenced off.

The surrounding land use and owners are:

North : Residential houses and a small park above the cliffs
South : Brisbane River
East : Residential houses above the cliffs
West : Block of residential units, car park, Boundary Street

2.3 Site Operations

The site has been vacant for several months, however it is currently used by the Police as a carpark. Various items of equipment and materials are currently temporarily stored on-site by the State Government.

2.4 Topography and Geology

The site is bounded on the northern side by cliffs, which are understood to have been formed as the result of quarrying operations carried out in the 1930's. The site is flat, and surface runoff drains directly into Brisbane River via a number of drains running under the wharf buildings.

A shallow channel runs between the edge of the concrete hardstand and the base of the cliff, from the western boundary of the site to the bomb shelter located opposite Building No. 3 (refer Figure 1). Surface water has ponded in this channel.

According to regional geology maps (City of Brisbane Geological Map, Sheet 3), the site is located on the boundary of two rock formations. These are the Palaeozoic age Neranleigh-Fernvale Beds (comprising greywacke, siltstone, shale, chert, jasper and basic volcanics) and the Mesozoic age Brisbane Tuff (comprising rhyolitic tuff, conglomerate, breccia and minor sandstone and shale). The interface between these two formations is evident in the cliff face, and was also observed during drilling investigations and sampling undertaken as part of the assessment.

The majority of the site is founded on a rock base overlain by a fill layer, the depth of which was found to vary up to approximately 1m. A large proportion of the fill observed during sampling was consistent with the geological composition of the cliff face described above, indicating that the fill possibly originated as a result of previous quarrying activities on site.

Rapid water infiltration was observed in boreholes during sampling conducted following a period of heavy rainfall, especially in areas located near to the cliff face. This was evidence of runoff flowing from the cliff face through the fill layer towards Brisbane River.

2.5 EPA Contaminated Land Register

EPA have advised that the following lots are currently registered on the Contaminated Land Register, in accordance with Schedule 8.3 of the Environmental Protection Act, 1997, the reason for which being described as "Hazardous Contaminant":-

- Lot 400 on SL1404;
- Lot 2 on RP44680;
- Lots 21 and 22 on RP8614; and
- Lot 4 on RP41821.

3.0 SITE HISTORY AND SITE INSPECTION

3.1 Site History

A site history was established by reviewing information supplied by various personnel who have had previous involvement with or knowledge regarding the site, and aerial photographs of the site dating back to 1964. References to buildings or features of the site in the following site history description can be found on Figure 1.

Review of aerial photographs indicated that:-

1964 - The site and surrounding area was generally as it appears today, however, there appears to be a number of small buildings located in the area at the eastern end of the site now used as the open storage area.

1974 - As above, however, this photo was taken during the Brisbane River Floods and the site appears to be completely inundated by flood waters.

An historical title search for the property was conducted by Brisbane City Legal Practice, Paralegal unit. The history of ownership of the site is quite complex due to the large number of individual lots which comprise the site. However, information received to date indicates that various lots within the site were generally privately owned until around the turn of the century, or in some cases until around the late 1920's. Qld National Bank Limited also owned some portions of the site at the beginning of the century. Brisbane Wharves Limited owned a number of lots for varying periods within 1901 and 1936. The Bureau of Industry also owned some lots from 1936 to 1950. Lots 1-4 of RP64991 were leased to Howard Smith Ltd from 1935 to 1956. The Department of Public Works currently owns the site, owning some lots from as early as 1946.

From the findings of the historical title search and anecdotal evidence from State Government personnel, it appears that the wharves on-site have been in use for the majority of this century. The wharves were used in wartime by the Navy for ship maintenance and storage and loading of supplies. Personal communication with ex-Navy personnel suggests that neither storage nor loading of munitions occurred at the site.

The following lots are identified as Prescribed Purpose Sites on BCC's Bimap system:-

- Lot 2 on B3333;
- Lot 2 on RP44680;
- Lots 21 and 22 on RP8614; and
- Lot 4 on RP41821.

Personal communication with the Contaminated Land Unit within BCC identified previous preliminary site investigation works which have been undertaken. Details of these investigations are unclear, however, it is believed that elevated metals of lead, copper and zinc were identified on some or all of the above lots. The registering of four of the above lots on the EPA Contaminated Land Register (refer Section 2.5) may be linked to the results of these site investigations, however, this is unconfirmed. The following description of site history is discussed on an area-by-area basis.

Personal communication with police personnel from Valley Police indicated that the Water Police and Police Diving Squad used part of the site as a base for their activities for some 20 years before relocating to the mouth of the Brisbane River approximately 3 months ago. Building No. 1 was used for administrative purposes, while Building No. 2 was used for storage purposes. It is possible that drums of oil and / or fuel may have also been stored on-site. General maintenance of police boats occurred while moored in the Brisbane River, and a bunded above-ground diesel tank located adjacent to Building No. 1 was used for police boat refuelling. This tank is still in place.

The fenced off area located opposite the Water Police building was used by Police as an impoundment area for seized and stolen cars, and for property to be used as evidence in court cases.

Building No. 3 was previously used as a general government store for government plant and equipment being held for auction. The State Works Department (now known as Q Build) also used the building for storage of plant, equipment and material such as stone masonry pieces.

Building No. 4 was previously used by multiple government departments as a general storage area. The building is currently approximately 90% vacant, however, is still used as a storage area for obsolete and old medical equipment awaiting transport to other countries. A government garage was also located in the eastern end of Building No. 4. Here servicing and maintenance of government vehicles occurred. Personal communication with State Government personnel indicates that refuelling of vehicles occurred at the garage, however, information regarding the fuel storage tanks is limited. There is a bunded area outside the garage area which possibly held a fuel storage tank and a concrete pad located opposite the garage area may also indicate the previous location of a fuel storage tank or bowsers.

A disused small amenities block containing toilets and showers is located opposite the government garage. This building was not connected to sewer, however, effluent was temporarily stored in holding tanks located outside the block. The effluent was pumped out and tankered off-site on a weekly basis. The amenities block was apparently used mainly by the Police Diving Squad.

An area outside the eastern end of Building No. 4 was used by Q Build for diamond sawing of silica sandstone blocks. A silica sand trap still located on-site was used to collect the effluent generated by the use of water for cooling purposes. This effluent comprised silica dust mixed with water and was temporarily stored in holding tanks located next to the trap. The holding tanks were pumped out and tankered off-site as needed.

A fenced off storage shed located opposite Building No. 4 adjacent to the base of the cliffs, was previously used as a storage area for low level radioactive hospital waste. It is believed that the types of waste stored included such items as hospital gowns and medical equipment used in radioactive procedures such as X-Rays. Storage of this type of waste ceased approximately 10 years ago and is now located near Maleny, north of Brisbane. Personal communication with Bruce Wallace from Queensland Health, indicates that radiation monitoring inside the storage shed was carried out in 1994 by Queensland Health, however, there was no evidence that radiation levels exceeded NHMRC Guidelines.

Building No. 5 was previously used by the Police Diving Squad for storage and general operations such as tank and boat maintenance. It is not known whether any hazardous substances were stored here.

Located east of Building No. 5 and bounded by the cliff and Brisbane River is an open area which is partially unconcreted. This area has been previously used as a general bulk storage area for various government activities and projects. When the quantity of material stored had accumulated sufficiently, government auctions were apparently held to clear the area.

3.2 Site Inspection

From site visits, the following site characteristics have been observed or inferred, based on a visual "walkover" assessment along with discussions with various personnel providing information.

The site has been fully vacated except for some areas where residual storage of some material / rubbish still occurs. It is expected that this material will be gradually removed from site. The site is presently used as a minor carpark by the Police.

Approximately two-thirds of the site is covered by a concrete hardstand which is expected to have prevented the downward migration of contaminants into underlying soils. No significant cracking or failure of the concrete hardstand was observed during the site inspection.

A bunded aboveground diesel storage tank is located next to Building No.1. From site history investigations this was apparently used by Water Police for boat refuelling. Staining of the concrete under the tank was evident. A large drum of waste oil and 2 small drums of oil/fuel were observed outside the bunded area. These drums were slightly leaking.

A number of empty drums were also observed inside the car impoundment area located opposite the Water Police buildings. What appears to be a drum of oil was also present and slightly leaking. A leaking drum of oil was also observed next to the eastern pylon of the Story Bridge. Three leaking drums of oil were also observed adjacent to the cliff opposite Building No.3. The extent of oil contamination on the concrete hardstand in this area is quite significant, and was observed to be draining into the small channel running in between the edge of the hardstand and the cliff base. The oil has ponded in this channel and does not appear to be draining from the channel.

A disused incinerator which appears to have been gas-fired is located next to the diesel tank described above.

Differing portions of each wharf building extend over Brisbane River. Each building is supported on timber pylons, with a raised timber floor, with some areas in Buildings 2 (Water Police) and 4 (government garage) also covered by plywood. These plywood areas appear to be stained by oil, which indicates the servicing and maintenance of engines. Building No.2 also contains a sign on the wall "SUPER ONLY" possibly indicating that drums of fuel were stored here. Signage also indicates that welding took place within this building.

Each wharf building contains some abandoned furniture or fittings, and rubbish. Building No. 4 is still used as a storage area for medical equipment awaiting shipment overseas.

A concrete pad is located at the base of the cliff opposite the area used as a government garage. There appears to have been a trench approximately 0.4m wide dug through the concrete hardstand which may indicate the presence of previous fuel storage tanks and associated pipework. A bunded area was also observed next to the garage area which may have contained an aboveground fuel storage tank.

A dismantled building which appears to be an old storage shed was observed adjacent to the cliff opposite building No. 4. The building was apparently abandoned due to termite damage, which were subsequently treated before dismantling the building.

The store shed located opposite Building No. 4 and adjacent to what appears to be an old bomb shelter is fenced off and padlocked. This is apparently the store shed used for storage of low level radioactive hospital waste.

The open air storage area located at the south-east of the site is quite overgrown, however, there is a small amount of stone masonry and equipment currently stored there. A number of empty and / or corroded drums were scattered throughout the site, especially in the open air storage area.

4.0 SAMPLING PLAN

Based on the above information a sampling program was developed to access the nature and extent of soil contamination within the site. The sampling program comprised drilling of boreholes and collection of soil samples at 54 locations. The sampling locations were identified on a grid measuring approximately 20m x 20m. A site plan showing the sampling locations is shown on Figure 2. Due to various site conditions during sample collection (eg. water inflow, shallow base rock), samples were able to be taken from 41 of the 54 sampling locations. 33 sampling locations were on the concrete hardstand.

The number of sampling locations was determined from AS4482.1-1997 *Guide to the sampling and investigation of potentially contaminated soil*, and site-specific information obtained from site history investigations.

Sampling was undertaken on 27 January 1999, 29 January 1999, and 2 February 1999. Drilling of boreholes and concrete drilling was conducted under supervision by Schneider Drilling Pty Ltd.

Table 1 below describes the lithology, samples taken, and analytes for each sampling location. Selected soil samples were analysed for one or more of the following:

- heavy metals including arsenic, cadmium, chromium, copper, lead, and zinc;
- pH;
- Total Petroleum Hydrocarbons (TPH);
- Benzene, Toluene, Ethyl-benzene, Xylene (BTEX);
- Polycyclic Aromatic Hydrocarbons (PAH); and
- Organochlorine and Organophosphorus Pesticides (OC/OP).

Table 1 Sampling Location Descriptions

Sampling Location Number	Depth (m)	Sample Interval (m)	Seq No.	Lithology	Analytical Parameters / Comments
BH1	0.0 – 0.2	0.2	1	(Fill) ash, underlying thin layer of asphalt	1,2,4,5
	0.2-0.9	0.5	2	Weathered Tuff, possible fill sourced on-site, yellow brown	1,2
	0.9			Base rock	
BH2	0.0-0.4	0.3		Weathered Tuff, possible fill sourced on-site, yellowy brown	
	0.4			Base rock	
BH3	0.0-0.2	0.2	3	Weathered Tuff, possible fill sourced on-site, yellowy brown	1,2
	0.2			Base rock	
BH4	0-0.15	0.1	4	(Fill) ash	1,2,4
	0.15			Base rock	

Table 1 (Cont) Sampling Location Descriptions

Sampling Location Number	Depth (m)	Sample Interval (m)	Seq No.	Lithology	Analytical Parameters / Comments
BH5	0-0.1	0.1		Weathered Tuff, possible fill sourced on-site, yellowy brown	
		0.1		Base rock	
BH6	0.0-0.2 0.2-0.6 0.6	0.2	5	(Fill) gravelly sand, brown (Fill) broken glass Base rock	1,2,5
BH7	0.0-0.9 0.9	0.35 0.5	6	(Fill) sandy clay, some gravel, trace ash and glass, mottled browns Base rock	1,2,3,4
BH8	0.0-0.2 0.2-0.8 0.8	0.2	7	(Fill) gravelly sand, some glass, yellowy light brown Weathered Tuff, possible fill sourced on-site, light brown Base rock	1,2
BH9	0.0-0.2 0.2	0.2		Weathered Tuff, possible fill sourced on-site, light brown Base rock	
BH10	0.0-0.9 0.9	0.5	8	Weathered Tuff, possible fill sourced on-site, light brown Base rock	1,2,3,5
BH11	0.0-0.1 0.1-0.5	0.2		(Fill) Gravel, up to 30mm diameter Weathered tuff, light brown	
BH12	0.0-0.2 0.2-0.9 0.9	0.2 0.5	9	(Fill) sandy gravel, up to 30mm diameter, grey (Fill) gravelly sand, some clay, light brown Base rock	1,2 Increase in moisture content observed with depth, saturated above base rock
BH13					Inaccessible
BH14	0.0-0.2 0.2	0.2		Concrete (Fill) gravel, well-graded, some sand Base rock	Rapid inflow observed
BH15	0.0-0.2 1.2	0.2	10	Concrete (Fill) sandy clay Base rock	1,2 Further samples unavailable due to saturation
BH16	0.0-0.2 0.8	0.2		Concrete (Fill) clayey sand, some gravel Base rock	Water observed, further samples unavailable due to saturation

Table 1 (Cont) Sampling Location Descriptions

Sampling Location Number	Depth (m)	Sample Interval (m)	Seq No.	Lithology	Analytical Parameters / Comments
BH17	0.0-0.2 0.4	0.2	11	Concrete (Fill) gravel, well-graded Base rock	1,2 Inflow observed at 0.2m
BH18					No sample – water at surface
BH19	0.0-0.1 0.1			(Fill) gravel Base rock	No sample (rock fill)
BH20	0.0-0.02 0.02-1.1 1.1	0.2	12	Topsoil, grass Weathered Tuff Base rock	1,2,5 Inflow observed at 0.25m
BH21	0.0-0.6 0.6-0.95 0.95	0.2	13	(Fill) clayey sand, some gravel Extremely weathered phyllite - clay, some gravel, grey Base rock	1,2,3 Inflow observed at 0.3m
BH22	0.0-0.2 0.2-0.5	0.2 0.5	14 15	(Fill) silty sand, ash, slight amount of tar-like material, black (Fill) silty sand, light brown	1,2,3,4 Slightly odourous (diesel) 1,2,3
BH23	0.0-0.2 0.2-0.3 0.3	0.2	16	Concrete (Fill) gravelly clay, grey Weathered phyllite Base rock	1,2,3
BH24	0.0-0.2 0.2-0.4 0.4	0.2		Concrete (Fill) gravelly (well-graded) clay, light brown Weathered phyllite Base rock	
BH25	0.0-0.2 0.2-0.5 0.5-1.3 1.3	0.2 0.5	17	Concrete (Fill) sandy clay, some gravel, brown (Fill) sandy clay, some gravel, brown, mottled orange, grey Weathered phyllite Base rock	1,2
BH26	0.0-0.25 0.25-0.5	0.2		Concrete (Fill) gravelly clay, green grey, mottled orange Weathered phyllite	Saturated at 0.5m

Table 1 (Cont) Sampling Location Descriptions

Sampling Location Number	Depth (m)	Sample Interval (m)	Seq No.	Lithology	Analytical Parameters / Comments
BH27	0.0-0.2	0.2	18	Concrete (Fill) gravelly clay, light brown. Mottled orange, grey, dark brown	1,2
	0.2-1.0	0.5		Weathered phyllite, light brown/orange, stiffness increasing with depth	
BH28	0.0-0.1	0.5 1.0	19	Concrete (Fill) gravel	Water observed directly under concrete 1,2
	0.1-1.0			Weathered phyllite – clay, mottled grey, orange, green, stiffness increasing with depth	
BH29	0.0-0.05 0.05			Concrete (Fill) gravel Base rock, some weathering	No sample
BH30	0.0-0.1 0.1			Topsoil, grass Base rock, some weathering	No sample
BH31	0.0			Concrete Base rock under concrete	No sample
BH32	0.0			Concrete Base rock under concrete	No sample
BH33	0.0-0.05 0.05-0.4 0.4	0.2	20	Concrete (Fill) gravel, some clay Weathered phyllite Base rock	1,2
BH34	0.0-0.5 0.5	0.2	21	Concrete Weathered phyllite Base rock	1,2,5
BH35	0.0-0.2 0.2	0.2		Concrete (Fill) gravel, some clay Base rock	
BH36	0.0-0.1	0.1	22	Concrete (Fill) sand, medium to coarse grain, possible bedding sand Base rock	1,2,3
	0.1				
BH37	0.0-0.1 0.1	0.1	23	Concrete Weathered phyllite Base rock	1,2
BH38	0.0-0.2	0.2		Concrete (Fill) sand, medium to coarse grain, possible bedding sand Base rock	Water inflow observed at 0.2m
	0.2				

Table 1 (Cont) Sampling Location Descriptions

Sampling Location Number	Depth (m)	Sample Interval (m)	Seq No.	Lithology	Analytical Parameters / Comments
BH38A	0.0-0.05 0.05			Concrete (Fill) gravel Base rock	No sample
BH39	0.0-0.1 0.1	0.1	24	Concrete (Fill) sandy gravel Weathered phyllite, stiffness increasing with depth	1,2,3
BH39A	0.0-0.1 0.2			Concrete Weathered phyllite Base rock	No sample
BH40	0.0-0.05 0.05			Concrete (Fill) gravel Base rock	No sample
BH41	0.0-0.05 0.05	0.2	25	Concrete (Fill) gravel Weathered phyllite, stiffness increasing with depth	1,2
BH42	0.0-0.02 0.02			Concrete (Fill) Gravel Weathered phyllite	No sample
BH43	0.0-0.2 0.2-0.9	0.2	26	Concrete (Fill) gravelly clay, light brown, grey, mottled red, dark red Extremely weathered phyllite	1,2,4,5
BH44	0.0-0.5 0.5-1.5	0.2 1.0	27 28	Concrete (Fill) silty sand, some clay, brown (All.) sandy clay, brown, light brown	1,2,3 1,2
BH45				Concrete rubble fill	No sample
BH46	0.0-0.2 0.2-1.5 1.5-	0.2 0.5 1.5	29 30	(Fill) weathered phyllite (All.) sandy clay, brown, moisture increasing with depth Residual clay, green, light brown, mottled grey, dark brown	1,2 1,2
BH47	0.0-0.2 0.2	0.2		Concrete Weathered phyllite Base rock	
BH48	0.0-0.1 0.1-0.2 0.2	0.1	31	Concrete (Fill) sand, medium to coarse grain, possible bedding sand Weathered rock Base rock	1,2

Table 1 (Cont) Sampling Location Descriptions

Sampling Location Number	Depth (m)	Sample Interval (m)	Seq No.	Lithology	Analytical Parameters / Comments
BH49	0.0-0.02 0.02			Concrete (Fill) gravel Base rock	No sample
BH50	0.0-0.2 0.4	0.12	32	Concrete (Fill) sand, medium to coarse grain, possible bedding sand Base rock	1,2 Water inflow observed at 0.2m
BH51	0.0-	0.2	33	Concrete Weathered phyllite, increasing in stiffness with depth	1,2,3
BH52	0.0-0.2 0.2	0.2	34	Ash, some gravel Base rock	1,2,3,4 Water observed, not odourous

Notes: (1) pH
 (2) Heavy metal analysis (As, Cd, Cr, Cu, Pb, Zn)
 (3) TPH/BTEX analysis
 (4) OC/OP Pesticides
 (5) PAH
 (All.) = Alluvium

5.0 LABORATORY ANALYSIS

5.1 Analytical Results

50 soil samples at 41 sampling locations were collected. 34 samples were selected and despatched to laboratory for analysis. Remaining samples were stored under refrigeration at BCC Geotechnical & Environmental Engineering Laboratory. Laboratory analysis was undertaken by BCC Scientific Analytical Services and Australian Laboratory Services.

Soil analytical results have been compared to the environmental and health-based investigation thresholds outlined in the *DEH Draft Guidelines for the Assessment & Management of Contaminated Land in Queensland, May 1998*. The health-based investigation thresholds specified in the guidelines are based upon the proposed end land use of the site. The proposed end land use of the Howard Smith Wharf site has not been finalised, however, it is understood that the site will likely be used for a combination of commercial/industrial and open space recreational uses. For this reason, the conservative values of Category E (Parks, Recreational Open Space) health-based investigation thresholds were considered when discussing the analytical results. Draft guidelines prepared by the Qld CHEM Unit in 1991 provide a guideline for the assessment of hydrocarbon contamination in soil. Where guidelines for certain contaminants are not available, Dutch guidelines which provide intervention levels have been used (*Environmental Quality Objectives in the Netherlands, Ministry of Housing, Spatial Planning and the Environment, 1994*). United States EPA Preliminary Remediation Goals were also used for comparison purposes.

Summary soil analysis results for the site are presented in Table 2 in Appendix A. Concentrations above guideline levels are highlighted in Table 2, and Figure 3 shows these concentrations on a site plan.

Heavy Metals

All samples despatched to the laboratory were analysed for the presence of selected heavy metals. Nine samples had reported concentrations above DEH environmental investigation thresholds for lead, zinc, cadmium and arsenic. The following two samples reported concentrations exceeding health-based investigation thresholds:

- BH10 (0.5m) – lead concentration 710 mg/kg; and
- BH20 (0.2m) – lead concentration 650 mg/kg,

slightly above the health-based investigation threshold for lead - 600 mg/kg.

All other metal results were below the relevant DEH environmental guidelines.

Organochlorine and Organophosphorus Pesticides

Six samples were analysed for organochlorine and organophosphorus pesticides. All pesticide levels were below the limit of reporting specified by the analytical laboratory.

Total Petroleum Hydrocarbons (TPH)

Eleven samples were analysed for TPH. The following two samples reported concentrations exceeding CHEM Unit guidelines:

- BH51 (0.2m) – C₁₀-C₁₄ fraction concentration of 127 mg/kg; and
- BH52 (0.2m) – C₁₀-C₁₄ fraction concentration of 274 mg/kg
C₁₅-C₂₈ fraction concentration of 1830 mg/kg,

above the CHEM Unit guidelines for C₁₀-C₁₄ fraction of 100 mg/kg and C₁₅-C₂₈ fraction of 1000 mg/kg.

Slightly elevated TPH levels were also observed in BH22 (0.2m), however these levels are below health based threshold levels. This result coincided with the observation of hydrocarbon odours in the surface soil at BH22.

BTEX

Eleven samples were analysed for benzene, toluene, ethylbenzene and xylene (BTEX). All samples were below the limit of reporting specified by the analytical laboratory.

Polycyclic Aromatic Hydrocarbons (PAH)

Six samples were analysed for PAH. All samples were below health-based investigation thresholds for benzo(a)pyrene and total PAH.

5.2 Discussion of Results

From the analytical results of the soil samples, low level heavy metal contamination of fill exists in parts of the site. The majority of the contamination reported was in the open storage area located at the south-eastern end of the site. No heavy metal concentrations above investigation thresholds were reported in any of the samples obtained from under the concrete hardstand.

Hydrocarbon concentrations above guideline levels were reported in the samples obtained from the area opposite the government garage. Anecdotal evidence suggests that refuelling of vehicles may have occurred in this area. Low concentrations of hydrocarbons were detected in BH22 at 0.2m, however the sample taken from 0.5m was free from detectable hydrocarbons. BH51, located under the concrete hardstand also contained concentrations above guideline levels. These findings suggests that hydrocarbon contamination is confined to the surface layers, however, may have migrated under the concrete. The depth to base rock in this area was found to vary from 0.2m to approximately 1m.

6.0 QUALITY ASSURANCE / QUALITY CONTROL

6.1 Field Decontamination

In order to reduce the potential for cross contamination between sampling locations, all drilling equipment was washed after completion of sampling at each borehole. Latex gloves were also discarded between each sampling location to reduce potential cross contamination between samples.

6.2 Sampling and Analysis

All soil samples were collected in acid-washed, solvent-rinsed glass bottles supplied by SAS, placed in an esky containing ice immediately upon collection. Samples were stored under refrigeration in BCC Geotechnical & Environmental Engineering Laboratory until delivery to the analytical laboratory.

Laboratory analysis of soil samples was performed by Brisbane Water Scientific Analytical Services (SAS) and Australian Laboratory Services Pty Ltd (ALS). Both laboratories are National Association of Testing Authorities (NATA) accredited to perform the selected analyses. All sample containers and accompanying Chain of Custody records were marked with a unique identifying number. Copies of the Chain of Custody forms are presented in Appendix C.

6.3 Health and Safety

A Health & Safety Plan (HSP) was prepared for use by Geotechnical and Environmental Engineering personnel and contractors, during the site contamination assessment.

The purpose of this document is to inform all parties who will be involved in the site contamination assessment of expected site conditions, potential hazards, personal protective equipment and safety precautions required, decontamination procedures, and the emergency response plan.

7.0 REMEDIATION OPTIONS & RECOMMENDATIONS

It is evident from the soil sampling and laboratory testing detailed in this report that low level contamination by heavy metals and petroleum hydrocarbons is present within the site. As specified in the *DEH Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland*, levels of contaminants above the health investigation levels for the proposed use will require remediation or development of an appropriate plan for managing the contamination. The following options are available for remediation / management of the Howard Smith Wharf site:

1. Do nothing option ie. leave the site in its current state

This option is not recommended as a requirement of the DEH Draft Guidelines is that contamination exceeding health investigation levels be remediated or managed.

2. Removal of contaminated soil for disposal to landfill

This option is not recommended due to the uncertainty of the extent of contamination and the fact that the contaminant levels identified are considered to be acceptable, subject to proper site management (refer Option 4) for the proposed commercial / recreational final land use.

3. Conduct further sampling and laboratory testing

Due to the results obtained from this assessment, this option is not considered necessary.

4. Development and implementation of a site management plan

A site management plan (SMP) is a stand-alone public document which summarises the contamination issues and conditions associated with the use of the site. The objective of a site management plan (SMP) is to manage the chemical contamination on the site in manner which protects human health and the environment and ensures that the site is suitable for the specified use.

This is the recommended option, as development and implementation of an SMP will enable the contamination to remain on-site thus reducing the costs of remediating contaminated areas. Also, as the end land use for the site is not yet finalised, the SMP could be developed in consideration of the most sensitive proposed land uses (Category D – High/Medium Density Residential; Category E – Parks, Recreational Open Space; Category F – Commercial/Industrial Use). The contamination would be managed by a combination of the following:

- The placement and maintenance of a barrier which safely separates users of the site and the contamination as well as minimising surface water infiltration and restricting contaminant migration; and
- The application of procedures in order to control any site excavation and development works.

SMPs are submitted to DEH for approval and recording on the Environmental Management Register.

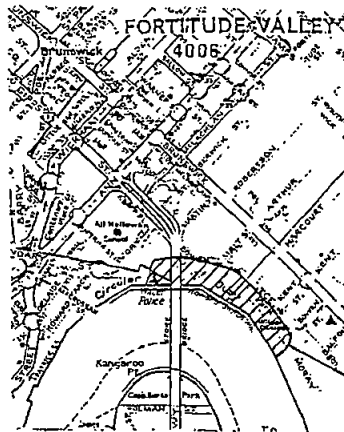
8.0 REFERENCES

AS4482.1-1997 Guide to the sampling and investigation of potentially contaminated soil

Department of Environment & Heritage, Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland, May 1998

Environmental Quality Objectives in the Netherlands, Ministry of Housing, Spatial Planning and the Environment, 1994

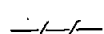
Guidelines for the Assessment of Contaminated Land in Queensland, CHEM Unit, 1992

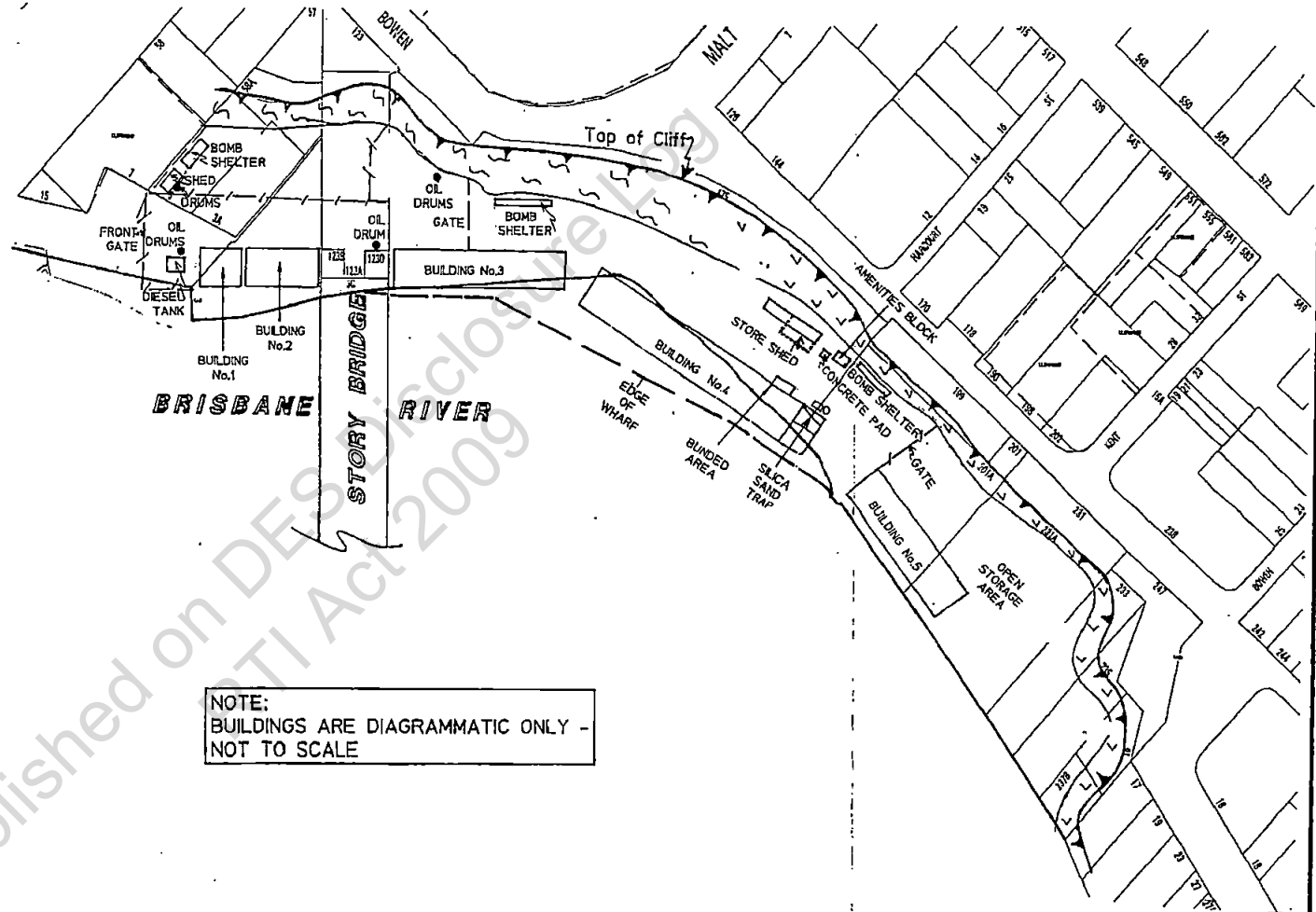


LOCALITY PLAN

SITE

LEGEND

-  BRISBANE TUFF
-  NERANLEIGH-FERNVALE BEDS
-  FENCE



NOTE:
BUILDINGS ARE DIAGRAMMATIC ONLY -
NOT TO SCALE

Design	L.R.	Jan 99
Drawn	P.E.B.	Jan 99
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Scale	1 : 2000 File A	

CITY DESIGN
GEOTECHNICAL & ENVIRONMENTAL ENGINEERING
SITE CONTAMINATION ASSESSMENT
HOWARD SMITH WHARF
SITE PLAN



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Figure No. 1



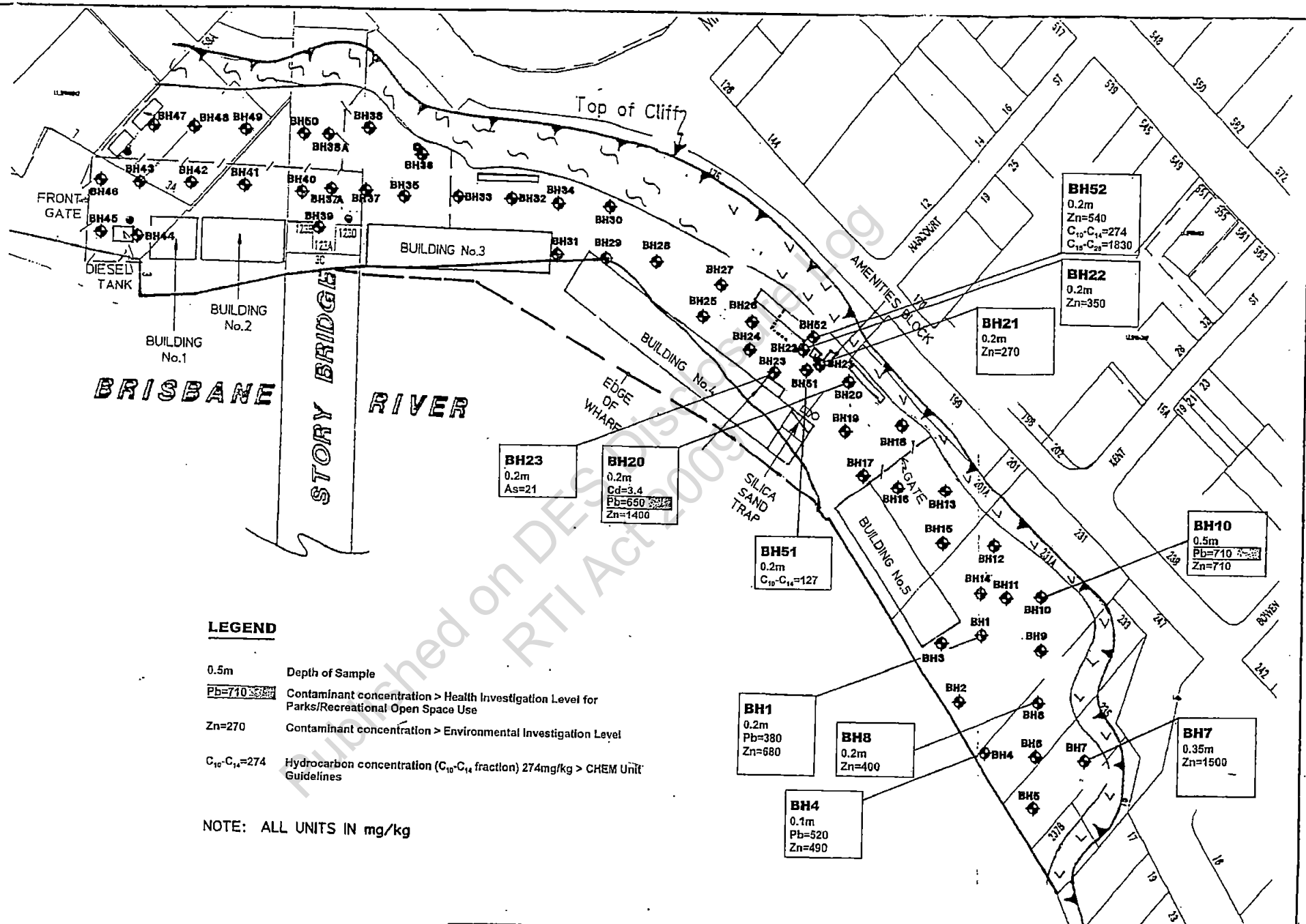
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CITY DESIGN
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 SITE CONTAMINATION ASSESSMENT
 HOWARD SMITH WHARF
 SAMPLING LOCATIONS



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HOWARD SMITH WHARF
CONTAMINANT CONCENTRATIONS



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**APPENDIX A
SUMMARY ANALYTICAL RESULTS**

Table 2 - SUMMARY OF LABORATORY ANALYTICAL RESULTS (SOIL)

Analysis	Units	LOR	DEH Guidelines			Sample Locations						
Sequence No.			Background	Environmental	Health (E)	1	2	3	4	5	6	7
Borehole No.						BH1	BH1	BH3	BH4	BH6	BH7	BH8
Depth (m)						0.2	0.5	0.2	0.1	0.2	0.35	0.2
Metals												
Arsenic (Tot.) as As	mg/kg	10	0.2-30	20	200	<10	<10	<10	<10	<10	<10	<10
Cadmium (Tot.) as Cd	mg/kg	1	0.04-2	3	40	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	<1.0
Chromium (Tot.) as Cr	mg/kg	2	0.5-110	50	200	16	3.1	2.3	17	7.3	19	8.5
Copper (Tot.) as Cu	mg/kg	1	1-190	60	2000	84	4.0	6.7	58	11	18	22
Lead (Tot.) as Pb	mg/kg	10	<2-200	300	600	380	53	99	520	38	210	100
Zinc (Tot.) as Zn	mg/kg	5	2-180	200	14000	680	70	120	490	120	1500	400
Percent Moisture	%					[NT]	[NT]	[NT]	[NT]	[NT]	11.8	[NT]
pH 1:5 Extract			6 - 8			7.8	8.1	7.7	7.0	9.4	8.6	8.1

Notes:

LOR - Limit of Reporting

DEH - Draft Guidelines investigation thresholds

E - Parks/Recreational Open Space health based criteria

NT - Not tested

Bold values indicate levels exceeding DEH environmental investigation threshold level

Shaded values indicate levels exceeding DEH health-based investigation threshold level

Table 2 (Cont) - SUMMARY OF LABORATORY ANALYTICAL RESULTS (SOIL)

Analysis	Units	LOR	DEH Guidelines			Sample Locations						
Sequence No.			Background	Environmental	Health (E)	8	9	10	11	12	13	14
Borehole No.						BH10	BH12	BH15	BH17	BH20	BH21	BH22
Depth (m)						0.5	0.5	0.2	0.2	0.2	0.2	0.2
Metals												
Arsenic (Tot.) as As	mg/kg	10	0.2-30	20	200	<10	<10	<10	<10	<10	<10	<10
Cadmium (Tot.) as Cd	mg/kg	1	0.04-2	3	40	<1.0	<1.0	<1.0	<1.0	3.4	<1.0	<1.0
Chromium (Tot.) as Cr	mg/kg	2	0.5-110	50	200	15	2.8	<2.0	4.4	19	3.3	7.1
Copper (Tot.) as Cu	mg/kg	1	1-190	60	2000	23	3.1	6.1	5.9	35	9.4	29
Lead (Tot.) as Pb	mg/kg	10	<2-200	300	600	710	36	100	48	650	110	130
Zinc (Tot.) as Zn	mg/kg	5	2-180	200	14000	710	71	67	84	1400	270	350
Percent Moisture	%					9.5	[NT]	[NT]	[NT]	[NT]	12.6	11.8
pH 1:5 Extract			6 - 8			8.7	8.1	8.1	8.5	7.3	9.0	8.9

Notes:

LOR - Limit of Reporting

DEH - Draft Guidelines investigation thresholds

E - Parks/Recreational Open Space health based criteria

NT - Not tested

Bold values indicate levels exceeding DEH environmental investigation threshold level**Shaded values indicate levels exceeding DEH health-based investigation threshold level**

Table 2 (Cont) - SUMMARY OF LABORATORY ANALYTICAL RESULTS (SOIL)

Analysis	Units	LOR	DEH Guidelines			Sample Locations						
Sequence No.			Background	Environmental	Health (E)	15	16	17	18	19	20	21
Borehole No.						BH22	BH23	BH25	BH27	BH28	BH33	BH34
Depth (m)						0.5	0.2	0.2	0.2	0.5	0.2	0.1
Metals												
Arsenic (Tot.) as As	mg/kg	10	0.2-30	20	200	<10	21	<10	<10	<10	<10	<10
Cadmium (Tot.) as Cd	mg/kg	1	0.04-2	3	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium (Tot.) as Cr	mg/kg	2	0.5-110	50	200	<2.0	<2.0	24	3.2	2.8	<2.0	<2.0
Copper (Tot.) as Cu	mg/kg	1	1-190	60	2000	8.7	8.9	2.9	3.1	<1.0	9.9	15
Lead (Tot.) as Pb	mg/kg	10	<2-200	300	600	11	<10	24	12	<10	<10	<10
Zinc (Tot.) as Zn	mg/kg	5	2-180	200	14000	100	77	50	69	37	100	84
Percent Moisture	%					4.6	14.7	[NT]	[NT]	[NT]	[NT]	[NT]
pH 1:5 Extract			6 - 8			9.4	9.3	5.5	8.8	6.2	9.1	9.6

Notes:

LOR - Limit of Reporting

DEH - Draft Guidelines investigation thresholds

E - Parks/Recreational Open Space health based criteria

NT - Not tested

Bold values indicate levels exceeding DEH environmental investigation threshold level

Shaded values indicate levels exceeding DEH health-based investigation threshold level

Table 2 (Cont) - SUMMARY OF LABORATORY ANALYTICAL RESULTS (SOIL)

Analysis	Units	LOR	DEH Guidelines			Sample Locations						
Sequence No.			Background	Environmental	Health (E)	22	23	24	25	26	27	28
Borehole No.						BH36	BH37	BH39	BH41	BH43	BH44	BH44
Depth (m)						0.2	0.2	0.1	0.2	0.2	0.2	1.0
Metals												
Arsenic (Tot.) as As	mg/kg	10	0.2-30	20	200	<10	<10	<10	<10	<10	<10	<10
Cadmium (Tot.) as Cd	mg/kg	1	0.04-2	3	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium (Tot.) as Cr	mg/kg	2	0.5-110	50	200	6.6	2.4	5.0	3.0	20	28	40
Copper (Tot.) as Cu	mg/kg	1	1-190	60	2000	5.1	19	12	26	8.5	8.3	9.7
Lead (Tot.) as Pb	mg/kg	10	<2-200	300	600	19	11	31	14	<10	16	<9.9
Zinc (Tot.) as Zn	mg/kg	5	2-180	200	14000	74	110	110	130	39	44	46
Percent Moisture	%					8.3	[NT]	7.6	[NT]	[NT]	12.9	[NT]
pH 1:5 Extract			6 - 8			9.1	9.2	9.8	8.4	8.5	8.2	6.2

Notes:

LOR - Limit of Reporting

DEH - Draft Guidelines investigation thresholds

E - Parks/Recreational Open Space health based criteria

NT - Not tested

Bold values indicate levels exceeding DEH environmental investigation threshold level

Shaded values indicate levels exceeding DEH health-based investigation threshold level

Table 2 (Cont) - SUMMARY OF LABORATORY ANALYTICAL RESULTS (SOIL)

Analysis	Units	LOR	DEH Guidelines			Sample Locations					
Sequence No.			Background	Environmental	Health (E)	29	30	31	32	33	34
Borehole No.						BH46	BH46	BH48	BH50	BH51	BH52
Depth (m)						0.2	0.5	0.1	0.2	0.2	0.2
Metals											
Arsenic (Tot.) as As	mg/kg	10	0.2-30	20	200	<10	<10	<10	<10	<10	<10
Cadmium (Tot.) as Cd	mg/kg	1	0.04-2	3	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium (Tot.) as Cr	mg/kg	2	0.5-110	50	200	6.9	28	5.4	7.8	<2.0	19
Copper (Tot.) as Cu	mg/kg	1	1-190	60	2000	13	6.8	12	25	8.0	43
Lead (Tot.) as Pb	mg/kg	10	<2-200	300	600	23	20	11	18	21	180
Zinc (Tot.) as Zn	mg/kg	5	2-180	200	14000	99	56	56	51	94	540
Percent Moisture	%					[NT]	[NT]	[NT]	[NT]	7.3	23.8
pH 1:5 Extract			6 - 8			9.5	6.1	8.5	9.3	9.3	7.3

Notes:

LOR - Limit of Reporting

DEH - Draft Guidelines investigation thresholds

E - Parks/Recreational Open Space health based criteria

NT - Not tested

Bold values indicate levels exceeding DEH environmental investigation threshold level

Shaded values indicate levels exceeding DEH health-based investigation threshold level

Table 2 (Cont) - SUMMARY OF LABORATORY ANALYTICAL RESULTS (SOIL)

Analysis	Units	LOR	Guidelines		Sample Locations							
Sequence No.			CHEM Unit	Dutch	6	8	13	14	15	16	22	24
Borehole No.					BH7	BH10	BH21	BH22	BH22	BH23	BH36	BH39
Depth (m)					0.35	0.5	0.2	0.2	0.5	0.2	0.2	0.1
TPH												
C ₆ -C ₉ Fraction	mg/kg	2	100		<2	<2	<2	<2	<2	<2	<2	<2
C ₁₀ - C ₁₄ Fraction	mg/kg	50	100		<50	<50	<50	<50	<50	<50	<50	<50
C ₁₅ - C ₂₈ Fraction	mg/kg	100	1000		<100	<100	<100	240	<100	<100	<100	<100
C ₂₉ - C ₃₆ Fraction	mg/kg	100	1000		<100	<100	<100	<100	<100	<100	<100	<100
Total C ₁₀ - C ₃₆ Fraction				5000				240				
			DEH Environmental									
BTEX												
Benzene	mg/kg	0.2	1		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Meta- & para-xylene	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
ortho-Xylene	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:

LOR - Limit of Reporting

Bold values indicate levels exceeding CHEM Unit/DEH guidelines

CHEM Unit- Draft guidelines for TPH contamination

DEH - Draft Guidelines investigation thresholds

Table 2 (Cont) - SUMMARY OF LABORATORY ANALYTICAL RESULTS (SOIL)

Analysis	Units	LOR	Guidelines		Sample Locations		
Sequence No.			CHEM Unit	Dutch	27	33	34
Borehole No.					BH44	BH51	BH52
Depth (m)					0.2	0.2	0.2
TPH							
C ₆ -C ₉ Fraction	mg/kg	2	100		<2	<2	<2
C ₁₀ - C ₁₄ Fraction	mg/kg	50	100		<50	127	274
C ₁₅ - C ₂₈ Fraction	mg/kg	100	1000		<100	265	1830
C ₂₉ - C ₃₆ Fraction	mg/kg	100	1000		<100	<100	862
Total C ₁₀ - C ₃₆ Fraction				5000		392	2966
			DEH Environmental				
BTEX							
Benzene	mg/kg	0.2	1		<0.2	<0.2	<0.2
Toluene	mg/kg	0.2			<0.2	<0.2	<0.2
Chlorobenzene	mg/kg	0.2			<0.2	<0.2	<0.2
Ethylbenzene	mg/kg	0.2			<0.2	<0.2	<0.2
Meta- & para-xylene	mg/kg	0.2			<0.2	<0.2	<0.2
ortho-Xylene	mg/kg	0.2			<0.2	<0.2	<0.2

Notes:

LOR - Limit of Reporting

CHEM Unit- Draft guidelines for TPH contamination

DEH - Draft Guidelines investigation thresholds

Bold values indicate levels exceeding CHEM Unit/DEH guidelines

Table 2 (Cont) - SUMMARY OF LABORATORY ANALYTICAL RESULTS (SOIL)

Analysis	Units	LOR	Guidelines		Sample Locations					
Sequence No.			DEH Health(E)	USEPA	1	5	8	12	21	26
Borehole No.					BH1	BH6	BH10	BH20	BH34	BH43
Depth (m)					0.2	0.2	0.5	0.2	0.2	0.2
Organochlorine Pesticides										
alpha-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
HCB	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC & gamma-BHC	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	20		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlordane - cis	mg/kg	0.05	100	1.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05	20	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDE	mg/kg	0.05		5.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan 2	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05		7.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.2	400	5.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:

LOR - Limit of Reporting

DEH - Draft Guidelines investigation thresholds

USEPA - United States Environmental Protection Agency Region IX Preliminary Remediation Goals (PRGs) for Industrial Land Uses

Table 2 (Cont) - SUMMARY OF LABORATORY ANALYTICAL RESULTS (SOIL)

Analysis	Units	LOR	Guidelines		Sample Locations					
Sequence No.			DEH Health(E)	USEPA	1	5	8	12	21	26
Borehole No.					BH1	BH6	BH10	BH20	BH34	BH43
Depth (m)					0.2	0.2	0.5	0.2	0.2	0.2
Organophosphorus Pesticides										
Dichlorvos	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
demeton-s-methyl	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos E	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos Z	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
fenamiphos	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos-methyl	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:

LOR - Limit of Reporting

DEH - Draft Guidelines investigation thresholds

USEPA - United States Environmental Protection Agency Region IX Preliminary Remediation Goals (PRGs) for Industrial Land Uses

Table 2 (Cont) - SUMMARY OF LABORATORY ANALYTICAL RESULTS (SOIL)

Analysis	Units	LOR	Guidelines		Sample Locations					
Sequence No.			DEH Health(E)	USEPA	1	4	6	14	26	34
Borehole No.					BH1	BH4	BH7	BH22	BH43	BH52
Depth (m)					0.2	0.2	0.35	0.2	0.2	0.2
PAH Analysis										
Naphthalene	mg/kg	0.5		800	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylnaphthalene	mg/kg	0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chloronaphthalene	mg/kg	0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	mg/kg	0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	mg/kg	0.5		360	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	mg/kg	0.5		300	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	mg/kg	0.5			1.4	0.5	<0.5	1.5	<0.5	0.7
Anthracene	mg/kg	0.5		19	<0.5	<0.5	<0.5	0.8	<0.5	<0.5
Fluorathene	mg/kg	0.5			2.0	0.9	<0.5	4.1	<0.5	<0.5
Pyrene	mg/kg	0.5		20,000	2.1	0.9	<0.5	4.0	<0.5	<0.5
N-2-Fluorenylacetamide	mg/kg	0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	mg/kg	0.5			1.0	0.5	<0.5	2.6	<0.5	<0.5
Chrysene	mg/kg	0.5		24	1.3	1.2	<0.5	2.5	<0.5	<0.5
Benzo(b) & (k)fluoranthene	mg/kg	1		2.6 to 26	2	1	<1	4	<1	<1
7,12-Dimethylbenz(a)anthracene	mg/kg	0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	mg/kg	0.5	2	0.26	1.2	<0.5	<0.5	1.9	<0.5	<0.5
3-Methylcholanthrene	mg/kg	0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	mg/kg	0.5			0.6	<0.5	<0.5	1.0	<0.5	<0.5
Dibenz(a,h)anthracene	mg/kg	0.5		26	<0.5	<0.5	<0.5	0.5	<0.5	<0.5
Benzo(g,h,i)perylene	mg/kg	0.5			0.7	<0.5	<0.5	0.9	<0.5	<0.5
TOTAL PAH	mg/kg		40		12.3	5	0	23.8	0	0.7

Notes:

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DEH - Draft Guidelines investigation thresholds

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APPENDIX B
LABORATORY ANALYTICAL RESULTS

**SCIENTIFIC ANALYTICAL SERVICES LABORATORY**

Attention: s.73 Irrelevant
Client: City Design, Ground Engineering
Job Name: 98155 Howard Smith Walk
Sampling Date: 02/02/99
Sampled By: Client
Sampling Method: Grab
Sample Matrix: Solid
Batch Number: 99/0933
Registration Date: 4 February 1999
Date of Report: 5 March 1999

Scientific Analytical Services
240 Donaldson Road
Rocklea Brisbane Qld 4106

Telephone 07 3403 2611
Facsimile 07 3403 2646

A unit of the Brisbane City Council

Sequence Number	Sample Description
/1	BH1 0.2 M
/2	BH1 0.5 M
/3	BH3 0.2 M
/4	BH4 0.2 M
/5	BH6 0.2 M
/6	BH7 0.35 M
/7	BH8 0.2 M
/8	BH10 0.5 M
/9	BH12 0.5 M
/10	BH15 0.2 M
/11	BH17 0.2 M
/12	BH20 0.2 M
/13	BH21 0.2 M
/14	BH22 0.2 M
/15	BH22 0.5 M
/16	BH23 0.2 M
/17	BH25 0.2 M
/18	BH27 0.2 M
/19	BH28 0.5 M
/20	BH33 0.2 M

Please note that the above results refer only to the samples tested,
and not to the batches from which they were drawn.

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Client: City Design, Ground Engineering
Job Name: 98155 Howard Smith Walk

Batch Number: 99/0933
Report Date: 5/03/99

Sequence Number	Sample Description
/21	BH34 0.2 M
/22	BH36 0.2 M
/23	BH37 0.2 M
/24	BH39 0.1 M
/25	BH41 0.2 M
/26	BH43 0.2 M
/27	BH44 0.2 M
/28	BH44 1.0 M
/29	BH46 0.2 M
/30	BH46 0.5 M
/31	BH48 0.1 M
/32	BH50 0.2 M
/33	BH51 0.2 M
/34	BH52 0.2 M

TPH/BTEX, PAH's and OC/OP Pesticides analysis performed by ALS EB19245.
This report supersedes any previous report of the same batch number.

Please note that the above results refer only to the samples tested,
and not to the batches from which they were drawn.

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Client: City Design, Ground Engineering
Job Name: 98155 Howard Smith Walk

Batch Number: 99/0933
Report Date: 5/03/99

Method	Test	Units	/1	/2	/3	/4
5.002	pH 1:5 Extract		7.8	8.1	7.7	7.0
External	Hydrocarbon Banding		[NR]	[NR]	[NR]	[NR]
External	BTEX		[NR]	[NR]	[NR]	[NR]
External	Polyaromatic Hydrocarbons		Complete	[NR]	[NR]	Complete
External	OC/OP Pesticides		Complete	[NR]	[NR]	[NR]
Method	Test	Units	/5	/6	/7	/8
5.002	pH 1:5 Extract		9.4	8.6	8.1	8.7
External	Hydrocarbon Banding		[NR]	Complete	[NR]	Complete
External	BTEX		[NR]	Complete	[NR]	Complete
External	Polyaromatic Hydrocarbons		[NR]	Complete	[NR]	[NR]
External	OC/OP Pesticides		Complete	[NR]	[NR]	Complete
Method	Test	Units	/9	/10	/11	/12
5.002	pH 1:5 Extract		8.1	8.1	8.5	7.3
External	Hydrocarbon Banding		[NR]	[NR]	[NR]	[NR]
External	BTEX		[NR]	[NR]	[NR]	[NR]
External	Polyaromatic Hydrocarbons		[NR]	[NR]	[NR]	[NR]
External	OC/OP Pesticides		[NR]	[NR]	[NR]	Complete
Method	Test	Units	/13	/14	/15	/16
5.002	pH 1:5 Extract		9.0	8.9	9.4	9.3
External	Hydrocarbon Banding		Complete	Complete	Complete	Complete
External	BTEX		Complete	Complete	Complete	Complete
External	Polyaromatic Hydrocarbons		[NR]	Complete	[NR]	[NR]
External	OC/OP Pesticides		[NR]	[NR]	[NR]	[NR]
Method	Test	Units	/17	/18	/19	/20
5.002	pH 1:5 Extract		5.5	8.8	6.2	9.1
External	Hydrocarbon Banding		[NR]	[NR]	[NR]	[NR]
External	BTEX		[NR]	[NR]	[NR]	[NR]
External	Polyaromatic Hydrocarbons		[NR]	[NR]	[NR]	[NR]
External	OC/OP Pesticides		[NR]	[NR]	[NR]	[NR]
Method	Test	Units	/21	/22	/23	/24
5.002	pH 1:5 Extract		9.6	9.1	9.2	8.8
External	Hydrocarbon Banding		[NR]	Complete	[NR]	Complete
External	BTEX		[NR]	Complete	[NR]	Complete
External	Polyaromatic Hydrocarbons		[NR]	[NR]	[NR]	[NR]
External	OC/OP Pesticides		Complete	[NR]	[NR]	[NR]

s.73 Irrelevant information

Please note that the above results refer only to the samples tested, and not to the batches from which they were drawn.

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Client: City Design, Ground Engineering
Job Name: 98155 Howard Smith Walk

Batch Number: 99/0933
Report Date: 5/03/99

Method	Test	Units	/25	/26	/27	/28
5.002	pH 1:5 Extract		8.4	8.5	8.2	6.2
External	Hydrocarbon Banding		[NR]	[NR]	Complete	[NR]
External	BTEX		[NR]	[NR]	Complete	[NR]
External	Polyaromatic Hydrocarbons		[NR]	Complete	[NR]	[NR]
External	OC/OP Pesticides		[NR]	Complete	[NR]	[NR]
Method	Test	Units	/29	/30	/31	/32
5.002	pH 1:5 Extract		9.5	6.1	8.5	9.3
External	Hydrocarbon Banding		[NR]	[NR]	[NR]	[NR]
External	BTEX		[NR]	[NR]	[NR]	[NR]
External	Polyaromatic Hydrocarbons		[NR]	[NR]	[NR]	[NR]
External	OC/OP Pesticides		[NR]	[NR]	[NR]	[NR]
Method	Test	Units	/33	/34		
5.002	pH 1:5 Extract		9.3	7.3		
External	Hydrocarbon Banding		Complete	Complete		
External	BTEX		Complete	Complete		
External	Polyaromatic Hydrocarbons		[NR]	Complete		
External	OC/OP Pesticides		[NR]	[NR]		

s.73 Irrelevant information

Please note that the above results refer only to the samples tested, and not to the batches from which they were drawn.

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Client: City Design, Ground Engineering
Job Name: 98155 Howard Smith Walk

Batch Number: 99/0933
Report Date: 5/03/99

Method	Test	Units	/1	/2	/3	/4
5.304	Calcium (Tot.) as Ca	mg/kg	25000	1700	550	3200
5.304	Magnesium (Tot.) as Mg	mg/kg	1100	<200	340	960
5.304	Sodium (Tot.) as Na	mg/kg	470	<400	<400	<400
5.304	Potassium (Tot.) as K	mg/kg	260	320	740	680
5.304	Aluminium (Tot.) as Al	mg/kg	6000	3000	2300	7000
5.304	Barium (Tot.) as Ba	mg/kg	190	41	74	220
5.304	Cadmium (Tot.) as Cd	mg/kg	<1.0	<1.0	<1.0	<1.0
5.304	Chromium (Tot.) as Cr	mg/kg	16	3.1	2.3	17
5.304	Copper (Tot.) as Cu	mg/kg	84	4.0	6.7	58
5.304	Iron (Tot.) as Fe	mg/kg	21000	8100	12000	55000
5.304	Manganese (Tot.) as Mn	mg/kg	290	110	220	550
5.304	Nickel (Tot.) as Ni	mg/kg	14	<2.0	<2.0	13
5.304	Lead (Tot.) as Pb	mg/kg	380	53	99	520
5.304	Zinc (Tot.) as Zn	mg/kg	680	70	120	490
5.304	Arsenic (Tot.) as As	mg/kg	<10	<10	<10	<10
Method	Test	Units	/5	/6	/7	/8
5.304	Calcium (Tot.) as Ca	mg/kg	2800	6900	1900	6500
5.304	Magnesium (Tot.) as Mg	mg/kg	3700	1100	1100	980
5.304	Sodium (Tot.) as Na	mg/kg	<400	<400	<400	<400
5.304	Potassium (Tot.) as K	mg/kg	980	400	900	1200
5.304	Aluminium (Tot.) as Al	mg/kg	6200	6300	6500	11000
5.304	Barium (Tot.) as Ba	mg/kg	63	120	130	270
5.304	Cadmium (Tot.) as Cd	mg/kg	<1.0	1.3	<1.0	<1.0
5.304	Chromium (Tot.) as Cr	mg/kg	7.3	19	8.5	15
5.304	Copper (Tot.) as Cu	mg/kg	11	18	22	23
5.304	Iron (Tot.) as Fe	mg/kg	18000	17000	22000	26000
5.304	Manganese (Tot.) as Mn	mg/kg	330	480	400	270
5.304	Nickel (Tot.) as Ni	mg/kg	4.3	5.9	4.8	7.4
5.304	Lead (Tot.) as Pb	mg/kg	38	210	100	710
5.304	Zinc (Tot.) as Zn	mg/kg	120	1500	400	710
5.304	Arsenic (Tot.) as As	mg/kg	<10	<10	<10	<10

s.73 Irrelevant information

Please note that the above results refer only to the samples tested, and not to the patches from which they were drawn.

Client: City Design, Ground Engineering
Job Name: 98155 Howard Smith Walk

Batch Number: 99/0933
Report Date: 5/03/99

Method	Test	Units	/8	/10	/11	/12
5.304	Calcium (Tot.) as Ca	mg/kg	1700	770	1200	1300
5.304	Magnesium (Tot.) as Mg	mg/kg	<200	<200	280	400
5.304	Sodium (Tot.) as Na	mg/kg	<390	<400	<400	<400
5.304	Potassium (Tot.) as K	mg/kg	620	510	1500	1000
5.304	Aluminium (Tot.) as Al	mg/kg	4400	3000	7900	11000
5.304	Barium (Tot.) as Ba	mg/kg	90	110	33	260
5.304	Cadmium (Tot.) as Cd	mg/kg	<1.0	<1.0	<1.0	3.4
5.304	Chromium (Tot.) as Cr	mg/kg	2.8	<2.0	4.4	19
5.304	Copper (Tot.) as Cu	mg/kg	3.1	6.1	5.9	35
5.304	Iron (Tot.) as Fe	mg/kg	13000	18000	15000	15000
5.304	Manganese (Tot.) as Mn	mg/kg	97	550	90	240
5.304	Nickel (Tot.) as Ni	mg/kg	<2.0	<2.0	<2.0	3.8
5.304	Lead (Tot.) as Pb	mg/kg	36	100	48	650
5.304	Zinc (Tot.) as Zn	mg/kg	71	67	84	1400
5.304	Arsenic (Tot.) as As	mg/kg	<10	<10	<10	<10
Method	Test	Units	/13	/14	/15	/16
5.304	Calcium (Tot.) as Ca	mg/kg	3900	3600	590	800
5.304	Magnesium (Tot.) as Mg	mg/kg	1000	690	<200	580
5.304	Sodium (Tot.) as Na	mg/kg	<400	1100	600	<400
5.304	Potassium (Tot.) as K	mg/kg	490	1000	1800	2400
5.304	Aluminium (Tot.) as Al	mg/kg	2600	5300	3000	4200
5.304	Barium (Tot.) as Ba	mg/kg	160	490	210	65
5.304	Cadmium (Tot.) as Cd	mg/kg	<1.0	<1.0	<1.0	<1.0
5.304	Chromium (Tot.) as Cr	mg/kg	3.3	7.1	<2.0	<2.0
5.304	Copper (Tot.) as Cu	mg/kg	9.4	29	8.7	8.9
5.304	Iron (Tot.) as Fe	mg/kg	22000	26000	26000	16000
5.304	Manganese (Tot.) as Mn	mg/kg	870	600	470	510
5.304	Nickel (Tot.) as Ni	mg/kg	3.7	10	5.4	2.9
5.304	Lead (Tot.) as Pb	mg/kg	110	130	11	<10
5.304	Zinc (Tot.) as Zn	mg/kg	270	350	100	77
5.304	Arsenic (Tot.) as As	mg/kg	<10	<10	<10	21

s.73 Irrelevant information

Please note that the above results refer only to the samples tested, and not to the batches from which they were drawn.

Page 6 of 8

Client: City Design, Ground Engineering
Job Name: 98155 Howard Smith Walk

Batch Number: 99/0933
Report Date: 5/03/99

Method	Test	Units	/17	/18	/19	/20
5.304	Calcium (Tot.) as Ca	mg/kg	1100	690	<200	2100
5.304	Magnesium (Tot.) as Mg	mg/kg	2100	420	1100	960
5.304	Sodium (Tot.) as Na	mg/kg	<390	<400	<390	<400
5.304	Potassium (Tot.) as K	mg/kg	1500	1300	3100	<200
5.304	Aluminium (Tot.) as Al	mg/kg	20000	3200	7100	1600
5.304	Barium (Tot.) as Ba	mg/kg	35	75	46	18
5.304	Cadmium (Tot.) as Cd	mg/kg	<1.0	<1.0	<1.0	<1.0
5.304	Chromium (Tot.) as Cr	mg/kg	24	3.2	2.8	<2.0
5.304	Copper (Tot.) as Cu	mg/kg	2.9	3.1	<1.0	9.9
5.304	Iron (Tot.) as Fe	mg/kg	32000	17000	11000	33000
5.304	Manganese (Tot.) as Mn	mg/kg	49	81	28	850
5.304	Nickel (Tot.) as Ni	mg/kg	4.8	2.5	<2.0	15
5.304	Lead (Tot.) as Pb	mg/kg	24	12	<10	<10
5.304	Zinc (Tot.) as Zn	mg/kg	50	69	37	100
5.304	Arsenic (Tot.) as As	mg/kg	<10	<10	<10	<10
Method	Test	Units	/21	/22	/23	/24
5.304	Calcium (Tot.) as Ca	mg/kg	3800	890	1500	1900
5.304	Magnesium (Tot.) as Mg	mg/kg	470	650	520	890
5.304	Sodium (Tot.) as Na	mg/kg	<400	<400	<390	420
5.304	Potassium (Tot.) as K	mg/kg	480	<200	<200	1100
5.304	Aluminium (Tot.) as Al	mg/kg	1300	1500	1200	5100
5.304	Barium (Tot.) as Ba	mg/kg	19	15	28	57
5.304	Cadmium (Tot.) as Cd	mg/kg	<1.0	<1.0	<1.0	<1.0
5.304	Chromium (Tot.) as Cr	mg/kg	<2.0	6.6	2.4	5.0
5.304	Copper (Tot.) as Cu	mg/kg	15	5.1	19	12
5.304	Iron (Tot.) as Fe	mg/kg	17000	8000	36000	28000
5.304	Manganese (Tot.) as Mn	mg/kg	130	91	610	650
5.304	Nickel (Tot.) as Ni	mg/kg	5.4	6.5	15	9.3
5.304	Lead (Tot.) as Pb	mg/kg	<10	19	11	31
5.304	Zinc (Tot.) as Zn	mg/kg	84	74	110	110
5.304	Arsenic (Tot.) as As	mg/kg	<10	<10	<10	<10

s.73 Irrelevant information

Please note that the above results refer only to the samples tested, and not to the batches from which they were drawn.

Client: City Design, Ground Engineering
Job Name: 98155 Howard Smith Walk

Batch Number: 99/0933
Report Date: 5/03/99

Method	Test	Units	/25	/26	/27	/28
5.304	Calcium (Tot.) as Ca	mg/kg	1000	2600	2600	1200
5.304	Magnesium (Tot.) as Mg	mg/kg	310	1800	2500	3500
5.304	Sodium (Tot.) as Na	mg/kg	<400	730	<400	570
5.304	Potassium (Tot.) as K	mg/kg	480	480	620	430
5.304	Aluminium (Tot.) as Al	mg/kg	2900	13000	14000	14000
5.304	Barium (Tot.) as Ba	mg/kg	20	66	73	58
5.304	Cadmium (Tot.) as Cd	mg/kg	<1.0	<1.0	<1.0	<1.0
5.304	Chromium (Tot.) as Cr	mg/kg	3.0	20	28	40
5.304	Copper (Tot.) as Cu	mg/kg	26	8.5	9.3	9.7
5.304	Iron (Tot.) as Fe	mg/kg	39000	26000	19000	25000
5.304	Manganese (Tot.) as Mn	mg/kg	580	70	260	130
5.304	Nickel (Tot.) as Ni	mg/kg	9.3	10	13	11
5.304	Lead (Tot.) as Pb	mg/kg	14	<10	16	<10
5.304	Zinc (Tot.) as Zn	mg/kg	130	39	44	46
5.304	Arsenic (Tot.) as As	mg/kg	<10	<10	<10	<10
Method	Test	Units	/29	/30	/31	/32
5.304	Calcium (Tot.) as Ca	mg/kg	2700	1800	980	1800
5.304	Magnesium (Tot.) as Mg	mg/kg	2500	2800	410	790
5.304	Sodium (Tot.) as Na	mg/kg	550	<400	<400	<400
5.304	Potassium (Tot.) as K	mg/kg	2700	1100	230	200
5.304	Aluminium (Tot.) as Al	mg/kg	12000	16000	2400	3000
5.304	Barium (Tot.) as Ba	mg/kg	160	97	17	20
5.304	Cadmium (Tot.) as Cd	mg/kg	<1.0	<1.0	<1.0	<1.0
5.304	Chromium (Tot.) as Cr	mg/kg	6.9	28	5.4	7.8
5.304	Copper (Tot.) as Cu	mg/kg	13	6.8	12	25
5.304	Iron (Tot.) as Fe	mg/kg	31000	25000	16000	11000
5.304	Manganese (Tot.) as Mn	mg/kg	170	400	300	210
5.304	Nickel (Tot.) as Ni	mg/kg	8.1	17	7.1	7.3
5.304	Lead (Tot.) as Pb	mg/kg	23	20	11	18
5.304	Zinc (Tot.) as Zn	mg/kg	99	56	56	51
5.304	Arsenic (Tot.) as As	mg/kg	<10	<10	<10	<10

s.73 Irrelevant information

Please note that the above results refer only to the samples tested, and not to the patches from which they were drawn.

Page 8 of 9

Client: City Design, Ground Engineering
Job Name: 98155 Howard Smith Walk

Batch Number: 99/0933
Report Date: 5/03/99

Method	Test	Units	/33	/34
5.304	Calcium (Tot.) as Ca	mg/kg	1500	4400
5.304	Magnesium (Tot.) as Mg	mg/kg	450	1200
5.304	Sodium (Tot.) as Na	mg/kg	<400	500
5.304	Potassium (Tot.) as K	mg/kg	890	480
5.304	Aluminium (Tot.) as Al	mg/kg	1600	9400
5.304	Barium (Tot.) as Ba	mg/kg	68	1200
5.304	Cadmium (Tot.) as Cd	mg/kg	<1.0	<1.0
5.304	Chromium (Tot.) as Cr	mg/kg	<2.0	19
5.304	Copper (Tot.) as Cu	mg/kg	8.0	43
5.304	Iron (Tot.) as Fe	mg/kg	19000	19000
5.304	Manganese (Tot.) as Mn	mg/kg	340	530
5.304	Nickel (Tot.) as Ni	mg/kg	3.3	21
5.304	Lead (Tot.) as Pb	mg/kg	21	180
5.304	Zinc (Tot.) as Zn	mg/kg	94	540
5.304	Arsenic (Tot.) as As	mg/kg	<10	<10

[ND] - Not Detected [NR] - Not Required [NT] - Not Tested

s.73 Irrelevant information

Authorised Signatory

Please note that the above results refer only to the samples tested, and not to the batches from which they were drawn.

Page 9 of 9

**SCIENTIFIC ANALYTICAL SERVICES LABORATORY**

Scientific Analytical Services
240 Donaldson Road
Rocklea Brisbane Qld 4106

Telephone 07 3403 2611
Facsimile 07 3403 2646

A unit of the Brisbane City Council

Attention: s.73 Irrelevant info
Client: City Design, Ground Engineering
Job Name: 98113 Quarry Rd - Extra Analyses
Sampling Date: 20/01/99
Sampled By: Client
Sampling Method: Grab
Sample Matrix: Soil/sediment
Batch Number: 99/1286
Registration Date: 17 February 1999
Date of Report: 17 February 1999

Method	Test	Units	/1 TP7 0.2m (0534/7)	/2 TP8 0.2m (0534/9)	/3 TP9 0.2m (0534/10)	/4 TP17 0.2m (0534/24)	/5 TP18 0.2m (0534/26)
External	OC/OP Pesticides		Complete	Complete	[NR]	[NR]	Complete
External	Hydrocarbon Banding		[NR]	[NR]	Complete	Complete	[NR]
External	BTEX		[NR]	[NR]	Complete	Complete	[NR]

[ND] - Not Detected [NR] - Not Required [NT] - Not Tested

OC/OP Pesticides, Total Petroleum Hydrocarbons and BTEX analysis performed by ALS EB19357.

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Authorised Signatory

Please note that the above results refer only to the samples tested,
and not to the batches from which they were drawn.

Page 1 of 1

AUSTRALIAN LABORATORY SERVICES P/L

A.C.N. 009 936 029

ANALYTICAL REPORT

PAGE 1 of 2

CONTACT: MS P BIANCHI
CLIENT: BRISBANE CITY COUNCIL
ADDRESS: ANALYTICAL SERVICES SECTION
240 DONALDSON ROAD
ROCKLEA QLD 4106

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB19357.
SUB BATCH: 0
No. OF SAMPLES: 3
DATE RECEIVED: 11/02/99
DATE COMPLETED: 17/02/99

ORDER No.:

SAMPLE TYPE: SOIL

PROJECT:

Method	Analysis description	Units	LOG	99/0534/7	99/0534/9	99/0534/26
EA-055	Moisture Content (dried @ 103°C)	%	0.1	10.2	10.0	5.4
EP-068A-SS	ORGANOCHLORINE PESTICIDES					
	alpha-BHC	ng/kg	0.05	<0.05	<0.05	<0.05
	HCB	ng/kg	0.05	<0.05	<0.05	<0.05
	beta-BHC & gamma-BHC	ng/kg	0.1	<0.1	<0.1	<0.1
	delta-BHC	ng/kg	0.05	<0.05	<0.05	<0.05
	Heptachlor	ng/kg	0.05	<0.05	<0.05	<0.05
	Aldrin	ng/kg	0.05	<0.05	<0.05	<0.05
	Heptachlor epoxide	ng/kg	0.05	<0.05	<0.05	<0.05
	Chlordane - trans	ng/kg	0.05	<0.05	<0.05	<0.05
	Endosulfan I	ng/kg	0.05	<0.05	<0.05	<0.05
	Chlordane - cis	ng/kg	0.05	<0.05	<0.05	<0.05
	Dieldrin	ng/kg	0.05	<0.05	<0.05	<0.05
	DDE	ng/kg	0.05	<0.05	<0.05	<0.05
	Endrin	ng/kg	0.05	<0.05	<0.05	<0.05
	Endosulfan 2	ng/kg	0.05	<0.05	<0.05	<0.05
	DDP	ng/kg	0.05	<0.05	<0.05	<0.05
	Endrin aldehyde	ng/kg	0.05	<0.05	<0.05	<0.05
	Endosulfan sulfate	ng/kg	0.05	<0.05	<0.05	<0.05
	DDT	ng/kg	0.2	<0.2	<0.2	<0.2
	Endrin ketone	ng/kg	0.05	<0.05	<0.05	<0.05
	Methoxychlor	ng/kg	0.2	<0.2	<0.2	<0.2
EP-068B-SS	ORGANOPHOSPHORUS PESTICIDES					
	Dichlorvos	ng/kg	0.05	<0.05	<0.05	<0.05
	Demeton-S-methyl	ng/kg	0.05	<0.05	<0.05	<0.05
	Monocrotophos	ng/kg	0.2	<0.2	<0.2	<0.2
	Dimethoate	ng/kg	0.05	<0.05	<0.05	<0.05
	Diazinon	ng/kg	0.05	<0.05	<0.05	<0.05
	Chlorpyrifos-methyl	ng/kg	0.05	<0.05	<0.05	<0.05
	Parathion-methyl	ng/kg	0.2	<0.2	<0.2	<0.2

COMMENTS:

s.73 Irrelevant information

Samples analysed on an as received basis. Results reported on a dry weight basis.

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10 FEB 1999

• Results apply to sample(s) as submitted by client.

This is the Final Report which supersedes any preliminary reports with this batch number.



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No. 625

AUSTRALIAN LABORATORY SERVICES P/L

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ANALYTICAL REPORT

PAGE 2 of 2

CONTACT: MS P BIANCHI
CLIENT: BRISBANE CITY COUNCIL
ADDRESS: ANALYTICAL SERVICES SECTION
240 DONALDSON ROAD
ROCKLEA QLD 4106

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB19357
SUB BATCH: 0
No. OF SAMPLES: 3
DATE RECEIVED: 11/02/99
DATE COMPLETED: 17/02/99

ORDER No.: SAMPLE TYPE: SOIL PROJECT:

Method	Analysis description	Units	LOR	99/0534/7	99/0534/9	99/0534/26
EP-068B-SS	Malathion	ng/kg	0.05	<0.05	<0.05	<0.05
	Fenthion	ng/kg	0.05	<0.05	<0.05	<0.05
	Chlorpyrifos	ng/kg	0.05	<0.05	<0.05	<0.05
	Parathion	ng/kg	0.2	<0.2	<0.2	<0.2
	Piriphos-ethyl	ng/kg	0.05	<0.05	<0.05	<0.05
	Chlorfenvinphos E	ng/kg	0.05	<0.05	<0.05	<0.05
	Chlorfenvinphos Z	ng/kg	0.05	<0.05	<0.05	<0.05
	Bromophos-ethyl	ng/kg	0.05	<0.05	<0.05	<0.05
	Fenamiphos	ng/kg	0.05	<0.05	<0.05	<0.05
	Prothiofos	ng/kg	0.05	<0.05	<0.05	<0.05
	Ethion	ng/kg	0.05	<0.05	<0.05	<0.05
	Carbophenothion	ng/kg	0.05	<0.05	<0.05	<0.05
	Azinphos-methyl	ng/kg	0.05	<0.05	<0.05	<0.05
EP-068S-SS	ORGANOCHLORINE PESTICIDE SURROGATE					
	Dibromo-BDE	%	1	97	83	94
EP-068T-SS	ORGANOPHOSPHORUS PESTICIDE SURROGATE					
	DEF	%	1	91	66	91

COMMENTS:

s.73 Irrelevant information

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Results apply to sample(s) as submitted by client.



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Melbourne
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Perth
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AUSTRALIAN LABORATORY SERVICES P/L

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ANALYTICAL REPORT

PAGE 1 of 1

CONTACT: MS P BIANCHI
CLIENT: BRISBANE CITY COUNCIL
ADDRESS: ANALYTICAL SERVICES SECTION
 240 DONALDSON ROAD
 ROCKLEA QLD 4106

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB19357
SUB BATCH: 1
No. OF SAMPLES: 2
DATE RECEIVED: 11/02/99
DATE COMPLETED: 17/02/99

ORDER No.: **SAMPLE TYPE:** SOIL **PROJECT:**

Method	Analysis description	Units	LOR	99/0534/10	99/0534/24
EA-055	Moisture Content (dried @ 103°C)	%	0.1	9.6	8.9
EP-071-SS	TOTAL PETROLEUM HYDROCARBONS				
	C6 - C9 Fraction	mg/kg	2	<2	<2
	C10 - C14 Fraction	mg/kg	50	<50	<50
	C15 - C29 Fraction	mg/kg	100	196	<100
	C29 - C36 Fraction	mg/kg	100	398	169
EP-080-SS	BTEX				
	Benzene	mg/kg	0.2	<0.2	<0.2
	Toluene	mg/kg	0.2	<0.2	<0.2
	Chlorobenzene	mg/kg	0.2	<0.2	<0.2
	Ethylbenzene	mg/kg	0.2	<0.2	<0.2
	meta- & para-Xylene	mg/kg	0.2	<0.2	<0.2
	ortho-Xylene	mg/kg	0.2	<0.2	<0.2
EP-080S-SS	VOLATILE TPH/BTEX COMPOUND SURROGATES				
	1,2-Dichloroethane-D4	%	1	81	85
	Toluene-D8	%	1	89	97
	4-Bromofluorobenzene	%	1	90	93

COMMENTS:

Samples analysed on an as received basis. Results reported on a dry weight basis.

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APPENDIX C
CHAIN OF CUSTODY FORMS

29/1/99

**BRISBANE WATER
SCIENTIFIC ANALYTICAL SERVICES**

ENVIRONMENTAL SAMPLES
Location: 98155 - Howard Smith Wharf.

Batch No	0933	Analysis Code	W-MISCENT
Date	27/1/99 + 4-2-99	Matrix	SOIL
Sampler	CLIENT	Client	CD-EN6
Date/Time Recd	4-2-99 1550	Job	98155
Received by	CS	Sampling Method	GRAB
Correct Containers	Yes	Preservation	CHILLED
Sampling Time	—	hrs.	

Sample	Analysis Method Code Seq No	pH Result	HEAVY METAL Result	TPH Result	BTEX Result	PAH Result	OC/OP					
BH1 0.2m	1	✓	✓			✓	✓					
0.5m	2	✓	✓									
BH3 0.2m	3	✓	✓									
BH4 0.2m	4	✓	✓			✓						
BH6 0.2m	5	✓	✓				✓					
BH7 0.35m	6	✓	✓	✓	✓	✓						
BH8 0.2m	7	✓	✓									
BH10 0.5m	8	✓	✓	✓	✓		✓					

s.73 Irrelevant information

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Date: 12/10/97

**BRISBANE WATER
SCIENTIFIC ANALYTICAL SERVICES**

ENVIRONMENTAL SAMPLES

Location:

Batch No	0933	Analysis Code	W-MISCENT
Date	27/1 + 2/2/99	Matrix	SOIL
Sampler	CLIENT	Client	10-ENG
Date/Time Recd	2/2/99 150	Job	98155
Received by	OS	Sampling Method	GRAB
Correct Containers	YES	Preservation	CHILLED
Sampling Time	hrs.		

Sample	Analysis Method Code	PH Result	Heavy Metals Result	TPH Result	BTEX Result	PAH Result	OL/OP						
	Seq No												
BH12 0.5m	9	✓	✓										
BH15 0.2m	10	✓	✓										
BH17 0.2m	11	✓	✓										
BH20 0.2m	12	✓	✓				✓						
BH21 0.2m	13	✓	✓	✓	✓								
BH22 0.2m	14	✓	✓	✓	✓	✓							
0.5m	15	✓	✓	✓	✓								
BH23 0.2m	16	✓	✓	✓	✓								

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Date: 12/10/97

**BRISBANE WATER
SCIENTIFIC ANALYTICAL SERVICES**

ENVIRONMENTAL SAMPLES

Location:

Batch No	0933	Analysis Code	W-MISCENT
Date	27/1 + 2/2/99	Matrix	SOIL
Sampler	CLIENT	Client	CD-ENG
Date/Time Recd	4/2/99 1550	Job	98155
Received by	CS.	Sampling Method	GRAB
Correct Containers	YES	Preservation	CHILLED
Sampling Time		hrs.	

Sample	Analysis Method Code	pH	Heavy Metals	TPH	BTEX	PAH	OC/OP						
	Seq No	Result	Result	Result	Result	Result							
BH25 0.2m	17	✓	✓										
BH27 0.2m	18	✓	✓										
BH28 0.5m	19	✓	✓										
BH33 0.2m	20	✓	✓										
BH34 0.2m	21	✓	✓				✓						
BH36 0.2m	22	✓	✓	✓	✓								
BH37 0.2m	23	✓	✓										
BH39 0.1m	24	✓	✓	✓	✓								

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Date : 12/10/97

**BRISBANE WATER
SCIENTIFIC ANALYTICAL SERVICES**

ENVIRONMENTAL SAMPLES
Location:

Batch No	0933	Analysis Code	W-MISCINT
Date	27/1 + 2/2/99	Matrix	SOIL
Sampler	CLIENT	Client	CD-ENG
Date/Time Recd	4/2/99 1350	Job	98155
Received by	CS.	Sampling Method	GRAB
Correct Containers		Preservation	CHILLED
Sampling Time		hrs.	

Sample	Analysis Method Code	P _H	HEAVY METALS	TPH	BTEX	PAH	OC/OP						
	Seq No	Result	Result	Result	Result	Result							
BH41 0.2m	25	✓	✓										
BH43 0.2m	26	✓	✓			✓	✓						
BH44 0.2m	27	✓	✓	✓	✓								
1m	28	✓	✓										
BH46 0.2m	29	✓	✓										
0.5m	30	✓	✓										
BH48 0.1m	31	✓	✓										
BH50 0.2m	32	✓	✓										

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Date: 12/10/97

**BRISBANE WATER
SCIENTIFIC ANALYTICAL SERVICES**

ENVIRONMENTAL SAMPLES

Location:

Batch No	0933	Analysis Code	W-MISCINT
Date	27/1 + 2/2/99	Matrix	SOIL
Sampler	CLIENT	Client	CD-ENG
Date/Time Recd	4/2/99 1350	Job	98155
Received by		Sampling Method	GRAB
Correct Containers		Preservation	CHILLED
Sampling Time		hrs.	

Sample	Analysis Method Code	PH	HEAVY METALS	TPH	BTEX	PAH	OC/OP					
	Seq No	Result	Result	Result	Result	Result						
BH51 0.2m	33	✓	✓	✓	✓							
BH52 0.2m	34	✓	✓	✓	✓	✓						

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Date: 12/10/97

Appendix B – Summary of Soil Analysis Results and Statistical Analysis

Published on DES Disclosure Log
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SUMMARY OF SOIL ANALYSIS RESULTS

Location (refer site layout plan) Laboratory ID Sample ID and Depth (mBGL)		Assessment Guidelines							1 BH1-0.2	2 BH1-0.5	3 BH3-0.2	4 BH4-0.1	5 BH6-0.2	6 BH7-0.35	7 BH8-0.2	8 BH10-0.5
Analyte	Limit of Reporting (mg/kg)	Background	EITL	HIL 'A'	HIL 'D'	HIL 'E'	HIL 'F'	EPA	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Metals																
Antimony			20	-	-	-	-	-								
Arsenic	0.5	0.2-30	20	100	400	200	500	-	10	10	10	10	10	10	10	10
Cadmium	0.5	0.04-2	3	20	80	40	100	-	1	1	1	1	1	1.3	1	1
Chromium (Total)	0.5	-	50	120,000	-	240,000	-	-	16	3.1	2.3	17	7.3	19	8.5	15
Copper	0.5	1-190	60	1,000	4,000	2,000	5,000	-	84	4.0	6.7	58	11	18	22	23
Lead	0.5	<2-200	300	300	1,200	600	1,500	300	380	53	99	520	38	210	100	710
Zinc	0.5	2-180	200	7,000	28,000	14,000	35,000	-	680	70	120	490	120	1500	400	710
TPH																
C6-C9	2	-	-	-	-	-	-	100						<2		<2
C10-C14	50	-	-	-	-	-	-	100						50		50
C15-C28	100	-	-	-	-	-	-	1,000						100		100
C29-C36	100	-	-	-	-	-	-	1,000						<100		<100
PAHs																
Napthalene	0.5	-	-	-	-	-	-	-	<0.5			<0.5		<0.5		
Acenaphthylene	0.5	-	-	-	-	-	-	-	<0.5			<0.5		<0.5		
Acenaphthene	0.5	-	-	-	-	-	-	-	<0.5			<0.5		<0.5		
Flourene	0.5	-	-	-	-	-	-	-	<0.5			<0.5		<0.5		
Phenanthrene	0.5	-	-	-	-	-	-	-	1.4			0.5		<0.5		
Anthracene	0.5	-	-	-	-	-	-	-	<0.5			<0.5		<0.5		
Flouranthene	0.5	-	-	-	-	-	-	-	2			0.9		<0.5		
Pyrene	0.5	-	-	-	-	-	-	-	2.1			0.9		<0.5		
Benzo(a)anthracene	0.5	-	-	-	-	-	-	-	1			0.5		<0.5		
Chrysene	0.5	-	-	-	-	-	-	-	1.3			1.2		<0.5		
Benzo (b&k) flouranthene	1.0	-	-	-	-	-	-	-	2			1		<1.0		
Benzo(a)pyrene	0.5	-	-	1	4	2	5	1	1.2			0.5		0.5		
Indeno(1,2,3-cd)pyrene	1.0	-	-	-	-	-	-	-	0.6			<0.5		<0.5		
Dibenz(ah)anthracene	1.0	-	-	-	-	-	-	-	<0.5			<0.5		<0.5		
Benzo(ghi)perylene	1.0	-	-	-	-	-	-	-	0.7			<0.5		<0.5		
Total PAHs	-	0.95-5	-	20	80	40	100	20	15.3			9.5		8		

Notes:

LOR	All results in mg/kg unless otherwise specified
Background	Limit of Laboratory Reporting
EITL	Levels Commonly Found in the Local Environment (EPA, 1998)
HIL 'A'	Urban Ecological Investigation Threshold Levels (EPA, 1998)
HIL 'D'	Health Investigation Level - Residential with Soil Access (EPA, 1998)
HIL 'E'	Health Investigation Level - Residential with Minimum Opportunity for Soil Access (EPA, 1998)
HIL 'F'	Health Investigation Level - Parks, Recreational Open Spaces and Playign Fields (EPA, 1998)
EPA	Health Investigation Level - Commercial Industrial (EPA, 1998)
-	QLD EPA Draft 'Clean Site' Guidelines (EPA, 1999)
n/a	Not Available/Not Relevant
n/t	Not Applicable
	Not Tested

SUMMARY OF SOIL ANALYSIS RESULTS

Location (refer site layout plan) Laboratory ID Sample ID and Depth (mBGL)		9 BH12-0.5	10 BH15-0.2	11 BH17-0.2	12 BH20-0.2	13 BH21-0.2	14 BH22-0.2	15 BH22-0.5	16 BH23-0.2	17 BH25-0.2	18 BH27-0.2	19 BH28-0.5	20 BH33-0.2	21 BH34-0.1	22 BH36-0.2	23 BH37-0.2	24 BH39-0.1
Analyte		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ng/kg
Metals	Antimony																
	Arsenic	10	10	10	10	10	10	10	21	10	10	10	10	10	10	10	10
	Cadmium	1	1	1	3.4	1	1	1	1	1	1	1	1	1	1	1	1
	Chromium (Total)	2.8	2	4.4	19	3.3	7.1	2	2	24	3.2	2.8	2	2	6.6	2.4	5
	Copper	3.1	6.1	5.9	35	9.4	29	8.7	8.9	2.9	3.1	<1.0	9.9	15	5.1	19	12
	Lead	36	100	48	650	110	130	11	10	24	12	10	10	10	19	11	31
	Zinc	71	67	84	1400	270	350	100	77	50	69	37	100	84	74	110	110
TPH	C6-C9					<2	<2	<2	<2						<2		<2
	C10-C14					50	50	50	50						50		50
	C15-C28					100	240	100	100						100		100
	C29-C36					<100	<100	<100	<100						<100		<100
PAHs	Napthalene						<0.5										
	Acenaphthylene						<0.5										
	Acenaphthene						<0.5										
	Flourene						<0.5										
	Phenanthrene						1.5										
	Anthracene						0.8										
	Flouranthene						4.1										
	Pyrene						4										
	Benzo(a)anthracene						2.6										
	Chrysene						2.5										
	Benzo (b&k) flouranthene						4										
	Benzo(a)pyrene						1.9										
	Indeno(1,2,3-cd)pyrene						1										
	Dibenz(ah)anthracene						0.5										
	Benzo(ghi)perylene						0.9										
	Total PAHs						25.8										

Notes:

LOR	
Background	
EITL	
HIL 'A'	
HIL 'D'	
HIL 'E'	
HIL 'F'	
EPA	
-	
n/a	
n/t	

SUMMARY OF SOIL ANALYSIS RESULTS

Location (refer site layout plan) Laboratory ID Sample ID and Depth (mBGL)	25 BH41-0.2	26 BH43-0.2	27 BH44-0.2	28 BH44-1.0	29 BH46-0.2	30 BH46-0.5	31 BH48-0.1	32 BH50-0.2	33 BH51-0.2	34 BH52-0.2	Mean	SD	Upper Mean 95% Confidence
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Metals													
Antimony			<10										
Arsenic	10	10	10	10	10	10	10	10	10	10	10.3	1.9	11.0
Cadmium	1	1	1	1	1	1	1	1	1	1	1.1	0.4	1.2
Chromium (Total)	3	20	28	40	6.9	28	5.4	7.8	2	19	10.0	9.7	13.2
Copper	26	8.5	8.3	9.7	13	6.8	12	25	8	43	17.0	17.2	22.8
Lead	14	10	16	<9.9	23	20	11	18	21	180	110.5	184.3	172.4
Zinc	130	39	44	46	99	56	56	51	94	540	244.1	357.2	364.1
TPH													
C6-C9			<2						<2	<2			
C10-C14			50						127	274	77.36	69.19	119.25
C15-C28			100						100	1830	270.00	519.10	576.77
C29-C36			<100						<100	<100			
PAHs													
Napthalene		<0.5								<0.5			
Acenaphthylene		<0.5								<0.5			
Acenaphthene		<0.5								<0.5			
Flourene		<0.5								<0.5			
Phenanthrene		<0.5								0.7			
Anthracene		<0.5								<0.5			
Flouranthene		<0.5								<0.5			
Pyrene		<0.5								<0.5			
Benzo(a)anthracene		<0.5								<0.5			
Chrysene		<0.5								<0.5			
Benzo (b&k) flouranthene		<1.0								<1.0			
Benzo(a)pyrene		0.5								0.5	0.85	0.59	1.32
Indeno(1,2,3-cd)pyrene		<0.5								<0.5			
Dibenz(ah)anthracene		<0.5								<0.5			
Benzo(ghi)perylene		<0.5								<0.5			
Total PAHs		8								8.2	12.47	7.11	18.16

Notes:

LOR	
Background	
EITL	
HIL 'A'	
HIL 'D'	
HIL 'E'	
HIL 'F'	
EPA	
-	
n/a	
n/t	

Appendix C Photographs

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View of Building Number 2 with walkway/cycle way in foreground



View of fenced holding area on Lot 4



View of Building Number 3 and walkway/cycle way looking east.



View of fenced car parking area on Lot 3.



View of masonry structure on Lot 4



View of site looking west



View of south west portion of Lot 4



View of disused diesel AST (Lot 3).

Appendix D Draft Site Management Plans

Published on DES Disclosure Log
RTI Act 2009

DRAFT SITE MANAGEMENT PLAN (SMP) –

LOT :4 PLAN : SP 128032 FILE REF : BNEXXXX

PRINTED:

DATE OF EFFECT:

1.0 SUMMARY OF CONTAMINATION

The site, Lot 4 SP 128032, 175 Bowen Terrace Fortitude Valley is currently used as a walkway with the remaining portion of the lot vacant and secured. The wharves on site were reportedly in use for most of last century and were also reportedly used in wartime by the Navy for ship maintenance and storage and loading of supplies. More recently (up to the late 1990s) the wharf buildings were used by various government departments to store various plant and equipment and to conduct maintenance and workshop activities. Low level radioactive materials such as medical equipment and consumables were stored on the site up until about 1989. A Queensland Health survey of the area where radioactive materials were stored reportedly cleared the area of any residual radioactivity at levels exceeding NHMRC guidelines. The site has largely remained vacant for the past 8 years.

Lot 4 is generally paved in concrete and bitumen with the exception of the wharf area which is constructed from timber. The site is characterised as a benched area between the southern face of a cliff/former quarry face and the Brisbane River. The bench area consists of a shallow layer (varying up to 1.0 metre) of fill overlying bedrock. The fill appears to predominantly consist of material consistent in terms of geological origin with the material observed in the cliff face.

The following maximum contaminants of concern were identified on the Howard Smith Wharf site of which Lot 4 on SP 128032 is part

arsenic 21 mg/kg
cadmium 3.4 mg/kg)
lead 710 mg/kg)
zinc 1500 mg/kg).
TPH (C₁₀-C₁₄ fraction) 274 mg/kg.
TPH (C₁₅-C₂₈ fraction) 1830 mg/kg.
Benzo(a)pyrene 1.9 mg/kg

These maximum contaminant contaminants were reported within shallow fill at the site.

2.0 OBJECTIVES OF THE SMP

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

3.0 ACHIEVEMENT AND MAINTENANCE OF OBJECTIVES

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

3.2 *Site Use.* The intended use of the site is for mixed use including commercial and open space and recreational use.

3.3 *Site 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 must comply with the requirements of the SMP.

3.4 *Surface Capping and Protective Barriers.* As the contaminant levels are generally below levels that would pose a risk to human health and the environment given any use for the site there are no specific requirements to maintain surface capping or protective barriers over the site.

3.5 *Soil excavation & Removal.* Soil material excavated on the site should be assessed for contaminants of concern and/or physical properties to determine if the material is contaminated and to identify appropriate management and disposal/re-use options.

Representative sampling and analysis of soil from excavation in areas of fill must be managed by a suitably qualified and experienced person in accordance with Section 381 of the *Environmental Protection Act 1994* (EP Act). Contaminated soil must not be removed off-site without a disposal permit in accordance with Section 424 of the EP Act.

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

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

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

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

4.0 MONITORING AND REPORTING

Records are to be kept of any soil excavation in contaminated areas, disposal permits and site management plan compliance for review by the administering authority from time to time.

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

DRAFT SITE MANAGEMENT PLAN (SMP) –

LOT 3 PLAN : SP 190810 FILE REF : BNEXXXX

PRINTED:

DATE OF EFFECT:

1.0 SUMMARY OF CONTAMINATION

The site, Lot 3 SP 190810, 5 Boundary Street Brisbane is currently used as a walkway with the remaining portion of the lot vacant and secured. The wharf area and buildings on the site had previously been used by the water police and police diving squad for administration and storage purposes as well as housing refuelling facilities.

Lot 3 is paved in concrete and bitumen with the exception of the wharf area which is constructed from timber. The site is characterised as a benched area between the southern face of a cliff/former quarry face and the Brisbane River. The bench area consists of a shallow layer (varying up to 1.0 metre) of fill overlying bedrock. The fill appears to predominantly consist of material consistent in terms of geological origin with the material observed in the cliff face.

The following maximum contaminants of concern were identified on the Howard Smith Wharf site of which Lot 3 on SP 190810 is part

arsenic 21 mg/kg
cadmium 3.4 mg/kg)
lead 710 mg/kg)
zinc 1500 mg/kg).
TPH (C₁₀-C₁₄ fraction) 274 mg/kg.
TPH (C₁₅-C₂₈ fraction) 1830 mg/kg.
Benzo(a)pyrene 1.9 mg/kg

These maximum contaminant contaminants were reported within shallow fill at the site.

2.0 OBJECTIVES OF THE SMP

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

3.0 ACHIEVEMENT AND MAINTENANCE OF OBJECTIVES

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

3.2 *Site Use.* The intended use of the site is for mixed use including commercial and open space and recreational use.

3.3 *Site 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 must comply with the requirements of the SMP.

3.4 *Surface Capping and Protective Barriers.* As the contaminant levels are generally below levels that would pose a risk to human health and the environment given any use for the site there are no specific requirements to maintain surface capping or protective barriers over the site.

3.5 *Soil excavation & Removal.* Soil material excavated on the site should be assessed for contaminants of concern and/or physical properties to determine if the material is contaminated and to identify appropriate management and disposal/re-use options.

Representative sampling and analysis of soil from excavation in areas of fill must be managed by a suitably qualified and experienced person in accordance with Section 381 of the *Environmental Protection Act 1994* (EP Act). Contaminated soil must not be removed off-site without a disposal permit in accordance with Section 424 of the EP Act.

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

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

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

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

4.0 MONITORING AND REPORTING

Records are to be kept of any soil excavation in contaminated areas, disposal permits and site management plan compliance for review by the administering authority from time to time.

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

Date : 26/06/2014 9:59:07 AM

From : "MYERS Mark"

To : [s.73 Irrelevant]@jhg.com.au"

Subject : Endorsed SDP & Information Notice 20140626 (CLEB04734914)

Attachment : Endorsed SDP & Information Notice 20140626.pdf;

Hi [s.73]

The endorsed SDP is attached

Regards,

Mark

Mark Myers

Project Officer

Waste and Land Contaminated Assessments Unit

Environmental Performance & Coordination Branch

Environmental Services & Regulation

Department of Environment and Heritage Protection

Level 9, 400 George Street, Brisbane QLD 4001

Ph: (07) 3330 6025 Fax: (07) 3330 5875

Website: www.ehp.qld.gov.au

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RTI Act 2009

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: 193530

John Holland Queensland Pty Ltd

PO Box 556

Fortitude Valley QLD

Attn: s.73 Irrelevant info Principal Contact
Email: @jhq.com.au

Re: Application to remove and dispose of contaminated soil from 175 Bowen Street, Fortitude Valley (Lot 4 on SP128032)

Decision

The administering authority has considered your application received on the 23 June 2014 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.

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 John Holland Queensland Pty Ltd on 23 June 2014 including:

- Part A and B application forms.
- Analytical Results
- Justification that removal to the landfill is an acceptable outcome
- Acceptance Letter dated 23 June 2014 provided by Transpacific stating they are willing to accept approximately 100m³ of contaminated soil from 175 Bowen Terrace, Fortitude Valley (Lot 4 on SP128032) to Single Lined Cell 5 located at Chum Street, New Chum (Lots 268 & 227 on SP103913).

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.

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

Notice of decision to grant a soil disposal permit with conditions

s.73 Irrelevant information

Signature

26/6/14

Date

Enquiries:

Ben Willey – (07) 3181 2429

Waste and Land Contamination Assessments
Department of Environment and Heritage
Protection

Level 9, 400 George Street

GPO Box 2454

Brisbane QLD 4001

Phone 13 QGOV (13 74 68)

Email ben.willey@ehp.qld.gov.au

Allen Johns

Delegate of the administering authority

Environmental Protection Act 1994

Published on DES Disc
RTI Act 2009

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.

Notice of decision to grant a soil disposal permit with conditions

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.

SOIL DISPOSAL PERMIT
Environmental Protection Act 1994 (EP Act)

Disposal permit number: CLEB04734914

Commencement date: 25 June 2014

Expiry Date: 25 June 2015

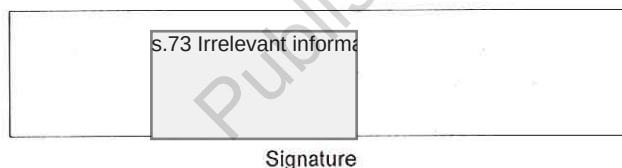
Permit holder: John Holland Queensland Pty Ltd

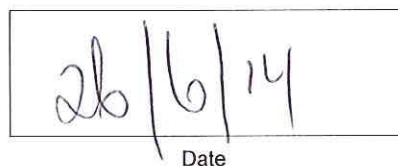
Authorised activity: Removal and disposal of approximately 100m³ of contaminated soil from 175 Bowen Terrace, Fortitude Valley (Lot 4 on SP128032) to Single Lined Cell 5 located at Chum Street, New Chum (Lots 268 & 227 on SP103913).

Maximum volume: 100m³

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.





Enquiries:

Ben Willey – (07) 3181 2429

Waste and Land Contamination Assessments
Department of Environment and Heritage
Protection
Level 9, 400 George Street
GPO Box 2454
Brisbane QLD 4001
Phone 13 QGOV (13 74 68)

Email ben.willey@ehp.qld.gov.au

Allen Johns
Delegate of the administering authority
Environmental Protection Act 1994

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 made available to the administering authority on 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.
4. The contaminated soil to be removed and disposed of must conform to the contaminate types and limits stipulated in the letter of acceptance and its attachment.

Published on DES Disclosure Log
RTI Act 2009

Date : 3/10/2017 12:15:21 PM

From : "PALM"

To : "Industry and Development Assessment"

Cc : "EMR CLR Registry"

Subject : Application 2010927 Soil disposal AR105212 Greencap Limited

Attachment : image001.wmz;image005.wmz;Disposal Permit Application Form_Completed and Signed.pdf;AR105212

Checklist.docx;image007.jpg;image008.png;image009.png;image011.wmz;image015.wmz;image006.png;image010.png;image012.png;image013.png;image014.png;

No hard copy

An application has been received by the Customer Service Team (PaLM) and requires your assessment.

Type: Soil disposal

AR: AR105212

Project: 193530

Client: Greencap Limited

Permit: CLEB0647817

Appl ID: 623173

Date received: 27/09/2017

Appl Date: 27/09/2017

Date Due: 15/10/2017

NOTE: This is on the EMR/CLR register. 31053

All application documents have been attached to Ecotrack/eDocs and can be searched by the AR number.

Please note Non DA staff in Palm will not be creating files however for any contaminated land applications, the EMR/CLR staff will create the file and will advise accordingly in a separate email.

If you have any questions regarding this application please send an email to palm@ehp.qld.gov.au

Regards



Rachel Hanwright
Customer Service Support Officer
Customer Service Team | Regulatory Capability and Customer Service
Department of Environment and Heritage Protection

P: 1300 130 372 F: 07 3330 5875 E: palm@ehp.qld.gov.au
Level 9, 400 George Street BRISBANE QLD 4000
GPO Box 2454, BRISBANE QLD 4001

From: [s.73 Irrelevant]mailto:[s.73 Irrelevant]@greencap.com.au]

Sent: Wednesday, 27 September 2017 2:40 PM

To: PALM

Subject: AR105212 Soil Disposal Permit Application

Hello,

Please find attached a disposal permit application.

Regards,

[s.73 Irrelevant]

BE (Chemical) | CEnvP – Contaminated Land Specialist

Principal Contaminated Land | Greencap

Level 8 / 133 Mary Street, Brisbane QLD 4000

T: +61 [s.73 Irrelevant] D: +61 [s.73 Irrelevant] M: [s.73 Irrelevant] E: [s.73 Irrelevant]@greencap.com.au | in: [LinkedIn](#)



INTEGRATED SERVICES • Environmental Management • Property Risk • Hazardous Materials
Contaminated Land • Work Health and Safety • Hygiene • Training • Online Solutions

www.greencap.com.au Adelaide | Auckland | Brisbane | Canberra | Darwin | Melbourne | Newcastle | Perth | Sydney | Wollongong

 Like us on Facebook  Follow us on Twitter  Connect with us on LinkedIn  Join our Mailing List



Muddy Boots



GREENCAP
WORKFORCE
TRAINING

To find out more about the re-launch of Muddy Boots Environmental Training please contact:

Tara Kennedy: muddyboots@greencap.com.au

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HOWARD SMITH WHARVES PROJECT DISPOSAL PERMIT APPLICATION

Lot 4 SP128032

Howard Smith Wharf Precinct, Boundary
Road, Fortitude Valley 4006

27 September 2017



Application form

Environmental Protection Act 1994

OFFICIAL USE ONLY

DATE RECEIVED

FILE REF

PROJECT REF

DATE

Application for a disposal permit for contaminated soil

This is the approved form for making an application to the administering authority for a disposal permit to treat or dispose of contaminated soil from land recorded in the environmental management register (EMR) or contaminated land register (CLR). The application is made under s.424¹ (as continued under s.739) of the Environmental Protection Act 1994 (EP Act).

Note: A soil disposal permit is not required when removing clean soil from a site listed on the EMR or CLR.

1. Applicant details

FULL NAME s.73 Irrelevant		TITLE Mr
COMPANY/ REGISTERED LEGAL ENTITY NAME (IF APPLICABLE) Greencap Limited		
REGISTERED ADDRESS Level 8, 133 Mary Street, Brisbane QLD		POSTCODE 4000
PHONE +61 07 s.73 Irrelevant	FAX	
EMAIL s.73 Irrelevant@greencap.com.au		
POSTAL ADDRESS (WRITE 'AS ABOVE' IF THE SAME AS REGISTERED ADDRESS) GPO Box 559, Brisbane QLD		POSTCODE 4001

CONTACT PERSON FOR COMPANY/ REGISTERED LEGAL ENTITY (IF APPLICABLE) As above
POSITION

¹ S. 424 continues to have effect in accordance with s. 739 of the EP Act and can be found in the superseded version of the EP Act available at https://www.legislation.qld.gov.au/LEGISLTN/SUPERSED/E/EnvProtA94_150710.pdf

Application form

Application for a disposal permit for contaminated soil

Principal Contaminated Land	
PHONE As above	FAX
EMAIL As above	

A soil disposal permit can only be approved where the site from which the soil is being removed is listed on the EMR or CLR.

For further information about how land is listed on the registers refer to the information available at the Queensland Government website:

<http://www.qld.gov.au/environment/pollution/management/contaminated-land/>

2. Site location

Please provide details of site(s) the soil is proposed to be removed **from**.

FULL STREET ADDRESS OF SITE(S) Howard Smith Wharves Precinct, Boundary Street, Fortitude Valley 4006	
LOT(S) Lot 4	PLAN(S) SP128032
LOCAL GOVERNMENT AREA Brisbane City Council	

3. Certificate of title

Please provide a copy of the current Certificate of Title for the land.

☒ Certificate of title attached

It is better to overestimate the amount of soil to be removed. If the limit is reached before the disposal is complete, a new disposal permit will be required.

4. Soil volume

What is the approximate volume (in cubic metres) of soil to be removed (allowing for excavation bulking)?

<ENTER THE SOIL VOLUME IN CUBIC METRES> 2,500m ²
--

Soil disposal permits only authorise the disposal of soil for the term stated on the disposal permit. The standard period is one year.

5. Disposal period

What are the dates between which soil is proposed to be moved to the disposal or treatment location?

FROM DATE: 1 st October 2017	TO DATE: 1 st October 2018
--	--

The application must be accompanied by the written acceptance of the local government authority or registered

6. Disposal location

What is the proposed disposal location?

Application form

Application for a disposal permit for contaminated soil

owner of the site which will receive the soil. The written acceptance must:

- state the amount of soil and the type of contaminants present in the soil; and
- confirm that the soil can be lawfully received under the conditions of the environmental authority for the facility (if being taken to a landfill facility)

If the soil is being disposed at a non-local government administered landfill or another parcel of land on the EMR/CLR, a copy of the Certificate of Title must be provided.

a. ☐ Local government administered waste disposal or treatment facility

NAME AND ADDRESS OF LOCAL GOVERNMENT ADMINISTERED LANDFILL

☐ Written acceptance from the local government authority is attached.

b. ☒ Non-local government-administered waste disposal or treatment facility

LOT(S)	PLAN(S)
FULL STREET ADDRESS OF SITE(S)	
.....	
See Annex Two for details/Title and Acceptance letter	

☒ Written acceptance from registered owner of site is attached.

☒ Certificate of title is attached

c. ☐ Another parcel of land which is listed on the EMR or CLR

EMR/CLR ID	
LOT(S)	PLAN(S)
FULL STREET ADDRESS OF SITE(S)	

☐ Written acceptance from registered owner of site is attached.

☐ Certificate of title is attached.

Disposal to landfill should only be considered where no other method of dealing with the contaminated soil is available or viable.

7. Management options

State reason(s) why on-site/off-site treatment or management is not proposed.

<PROVIDE REASONS>

Timing of project/development onsite requires immediate disposal; and due to the location of site between cliffs and the Brisbane River there is no room on site for treatment and storage of material

8. Sampling

Is it proposed to undertake validation sampling to confirm that all soil has been removed?

☐ Yes

☒ No

Application form

Application for a disposal permit for contaminated soil

9. Soil contamination

Provide a description of the contamination present in the soil to be removed.

<PROVIDE DESCRIPTION>

Lead and Asbestos

If a site investigation report is being submitted simultaneously to the administering authority, refer to the relevant sections of that report otherwise copies must be provided of all laboratory reports for contaminated soil analyses and leachate testing results.

A previously submitted site investigation report may be referred to, provided it is still relevant and accurate.

Soil sampling needs to be completed in accordance with Schedule B2 of the National Environment Protection (Assessment of Site Contamination) Measure 1999.

10. Required supporting information

Please tick relevant boxes below to indicate that you have attached the following information with this application and list the relevant attachments.

Required information	Name of attachment containing the required information <small>(if the required information can be found in an attached site investigation report provide the title, version and section number for the report)</small>
Scaled plan showing soil sampling locations and contamination source(s)	Annex 3
Tabulation of soil analysis results	Annex 4
Toxicity Characteristic Leaching Procedure (TCLP) results from relevant soil samples	Annex 4
Copies of all laboratory reports and sample receipt advices for all soil analysis	Annex 5
Explanation of location and depths of samples, how samples were collected, and how sample integrity was maintained	Annex 6

Application form
Application for a disposal permit for contaminated soil

11. Declaration

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

- I do solemnly and sincerely declare that all information supplied on or with this application is true and correct to the best of my knowledge.
- I understand that it is an offence under s.480 of the *Environmental Protection Act 1994* to give to the administering authority or an authorised person a document containing information that I know to be false, misleading or incomplete in a material particular; and
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

APPLICANT NAME

s.73 Irrelevant information

SIGNATURE OF INDIVIDUAL APPLICANT OR AUTHORISED SIGNATORY

s.73 Irrelevant information

s.73 Irrelevant information

DATE

27/09/2017

Applicant checklist

- ☒ Application form completed and signed (this form)
- ☒ Certificate of title attached (refer question 3)
- ☒ Written acceptance from disposal location attached (refer question 6)
- ☒ Certificate of title for disposal location attached where applicable (refer question 6)
- ☒ Required supporting information attached (or referenced in site investigation report) (refer question 10)

Please submit your complete application using one of the following methods:

Email:

palm@ehp.qld.gov.au

The email subject line should be 'Application for a disposal permit for contaminated soil'.

The file size limit for submission via email is 14MB. Any submission via email which exceeds 14MB will need to be broken down into separate emails, with each email clearly labelled Part X of X (e.g. Part 1 of 2), included in the subject line of the email.

Mail:

Permit and Licence Management
Department of Environment and Heritage Protection
GPO Box 2454, BRISBANE QLD 4001

Courier or hand delivery:

Permit and Licence Management
Department of Environment and Heritage Protection
Level 3, 400 George Street,
BRISBANE QLD 4001
Hours: 8.30 am—5.00 pm business days

Privacy statement

The Department of Environment and Heritage Protection (the department) is collecting your personal information to assess the application for a disposal permit under s.424 of the *Environmental Protection Act 1994*. Information will not be disclosed to any other person or agency unless you have given us permission or we are authorised or required by law. For queries about privacy matters email: privacy@ehp.qld.gov.au or telephone: (07) 3330 6270.

Howard Smith Wharves Project Disposal Permit Lot 4
SP128032

Howard Smith Wharf Precinct, Boundary Road, Fortitude Valley 4006

Annex One: Certificate of Title

CURRENT TITLE SEARCH

DEPT OF NATURAL RESOURCES AND MINES, QUEENSLAND

Request No: 26972698

Search Date: 27/09/2017 10:04

Title Reference: 50323249

Date Created: 31/07/2000

Previous Title: 40025609

REGISTERED OWNER

Dealing No: 707890862 14/07/2004

BRISBANE CITY COUNCIL

ESTATE AND LAND

Estate in Fee Simple

LOT 4 SURVEY PLAN 128032
Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 40025609 (Lot 4 on SP 128032)
2. LEASE No 718182955 28/07/2017 at 15:49
HSW NOMINEES PTY LIMITED A.C.N. 166 209 874
LEASE F AND G ON SP298961
TERM: 26/05/2017 TO 25/05/2020 OPTION NIL
3. MORTGAGE No 718260345 07/09/2017 at 12:25
A3 SG GAMMA PTE LTD
over
LEASE: 718182955

ADMINISTRATIVE ADVICES

Dealing	Type	Lodgement Date	Status
713597367	HERITGE SITE QUEENSLAND HERITAGE ACT 1992	30/11/2010 11:14	CURRENT

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Requested By: D-ENQ CITEC CONFIRM

Howard Smith Wharves Project Disposal Permit

Lot 4 SP128032

Howard Smith Wharf Precinct, Boundary Road, Fortitude Valley 4006

Annex Two: Written Acceptance Letter/Certificate of Title of Disposal Site

converting waste into clean energy



TI TREE
bioENERGY
A.B.N. 67 450 387 919
166 Boundary Road
Rocklea, Q 4106
PO Box 933
Archerfield Q 4108
T: 07 3275 0111
F: 07 3275 0142

September 27, 2017

Ref: **RRS - REM - 2671A1**

Lined Landfill Disposal

Greencap
Lvl 8/133 Mary St
Brisbane

Attention:

s.73 Irrelevant information

Reference:

LINED LANDFILL DISPOSAL AT TI TREE BIOENERGY OF 2,500m³ OF

ASBESTOS CONTAMINATED MATERIALS FROM THE LOT 3/SP128031, LOT 400/SL1404, LOT 4/SP128032, LOT 21/RP8614, LOT 2/B333, LOT 4/RP41821, LOT 22/RP44680, LOT 2/RP8616 PROJECT

SITUATED AT HOWARD SMITH WHARVES BRISBANE

Dear

s.73 Irrelevant

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Greencap. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at a total of 2500m³ in volume (approximately), is acceptable for Lined Landfill Disposal at our Ti Tree bioENERGY Facility.

Site: Ti Tree bioENERGY

Description: Stage 1 of the Veolia Environmental Services (Australia) Pty Ltd landfill at Champions Way, Willowbank, Qld 4306.

RP Address: Lot 4 on RP24574,
County of Churchill, Parish of Jeebropilly.

DA Number: **EPPR00573913**

Site Address: 55 Champions Way, Willowbank, Queensland 4306.
Lot 3 Plan SP167885; & Lot 8 Plan RP24574.

Access Code:

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery driver will need to unload at the site.



Acceptance is subject to the following conditions:

1. Materials in each load are to be appropriately managed to eliminate dust generation and loss. This is to including, however may not be limited to, the covering of loads during transportation.
2. The Queensland Department of Environment & Heritage Protection (QLD DEHP) must approve the disposal of the material via their contaminated land removal permit process or a written confirmation identifying that this process is not applicable.
3. The soil must not contain any other contaminants in exceedance of the limits as set out in schedule G of the concurrence agency response to the sites Development Approval, as attached.
4. The name of the haulage contractor and relevant truck registration numbers (if not supplied by Veolia Environmental Services) must be notified to us in advance of material deliveries to allow pre-registration on the sites weighbridge system.

If there is any additional information you require please do not hesitate to contact me on the numbers listed below.

Yours Sincerely,

s.73 Irrelevant informa

Remediation Services Sales Representative

Tel: s.73 Irrelevant ir

Mob:

Fax: 07 3275 0101

Email: s.73 Irrele @veolia.com

qld.remediation@veolia.com.au

[illegible]

CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 10106425

Search Date: 22/09/2010 16:08

Title Reference: 50524716

Date Created: 01/11/2004

Previous Title: 16159245

50280957

50280968

50514860

REGISTERED OWNER

Interest

Dealing No: 710159217 06/12/2006

VEOLIA ENVIRONMENTAL SERVICES (AUSTRALIA) PTY LTD

A.C.N. 051 316 584

1/2

JJ RICHARDS TI TREE PTY LTD A.C.N. 100 535 751

1/2

AS TENANTS IN COMMON

ESTATE AND LAND

Estate in Fee Simple

LOT 3

SURVEY PLAN 167885

County of CHURCHILL

Parish of JEEBROPILLY

Local Government: IPSWICH

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10290220 (POR 252)
Deed of Grant No. 10310213 (POR 253)
2. EASEMENT No 601074403 (K311478B) 20/06/1990
benefiting
PART OF THE LAND FORMERLY
LOT 1 ON RP24575 AND LOT 2 ON SP131344
OVER EASEMENT R ON RP228279
3. EASEMENT No 602071481 (K311473M) 20/06/1990
benefiting
PART OF THE LAND FORMERLY
LOT 1 ON RP24575 AND LOT 2 ON SP131344
OVER EASEMENTS N AND M ON RP228278
4. EASEMENT No 602071482 (K311483V) 20/06/1990
benefiting
PART OF THE LAND FORMERLY
LOT 1 ON RP24575 AND LOT 2 ON SP131344
OVER EASEMENT P ON RP228279

CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 10106425

Search Date: 22/09/2010 16:08

Title Reference: 50524716

Date Created: 01/11/2004

EASEMENTS, ENCUMBRANCES AND INTERESTS

5. EASEMENT No 602071483 (K311486D) 20/06/1990
benefiting
PART OF THE LAND FORMERLY
LOT 1 ON RP24575 AND LOT 2 ON SP131344
OVER EASMENT B ON RP228276, EASEMENTS C, D AND E ON
RP228277, EASEMENTS F, G, H, J, K, AND L ON RP228278
6. PROFIT A PRENDRE No 708342012 06/01/2005 at 11:43
EBENEZER MINING COMPANY PTY LTD A.C.N. 010 778 711
OVER PROFIT A PRENDRE A ON SP170004
7. EASEMENT IN GROSS No 710470586 02/04/2007 at 16:15
burdening the land
ENERGEX LIMITED A.C.N. 078 849 055
over
EASEMENT S ON SP200150

ADMINISTRATIVE ADVICES - NIL

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Requested By: D APPLICATIONS CITEC CONFIRM

CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 10106427

Search Date: 22/09/2010 16:08

Title Reference: 10927221

Date Created: 19/11/1897

Creating Dealing: 601462786

REGISTERED OWNER

Dealing No: 701764267 17/01/1997

EBENEZER MINING COMPANY PTY LTD A.C.N. 010 778 711

ESTATE AND LAND

Estate in Fee Simple

LOT 8 REGISTERED PLAN 24574
County of CHURCHILL Parish of JEEBROPILLY
Local Government: IPSWICH

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10290220 (POR 252)

ADMINISTRATIVE ADVICES - NIL

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

** End of Current Title Search **

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Howard Smith Wharves Project Disposal Permit

Lot 4 SP128032

Howard Smith Wharf Precinct, Boudary Road, Fortitude Valley 4006

Annex Three: Scaled Plan showing Soil Sampling Locations

Published on DES Disclosure Log
RTI Act 2009



-  Soil Sample
-  Stockpile (Indicative)

Howard Smith Wharves Sample Locations

Figure 1

Hutchinson Builders

Date: 13/09/2017

Author: s 73 Irrel

Revision: R1

Map Scale: 1:992

Coordinate System: GDA 1984 MGA Zone 56

GREENCAP

All locations indicative and subject to survey.

File A

No warranty is given in relation to the data (including accuracy, reliability, completeness or suitability) and accept no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of or reliance upon the data. Data must not be used for direct marketing or be used in breach of privacy laws.

Basemap

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Howard Smith Wharves Project Disposal Permit

Lot 4 SP128032

Howard Smith Wharf Precinct, Boudary Road, Fortitude Valley 4006

Annex Four: Tabulation of Soil Analysis Results- including Totals and TCLP results

Published on DES Disclosure Log
RTI Act 2009

Howard Smith Wharves
Bulk Asbestos in Soil Stockpile
Interim Laboratory Summary Results

Sample ID	Sample Details	Sample Type	Weight (g)	Asbestos Present	Fibres Identified	Asbestos Concentration (% w/w)
Criteria: Residential use, day care, preschools, etc:						0.01
Criteria: Parks, public open spaces:						0.02
Criteria: Commercial / Industrial:						0.05
Stockpile 1						
SPI-Grid 1-B	Not Supplied	Fibre Cement	24	Yes	CHR	0.022
SPI-Grid 2-B	Not Supplied	Fibre Cement	11	Yes	CHR	0.010
SPI-Grid 3-B	Not Supplied	Fibre Cement	15	Yes	CHR	0.014
SPI-Grid 4-B	Not Supplied	Brake Pad	57	Yes	CHR	0.052
SPI-Grid 5-B	Not Supplied	Fibre Cement	39	Yes	CHR	0.035
SPI-Grid 6-B	Not Supplied	Fibre Cement	42	Yes	CHR	0.038
SPI-Grid 7-B	Not Supplied	Fibre Cement	26	Yes	CHR	0.024
SPI-Grid 9-B	Not Supplied	Fibre Cement	12	Yes	CHR	0.011
SPI-Grid 10-B	Not Supplied	Fibre Cement	31	Yes	CHR	0.028
SPI-Grid 11-B	Not Supplied	Fibrous Board	24	No	NAD, SMF	NA
SPI-Grid 12-B	Not Supplied	Fibre Cement	45	Yes	CHR	0.041
SPI-Grid 13-B	Not Supplied	Fibre Cement	14	Yes	CHR, AMO, CRO	0.013
SPI-Grid 14-B	Not Supplied	Fibre Cement	18	Yes	CHR	0.016
SPI-Grid 16-B	Not Supplied	Bituminous Material	20	No	NAD, ORF	NA
SPI-Grid 17-B	Not Supplied	Fibre Cement	30	Yes	CHR, AMO	0.027
SPI-Grid 18-A	Not Supplied	Fibre Cement	10	Yes	CHR	0.009
SPI-Grid 18-B	Not Supplied	Vinyl Tiles	1	Yes	CHR	0.001
SPI-Grid 19-B	Not Supplied	Fibre Cement	15	Yes	CHR	0.014
SPI-Grid 20-B	Not Supplied	Fibre Cement	40	Yes	CHR	0.036
SPI-Grid 21-B	Not Supplied	Fibre Cement	20	Yes	CHR	0.018
SPI-Grid 22-B	Not Supplied	Fibre Cement	18	Yes	CHR, AMO, CRO	0.016
SPI-Grid 23-B-A	Not Supplied	Fibre Cement	11	Yes	CHR	0.01
SPI-Grid 23-B-B	Not Supplied	Fibre Cement	25	Yes	CHR	0.023
SPI-Grid 24-B	Not Supplied	Fibre Cement	23	Yes	CHR	0.021
SPI-Grid 25-B	Not Supplied	Fibre Cement	92	Yes	CHR	0.084
SPI-Grid 26-B	Not Supplied	Fibre Cement	38	Yes	CHR	0.035
SPI-Grid 27-B	Not Supplied	Fibre Cement	20	Yes	CHR	0.018
SPI-Grid 30-B	Not Supplied	Fibre Cement	67	Yes	CHR	0.061
SPI-Grid 31-B	Not Supplied	Fibre Cement	27	Yes	CHR, AMO	0.025
SPI-Grid 32-B	Not Supplied	Fibre Cement	172	Yes	CHR	0.156
SPI-Grid 33-B	Not Supplied	Fibre Cement	18	Yes	CHR	0.016
SPI-Grid 34-B	Not Supplied	Fibre Cement	35	Yes	CHR	0.032
SPI-Grid 35-B	Not Supplied	Fibre Cement	59	Yes	CHR	0.054
SPI-Grid 36-B	Not Supplied	Fibre Cement	13	Yes	CHR	0.012
Stockpile 2						
SP2-GRID 1-B	Not Supplied	Fibre Cement	16	Yes	CHR	0.015
SP2-GRID 2-B	Not Supplied	Fibre Cement	48	Yes	CHR, AMO	0.044
SP2-GRID 3-B	Not Supplied	Fibre Cement	12	Yes	CHR, AMO	0.011
SP2-GRID 4-B	Not Supplied	Fibre Cement	34	Yes	CHR	0.031
SP2-GRID 5-B	Not Supplied	Fibre Cement	33	Yes	CHR	0.030
SP2-GRID 7-B	Not Supplied	Fibre Cement	13	Yes	CHR	0.012
SP2-GRID 9-B	Not Supplied	Fibre Cement	52	Yes	CHR	0.047
SP2-GRID 10-B	Not Supplied	Fibre Cement	37	Yes	CHR, AMO, CRO	0.034
SP2-GRID 12-B	Not Supplied	Fibre Cement	33	Yes	CHR	0.030
SP2-GRID13-B	Not Supplied	Fibre Cement	31	Yes	CHR	0.028
SP2-GRID14-B	Not Supplied	Fibre Cement	12	Yes	CHR	0.011
SP2-GRID15-B	Not Supplied	Fibre Cement	32	Yes	CHR	0.029
SP2-GRID16-B	Not Supplied	Fibre Cement	38	Yes	CHR	0.035
SP2-GRID21-B	Not Supplied	Fibre Cement	21	Yes	CHR	0.019
Stockpile 3						
SP3-GRID1-B	Not Supplied	Fibre Cement	79	Yes	CHR	0.072
SP3-GRID2-B	Not Supplied	Fibre Cement	27	Yes	CHR	0.025
SP3-GRID3-B	Not Supplied	Fibre Cement	64	Yes	CHR	0.058
SP3-GRID4-B-A	Not Supplied	Fibre Cement	59	Yes	CHR, AMO	0.054
SP3-GRID4-B-B	Not Supplied	Resinous Board	11	No	NAD	N/A
SP3-GRID5-B	Not Supplied	Fibre Cement	52	Yes	CHR	0.047

Notes:

CHR	Chrysotile (white asbestos)	ORF	Organic Fibre
AMO	Amosite (Brown/Grey asbestos)	SMF	Synthetic Mineral Fibre
CRO	Crocidolite (Blue asbestos)	NFD	No Fibres Detected
UMF	Unknown Mineral Fibre	NAD	No Asbestos Detected

Sample ID	Sample Details	Sample Type	Weight (g)	Asbestos Present	Fibres Identified	Asbestos Concentration (% w/w)
Criteria: Residential use, day care, preschools, etc:						0.001
Criteria: Parks, public open spaces:						0.001
Criteria: Commercial / Industrial:						0.001
Stockpile 1						
SPI-Grid 1-S	Not Supplied	Soil	109	No	NAD, ORF	N/A
SPI-Grid 2-S	Not Supplied	Soil	95	No	NAD, ORF	N/A
SPI-Grid 3-S	Not Supplied	Soil	101	No	NAD, ORF	N/A
SPI-Grid 4-S	Not Supplied	Soil	78	No	NAD, ORF	N/A
SPI-Grid 5-S	Not Supplied	Soil	108	No	NAD, ORF	N/A
SPI-Grid 6-S	Not Supplied	Soil	120	No	NAD, ORF	N/A
SPI-Grid 7-S	Not Supplied	Soil	126	No	NAD, ORF	N/A
SPI-Grid 8-S	Not Supplied	Soil	116	No	NAD, ORF	N/A
SPI-Grid 9-S	Not Supplied	Soil	100	No	NAD, ORF	N/A
SPI-Grid 10-S	Not Supplied	Soil	103	No	NAD, ORF	N/A
SPI-Grid 11-S	Not Supplied	Soil	106	No	NAD, ORF	N/A
SPI-Grid 12-S	Not Supplied	Soil	106	No	NAD, ORF	N/A
SPI-Grid 13-S	Not Supplied	Soil	105	No	NAD, ORF	N/A
SPI-Grid 14-S	Not Supplied	Soil	102	No	NAD, ORF	N/A
SPI-Grid 15-S	Not Supplied	Soil	102	No	NAD, ORF	N/A
SPI-Grid 16-S	Not Supplied	Soil	101	No	NAD, ORF	N/A
SPI-Grid 17-S	Not Supplied	Soil	101	No	NAD, ORF	N/A
SPI-Grid 18-S	Not Supplied	Soil	105	No	NAD, ORF	N/A
SPI-Grid 19-S	Not Supplied	Soil	114	No	NAD, ORF	N/A
SPI-Grid 20-S	Not Supplied	Soil	111	No	NAD, ORF	N/A
SPI-Grid 21-S	Not Supplied	Soil	97	No	NAD, ORF	N/A
SPI-Grid 22-S	Not Supplied	Soil	99	No	NAD, ORF	N/A
SPI-Grid 23-S	Not Supplied	Soil	107	No	NAD, ORF	N/A
SPI-Grid 24-S	Not Supplied	Soil	103	No	NAD, ORF	N/A
SPI-Grid 25-S	Not Supplied	Soil	107	No	NAD, ORF	N/A
SPI-Grid 26-S	Not Supplied	Soil	99	No	NAD, ORF	N/A
SPI-Grid 27-S	Not Supplied	Soil	107	No	NAD, ORF	N/A
SPI-Grid 28-S	Not Supplied	Soil	113	No	NAD, ORF	N/A
SPI-Grid 29-S	Not Supplied	Soil	118	No	NAD, ORF	N/A
SPI-Grid 30-S	Not Supplied	Soil	94	No	NAD, ORF	N/A
SPI-Grid 31-S	Not Supplied	Soil	98	No	NAD, ORF	N/A
SPI-Grid 32-S	Not Supplied	Soil	98	No	NAD, ORF	N/A
SPI-Grid 33-S	Not Supplied	Soil	103	No	NAD, ORF	N/A
SPI-Grid 34-S	Not Supplied	Soil	99	No	NAD, ORF	N/A
SPI-Grid 35-S	Not Supplied	Soil	104	No	NAD, ORF	N/A
SPI-Grid 36-S	Not Supplied	Soil	108	No	NAD, ORF	N/A
Stockpile 2						
SP2-GRID1-S	Not Supplied	Soil	114	No	NAD, ORF	N/A
SP2-GRID2-S	Not Supplied	Soil	118	No	NAD, ORF	N/A
SP2-GRID3-S	Not Supplied	Soil	101	No	NAD, ORF	N/A
SP2-GRID4-S	Not Supplied	Soil	104	No	NAD, ORF	N/A
SP2-GRID5-S	Not Supplied	Soil	95	No	NAD, ORF	N/A
SP2-GRID6-S	Not Supplied	Soil	115	No	NAD, ORF	N/A
SP2-GRID7-S	Not Supplied	Soil	97	No	NAD, ORF	N/A
SP2-GRID8-S	Not Supplied	Soil	93	No	NAD, ORF	N/A
SP2-GRID9-S	Not Supplied	Soil	96	No	NAD, ORF	N/A
SP2-GRID10-S	Not Supplied	Soil	115	No	NAD, ORF	N/A
SP2-GRID11-S	Not Supplied	Soil	118	No	NAD, ORF	N/A
SP2-GRID12-S	Not Supplied	Soil	119	No	NAD, ORF	N/A
SP2-GRID13-S	Not Supplied	Soil	102	No	NAD, ORF	N/A
SP2-GRID14-S	Not Supplied	Soil	101	No	NAD, ORF	N/A
SP2-GRID15-S	Not Supplied	Soil	93	No	NAD, ORF	N/A
SP2-GRID16-S	Not Supplied	Soil	91	No	NAD, ORF	N/A
SP2-GRID17-S	Not Supplied	Soil	87	No	NAD, ORF	N/A
SP2-GRID18-S	Not Supplied	Soil	86	No	NAD, ORF	N/A
SP2-GRID19-S	Not Supplied	Soil	97	No	NAD, ORF	N/A
SP2-GRID20-S	Not Supplied	Soil	99	No	NAD, ORF	N/A
SP2-GRID21-S	Not Supplied	Soil	102	No	NAD, ORF	N/A
Stockpile 2						
SP3-GRID1-S	Not Supplied	Soil	106	No	NAD, ORF	N/A
SP3-GRID2-S	Not Supplied	Soil	116	No	NAD, ORF	N/A
SP3-GRID3-S	Not Supplied	Soil	109	No	NAD, ORF	N/A
SP3-GRID4-S	Not Supplied	Soil	109	No	NAD, ORF	N/A
SP3-GRID5-S	Not Supplied	Soil	112	No	NAD, ORF	N/A

Notes:

CHR	Chrysotile (white asbestos)	ORF	Organic Fibre
AMO	Amosite (Brown/Grey asbestos)	SMF	Synthetic Mineral Fibre
CRO	Crocidolite (Blue asbestos)	NFD	No Fibres Detected
UMF	Unknown Mineral Fibre	NAD	No Asbestos Detected

Sample ID	Total Lead mg/kg	Leachate Lead mg/L
Unlined landfill acceptance criteria	600	0.5
Lined landfill acceptance criteria	Nd	5.0
SPI-GRID 1-S	200	0.17
SPI-GRID 4-S	240	0.34
SPI-GRID 7-S	170	0.21
SPI-GRID 10-S	170	0.26
SPI-GRID 13-S	1200	0.22
SPI-GRID 16-S	210	0.23
SPI-GRID 19-S	150	0.23
SPI-GRID 22-S	380	0.24
SPI-GRID 25-S	180	0.25
SPI-GRID 30-S	370	0.2
SPI-GRID 33-S	310	0.18
SPI-GRID 36-S	170	0.21
SP2-GRID3-S	150	0.07
SP2-GRID6-S	140	0.09
SP2-GRID9-S	190	0.08
SP2-GRID12-S	140	0.06
SP2-GRID15-S	170	0.05
SP2-GRID18-S	110	0.03
SP2-GRID21-S	130	0.02
SP3-GRID3-S	100	0.02

BOLD Exceeds unlined landfill acceptance criteria
BOLD Exceeds lined landfill acceptance criteria

Howard Smith Wharves Project Disposal Permit

Lot 4 SP128032

Howard Smith Wharf Precinct, Boudary Road, Fortitude Valley 4006

Annex Five: Copies of Laboratory Results

Published on DES Disclosure Log
RTI Act 2009

Company Name: Greencap - NAA QLD P/L
Address: Level 8, 133 Mary St
Brisbane
QLD 4001
Project Name: HOWARD SMITH WHARF
Project ID: J152294-01

Order No.: PO231216
Report #: 564281
Phone: s.73 Irrelevant info
Fax: 07 3514 9220

Received: Sep 21, 2017 2:30 PM
Due: Sep 26, 2017
Priority: 3 Day
Contact Name: s.73 Irrelevant info

Eurofins | mgt Analytical Services Manager s.73 Irrelevant info

Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SPI-GRID 1-S	Not Provided		Soil	B17-Se25479		X		X
2	SPI-GRID 1-S	Not Provided		US Leachate	B17-Se25480		X	X	
3	SPI-GRID 4-S	Not Provided		Soil	B17-Se25481		X		X
4	SPI-GRID 4-S	Not Provided		US Leachate	B17-Se25482		X	X	
5	SPI-GRID 7-S	Not Provided		Soil	B17-Se25483		X		X
6	SPI-GRID 7-S	Not Provided		US Leachate	B17-Se25484		X	X	
7	SPI-GRID 10-S	Not Provided		Soil	B17-Se25485		X		X
8	SPI-GRID 10-S	Not Provided		US Leachate	B17-Se25486		X	X	

Company Name: Greencap - NAA QLD P/L
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Brisbane
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Eurofins | mgt Analytical Services Manager : s.73 Irrelevant

Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
9	SPI-GRID 13-S	Not Provided		Soil	B17-Se25487		X		X
10	SPI-GRID 13-S	Not Provided		US Leachate	B17-Se25488		X	X	
11	SPI-GRID 16-S	Not Provided		Soil	B17-Se25489		X		X
12	SPI-GRID 16-S	Not Provided		US Leachate	B17-Se25490		X	X	
13	SPI-GRID 19-S	Not Provided		Soil	B17-Se25491		X		X
14	SPI-GRID 19-S	Not Provided		US Leachate	B17-Se25492		X	X	
15	SPI-GRID 22-S	Not Provided		Soil	B17-Se25493		X		X

Company Name: Greencap - NAA QLD P/L
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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
16	SPI-GRID 22-S	Not Provided		US Leachate	B17-Se25494		X	X	
17	SPI-GRID 25-S	Not Provided		Soil	B17-Se25495		X		X
18	SPI-GRID 25-S	Not Provided		US Leachate	B17-Se25496		X	X	
19	SPI-GRID 30-S	Not Provided		Soil	B17-Se25497		X		X
20	SPI-GRID 30-S	Not Provided		US Leachate	B17-Se25498		X	X	
21	SPI-GRID 33-S	Not Provided		Soil	B17-Se25499		X		X
22	SPI-GRID 33-S	Not Provided		US Leachate	B17-Se25500		X	X	

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
23	SPI-GRID 36-S	Not Provided		Soil	B17-Se25501		X		X
24	SPI-GRID 36-S	Not Provided		US Leachate	B17-Se25502		X	X	
25	SP2-GRID3-S	Not Provided		Soil	B17-Se25503		X		X
26	SP2-GRID3-S	Not Provided		US Leachate	B17-Se25504		X	X	
27	SP2-GRID6-S	Not Provided		Soil	B17-Se25505		X		X
28	SP2-GRID6-S	Not Provided		US Leachate	B17-Se25506		X	X	
29	SP2-GRID9-S	Not Provided		Soil	B17-Se25507		X		X
30	SP2-GRID9-S	Not Provided		US Leachate	B17-Se25508		X	X	
31	SP2-GRID12-S	Not Provided		Soil	B17-Se25509		X		X
32	SP2-GRID12-S	Not Provided		US Leachate	B17-Se25510		X	X	

Company Name: Greencap - NAA QLD P/L
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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
	S								
33	SP2-GRID15-S	Not Provided		Soil	B17-Se25511		X		X
34	SP2-GRID15-S	Not Provided		US Leachate	B17-Se25512		X	X	
35	SP2-GRID18-S	Not Provided		Soil	B17-Se25513		X		X
36	SP2-GRID18-S	Not Provided		US Leachate	B17-Se25514		X	X	
37	SP2-GRID21-S	Not Provided		Soil	B17-Se25515		X		X
38	SP2-GRID21-S	Not Provided		US Leachate	B17-Se25516		X	X	
39	SP3-GRID3-S	Not Provided		Soil	B17-Se25517		X		X

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
40	SP3-GRID3-S	Not Provided		US Leachate	B17-Se25518		X	X	
41	SP2-GRID34-S	Not Provided		Soil	B17-Se25519	X			
42	SPI-GRID 2-S	Not Provided		Soil	B17-Se25520	X			
43	SPI-GRID 3-S	Not Provided		Soil	B17-Se25521	X			
44	SPI-GRID 5-S	Not Provided		Soil	B17-Se25522	X			
45	SPI-GRID 6-S	Not Provided		Soil	B17-Se25523	X			
46	SPI-GRID 8-S	Not Provided		Soil	B17-Se25524	X			
47	SPI-GRID 9-S	Not Provided		Soil	B17-Se25525	X			
48	SPI-GRID 11-S	Not Provided		Soil	B17-Se25526	X			
49	SPI-GRID 12-S	Not Provided		Soil	B17-Se25527	X			

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
50	SPI-GRID 14-S	Not Provided		Soil	B17-Se25528	x			
51	SPI-GRID 15-S	Not Provided		Soil	B17-Se25529	x			
52	SPI-GRID 17-S	Not Provided		Soil	B17-Se25530	x			
53	SPI-GRID 18-S	Not Provided		Soil	B17-Se25531	x			
54	SPI-GRID 20-S	Not Provided		Soil	B17-Se25532	x			
55	SPI-GRID 21-S	Not Provided		Soil	B17-Se25533	x			
56	SPI-GRID 23-S	Not Provided		Soil	B17-Se25534	x			

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
57	SPI-GRID 24-S	Not Provided		Soil	B17-Se25535	x			
58	SPI-GRID 26-S	Not Provided		Soil	B17-Se25536	x			
59	SPI-GRID 27-S	Not Provided		Soil	B17-Se25537	x			
60	SPI-GRID 28-S	Not Provided		Soil	B17-Se25538	x			
61	SPI-GRID 29-S	Not Provided		Soil	B17-Se25539	x			
62	SPI-GRID 31-S	Not Provided		Soil	B17-Se25540	x			
63	SPI-GRID 32-S	Not Provided		Soil	B17-Se25541	x			

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
64	SPI-GRID 35-S	Not Provided		Soil	B17-Se25542	x			
65	SP2-GRID1-S	Not Provided		Soil	B17-Se25543	X			
66	SP2-GRID2-S	Not Provided		Soil	B17-Se25544	X			
67	SP2-GRID4-S	Not Provided		Soil	B17-Se25545	X			
68	SP2-GRID5-S	Not Provided		Soil	B17-Se25546	X			
69	SP2-GRID7-S	Not Provided		Soil	B17-Se25547	X			
70	SP2-GRID8-S	Not Provided		Soil	B17-Se25548	X			
71	SP2-GRID10-S	Not Provided		Soil	B17-Se25549	x			
72	SP2-GRID11-S	Not Provided		Soil	B17-Se25550	x			
73	SP2-GRID13-S	Not Provided		Soil	B17-Se25551	x			

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
	S								
74	SP2-GRID14-S	Not Provided		Soil	B17-Se25552	X			
75	SP2-GRID16-S	Not Provided		Soil	B17-Se25553	X			
76	SP2-GRID17-S	Not Provided		Soil	B17-Se25554	X			
77	SP2-GRID19-S	Not Provided		Soil	B17-Se25555	X			
78	SP2-GRID20-S	Not Provided		Soil	B17-Se25556	X			
79	SP3-GRID1-S	Not Provided		Soil	B17-Se25557	X			
80	SP3-GRID2-S	Not Provided		Soil	B17-Se25558	X			
81	SP3-GRID4-S	Not Provided		Soil	B17-Se25559	X			

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
82	SP3-GRID5-S	Not Provided		Soil	B17-Se25560	X			
Test Counts						42	40	20	20

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SPI-GRID 1-S	Not Provided		Soil	B17-Se25479		X		X
2	SPI-GRID 1-S	Not Provided		US Leachate	B17-Se25480		X	X	
3	SPI-GRID 4-S	Not Provided		Soil	B17-Se25481		X		X
4	SPI-GRID 4-S	Not Provided		US Leachate	B17-Se25482		X	X	
5	SPI-GRID 7-S	Not Provided		Soil	B17-Se25483		X		X
6	SPI-GRID 7-S	Not Provided		US Leachate	B17-Se25484		X	X	
7	SPI-GRID 10-S	Not Provided		Soil	B17-Se25485		X		X
8	SPI-GRID 10-S	Not Provided		US Leachate	B17-Se25486		X	X	

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
9	SPI-GRID 13-S	Not Provided		Soil	B17-Se25487		X		X
10	SPI-GRID 13-S	Not Provided		US Leachate	B17-Se25488		X	X	
11	SPI-GRID 16-S	Not Provided		Soil	B17-Se25489		X		X
12	SPI-GRID 16-S	Not Provided		US Leachate	B17-Se25490		X	X	
13	SPI-GRID 19-S	Not Provided		Soil	B17-Se25491		X		X
14	SPI-GRID 19-S	Not Provided		US Leachate	B17-Se25492		X	X	
15	SPI-GRID 22-S	Not Provided		Soil	B17-Se25493		X		X

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
16	SPI-GRID 22-S	Not Provided		US Leachate	B17-Se25494		X	X	
17	SPI-GRID 25-S	Not Provided		Soil	B17-Se25495		X		X
18	SPI-GRID 25-S	Not Provided		US Leachate	B17-Se25496		X	X	
19	SPI-GRID 30-S	Not Provided		Soil	B17-Se25497		X		X
20	SPI-GRID 30-S	Not Provided		US Leachate	B17-Se25498		X	X	
21	SPI-GRID 33-S	Not Provided		Soil	B17-Se25499		X		X
22	SPI-GRID 33-S	Not Provided		US Leachate	B17-Se25500		X	X	

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
23	SPI-GRID 36-S	Not Provided		Soil	B17-Se25501		X		X
24	SPI-GRID 36-S	Not Provided		US Leachate	B17-Se25502		X	X	
25	SP2-GRID3-S	Not Provided		Soil	B17-Se25503		X		X
26	SP2-GRID3-S	Not Provided		US Leachate	B17-Se25504		X	X	
27	SP2-GRID6-S	Not Provided		Soil	B17-Se25505		X		X
28	SP2-GRID6-S	Not Provided		US Leachate	B17-Se25506		X	X	
29	SP2-GRID9-S	Not Provided		Soil	B17-Se25507		X		X
30	SP2-GRID9-S	Not Provided		US Leachate	B17-Se25508		X	X	
31	SP2-GRID12-S	Not Provided		Soil	B17-Se25509		X		X
32	SP2-GRID12-S	Not Provided		US Leachate	B17-Se25510		X	X	

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
	S								
33	SP2-GRID15-S	Not Provided		Soil	B17-Se25511		X		X
34	SP2-GRID15-S	Not Provided		US Leachate	B17-Se25512		X	X	
35	SP2-GRID18-S	Not Provided		Soil	B17-Se25513		X		X
36	SP2-GRID18-S	Not Provided		US Leachate	B17-Se25514		X	X	
37	SP2-GRID21-S	Not Provided		Soil	B17-Se25515		X		X
38	SP2-GRID21-S	Not Provided		US Leachate	B17-Se25516		X	X	
39	SP3-GRID3-S	Not Provided		Soil	B17-Se25517		X		X

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
40	SP3-GRID3-S	Not Provided		US Leachate	B17-Se25518		X	X	
41	SP2-GRID34-S	Not Provided		Soil	B17-Se25519	X			
42	SPI-GRID 2-S	Not Provided		Soil	B17-Se25520	X			
43	SPI-GRID 3-S	Not Provided		Soil	B17-Se25521	X			
44	SPI-GRID 5-S	Not Provided		Soil	B17-Se25522	X			
45	SPI-GRID 6-S	Not Provided		Soil	B17-Se25523	X			
46	SPI-GRID 8-S	Not Provided		Soil	B17-Se25524	X			
47	SPI-GRID 9-S	Not Provided		Soil	B17-Se25525	X			
48	SPI-GRID 11-S	Not Provided		Soil	B17-Se25526	X			
49	SPI-GRID 12-S	Not Provided		Soil	B17-Se25527	X			

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
50	SPI-GRID 14-S	Not Provided		Soil	B17-Se25528	x			
51	SPI-GRID 15-S	Not Provided		Soil	B17-Se25529	x			
52	SPI-GRID 17-S	Not Provided		Soil	B17-Se25530	x			
53	SPI-GRID 18-S	Not Provided		Soil	B17-Se25531	x			
54	SPI-GRID 20-S	Not Provided		Soil	B17-Se25532	x			
55	SPI-GRID 21-S	Not Provided		Soil	B17-Se25533	x			
56	SPI-GRID 23-S	Not Provided		Soil	B17-Se25534	x			

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
57	SPI-GRID 24-S	Not Provided		Soil	B17-Se25535	x			
58	SPI-GRID 26-S	Not Provided		Soil	B17-Se25536	x			
59	SPI-GRID 27-S	Not Provided		Soil	B17-Se25537	x			
60	SPI-GRID 28-S	Not Provided		Soil	B17-Se25538	x			
61	SPI-GRID 29-S	Not Provided		Soil	B17-Se25539	x			
62	SPI-GRID 31-S	Not Provided		Soil	B17-Se25540	x			
63	SPI-GRID 32-S	Not Provided		Soil	B17-Se25541	x			

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
64	SPI-GRID 35-S	Not Provided		Soil	B17-Se25542	x			
65	SP2-GRID1-S	Not Provided		Soil	B17-Se25543	X			
66	SP2-GRID2-S	Not Provided		Soil	B17-Se25544	X			
67	SP2-GRID4-S	Not Provided		Soil	B17-Se25545	X			
68	SP2-GRID5-S	Not Provided		Soil	B17-Se25546	X			
69	SP2-GRID7-S	Not Provided		Soil	B17-Se25547	X			
70	SP2-GRID8-S	Not Provided		Soil	B17-Se25548	X			
71	SP2-GRID10-S	Not Provided		Soil	B17-Se25549	x			
72	SP2-GRID11-S	Not Provided		Soil	B17-Se25550	x			
73	SP2-GRID13-S	Not Provided		Soil	B17-Se25551	x			

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
	S								
74	SP2-GRID14-S	Not Provided		Soil	B17-Se25552	X			
75	SP2-GRID16-S	Not Provided		Soil	B17-Se25553	X			
76	SP2-GRID17-S	Not Provided		Soil	B17-Se25554	X			
77	SP2-GRID19-S	Not Provided		Soil	B17-Se25555	X			
78	SP2-GRID20-S	Not Provided		Soil	B17-Se25556	X			
79	SP3-GRID1-S	Not Provided		Soil	B17-Se25557	X			
80	SP3-GRID2-S	Not Provided		Soil	B17-Se25558	X			
81	SP3-GRID4-S	Not Provided		Soil	B17-Se25559	X			

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Sample Detail						HOLD	Lead	USA Leaching Procedure	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X
Sydney Laboratory - NATA Site # 18217									
Brisbane Laboratory - NATA Site # 20794						X			
Perth Laboratory - NATA Site # 23736									
82	SP3-GRID5-S	Not Provided		Soil	B17-Se25560	X			
Test Counts						42	40	20	20

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. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. 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 and 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.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
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

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 & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

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, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene 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 Aroclor 1260 in Matrix Spikes and LCS.
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 RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

[illegible]

CERTIFICATE OF ANALYSIS

Asbestos Identification

Certificate No: 17-3699

Client:	Greencap	Dates Sampled:	1/09/2017 to 4/09/2017
Client Contact:	s.73 Irrelevant ir	Date Received:	5/09/2017
Telephone:		Date Analysed:	6/09/2017
Email:	s.73 Irrelevant@greencap.com.au	Order No.:	230364
Address:	Level 8, 133 Mary Street Brisbane QLD 4000	Sampled By:	As Received
Site:	Howard Smith Wharves - 5 Boundary Street, Brisbane QLD		

Test Method:

Qualitative identification of asbestos types in bulk samples at COHLABS Laboratory by polarised light microscopy, including dispersion staining techniques using COHLABS in-house method ID-1, AS4964 (2004). The results contained within this report relate only to the sample(s) submitted for testing. COHLABS accepts no responsibility for the initial collection, packaging or transportation of samples submitted by external persons. This document may not be reproduced except in full.

Lab ID	Sample ID	Sample Details	Sample Type	Size / Weight cm/g	Asbestos Present	Fibres Identified
001	SPI-Grid 1-B	Not Supplied	Fibre Cement	24 g	Yes	CHR
002	SPI-Grid 2-B	Not Supplied	Fibre Cement	11g	Yes	CHR
003	SPI-Grid 3-B	Not Supplied	Fibre Cement	15 g	Yes	CHR
004	SPI-Grid 4-B	Not Supplied	Brake Pad	57 g	Yes	CHR
005	SPI-Grid 5-B	Not Supplied	Fibre Cement	39 g	Yes	CHR
006	SPI-Grid 6-B	Not Supplied	Fibre Cement	42 g	Yes	CHR
007	SPI-Grid 7-B	Not Supplied	Fibre Cement	26 g	Yes	CHR
008	SPI-Grid 9-B	Not Supplied	Fibre Cement	12 g	Yes	CHR
009	SPI-Grid 10-B	Not Supplied	Fibre Cement	31 g	Yes	CHR
010	SPI-Grid 11-B	Not Supplied	Fibrous Board	24 g	No	NAD, SMF
011	SPI-Grid 12-B	Not Supplied	Fibre Cement	45 g	Yes	CHR
012	SPI-Grid 13-B	Not Supplied	Fibre Cement	14 g	Yes	CHR, AMO, CRO
013	SPI-Grid 14-B	Not Supplied	Fibre Cement	18 g	Yes	CHR
014	SPI-Grid 16-B	Not Supplied	Bituminous Material	20 g	No	NAD, ORF
015	SPI-Grid 17-B	Not Supplied	Fibre Cement	30 g	Yes	CHR, AMO
016	SPI-Grid 18-A	Not Supplied	Fibre Cement	10 g	Yes	CHR
017	SPI-Grid 18-B	Not Supplied	Vinyl Tiles	1 g	Yes	CHR
018	SPI-Grid 19-B	Not Supplied	Fibre Cement	15 g	Yes	CHR
019	SPI-Grid 20-B	Not Supplied	Fibre Cement	40 g	Yes	CHR
020	SPI-Grid 21-B	Not Supplied	Fibre Cement	20 g	Yes	CHR
021	SPI-Grid 22-B	Not Supplied	Fibre Cement	18 g	Yes	CHR, AMO, CRO
022	SPI-Grid 23-B-A	Not Supplied	Fibre Cement	11 g	Yes	CHR



NATA Accreditation number: 19499

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

ABN: 62 166 540 094

Page 1 of 2

Lab ID	Sample ID	Sample Details	Sample Type	Size / Weight cm/g	Asbestos Present	Fibres Identified
023	SPI-Grid 23-B-B	Not Supplied	Fibre Cement	25 g	Yes	CHR
024	SPI-Grid 24-B	Not Supplied	Fibre Cement	23 g	Yes	CHR
025	SPI-Grid 25-B	Not Supplied	Fibre Cement	92 g	Yes	CHR
026	SPI-Grid 26-B	Not Supplied	Fibre Cement	38 g	Yes	CHR
027	SPI-Grid 27-B	Not Supplied	Fibre Cement	20 g	Yes	CHR
028	SPI-Grid 30-B	Not Supplied	Fibre Cement	67 g	Yes	CHR
029	SPI-Grid 31-B	Not Supplied	Fibre Cement	27 g	Yes	CHR, AMO
030	SPI-Grid 32-B	Not Supplied	Fibre Cement	172 g	Yes	CHR
031	SPI-Grid 33-B	Not Supplied	Fibre Cement	18 g	Yes	CHR
032	SPI-Grid 34-B	Not Supplied	Fibre Cement	35 g	Yes	CHR
033	SPI-Grid 35-B	Not Supplied	Fibre Cement	59 g	Yes	CHR
034	SPI-Grid 36-B	Not Supplied	Fibre Cement	13 g	Yes	CHR

Fibre Identification Legend

CHR Chrysotile (white asbestos)
AMO Amosite (Brown/Grey asbestos)
CRO Crocidolite (Blue asbestos)
UMF Unknown Mineral Fibre

ORF Organic Fibre
SMF Synthetic Mineral Fibre
NFD No Fibres Detected
NAD No Asbestos Detected

Approved Identifier

Name: s.73 Irrelevant

s.73 Irrelevant information

Approved Signatory

Name: s.73 Irrelevant

s.73 Irrelevant information



NATA Accreditation number: 19499

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

ABN: 62 166 540 094

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CERTIFICATE OF ANALYSIS

Asbestos Identification

Certificate No: 17-3699-002

Client:	Greencap	Date Sampled:	5/09/2017
Client Contact:	s.73 Irrelevant information	Date Received:	6/09/2017
Telephone:		Date Analysed:	6/09/2017
Email:	s.73 Irrelevant information@greencap.com.au	Order No.:	230452
Address:	Level 8, 133 Mary Street Brisbane QLD 4000	Sampled By:	As Received
Site:	Howard Smith Wharves - 5 Boundary Street, Brisbane QLD		

Test Method:

Qualitative identification of asbestos types in bulk samples at COHLABS Laboratory by polarised light microscopy, including dispersion staining techniques using COHLABS in-house method ID-1, AS4964 (2004). The results contained within this report relate only to the sample(s) submitted for testing. COHLABS accepts no responsibility for the initial collection, packaging or transportation of samples submitted by external persons. This document may not be reproduced except in full.

Lab ID	Sample ID	Sample Details	Sample Type	Size / Weight cm/g	Asbestos Present	Fibres Identified
001	J152294-01: SP2-GRID 1-B	Not Supplied	Fibre Cement	16 g	Yes	CHR
002	J152294-01: SP2-GRID 2-B	Not Supplied	Fibre Cement	48 g	Yes	CHR, AMO
003	J152294-01: SP2-GRID 3-B	Not Supplied	Fibre Cement	12 g	Yes	CHR, AMO
004	J152294-01: SP2-GRID 4-B	Not Supplied	Fibre Cement	34 g	Yes	CHR
005	J152294-01: SP2-GRID 5-B	Not Supplied	Fibre Cement	33 g	Yes	CHR
006	J152294-01: SP2-GRID 7-B	Not Supplied	Fibre Cement	13 g	Yes	CHR
007	J152294-01: SP2-GRID 9-B	Not Supplied	Fibre Cement	52 g	Yes	CHR
008	J152294-01: SP2-GRID 10-B	Not Supplied	Fibre Cement	37 g	Yes	CHR, AMO, CRO
009	J152294-01: SP2-GRID 12-B	Not Supplied	Fibre Cement	33 g	Yes	CHR
010	J152294-01: SP2-GRID13-B	Not Supplied	Fibre Cement	31 g	Yes	CHR
011	J152294-01: SP2-GRID14-B	Not Supplied	Fibre Cement	12 g	Yes	CHR
012	J152294-01: SP2-GRID15-B	Not Supplied	Fibre Cement	32 g	Yes	CHR
013	J152294-01: SP2-GRID16-B	Not Supplied	Fibre Cement	38 g	Yes	CHR



NATA Accreditation number: 19499

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

ABN: 62 166 540 094

Page 1 of 2

Lab ID	Sample ID	Sample Details	Sample Type	Size / Weight cm/g	Asbestos Present	Fibres Identified
014	J152294-01: SP2-GRID21-B	Not Supplied	Fibre Cement	21 g	Yes	CHR

Fibre Identification Legend

CHR Chrysotile (white asbestos)
AMO Amosite (Brown/Grey asbestos)
CRO Crocidolite (Blue asbestos)
UMF Unknown Mineral Fibre

ORF Organic Fibre
SMF Synthetic Mineral Fibre
NFD No Fibres Detected
NAD No Asbestos Detected

Approved Identifier

Name: s.73 Irrelevant

s.73 Irrelevant information

Approved Signatory

Name: s.73 Irrelevant

s.73 Irrelevant information



NATA Accreditation number: 19499

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

ABN: 62 166 540 094

Page 2 of 2

CERTIFICATE OF ANALYSIS

Asbestos Identification

Certificate No: 17-3699-003

Client:	Greencap	Date Sampled:	5/09/2017
Client Contact:	s.73 Irrelevant informati	Date Received:	6/09/2017
Telephone:		Date Analysed:	7/09/2017
Email:	s.73 Irrelevant informati@greencap.com.au	Order No.:	230452
Address:	Level 8, 133 Mary Street Brisbane QLD 4000	Sampled By:	As Received
Site:	Howard Smith Wharves - 5 Boundary Street, Brisbane QLD		

Test Method:

Qualitative identification of asbestos types in bulk samples at COHLABS Laboratory by polarised light microscopy, including dispersion staining techniques using COHLABS in-house method ID-1, AS4964 (2004). The results contained within this report relate only to the sample(s) submitted for testing. COHLABS accepts no responsibility for the initial collection, packaging or transportation of samples submitted by external persons. This document may not be reproduced except in full.

Lab ID	Sample ID	Sample Details	Sample Type	Size / Weight cm/g	Asbestos Present	Fibres Identified
001	J152294-01: SP2-GRID1-S	Not Supplied	Soil	114 g	No	NAD, ORF
002	J152294-01: SP2-GRID2-S	Not Supplied	Soil	118 g	No	NAD, ORF
003	J152294-01: SP2-GRID3-S	Not Supplied	Soil	101 g	No	NAD, ORF
004	J152294-01: SP2-GRID4-S	Not Supplied	Soil	104 g	No	NAD, ORF
005	J152294-01: SP2-GRID5-S	Not Supplied	Soil	95 g	No	NAD, ORF
006	J152294-01: SP2-GRID6-S	Not Supplied	Soil	115 g	No	NAD, ORF
007	J152294-01: SP2-GRID7-S	Not Supplied	Soil	97 g	No	NAD, ORF
008	J152294-01: SP2-GRID8-S	Not Supplied	Soil	93 g	No	NAD, ORF
009	J152294-01: SP2-GRID9-S	Not Supplied	Soil	96g	No	NAD, ORF
010	J152294-01: SP2-GRID10-S	Not Supplied	Soil	115 g	No	NAD, ORF
011	J152294-01: SP2-GRID11-S	Not Supplied	Soil	118 g	No	NAD, ORF
012	J152294-01: SP2-GRID12-S	Not Supplied	Soil	119 g	No	NAD, ORF
013	J152294-01: SP2-GRID13-S	Not Supplied	Soil	102 g	No	NAD, ORF



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ABN: 62 166 540 094

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Lab ID	Sample ID	Sample Details	Sample Type	Size / Weight cm/g	Asbestos Present	Fibres Identified
014	J152294-01: SP2-GRID14-S	Not Supplied	Soil	101 g	No	NAD, ORF
015	J152294-01: SP2-GRID15-S	Not Supplied	Soil	93 g	No	NAD, ORF
016	J152294-01: SP2-GRID16-S	Not Supplied	Soil	91 g	No	NAD, ORF
017	J152294-01: SP2-GRID17-S	Not Supplied	Soil	87 g	No	NAD, ORF
018	J152294-01: SP2-GRID18-S	Not Supplied	Soil	86 g	No	NAD, ORF
019	J152294-01: SP2-GRID19-S	Not Supplied	Soil	97 g	No	NAD, ORF
020	J152294-01: SP2-GRID20-S	Not Supplied	Soil	99 g	No	NAD, ORF
021	J152294-01: SP2-GRID21-S	Not Supplied	Soil	102 g	No	NAD, ORF

Fibre Identification Legend

CHR Chrysotile (white asbestos)
AMO Amosite (Brown/Grey asbestos)
CRO Crocidolite (Blue asbestos)
UMF Unknown Mineral Fibre

ORF Organic Fibre
SMF Synthetic Mineral Fibre
NFD No Fibres Detected
NAD No Asbestos Detected

Approved Identifier

Name: s.73 Irrelevant information

s.73 Irrelevant information

Approved Signatory

Name: s.73 Irrelevant information

s.73 Irrelevant information



NATA Accreditation number: 19499

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ABN: 62 166 540 094

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CERTIFICATE OF ANALYSIS

Asbestos Identification

Certificate No: 17-3699-004

Client:	Greencap	Date Sampled:	6/09/2017
Client Contact:	s.73 Irrelevant information	Date Received:	7/09/2017
Telephone:		Date Analysed:	8/09/2017
Email:	s.73 Irrelevant information@greencap.com.au	Order No.:	230453
Address:	Level 8, 133 Mary Street Brisbane QLD 4000	Sampled By:	As Received
Site:	Howard Smith Wharves - 5 Boundary Street, Brisbane QLD		

Test Method:

Qualitative identification of asbestos types in bulk samples at COHLABS Laboratory by polarised light microscopy, including dispersion staining techniques using COHLABS in-house method ID-1, AS4964 (2004). The results contained within this report relate only to the sample(s) submitted for testing. COHLABS accepts no responsibility for the initial collection, packaging or transportation of samples submitted by external persons. This document may not be reproduced except in full.

Lab ID	Sample ID	Sample Details	Sample Type	Size / Weight cm/g	Asbestos Present	Fibres Identified
001	J152294-01: SP3-GRID1-B	Not Supplied	Fibre Cement	79 g	Yes	CHR
002	J152294-01: SP3-GRID2-B	Not Supplied	Fibre Cement	27 g	Yes	CHR
003	J152294-01: SP3-GRID3-B	Not Supplied	Fibre Cement	64 g	Yes	CHR
004	J152294-01: SP3-GRID4-B-A	Not Supplied	Fibre Cement	59 g	Yes	CHR, AMO
005	J152294-01: SP3-GRID4-B-B	Not Supplied	Resinous Board	11 g	No	NAD
006	J152294-01: SP3-GRID5-B	Not Supplied	Fibre Cement	52 g	Yes	CHR

Fibre Identification Legend

CHR	Chrysotile (white asbestos)	ORF	Organic Fibre
AMO	Amosite (Brown/Grey asbestos)	SMF	Synthetic Mineral Fibre
CRO	Crocidolite (Blue asbestos)	NFD	No Fibres Detected
UMF	Unknown Mineral Fibre	NAD	No Asbestos Detected



NATA Accreditation number: 19499

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ABN: 62 166 540 094

Page 1 of 2

Approved Identifier

Name: s.73 Irrelevant in

s.73 Irrelevant information

Approved Signatory

Name: s.73 Irrelevant i

s.73 Irrelevant information

Published on DES Disclosure Log
RTI Act 2009



NATA Accreditation number: 19499

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ABN: 62 166 540 094

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CERTIFICATE OF ANALYSIS

Asbestos Identification

Certificate No: 17-3699-005

Client:	Greencap	Date Sampled:	6/09/2017
Client Contact:	s.73 Irrelevant informa	Date Received:	7/09/2017
Telephone:		Date Analysed:	8/09/2017
Email:	@greencap.com.au	Order No.:	230453
Address:	Level 8, 133 Mary Street Brisbane QLD 4000	Sampled By:	As Received
Site:	Howard Smith Wharves - 5 Boundary Street, Brisbane QLD		

Test Method:

Qualitative identification of asbestos types in bulk samples at COHLABS Laboratory by polarised light microscopy, including dispersion staining techniques using COHLABS in-house method ID-1, AS4964 (2004). The results contained within this report relate only to the sample(s) submitted for testing. COHLABS accepts no responsibility for the initial collection, packaging or transportation of samples submitted by external persons. This document may not be reproduced except in full.

Lab ID	Sample ID	Sample Details	Sample Type	Size / Weight cm/g	Asbestos Present	Fibres Identified
001	J152294-01: SP3-GRID1-S	Not Supplied	Soil	106 g	No	NAD, ORF
002	J152294-01: SP3-GRID2-S	Not Supplied	Soil	116 g	No	NAD, ORF
003	J152294-01: SP3-GRID3-S	Not Supplied	Soil	109 g	No	NAD, ORF
004	J152294-01: SP3-GRID4-S	Not Supplied	Soil	109 g	No	NAD, ORF
005	J152294-01: SP3-GRID5-S	Not Supplied	Soil	112 g	No	NAD, ORF

Fibre Identification Legend

CHR	Chrysotile (white asbestos)	ORF	Organic Fibre
AMO	Amosite (Brown/Grey asbestos)	SMF	Synthetic Mineral Fibre
CRO	Crocidolite (Blue asbestos)	NFD	No Fibres Detected
UMF	Unknown Mineral Fibre	NAD	No Asbestos Detected

Approved Identifier

Name: s.73 Irrelevant inform

s.73 Irrelevant information

Approved Signatory

Name: s.73 Irrelevant

s.73 Irrelevant information



NATA Accreditation number: 19499

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

ABN: 62 166 540 094

Page 1 of 1

Client:	Greencap		
Contact:	s.73 Irrelevant information	Phone No.	s.73 Irrelevant information
Address:	Level 8, 133 Mary St	Fax No.	
	Brisbane QLD 4000	Email:	s.73 Irrelevant information @greencap.com.au s.73 Irrelevant information @greencap.com.au
		Order No.	PO230452

Site details (Please use separate forms for each site):
Howard Smith Wharves – Boundary Street, Fortitude Valley

Total No. samples sent:	35 (21 soil + 14 Bulk)	CLIENT USE
Total No. samples received:		LAB USE ONLY
Date samples collected:	05/09/2017	Date results required:

Sample locations:
J152294-01: SP2-GRID1-B: fibre cement debris
J152294-01: SP2-GRID2-B: fibre cement debris
J152294-01: SP2-GRID3-B: fibre cement debris
J152294-01: SP2-GRID4-B: fibre cement debris
J152294-01: SP2-GRID5-B: fibre cement debris
J152294-01: SP2-GRID7-B: fibre cement debris
J152294-01: SP2-GRID9-B: fibre cement debris
J152294-01: SP2-GRID10-B: fibre cement debris
J152294-01: SP2-GRID12-B: fibre cement debris
J152294-01: SP2-GRID13-B: fibre cement debris
J152294-01: SP2-GRID14-B: fibre cement debris
J152294-01: SP2-GRID15-B: fibre cement debris
J152294-01: SP2-GRID16-B: fibre cement debris
J152294-01: SP2-GRID21-B: fibre cement debris
J152294-01: SP2-GRID1-S: Soil
J152294-01: SP2-GRID2-S: Soil
J152294-01: SP2-GRID3-S: Soil
J152294-01: SP2-GRID4-S: Soil
J152294-01: SP2-GRID5-S: Soil
J152294-01: SP2-GRID6-S: Soil
J152294-01: SP2-GRID7-S: Soil
J152294-01: SP2-GRID8-S: Soil
J152294-01: SP2-GRID9-S: Soil
J152294-01: SP2-GRID10-S: Soil
J152294-01: SP2-GRID11-S: Soil

J152294-01: SP2-GRID12-S: Soil
J152294-01: SP2-GRID13-S: Soil
J152294-01: SP2-GRID14-S: Soil
J152294-01: SP2-GRID15-S: Soil
J152294-01: SP2-GRID16-S: Soil
J152294-01: SP2-GRID17-S: Soil
J152294-01: SP2-GRID18-S: Soil
J152294-01: SP2-GRID19-S: Soil
J152294-01: SP2-GRID20-S: Soil
J152294-01: SP2-GRID21-S: Soil

PLEASE SEND SAMPLES TO:

COHLABS

PO Box 5324
West End QLD 4101

Or

Unit 6A, 15 Musgrave Street
West End QLD 4101

Tel: (07) 3015 7555

Email: enquiries@cohlabs.com.au

OFFICE USE ONLY
Job No.
Date Samples Received:
Samples Checked by:

Note: It is recommended that you photocopy this form and retain for your records

Client:	Greencap		
Contact:	s.73 Irrelevant information	Phone No.	s.73 Irrelevant informat
Address:	Level 8, 133 Mary St	Fax No.	
	Brisbane QLD 4000	Email:	s.73 Irrelevant @greencap.com.au s.73 Irrelevant information @greencap.com.au
		Order No.	PO230453

Site details (Please use separate forms for each site):
Howard Smith Wharves – Boundary Street, Fortitude Valley

Total No. samples sent:	10 (5 bulk + 5 soil)	CLIENT USE
Total No. samples received:		LAB USE ONLY
Date samples collected:	06/09/2017	Date results required: ASAP

Sample locations:
J152294-01: SP3-GRID1-B: fibre cement debris
J152294-01: SP3-GRID2-B: fibre cement debris
J152294-01: SP3-GRID3-B: fibre cement debris
J152294-01: SP3-GRID4-B: fibre cement debris
J152294-01: SP3-GRID5-B: fibre cement debris
J152294-01: SP3-GRID1-S: Soil
J152294-01: SP3-GRID2-S: Soil
J152294-01: SP3-GRID3-S: Soil
J152294-01: SP3-GRID4-S: Soil
J152294-01: SP3-GRID5-S: Soil

PLEASE SEND SAMPLES TO:

COHLABS
PO Box 5324
West End QLD 4101

Or

OFFICE USE ONLY
Job No.
Date Samples Received:

Unit 6A, 15 Musgrave Street
West End QLD 4101

Tel: (07) 3015 7555

Email: enquiries@cohlabs.com.au

Samples Checked by:

Note: It is recommended that you photocopy this form and retain for your records

Published on DES Disclosure Log
RTI Act 2009

Client:	Greencap		
Contact:	s.73 Irrelevant infor	Phone No.	s.73 Irrelevant infor
Address:	Level 8, 133 Mary St	Fax No.	
	Brisbane QLD 4000	Email:	s.73 Irrelevant in @greencap.com.au
		Order No.	PO230364

Site details (Please use separate forms for each site):
Howard Smith Wharves – Boundary Street, Fortitude Valley
(Analysis for Asbestos Bulk Samples and Fines in Soil)

Total No. samples sent:	31 Bulk Samples 36 Soil Samples	CLIENT USE
Total No. samples received:		LAB USE ONLY
Date samples collected:	1 and 4 September 2017	Date results required: ASAP

Sample locations:
Bulk Samples (31)
SPI-Grid 1-B
SPI-Grid 2-B
SPI Grid 3-B
SPI Grid 4-B
SPI Grid 5-B
SPI Grid 6-B
SPI Grid 7-B
SPI Grid 9-B
SPI Grid 10-B
SPI Grid 12-B
SPI Grid 13-B
SPI Grid 14-B
SPI Grid 16-B
SPI Grid 17-B
SPI Grid 18-B
SPI Grid 19-B
SPI Grid 20-B
SPI Grid 21-B

SPI Grid 22-B
SPI-Grid 23-B
SPI-Grid 24-B
SPI-Grid 25-B
SPI-Grid 26-B
SPI-Grid 27-B
SPI-Grid 30-B
SPI-Grid 31-B
SPI-Grid 32-B
SPI-Grid 33-B
SPI-Grid 34-B
SPI-Grid 35-B
SPI-Grid 36-B
Soil Samples (36)
SPI-Grid 1-S
SPI-Grid 2-S
SPI Grid 3-S
SPI Grid 4-S
SPI Grid 5-S
SPI Grid 6-S
SPI Grid 7-S
SPI Grid 8-S
SPI Grid 9-S
SPI Grid 10-S
SPI Grid 11-S
SPI Grid 12-S
SPI Grid 13-S
SPI Grid 14-S
SPI Grid 15-S
SPI Grid 16-S
SPI Grid 17-S
SPI Grid 18-S
SPI Grid 19-S
SPI Grid 20-S
SPI Grid 21-S

SPI Grid 22-S
SPI-Grid 23-S
SPI-Grid 24-S
SPI-Grid 25-S
SPI-Grid 26-S
SPI-Grid 27-S
SPI-Grid 30-S
SPI-Grid 31-S
SPI-Grid 32-S
SPI-Grid 33-S
SPI-Grid 34-S
SPI-Grid 35-S
SPI-Grid 36-S

PLEASE SEND SAMPLES TO:

COHLABS

PO Box 5324
West End QLD 4101

Or

Unit 6A, 15 Musgrave Street
West End QLD 4101

Tel: (07) 3015 7555

Email: enquiries@cohlabs.com.au

OFFICE USE ONLY	
Job No.	
Date Samples Received:	
Samples Checked by:	

Note: It is recommended that you photocopy this form and retain for your records

Sample Receipt Advice

Company name: **Greencap - NAA QLD P/L**
Contact name: **s.73 Irrelevant info**
Project name: **HOWARD SMITH WHARF**
Project ID: **J152294-01**
COC number: **Not provided**
Turn around time: **3 Day**
Date/Time received: **Sep 21, 2017 2:30 PM**
Eurofins | mgt reference: **564281**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Appropriate sample containers have been used.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

SAMPLES SPI-GRID 28-S AND SPI-GRID 29-S NOT ON COC. THESE HAVE BEEN PUT ON HOLD.

Contact notes

If you have any questions with respect to these samples please contact:

s.73 Irrelevant info on Phone : or by e.mail: **s.73 Irrelevant info**@eurofins.com

Results will be delivered electronically via e.mail to **s.73 Irrelevant info** **s.73 Irrelevant info**@greencap.com.au.

Note: A copy of these results will also be delivered to the general Greencap - NAA QLD P/L email address.

Howard Smith Wharves Project Disposal Permit

Lot 4 SP128032

Howard Smith Wharf Precinct, Boudary Road, Fortitude Valley 4006

Annex Six: Explanation of Location and depths of samples, how samples were collected and how integrity was maintained

Published on DES Disclosure Log
RTI Act 2009

METHODOLOGY

The methodology for soil sampling at the Howard Smith Wharf Site was undertaken in accordance with the WA Guidelines, as outlined in the table below. Analysis of soil and ACM samples for asbestos identification were conducted by a National Association of Testing Authorities (NATA) certified laboratory.

Task	Methodology (WA Guidelines 2009)
Implementation	<p>Sampling was conducted to 30 cm below the likely lower limit of potential contamination unless this is greater than 3 metres</p> <p>Suspect asbestos material or construction debris was targeted and all sample locations noted- as per Annex Three Sampling Location Plan</p> <p>Precautions were taken to protect workers and public from wall collapse or hole hazards, and potential asbestos fibre release from excavation/sampling.</p> <p>This includes personal protective equipment (PPE), respiratory protective equipment (RPE), dust suppression and ensuring the excavator cabin is sealed with recycled air circulation.</p>
ACM and FA	<p>As the material was a stockpile that had been thoroughly mixed, there was no notable change in stratum.</p> <p>The soil type was a combination of clay, soil, silt and gravel, with cobble-sized rocks.</p> <p>Identified suspected ACM and fibrous asbestos (FA) were manually collected wearing nitrile gloves.</p> <p>Samples were placed in sealable plastic bags supplied by the laboratory for mass and asbestos identification. Identified ACM and AF were weighed to calculate asbestos soil concentration for individual samples.</p>
AF	<p>At least one representative soil sample was collected from each relevant stratum or 1 m depth (if thick) of one wall, and discretionary samples from other suspect depths to determine if asbestos fines (AF) were present.</p>

Following asbestos analysis, samples were sent to another NATA-accredited laboratory for lead analysis. Samples were not iced, as this is not required for lead. Therefore, sample integrity was maintained.

Date : 5/10/2017 2:13:00 PM

From : "WEISE Tom"

To : s.73 Irrelevant@greencap.com.au"

Cc : "Industry and Development Assessment" , "EMR CLR Registry"

Subject : Soil Disposal Permit Application; Howard Smith Wharves Precinct, Fortitude Valley AR105212

Attachment : Soil Disposal Permit CLEB06407817.pdf;image001.png;image002.jpg;

Good afternoon,

Please see attached Notice and SDP for the above site.

Should you have any queries, please do not hesitate to contact me.

Regards,

Tom



Tom Weise
Environmental Officer
Waste and Contaminated Land Assessment
Department of Environment and Heritage Protection
P 07 3330 5206
Level 8 400 George Street BRISBANE QLD 4000
GPO Box 2454 BRISBANE QLD 4001



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)¹ of the Environmental Protection Act 1994 (EP Act) to advise you of the decision to grant your application for a soil disposal permit, but to impose conditions on the permit, and to inform you of the reasons for the decision and your review and appeal rights.

5 October 2017

Our reference: AR105212 – 101/0010589

Greencap Limited
GPO Box 559
Brisbane QLD 4001
ATTN: s.73 Irrelevant in

s.73 Irrelevant @greencap.com.au

Dear s.73 Irrelevant

Re: Application to remove and dispose of 5,000m³ of Asbestos contaminated soil from Howard Smith Wharves Precinct, Boundary Street, Fortitude Valley, Qld (Lot 4 on SP128032)

Decision

The administering authority has considered your application received on 27 September 2017 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 to grant the application for a disposal permit the administering authority has considered the standard criteria listed in Schedule 4 of the EP Act including:

¹ Section 424 continues to have effect under section 739 of the EP Act.

Notice of decision to grant a soil disposal permit with conditions

- 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.

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 Greencap Limited on 27 September 2017 including:

- Application form
- Analysis Results
- Letter of acceptance provided by Veolia Environmental Services dated 3 October 2017 stating they are willing to accept **5, 000m³ of contaminated soil** from **Howard Smith Wharves Precinct, Boundary Street, Fortitude Valley, Qld (Lot 4 on SP128032)** for **Lined Landfill Disposal** at Veolia's TiTree bioENERGY Facility, located at 55 Champions Way, Willowbank, Qld.

Review and appeal details

This decision is not an original decision under the EP Act and so there are no formal review and appeal rights if you are dissatisfied with the decision made by the administering authority. If you are dissatisfied with this decision you may make an application to the administering authority to review the decision but the administering authority is not required to conduct a review. You may have other legal rights and should seek legal advice.

Should you have any questions in relation to this matter, please contact Waste & Contaminated Land on 3330 5206.

Notice of decision to grant a soil disposal permit with conditions

s.73 Irrelevant information

Signature

05/10/2017

Date

Enquiries:

Tom Weise
 Ph: (07) 3330 5206
 Waste and Contaminated Land Assessment
 Department of Environment and Heritage
 Protection.
 Level 8, 400 George Street
 Brisbane QLD 4001

Email: tom.weise@ehp.qld.gov.au

Angelina S. Bismarck
 Principal Environmental Officer
 Delegate of the Chief Executive
Environmental Protection Act 1994

Published on DES Disclosure
RTI Act 2009

SOIL DISPOSAL PERMIT
Environmental Protection Act 1994 (EP Act)

Disposal permit number: CLEB06407817

Commencement date: 5 October 2017

Expiry Date: 5 October 2018

Permit Holder: Greencap Limited

Authorised activity: Removal of 5, 000m³ of contaminated soil from Howard Smith Wharves Precinct, Boundary Street, Fortitude Valley, Qld (Lot 4 on SP128032) for Lined Landfill Disposal at Veolia's TiTree bioENERGY Facility, located at 55 Champions Way, Willowbank, Qld.

Maximum volume: 5, 000m³

This disposal permit is subject to the conditions endorsed hereon or attached hereto in Schedule A.

<div style="border: 1px solid black; padding: 5px; width: fit-content;">s.73 Irrelevant information</div>

Signature

05/10/2017

Date

Enquiries:

Tom Weise – (07) 3330 5206

Waste and Contaminated Land Assessment
Department of Environment and Heritage
Protection
Level 8, 400 George Street
GPO Box 2454
Brisbane QLD 4001
Phone 13 QGOV (13 74 68)
Email tom.weise@ehp.qld.gov.au

Angelina S. Bismarck
Principal Environmental Officer
Delegate of the administering authority
Environmental Protection Act 1994

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.

Published on DES Disclosure Log
RTI Act 2009

Date : 13/11/2017 3:40:11 PM
From : s.73 Irrelevant information
To : "PALM"
Cc : s.73 Irrelevant information "WEISE Tom"
Subject : AR106404 - Disposal Permit Application for Lot 4 SP128032; Howard Smith Wharf Precinct
Attachment : Compiled Permit.HSW
site.13112017.pdf;image001.wnz;image005.wnz;image007.jpg;image008.jpg;image009.jpg;image010.jpg;image011.jpg;image012.jpg;image013.png;image014.png;image015.png;image016.png;

To whom it may concern,

Please find attached a disposal permit application to dispose of a further 1000m3 of contaminated soil from another section of the same land parcel at the Howard Smith Wharf Site (Lot 4 SP128032). All required information is attached including acceptance letter from the land fill managers.

I have spoken to Tom Weise who processed the last permit for this site and have requested that this be prioritised due to the very tight development timeframes of our client's project.

Please do not hesitate to contact me if you require any further information or clarification.

Kind Regards

s.73 Irrelevant information

BSc / M Env Mgmt

Environmental Consultant | Greencap

Level 8 / 133 Mary Street, Brisbane QLD 4000

T: +61 7 3514 9222 | D: s.73 Irrelevant information | E: s.73 Irrelevant information@greencap.com.au

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Going Further in Managing Risk

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Environmental Management | Contaminated Land | Emergency Management
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HOWARD SMITH WHARVES PROJECT DISPOSAL PERMIT

Lot 4 SP128032

Howard Smith Wharf Precinct, Boudary
Road, Fortitude Valley 4006

November 2017



Application form

Environmental Protection Act 1994

Application for a disposal permit for contaminated soil

OFFICIAL USE ONLY

DATE RECEIVED

FILE REF

PROJECT REF

DATE

This is the approved form for making an application to the administering authority for a disposal permit to treat or dispose of contaminated soil from land recorded in the environmental management register (EMR) or contaminated land register (CLR). The application is made under s.424¹ (as continued under s.739) of the Environmental Protection Act 1994 (EP Act).

Note: A soil disposal permit is not required when removing clean soil from a site listed on the EMR or CLR.

1. Applicant details

FULL NAME s.73 Irrelevant info		TITLE Mr
COMPANY/ REGISTERED LEGAL ENTITY NAME (IF APPLICABLE) Greencap Limited		
REGISTERED ADDRESS Level 8, 133 Mary Street, Brisbane QLD		POSTCODE 4000
PHONE +61 s.73 Irrelevant info	FAX	
EMAIL s.73 Irrelevant info@greencap.com.au		
POSTAL ADDRESS (WRITE 'AS ABOVE' IF THE SAME AS REGISTERED ADDRESS) GPO Box 559, Brisbane QLD		POSTCODE 4001
CONTACT PERSON FOR COMPANY/ REGISTERED LEGAL ENTITY (IF APPLICABLE) As above		
POSITION		

¹ S. 424 continues to have effect in accordance with s. 739 of the EP Act and can be found in the superseded version of the EP Act available at https://www.legislation.qld.gov.au/LEGISLTN/SUPERSED/E/EnvProtA94_150710.pdf

Application form

Application for a disposal permit for contaminated soil

A soil disposal permit can only be approved where the site from which the soil is being removed is listed on the EMR or CLR.

For further information about how land is listed on the registers refer to the information available at the Queensland Government website:

<http://www.gld.gov.au/environment/pollution/management/contaminated-land/>

It is better to overestimate the amount of soil to be removed. If the limit is reached before the disposal is complete, a new disposal permit will be required.

Soil disposal permits only authorise the disposal of soil for the term stated on the disposal permit. The standard period is one year.

The application must be accompanied by the written acceptance of the local government authority or registered

Principal Contaminated Land	
PHONE As above	FAX
EMAIL As above	

2. Site location

Please provide details of site(s) the soil is proposed to be removed **from**.

FULL STREET ADDRESS OF SITE(S) Howard Smith Wharves Precinct, Boundary Street, Fortitude Valley 4006	
LOT(S) Lot 4	PLAN(S) SP128032
LOCAL GOVERNMENT AREA Brisbane City Council	

3. Certificate of title

Please provide a copy of the current Certificate of Title for the land.

☒ Certificate of title attached

4. Soil volume

What is the approximate volume (in cubic metres) of soil to be removed (allowing for excavation bulking)?

<ENTER THE SOIL VOLUME IN CUBIC METRES> 1,000
--

5. Disposal period

What are the dates between which soil is proposed to be moved to the disposal or treatment location?

FROM DATE: 13 November 2017	TO DATE: 13 November 2018
--------------------------------	------------------------------

6. Disposal location

What is the proposed disposal location?

Application form

Application for a disposal permit for contaminated soil

owner of the site which will receive the soil. The written acceptance must:

- state the amount of soil and the type of contaminates present in the soil; and
- confirm that the soil can be lawfully received under the conditions of the environmental authority for the facility (if being taken to a landfill facility)

If the soil is being disposed at a non-local government administered landfill or another parcel of land on the EMR/CLR, a copy of the Certificate of Title must be provided.

Disposal to landfill should only be considered where no other method of dealing with the contaminated soil is available or viable.

a. ☐ Local government administered waste disposal or treatment facility

NAME AND ADDRESS OF LOCAL GOVERNMENT ADMINISTERED LANDFILL

☐ Written acceptance from the local government authority is attached.

b. ☒ Non-local government-administered waste disposal or treatment facility

LOT(S)	PLAN(S)
FULL STREET ADDRESS OF SITE(S) See Annex Two for details/Title and Acceptance letter	

☒ Written acceptance from registered owner of site is attached.

☒ Certificate of title is attached

c. ☐ Another parcel of land which is listed on the EMR or CLR

EMR/CLR ID	
LOT(S)	PLAN(S)
FULL STREET ADDRESS OF SITE(S)	

☐ Written acceptance from registered owner of site is attached.

☐ Certificate of title is attached.

7. Management options

State reason(s) why on-site/off-site treatment or management is not proposed.

<PROVIDE REASONS>

Timing of project/development onsite requires immediate disposal; and due to the location of site between cliffs and the Brisbane River there is no room on site for treatment and storage of material

8. Sampling

Is it proposed to undertake validation sampling to confirm that all soil has been removed?

☐ Yes

☒ No

9. Soil contamination

Provide a description of the contamination present in the soil to be removed.

<PROVIDE DESCRIPTION>

Asbestos

10. Required supporting information

Please tick relevant boxes below to indicate that you have attached the following information with this application and list the relevant attachments.

Required information	Name of attachment containing the required information <small>(if the required information can be found in an attached site investigation report provide the title, version and section number for the report)</small>
Scaled plan showing soil sampling locations and contamination source(s)	Annex 3
Tabulation of soil analysis results	Not Applicable
Toxicity Characteristic Leaching Procedure (TCLP) results from relevant soil samples	Not applicable
Copies of all laboratory reports and sample receipt advices for all soil analysis	Annex 4
Explanation of location and depths of samples, how samples were collected, and how sample integrity was maintained	Annex 5

If a site investigation report is being submitted simultaneously to the administering authority, refer to the relevant sections of that report otherwise copies must be provided of all laboratory reports for contaminated soil analyses and leachate testing results.

A previously submitted site investigation report may be referred to, provided it is still relevant and accurate.

Soil sampling needs to be completed in accordance with Schedule B2 of the National Environment Protection (Assessment of Site Contamination) Measure 1999.

Application form
Application for a disposal permit for contaminated soil

11. Declaration

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

- I do solemnly and sincerely declare that all information supplied on or with this application is true and correct to the best of my knowledge.
- I understand that it is an offence under s.480 of the *Environmental Protection Act 1994* to give to the administering authority or an authorised person a document containing information that I know to be false, misleading or incomplete in a material particular; and
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

APPLICANT NAME

s.73 Irrelevant information

SIGNATURE OF INDIVIDUAL APPLICANT OR AUTHORISED SIGNATORY

s.73 Irrelevant information

DATE

13/11/2017

Applicant checklist

- ☐ Application form completed and signed (this form)
- ☐ Certificate of title attached (refer question 3)
- ☐ Written acceptance from disposal location attached (refer question 6)
- ☐ Certificate of title for disposal location attached where applicable (refer question 6)
- ☐ Required supporting information attached (or referenced in site investigation report) (refer question 10)

Please submit your complete application using one of the following methods:

Email:

palm@ehp.qld.gov.au

The email subject line should be 'Application for a disposal permit for contaminated soil'.

The file size limit for submission via email is 14MB. Any submission via email which exceeds 14MB will need to be broken down into separate emails, with each email clearly labelled Part X of X (e.g. Part 1 of 2), included in the subject line of the email.

Mail:

Permit and Licence Management
Department of Environment and Heritage Protection
GPO Box 2454, BRISBANE QLD 4001

Courier or hand delivery:

Permit and Licence Management
Department of Environment and Heritage Protection
Level 3, 400 George Street,
BRISBANE QLD 4001
Hours: 8.30 am—5.00 pm business days

Privacy statement

The Department of Environment and Heritage Protection (the department) is collecting your personal information to assess the application for a disposal permit under s.424 of the *Environmental Protection Act 1994*. Information will not be disclosed to any other person or agency unless you have given us permission or we are authorised or required by law. For queries about privacy matters email: privacy@ehp.qld.gov.au or telephone: (07) 3330 6270.

Howard Smith Wharves Project Disposal Permit

Lot 4 SP128032

Howard Smith Wharf Precinct, Boudary Road, Fortitude Valley 4006

Annex One: Certificate of Title

CURRENT TITLE SEARCH

DEPT OF NATURAL RESOURCES AND MINES, QUEENSLAND

Request No: 26972698

Search Date: 27/09/2017 10:04

Title Reference: 50323249

Date Created: 31/07/2000

Previous Title: 40025609

REGISTERED OWNER

Dealing No: 707890862 14/07/2004

BRISBANE CITY COUNCIL

ESTATE AND LAND

Estate in Fee Simple

LOT 4 SURVEY PLAN 128032
Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 40025609 (Lot 4 on SP 128032)
2. LEASE No 718182955 28/07/2017 at 15:49
HSW NOMINEES PTY LIMITED A.C.N. 166 209 874
LEASE F AND G ON SP298961
TERM: 26/05/2017 TO 25/05/2020 OPTION NIL
3. MORTGAGE No 718260345 07/09/2017 at 12:25
A3 SG GAMMA PTE LTD
over
LEASE: 718182955

ADMINISTRATIVE ADVICES

Dealing	Type	Lodgement Date	Status
713597367	HERITGE SITE QUEENSLAND HERITAGE ACT 1992	30/11/2010 11:14	CURRENT

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Requested By: D-ENQ CITEC CONFIRM

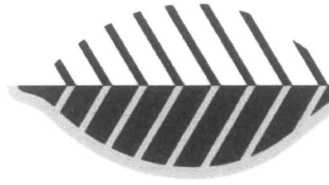
Howard Smith Wharves Project Disposal Permit

Lot 4 SP128032

Howard Smith Wharf Precinct, Boudary Road, Fortitude Valley 4006

Annex Two: Written Acceptance Letter/Certificate of Title of Disposal Site

converting waste into clean energy



TI TREE
bioENERGY

A.B.N. 67 450 387 919
166 Boundary Road
Rocklea, Q 4106
PO Box 933
Archerfield Q 4108
T: 07 3275 0111
F: 07 3275 0142

November 10, 2017

Ref: **RRS - REM - 2671A1**

Lined Landfill Disposal

Greencap
Lvl 8/133 Mary St
Brisbane

Attention:

s.73 Irrelevant information

Reference:

Lined Landfill Disposal at Ti Tree bioEnergy of additional 1,000m³ (total 6,000m³) of
ASBESTOS CONTAMINATED MATERIALS FROM THE LOT 3/SP128031, LOT 400/SL1404, LOT 4/SP128032, LOT
21/RP8614, LOT 2/B333, LOT 4/RP41821, LOT 22/RP44680, LOT 2/RP8616 PROJECT
SITUATED AT HOWARD SMITH WHARVES BRISBANE

Dear

s.73 Irrelevant

Veolia Environmental Services has reviewed the Total and TCLP concentrations data recently provided by Greencap. We can confirm that the material, represented by the sample numbers listed in the attached table and estimated at additional 1,000m³ (total of 6000m³) in volume (approximately), is acceptable for Lined Landfill Disposal at our Ti Tree bioENERGY Facility.

Site: Ti Tree bioENERGY

Description: Stage 1 of the Veolia Environmental Services (Australia) Pty Ltd landfill at Champions Way, Willowbank, Qld 4306.

RP Address: Lot 4 on RP24574,
County of Churchill, Parish of Jeebropilly.

DA Number: **EPPR00573913**

Site Address: 55 Champions Way, Willowbank, Queensland 4306.
Lot 3 Plan SP167885; & Lot 8 Plan RP24574.

Access Code:

Please find attached a copy of the Site Entry Conditions, which all personnel visiting and delivering to the site are expected to obey, in the interests of safety and sustainability. Also attached is a copy of the Weighbridge Procedure, which includes the Material Access Code (MAC), that each delivery driver will need to unload at the site.



Acceptance is subject to the following conditions:

1. Materials in each load are to be appropriately managed to eliminate dust generation and loss. This is to including, however may not be limited to, the covering of loads during transportation.
2. The Queensland Department of Environment & Heritage Protection (QLD DEHP) must approve the disposal of the material via their contaminated land removal permit process or a written confirmation identifying that this process is not applicable.
3. The soil must not contain any other contaminants in exceedance of the limits as set out in schedule G of the concurrence agency response to the sites Development Approval, as attached.
4. The name of the haulage contractor and relevant truck registration numbers (if not supplied by Veolia Environmental Services) must be notified to us in advance of material deliveries to allow pre-registration on the sites weighbridge system.

If there is any additional information you require please do not hesitate to contact me on the numbers listed below.

Yours Sincerely,

s.73 Irrelevant inform

Remediation Services Manager

Tel: s.73 Irrelevant

Mob:

Fax: 07 3275 0101

Email: s.73 Irrelevant in@veolia.com

qld.remediation@veolia.com.au

[illegible]

APPENDIX C

Copy of Current Title Search

CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 10106425

Search Date: 22/09/2010 16:08

Title Reference: 50524716

Date Created: 01/11/2004

Previous Title: 16159245

50280957

50280968

50514860

REGISTERED OWNER

Interest

Dealing No: 710159217 06/12/2006

VEOLIA ENVIRONMENTAL SERVICES (AUSTRALIA) PTY LTD

A.C.N. 051 316 584

1/2

JJ RICHARDS TI TREE PTY LTD A.C.N. 100 535 751

1/2

AS TENANTS IN COMMON

ESTATE AND LAND

Estate in Fee Simple

LOT 3

SURVEY PLAN 167885

County of CHURCHILL

Parish of JEEBROPILLY

Local Government: IPSWICH

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10290220 (POR 252)
Deed of Grant No. 10310213 (POR 253)
2. EASEMENT No 601074403 (K311478B) 20/06/1990
benefiting
PART OF THE LAND FORMERLY
LOT 1 ON RP24575 AND LOT 2 ON SP131344
OVER EASEMENT R ON RP228279
3. EASEMENT No 602071481 (K311473M) 20/06/1990
benefiting
PART OF THE LAND FORMERLY
LOT 1 ON RP24575 AND LOT 2 ON SP131344
OVER EASEMENTS N AND M ON RP228278
4. EASEMENT No 602071482 (K311483V) 20/06/1990
benefiting
PART OF THE LAND FORMERLY
LOT 1 ON RP24575 AND LOT 2 ON SP131344
OVER EASEMENT P ON RP228279

CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 10106425

Search Date: 22/09/2010 16:08

Title Reference: 50524716

Date Created: 01/11/2004

EASEMENTS, ENCUMBRANCES AND INTERESTS

5. EASEMENT No 602071483 (K311486D) 20/06/1990
benefiting
PART OF THE LAND FORMERLY
LOT 1 ON RP24575 AND LOT 2 ON SP131344
OVER EASMENT B ON RP228276, EASEMENTS C, D AND E ON
RP228277, EASEMENTS F, G, H, J, K, AND L ON RP228278
6. PROFIT A PRENDRE No 708342012 06/01/2005 at 11:43
EBENEZER MINING COMPANY PTY LTD A.C.N. 010 778 711
OVER PROFIT A PRENDRE A ON SP170004
7. EASEMENT IN GROSS No 710470586 02/04/2007 at 16:15
burdening the land
ENERGEX LIMITED A.C.N. 078 849 055
over
EASEMENT S ON SP200150

ADMINISTRATIVE ADVICES - NIL

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Requested By: D APPLICATIONS CITEC CONFIRM

CURRENT TITLE SEARCH

ENVIRONMENT AND RESOURCE MANAGEMENT, QUEENSLAND

Request No: 10106427

Search Date: 22/09/2010 16:08

Title Reference: 10927221

Date Created: 19/11/1897

Creating Dealing: 601462786

REGISTERED OWNER

Dealing No: 701764267 17/01/1997

EBENEZER MINING COMPANY PTY LTD A.C.N. 010 778 711

ESTATE AND LAND

Estate in Fee Simple

LOT 8 REGISTERED PLAN 24574
County of CHURCHILL
Local Government: IPSWICH

Parish of JEEBROPILLY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10290220 (POR 252)

ADMINISTRATIVE ADVICES - NIL

UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

** End of Current Title Search **

COPYRIGHT THE STATE OF QUEENSLAND (ENVIRONMENT AND RESOURCE MANAGEMENT) [2010]
Requested By: D APPLICATIONS CITEC CONFIRM

Howard Smith Wharves Project Disposal Permit

Lot 4 SP128032

Howard Smith Wharf Precinct, Boudary Road, Fortitude Valley 4006

Annex Three: Scaled Plan showing Soil Sampling Locations

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RTI Act 2009



Extent of soil contaminated with loose friable asbestos (type: Crocidolite)



Sample location

CLIENT: Hutchinson Builders QLD

SITE ADDRESS: Howard Smith Wharves, 5 Boundary Street, Fortitude Valley QLD 4006

CLIENT No.: C107595

JOB No.: J152294

AREA: Building-C undercroft soil

DATE: Nov 2017

CONSULTANT: 22-166

s.73 Irrelevant information

PLAN TYPE: Friable asbestos soil contamination - extent

File A

NOTE: Plan Not to Scale

PAGE: 1 of 1

GREENCAP

Going Further in Monitoring Page 391 of 409

Howard Smith Wharves Project Disposal Permit

Lot 4 SP128032

Howard Smith Wharf Precinct, Boudary Road, Fortitude Valley 4006

Annex Four: Copies of Laboratory Results

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RTI Act 2009

CERTIFICATE OF ANALYSIS

Asbestos Identification

Certificate No: 17-4714

Client:	Greencap	Date Sampled:	27/10/2017
Client Contact:	s.73 Irrelevant information	Date Received:	27/10/2017
Telephone:		Date Analysed:	27/10/2017
Email:	greencap.com.au	Order No.:	PO232943
Address:	Level 8, 133 Mary Street Brisbane QLD 4000	Sampled By:	As Received
Site:	Howard Smith Wharves - 5 Boundary Street, Brisbane QLD		

Test Method:

Qualitative identification of asbestos types in bulk samples at COHLABS Laboratory by polarised light microscopy, including dispersion staining techniques using COHLABS in-house method ID-1, AS4964 (2004). The results contained within this report relate only to the sample(s) submitted for testing. COHLABS accepts no responsibility for the initial collection, packaging or transportation of samples submitted by external persons. This document may not be reproduced except in full.

Lab ID	Sample ID	Sample Details	Sample Type	Size / Weight cm/g	Asbestos Present	Fibres Identified
001	J152294- BLDGc-001	Not Supplied	Fibrous Material	10 x 10	Yes	CRO, ORF

Fibre Identification Legend

CHR	Chrysotile (white asbestos)	ORF	Organic Fibre
AMO	Amosite (Brown/Grey asbestos)	SMF	Synthetic Mineral Fibre
CRO	Crocidolite (Blue asbestos)	NFD	No Fibres Detected
UMF	Unknown Mineral Fibre	NAD	No Asbestos Detected

Approved Identifier

Name: s.73 Irrelevant information

s.73 Irrelevant information

Approved Signatory

Name: s.73 Irrelevant information

s.73 Irrelevant information



NATA Accreditation number: 19499

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

ABN: 62 166 540 094

Page 1 of 1

CERTIFICATE OF ANALYSIS

Asbestos Identification

Certificate No: 17-3201

Client:	Greencap	Date Sampled:	10/08/2017
Client Contact:	s.73 Irrelevant	Date Received:	10/08/2017
Telephone:		Date Analysed:	10/08/2017
Email:	@greencap.com.au	Order No.:	229264
Address:	Level 8, 133 Mary Street Brisbane QLD 4000	Sampled By:	As Received
Site:	Howard Smith Wharves, Building C - 5 Boundary Street, Brisbane QLD		

Test Method:

Qualitative identification of asbestos types in bulk samples at COHLABS Laboratory by polarised light microscopy, including dispersion staining techniques using COHLABS in-house method ID-1, AS4964 (2004). The results contained within this report relate only to the sample(s) submitted for testing. COHLABS accepts no responsibility for the initial collection, packaging or transportation of samples submitted by external persons. This document may not be reproduced except in full.

Lab ID	Sample ID	Sample Details	Sample Type	Size / Weight cm/g	Asbestos Present	Fibres Identified
001	J152294-HSW-5BS-001	South Wall – East End – Debris to Base of Wall	Fibre Cement	2 x 2 cm	No	NAD, ORF
002	J152294-HSW-5BS-002	South Wall – East End – Debris to Timber Framework	Fibre Cement	1 x 1 cm	No	NAD, ORF
003	J152294-HSW-5BS-003	East End – Debris Between Floorboards	Dust / Debris	Dust/Debris 14 g Asbestos Fibre <0.0001 g	Yes	CRO, ORF
004	J152294-HSW-5BS-004	South Wall – East End – Debris to Base of Wall	Fibre Cement	1 x 1 cm	Yes	CHR
005	J152294-HSW-5BS-005	South Wall – East End – Debris to Timber Framework	Dust / Debris	Dust/Debris 1 g Asbestos Fragments 0.2000 g	Yes	CHR, ORF
006	J152294-HSW-5BS-006	North Wall – Dust to Timber Framework Above East Door	Dust / Debris	Dust/Debris 5 g Asbestos Fragments <0.0001 g	Yes	CHR, Handpicked 2mm x 5mm, ORF
007	J152294-HSW-5BS-007	Floor Adj. Ramp – Debris to Floor	Vinyl Tiles	2 x 1 cm	No	NAD, ORF
008	J152294-HSW-5BS-008	Floor Adj. Ramp – Dust Between Floorboards	Dust / Debris	6 g	No	NAD, ORF
009	J152294-HSW-5BS-009	Salvaged X-Ray Machine – Electrical Wire Insulation	Insulation Material	2 x 1 cm	No	NAD, ORF



NATA Accreditation number: 19499

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

ABN: 62 166 540 094

Page 1 of 3

Lab ID	Sample ID	Sample Details	Sample Type	Size / Weight cm/g	Asbestos Present	Fibres Identified
010	J152294-HSW-5BS-010	Salvaged Tripod – Electrical Wire Insulation	Insulation Material	3 x 1 cm	No	NAD, ORF
011	J152294-HSW-5BS-011	Recess Above Door to South Wall – Dust	Dust / Debris	5 g	No	NAD, ORF, SMF
012	J152294-HSW-5BS-012	Floor Adj. West Door – South Side – Debris Between Floorboards	Fibre Cement	8 x 2 cm	Yes	CHR, AMO
013	J152294-HSW-5BS-013	Floor Adj. Door to South-West Corner – Debris Sheet Vinyl	Vinyl Sheet Backing	6 x 4 cm	No	NAD, ORF, SMF
014	J152294-HSW-5BS-014	South Wall Above Window – Debris to High Level Timber Framework	Fibre Cement	1 x 1 cm	Yes	CHR, AMO
015	J152294-HSW-5BS-015	West Wall – Debris to Base of Wall	Fibre Cement	5 x 5 cm	Yes	CHR, AMO
016	J152294-HSW-5BS-016	Adj. West Wall – Debris Between Floorboards	Fibre Cement	3 x 2 cm	Yes	CHR
017	J152294-HSW-5BS-017	East Wall – Debris to Base of Wall	Fibre Cement	6 x 5 cm	No	NAD, ORF
018	J152294-HSW-5BS-018	Centre of Building – Dust to Horizontal Face of Roof Truss	Dust / Swab	16 x 2 cm	No	NAD, ORF
019	J152294-HSW-5BS-019	Centre of Building – Dust to Angled Face of Roof Truss	Dust / Debris	Dust/Debris 6 g Asbestos Fibre <0.0001 g	Yes	CRO Handpicked 3mm x 2mm, ORF
020	J152294-HSW-5BS-020	North Wall – Debris to Wall Top Plate	Fibre Cement	4 x 2 cm	Yes	CHR
021	J152294-HSW-5BS-021	North Wall – Dust to Horizontal Face of Roof Truss	Dust / Debris	Dust/Debris 8 g Asbestos Fragments 0.1000 g	Yes	CHR, ORF
022	J152294-HSW-5BS-022	West End – Debris Above Mesh to Underside of Roof	Fibre Cement	3 x 2 cm	Yes	CHR

Fibre Identification Legend

CHR	Chrysotile (white asbestos)	ORF	Organic Fibre
AMO	Amosite (Brown/Grey asbestos)	SMF	Synthetic Mineral Fibre
CRO	Crocidolite (Blue asbestos)	NFD	No Fibres Detected
UMF	Unknown Mineral Fibre	NAD	No Asbestos Detected



NATA Accreditation number: 19499

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

ABN: 62 166 540 094

Page 2 of 3

Approved Identifier

Name: s.73 Irrelevant infor

s.73 Irrelevant information

Approved Signatory

Name: s.73 Irrelevant

s.73 Irrelevant information

Notes:

Hand-picked refers to small discrete amounts of asbestos distributed unevenly in a large body of non-asbestos material.

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NATA Accreditation number: 19499

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ABN: 62 166 540 094

Page 3 of 3

Howard Smith Wharves Project Disposal Permit

Lot 4 SP128032

Howard Smith Wharf Precinct, Boudary Road, Fortitude Valley 4006

Annex Five: Explanation of location and depths of samples, how samples were collected and how integrity was maintained

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METHODOLOGY

The methodology for soil sampling at the Howard Smith Wharf Site was undertaken in accordance with the WA Guidelines, as outlined in the table below. Analysis of soil and ACM samples for asbestos identification were conducted by a National Association of Testing Authorities (NATA) certified laboratory.

Task	Methodology (WA Guidelines 2009)
Implementation	<p>Sampling was conducted on the surface of soil only, as asbestos was visibly present on the surface in the undercroft of the building and surrounds, minimal soil was disturbed.</p> <p>Suspect asbestos material or construction debris were targeted and all sample locations are noted in and around the building- as per Annex Three Sampling Location Plan</p> <p>Precautions were taken to protect workers and public from potential asbestos fibre release as samples were taken.</p> <p>This includes personal protective equipment (PPE), respiratory protective equipment (RPE), and dust suppression where required. Disturbance of the soil was kept to an absolute minimum, due to the high likelihood of the presence of Asbestos, and the very fine, dusty top soil.</p> <p>Samples were not iced, as this is not required for Asbestos. Therefore, sample integrity was maintained.</p>
ACM and FA	<p>As the material was in-situ but minimally disturbed, it was not possible to note changes in stratum.</p> <p>The topsoil was very fine silt and soil.</p> <p>Identified suspected ACM and fibrous asbestos (FA) were manually collected wearing nitrile gloves.</p> <p>Samples were placed in sealable plastic bags supplied by the laboratory for mass and asbestos identification. Asbestos soil concentration wasn't calculated, as the samples consisted of pure blue fibrous asbestos clumps on the soil surface in large volumes.</p>
AF	<p>At least one representative soil sample was collected from the sample site, and discretionary samples from other suspect areas around the building and in the undercroft to determine if asbestos fines (AF) were present.</p>

Previous Samples collected from the internal timber floor structures of the building materials indicated positive friable asbestos (crocidolite) presence. Associated Sample analysis report attached. Related sample numbers:

- 1) J52294-HSW-5BS-003
- 2) J152294-HSW-5BS-019

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Date : 15/11/2017 2:03:24 PM

From : "PALM"

To : "Industry and Development Assessment"

Cc : "EMR CLR Registry"

Subject : BRING UP: AR106404

Attachment : AR106404 Greencap Ltd.docx;image001.png;image003.png;image005.png;image006.png;

Good afternoon,

Please note that there is no hard copy

An application has been received by the Customer Service Team (PaLM) and requires your assessment.

Type: soil disposal permit

AR: 106404

Project: 193530

Client: Greencap Ltd

Permit: CLEB06437617

Application ID: 696935

Received Date: 13 November 2017

Application Date: 13 November 2017

NOTE: This is on the EMR/CLR register.

All application documents have been attached to Ecotrack/eDocs and can be searched by the AR number.

Please note Non DA staff in Palm will not be creating files however for any contaminated land applications, the EMR/CLR staff will create the file and will advise accordingly in a separate email.

If you have any questions regarding this application please contact Alison Shaw or send an email to palm@ehp.qld.gov.au

Regards,



Alison Shaw

Customer Service Support Officer

Customer Service Team | Regulatory Capability and Customer Service

Department of Environment and Heritage Protection

P 1300 130 372 F 07 3330 5875

400 George Street, BRISBANE QLD 4000

GPO Box 2454, BRISBANE QLD 4001



COVER SHEET

☐ Regional Info & Filing (hard copy) ☐ Electronic application received ☒ Regional - Action Required

PaLM Non-DA TEAM - ADMINISTRATION PROCESSING Application for Disposal Permit (Contaminated Land) Checklist	
Department/Office: Waste and Contaminated Land	AR No: 106404
Project No: 193530	Permit No: CLEB06437617
Ecotrack Application ID reference: 623742	
Client No: 696935	EMR/CLR ID No: 31053
PaLM Contact: Margaret Jones	
Application Details Indicate by Yes ☒	
Applicant Name: Greencap Ltd	
Contact Name: s.73 Irrelevant inform	
Site Location Address: Howard Smith Wharf Site	
Lot/Plan: Lot 4 on SP128032	
Application Dates	
Date Received: 13/11/2017	Application Valid Date: 13/11/2017
Due Date: 27/11/2017 (10 business days after application deemed valid)	
Application Type: Non-DA Soil Disposal Permit	
Application Checks – Indicate by Yes ☒ Please note: A blank box may indicate an 'INVALID' application	
☒ Part A and Part B application forms supplied and completed ☒ Forms signed and dated ☒ All parts of the forms completed ☒ Letter of acceptance from Landfill, etc.	
WLCA ADMINISTRATION PROCESSING	
Applications are generally received by Email	
☐	SAVE COVER SHEET; ELECTRONIC AND/OR SCANNED HARD COPY FILE PARTS **
☐	LOCATE & ORDER FILE (eDOCS/Records) FILE Reference: ***Refer for eDOCS file path
☐	MOVE FILE TO WLCA OFFICER AND UPDATE eDOCS LOCATION
☐	FORWARD HARD COPY FILE TO WLCA OFFICER LOCATION
APPLICATION ASSESSMENT DECISION	
☐	PRINT DECISION NOTICE AND PERMIT; DELEGATE TO SIGN & SAVE *

☐	POST or EMAIL (if email address provided on application) NOTICE & PERMIT TO APPLICANT/OWNER/LGA
☐	UPDATE ECOTRACK (Decision, Permit Effective Date & Expiry Date; Officer Responsible, Delegate, File Reference, &.Upload Notices)
	➤ EMAIL COPY OF DECISION NOTICE TO: emr.clr.registry@ehp.qld.gov.au
☐	COPY OVER FILES FROM LOCAL DIRECTORY/FOLDER TO eDOCS (** to ***)

****Save to: "\\chqfile2\groupdir\Environmental Services\Contaminated Land\DISPOSAL PERMITS AND SITE ASSESSMENTS" under the corresponding year; month; project number; as e.g. "Cover Sheet-Ecotrack Permit Reference #"**

*****eDOCS save to: ENVIRONMENTAL MANAGEMENT\CONTAMINATED SITES MANAGEMENT\Notifiable Activities or by Local Government Authority (request file creation using lot/plan description)**

Date : 16/11/2017 4:27:38 PM

From : "WEISE Tom"

To : s.73 Irrelevant@greencap.com.au"

Cc : s.73 Irrelevant inform@greencap.com.au" , "Industry and Development Assessment" , "EMR CLR Registry"

Subject : Soil Disposal Permit Application: Howard Street Wharves, Fortitude Valley AR106404

Attachment : Soil Disposal Permit CLEB06437617.pdf;image001.png;image002.jpg;

Good afternoon,

Please see attached Notice and SDP for the above site.

Should you have any queries regarding contaminated land, please do not hesitate to contact me.

Regards,

Tom



Tom Weise
Environmental Officer
Waste and Contaminated Land Assessment
Department of Environment and Heritage Protection
P 07 3330 5206
Level 8 400 George Street BRISBANE QLD 4000
GPO Box 2454 BRISBANE QLD 4001



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)¹ of the Environmental Protection Act 1994 (EP Act) to advise you of the decision to grant your application for a soil disposal permit, but to impose conditions on the permit, and to inform you of the reasons for the decision and your review and appeal rights.

16 October 2017

Our reference: AR106404 – 101/0010589

Greencap Limited
GPO Box 559
Brisbane QLD 4001
ATTN: s.73 Irrelevant info

s.73 Irrelevant i@greencap.com.au
CC: s.73 Irrelevant informa@greencap.com.au

Dear s.73 Irrelevant

Re: Application to remove and dispose of 1, 000m³ of Asbestos contaminated soil from Howard Smith Wharves Precinct, Boundary Street, Fortitude Valley, Qld (Lot 4 on SP128032)

Decision

The administering authority has considered your application received on 13 November 2017 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).

¹ Section 424 continues to have effect under section 739 of the EP Act.

Information Notice

Notice of decision to grant a soil disposal permit with conditions

Assessment criteria used in making the decision

In accordance with section 424(4) of the EP Act in making its decision to grant 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.

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 Greencap Limited on 13 November 2017 including:

- Application form
- Analysis Results
- Letter of acceptance provided by Veolia Environmental Services dated 10 October 2017 stating they are willing to accept **1, 000m³ of contaminated soil from Howard Smith Wharves Precinct, Boundary Street, Fortitude Valley, Qld (Lot 4 on SP128032) for Lined Landfill Disposal** at Veolia's TiTree bioENERGY Facility, located at 55 Champions Way, Willowbank, Qld.

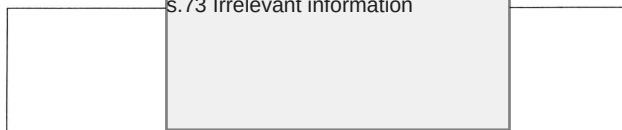
Review and appeal details

This decision is not an original decision under the EP Act and so there are no formal review and appeal rights if you are dissatisfied with the decision made by the administering authority. If you are dissatisfied with this decision you may make an application to the administering authority to review the decision but the administering authority is not required to conduct a review. You may have other legal rights and should seek legal advice.

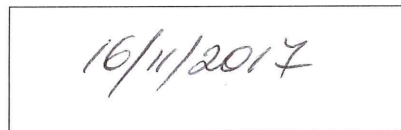
Should you have any questions in relation to this matter, please contact Waste & Contaminated Land on 3330 5206.

Notice of decision to grant a soil disposal permit with conditions

s.73 Irrelevant information

A rectangular box for a signature, with a greyed-out area in the center labeled 's.73 Irrelevant information'.

Signature

A rectangular box for a date, containing the handwritten date '16/11/2017'.

Date

Enquiries:

Tom Weise

Ph: (07) 3330 5206

Waste and Contaminated Land Assessment
Department of Environment and Heritage
Protection.

Level 8, 400 George Street
Brisbane QLD 4001

Email: tom.weise@ehp.qld.gov.au

Angelina S. Bismarck
Principal Environmental Officer
Delegate of the Chief Executive
Environmental Protection Act 1994

Published on DES Disclosure
RTI Act 2009

SOIL DISPOSAL PERMIT
Environmental Protection Act 1994 (EP Act)

Disposal permit number: CLEB06437617

Commencement date: 16 November 2017

Expiry Date: 16 November 2018

Permit Holder: Greencap Limited

Authorised activity: Removal of 1, 000m³ of contaminated soil from Howard Smith Wharves Precinct, Boundary Street, Fortitude Valley, Qld (Lot 4 on SP128032) for Lined Landfill Disposal at Veolia's TiTree bioENERGY Facility, located at 55 Champions Way, Willowbank, Qld.

Maximum volume: 1, 000m³

This disposal permit is subject to the conditions endorsed hereon or attached hereto in Schedule A.

	s.73 Irrelevant information	
--	-----------------------------	--

Signature

16/11/2017

Date

Enquiries:

Tom Weise – (07) 3330 5206

Waste and Contaminated Land Assessment
Department of Environment and Heritage
Protection
Level 8, 400 George Street
GPO Box 2454
Brisbane QLD 4001
Phone 13 QGOV (13 74 68)
Email tom.weise@ehp.qld.gov.au

Angelina S. Bismarck
Principal Environmental Officer
Delegate of the administering authority
Environmental Protection Act 1994

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.

Published on DES Disclosure Log
RTI Act 2009

Date : 29/11/2017 10:38:01 AM

From : "WEISE Tom"

To : s.73 Irrelevant@greencap.com.au"

Cc : s.73 Irrelevant informant@greencap.com.au", "SMOLKOVA-BISMARCK Angelina", "EMR CLR Registry", "Industry and Development Assessment"

Subject : Soil Disposal Permit Application: Howard Street Wharves Precinct, Fortitude Valley AR106404 - AMENDMENT

Attachment : image001.png;image002.jpg;

Good morning s.73 Irre

Thank you for taking the time to discuss the granted Notice and SDP (CLEB06437617) for the above site.

As mentioned, there are two administrative errors to clarify for future reference;

- The date of Veolia's Waste Acceptance Letter is not **10 October 2017**, but **10 November 2017**; and
- The date of the granted Notice is not **16 October 2017**, but **16 November 2017**.

Please accept this email as clarification on the matter, and I apologise for the inconvenience.

Should you have any queries regarding contaminated land, please do not hesitate to contact me.

Regards,

Tom



Tom Weise
Environmental Officer
Waste and Contaminated Land Assessment
Department of Environment and Heritage Protection
P 07 3330 5206
Level 8 400 George Street BRISBANE QLD 4000
GPO Box 2454 BRISBANE QLD 4001

